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COURSES

Courses listed below, separated by subject, are active as of the spring 2026 term. Courses can be updated three times per year, to coincide with the priority enrollment time period for upcoming terms.

COURSE DESIGNATIONS

COURSE DESIGNATIONS

Below you will find a short description of items included in course listings and course bubbles. For further information regarding course designations, consult your advisor or view the Requirements for Undergraduate Study (https://guide.wisc.edu/undergraduate/#requirementsforundergraduatestudytext). The mortarboard symbol (#) appears before the title of any course that fulfills one of the Communication Part A or Part B, Ethnic Studies, or Quantitative Reasoning Part A or Part B requirements.

Gen Ed	Communication Part A: a course in communication skills at the college level, developing student abilities in writing and public speaking, for both exposition and argumentation.
	Communication Part B: a course involving substantial instruction in the four modes of literacy (that is, speaking, reading, writing, and listening), with emphasis on speaking and writing, either in the conventions of specific fields or in more advanced courses in communication.
	Quantitative Reasoning Part A: a Quantitative Reasoning Part A course is an introductory course in college#level mathematics, computer science, statistics or formal logic that prepares students for more advanced work in a disciplinary context.
	Quantitative Reasoning Part B: a Quantitative Reasoning Part B course builds on the tools of college#level mathematics, computer science, statistics or formal logic that are acquired by achieving the Quantitative Reasoning Part A learning outcomes. Quantitative Reasoning Part B courses may be offered at any level, provided that the material challenges students to think critically and apply quantitative skills to develop models, interpret data, draw conclusions, and solve problems within a disciplinary or interdisciplinary context.
Ethnic St	Counts toward Ethnic Studies requirement: a course intended to increase understanding of the culture and contributions of persistently marginalized racial or ethnic groups in the United States, and to equip students to respond constructively to issues connected with our pluralistic society and global community.
Breadth	Biological Science: a course concerning the systematic study of the structure, function, growth, origin, evolution, distribution, and taxonomy of living organisms. Courses with this designation may meet Biological Science requirements or the broader Natural Science breadth requirements.
	Humanities: employing analytical, critical, and interpretive methods, "Arts & Humanities" courses teach a wide array of skills necessary to understand and analyze past, present, and future of the world around us. These courses focus on exploring the human condition, using knowledge to build empathy and appreciation for the complexities of one's own and other people's perspectives.
	Literature: courses with "literature" designation focus on the reading and interpretation of texts in multiple genres, including fictional and nonfictional prose, poetry, and drama, from a range of cultures, in translation or in their original languages, irrespective of how they are presented. They teach skills of literary analysis while examining the relation between the texts and the cultures, historical periods, and ideas that produced them.
	Natural Science: a course characterized by the systematic study of the natural and physical world, and with the use of abstraction and logical reasoning. Biological Science and Physical Science courses are subsets of the Natural Science curriculum.
	Physical Science: a course involving the systematic study of objective information about the physical world, broadly defined, and include areas of study such as Astronomy, Biology, Chemistry, Physics, Materials Science, and Earth Science (atmospheric science, oceanography). Courses with this designation may meet Physical Science requirements or the broader Natural Science breadth requirements.
	Social Science: a course which relies upon methods of data collection (either qualitative or quantitative), data analysis, or data interpretation that characterize factual, methodological, institutional, and theoretical inquiry into the systematic study of humans/groups and institutions/society.
Level	Elementary: a course associated with predominantly introductory material, are usually open to all students (including first year students).
	Intermediate and Advanced: courses with sensible prerequisites to reflect a gradual mastery of material.
L&S Credit	Counts as Liberal Arts and Science credit in L&S: a course which encourage students in one or more of the three "habits of the mind" of liberal arts education, as specified by the College of Letters and Science.

Honors	Accelerated Honors (!): a course open to both honors and non-honors students. Accelerated Honors courses receive honors credit automatically in recognition of the amount and rigor of material covered in the course, often designed to combine two semesters of material into one semester. The enrollment system will automatically assign honors. Honors Only Courses (H): a course reserved for students declared in an Honors program only, taught by a faculty member who is an expert in the subject-matter of the course. It is designed to challenge students to actively participate; hence, the course content is often shaped by student questions and interests. The enrollment system will automatically assign honors. Honors Optional (%): a course open to both honors and non-honors students. The optional honors component of work is designed to facilitate in-depth, student-driven learning and enrich the student's experience. The student is responsible for formally declaring their intention to complete an honors project when enrolling.
Grad 50%	Counts toward 50% graduate coursework requirement: a course used in the Graduate School's requirement that least 50% of credits applied toward the student's graduate program must be with courses designed for graduate work.
Work	Workplace Experience Course: a course where workplace experience is linked to learning in an academic program. Courses must include intentional learning objectives related to the experience.
Foreign Language	First-semester language course: Course in a language other than English for students with no prior experience in the language. These courses are not retro-credit eligible. Second-semester language course: Course in a language other than English that requires a Level 1 course a requisite. These courses are retro-credit eligible. Third-semester language course: Course in a language other than English that requires a Level 2 course a requisite. These courses are retro-credit eligible. Fourth-semester language course: Course in a language other than English that requires a Level 3 course a requisite. These courses are retro-credit eligible Fifth-semester and above language course. Course in a language other than English that requires a Level 4 or Level 5 course a requisite. These courses are retro-credit eligible.

COURSE REQUISITES

COURSE REQUISITES

Requisites represent the academic preparation required to be successful in a course. They are enforced via the enrollment system, meaning a student who attempts to enroll in a course but lacks the requisite preparation will be prevented from enrolling in the course until the requisite has been met.

It is assumed that courses in progress at the time of enrollment will be completed successfully and thus fulfill a course requisite. Course administrators/departments may check the completion of these courses and may drop enrolled students who failed or dropped a requisite course and notify them accordingly.

There are occasions when a student may have the necessary preparation to be successful in a course, but this preparation is not easily identifiable in their student record. An example would be earned transfer credit that did not equate to a UW-Madison course that meets the spirit of the required course. You may ask the course instructor for permission to enroll in a course for which you do not meet the enforced requisite. Instructor permission will override any restrictions on enrollment the class might have.

WAYS TO FULFILL REQUISITES:

- UW-Madison Courses (p. 5)
- Testing Scores (p. 6)
- Transfer Equivalencies (p. 6)
- General Education (p. 6)
- Limitations on Enrollment/Audience (p. 6)
- Class Standing (p. 7)
- Consent of Instructor (p. 7)

UW-MADISON COURSES

Courses identified in requisites list the subject(s) and catalog number (example: MATH 221). If a course is cross-listed, you will meet the requisite regardless of the subject you enrolled, with one exception (see minimum credits in a subject) (p. 6). For example, ZOOLOGY/BIOLOGY 101 is the same course, so requisites recognize both Zoology and Biology as fulfilling the requirement; it does not matter which course you enrolled in.

Concurrent Enrollment

Concurrent enrollment means being enrolled in a course in the same term as the requisite course. There are three ways these can be written:

1. You may either have completed the requisite course in a prior term or be currently enrolled in it. (example: *Course A, or concurrent enrollment*). Example: PLANTSCI 335
2. You must be enrolled in the listed courses during the same term, every time the courses are offered (example: Course A requisite: *Concurrent enrollment in Course B.*; Course B requisite: *Concurrent enrollment in Course A*). You will have to enroll in all courses at the same time otherwise you will not meet the requisite. Example: NURSING 726 & NURSING 728
3. One course requires concurrent enrollment but the other course does not. For example, if you enroll in a Course A with a requisite stating "*Concurrent enrollment in Course B*", but Course B does not require you to be enrolled in Course A. In this situation, you must enroll in Course B first, then go back in and enroll in Course A. Example: MUS PERF 201 & MUS PERF 251

Minimum Credits in a Subject

Requisites may specify a certain number of credits in any given subject (example: *3 credits in HISTORY*). This means you must have taken at least 3 credits in the HISTORY course array without specifying an individual course. If you take a course cross-listed with HISTORY, but do not enroll in HISTORY, you will not meet the requisite. Example: HISTORY 200

Grades

In very limited situations, a minimum grade may be included associated with a requisite course (example: *a grade of C in Course A*). If you are a transfer student, you may need individual permission from the instructor to enroll in courses with this type of requisite. Example: NUTR SCI 431

TESTING SCORES

Advanced Placement (AP), International Baccalaureate (IB), and the College-Level Examination Program (CLEP)

These exam scores are converted into UW-Madison credit via equivalent courses. They do not display publicly in requisites. Due to the nature of the vast array of subject material there isn't always a direct equivalent (exact match from the exam to a UW-Madison course), thus credit will show up on your record as a transfer equivalent (denoted by SUBJECT X##, example GEN ELCT X12). See the list of exams and their equivalent UW-Madison courses in the Placement and Credit by Exam (https://guide.wisc.edu/undergraduate/#placementandcreditbyexamtext) section of Guide.

UW-System/UW-Madison Placement Exam Scores and Departmental Placement Exams

The UW-System and UW-Madison provide placement exams in English, English as a Second Language (ESL), French, German, Math, Spanish and have direct equivalents to UW-Madison courses. Departments may also provide placement exams in other subject matter where a student may have acquired knowledge, skills, or competencies. Requisites use placement exam scores and use the language "*or placement into [course].*" Find more information about these exams and subsequent placement into UW-Madison courses in the Placement and Credit by Exam (https://guide.wisc.edu/undergraduate/#placementandcreditbyexamtext) section of Guide. Example: FRENCH 102

TRANSFER EQUIVALENCIES

If you are transferring to UW-Madison, their previous coursework will be converted to UW-Madison credit/courses. In most cases, you will see the equivalent UW-Madison course on your transcript, which can be used just like the courses above (p. 5). If there is not a direct equivalent (exact match from your previous institution to a UW-Madison course), you will receive credit in any given subject as a transfer equivalent (denoted by SUBJECT X##, example GEN ELCT X12).

In some situations, you may have acquired subject matter knowledge, but did not complete all the learning outcomes associated with UW-Madison general education attributes or designations. Transfer equivalency courses used in this situation provide a transfer credit equivalent to course content without the general education requirement fulfillment. These are included in requisites behind the scenes.

When requisites include a minimum letter grade, the transfer equivalency grade will factor in the requisite as a 2.000 GPA, regardless your grade from the previous institution.

List of standard UW-Madison equivalencies without general education attributes/designations

- **BIO SCI X52**: Included in requisites where BIOLOGY/BOTANY/ZOOLOGY 152 is used. This is the transfer equivalency for the bioscience content without fulfilling the Communications B requirement.
- **PSYCH X02**: Include in requisites where PSYCH 225 is used. This is the transfer equivalency without fulfilling the Communications B requirement.

GENERAL EDUCATION

Some courses utilize the satisfaction of a specific general education requirement as a requisite. These are written as:

- *Satisfied Communications A requirement*
  - Example: COM ARTS 262
- *Satisfied Quantitative Reasoning (QR) A requirement*
  - Example: C&E SOC/SOC 360
- *Satisfied Quantitative Reasoning (QR) B requirement*

To see more about general education requirements, see the Requirements for Undergraduate Degrees (https://guide.wisc.edu/undergraduate/#requirementsforundergraduatestudytext) in Guide.

LIMITATIONS ON ENROLLMENT/AUDIENCE

Some courses are designed for a specific audience. Requisites limit who can enroll in these courses.

Significant content overlap

When a course covers a significant portion of another course, a requisite will prevent you from earning credit in courses that are vastly similar. These requisites include statements such as "*Not open to students with credit in [Course A]*", which will prevent you from enrolling in a course where you already have mastered the subject matter. Example: CHEM 327

Honors

Courses may limit enrollment to students only in honors programs. Requisites for these courses will be written as:

- *Declared in an honors program* (this means any honors in the major, college honors, or honors research) Example: POLI SCI 182
- *Declared in [school or college] honors program* (this means any honors program within a specific school or college) Example: INTER-AG 288
- *Declared in [degree/major/program] honors in the major* (this means to a single, specific honors program)

Limiting by program

Courses can be designed for specific programs and will have requisites that specify who can enroll. You must be declared in one of these programs to enroll. Requisites will be written as:

- *Declared in [degree/major/program]* Example: KINES 300
- *Declared in [major/program] graduate program* Example: CHEM/BIOCHEM 704

- *Declared in Capstone Certificate in [program]* Example: M E 718
- *Classified as Pre-[degree/major/program name]* Example: CURRIC 319

CLASS STANDING

Class standing is based on the number of credits you have earned, credits in progress at time of enrollment, and your academic career (undergraduate, graduate, pharmacy, medical, veterinary, law, or special).

Requisites using standing can be written in a variety of ways, depending on the audience. If the requisite is *Sophomore standing*, this includes sophomore, junior, senior, graduate/professional, or special career students. If the requisite is *Sophomore standing only*, only undergraduate students with 24-53 credits may enroll in the course.

Credits and Class Standing

- 0-23 credits: Freshman
- 24-53 credits: Sophomore
- 54-85 credits: Junior
- 86+ credits: Senior

Limits based on course catalog number

- Courses numbered 100-299 are open to undergraduates only. Graduate students may enroll, but the credits will not be reflected on their student record.
- Courses numbered 300-699 are open to undergraduate and graduate programs.
- Courses numbered 700 and above are open only to graduate/professional students.

CONSENT OF INSTRUCTOR

Some courses may only enroll when you have consent of instructor. These courses usually are independent study, directed study, etc. or courses that require auditions, permission the fist time, or other unique situations that are subjective. This is written as "Consent of Instructor." Example: DANCE 159

SYLLABUS

OVERVIEW

For a complete guide to UW–Madison syllabus requirements and resources, please visit ctlm.wisc.edu/syllabus/ (https://ctlm.wisc.edu/syllabus/).

The following statements were created for inclusion in course syllabi. Instructors are strongly encouraged to reference, or include a link to, these statements in their individual course syllabi. This ensures that consistent institutional information is provided to all students.

SYLLABUS STATEMENTS

ACADEMIC CALENDAR & RELIGIOUS OBSERVANCES

Academic Calendar & Religious Observances (https://secfac.wisc.edu/academic-calendar/)

Establishment of the academic calendar for the University of Wisconsin-Madison falls within the authority of the faculty as set forth in Faculty Policies and Procedures (https://policy.wisc.edu/library/UW-801/#Pol801_1_20). Construction of the academic calendar is subject to various rules and laws prescribed by the Board of Regents, the Faculty Senate, State of Wisconsin and the federal government. For additional dates and deadlines for students, see the Office of the Registrar's pages (https://registrar.wisc.edu/dates/). Students are responsible for notifying instructors within the first two weeks of classes about any need for flexibility due to religious observances (https://policy.wisc.edu/library/UW-880/).

ACADEMIC INTEGRITY STATEMENT

By virtue of enrollment, each student agrees to uphold the high academic standards of the University of Wisconsin-Madison; academic misconduct is behavior that negatively impacts the integrity of the institution. Cheating, fabrication, plagiarism, unauthorized collaboration, and helping others commit these previously listed acts are examples of misconduct which may result in disciplinary action. Examples of disciplinary sanctions (https://conduct.students.wisc.edu/academic-misconduct/) include, but are not limited to, failure on the assignment/course, written reprimand, disciplinary probation, suspension, or expulsion.

ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES

The University of Wisconsin-Madison supports the right of all enrolled students to a full and equal educational opportunity. The Americans with Disabilities Act (ADA), Wisconsin State Statute (36.12), and UW-Madison policy (UW-855) (https://policy.wisc.edu/library/UW-855/) require the university to provide reasonable accommodations to students with disabilities to access and participate in its academic programs and educational services. Faculty and students share responsibility in the accommodation process. Students are expected to inform faculty of their need for instructional accommodations during the beginning of the semester, or as soon as possible after being approved for accommodations. Faculty will work either directly with the student or in coordination with the McBurney Center to provide reasonable instructional and course-related accommodations. Disability information, including instructional accommodations as part of a student's educational record, is confidential and protected under FERPA. (See: McBurney Disability Resource Center (https://mcburney.wisc.edu/))

COURSE EVALUATIONS

UW-Madison students have the opportunity to evaluate the courses they are enrolled in and their learning experiences through course evaluations. Most instructors use a digital course evaluation tool (https://kb.wisc.edu/luwmad/81069/). In most instances, students receive an official email two weeks prior to the end of the semester, notifying them that anonymous course evaluations are available. Student participation is an integral component of course development, and confidential feedback is important. UW-Madison strongly encourages student participation in course evaluations.

DIVERSITY & INCLUSION STATEMENT

Diversity (https://diversity.wisc.edu) is a source of strength, creativity, and innovation for UW-Madison. We value the contributions of each person and respect the profound ways their identity, culture, background, experience, status, abilities, and opinion enrich the university community. We commit ourselves to the pursuit of excellence in teaching, research, outreach, and diversity as inextricably linked goals. The University of Wisconsin-Madison fulfills its public mission by creating a welcoming and

inclusive community for people from every background – people who as students, faculty, and staff serve Wisconsin and the world.

MENTAL HEALTH AND WELL-BEING STATEMENT

Students often experience stressors that can impact both their academic experience and personal well-being. These may include mental health concerns, substance misuse, sexual or relationship violence, family circumstances, campus climate, financial matters, among others.

Students are encouraged to learn about and utilize UW-Madison's mental health services and/or other resources as needed. Visit uhs.wisc.edu or call University Health Services at (608) 265-5600 to learn more.

PRIVACY OF STUDENT RECORDS & THE USE OF AUDIO RECORDED LECTURES STATEMENT

View more information about FERPA (https://registrar.wisc.edu/ferpa-facstaff/).

Lecture materials and recordings for this course are protected intellectual property at UW-Madison. Students in courses may use the materials and recordings for their personal use related to participation in class. Students may also take notes solely for their personal use. If a lecture is not already recorded, students are not authorized to record lectures without permission unless they are considered by the university to be a qualified student with a disability who has an approved accommodation that includes recording. [Regent Policy Document 4-1] Students may not copy or have lecture materials and recordings outside of class, including posting on internet sites or selling to commercial entities, with the exception of sharing copies of personal notes as a notetaker through the McBurney Disability Resource Center. Students are otherwise prohibited from providing or selling their personal notes to anyone else or being paid for taking notes by any person or commercial firm without the instructor's express written permission. Unauthorized use of these copyrighted lecture materials and recordings constitutes copyright infringement and may be addressed under the university's policies, UWS Chapters 14 and 17, governing student academic and non-academic misconduct.

STUDENTS' RULES, RIGHTS & RESPONSIBILITIES

Rights & Responsibilities (https://guide.wisc.edu/undergraduate/#rulesrightsandresponsibilitiestext)

TEACHING & LEARNING DATA TRANSPARENCY STATEMENT

The privacy and security of faculty, staff and students' personal information is a top priority for UW-Madison. The university carefully reviews and vets all campus-supported digital tools used for teaching and learning, including those that support data empowered educational practices (https://teachlearn.wisc.edu/deep/) and proctoring. View the university's full teaching and learning data transparency statement (https://teachlearn.provost.wisc.edu/teaching-and-learning-data-transparency-statement/).

ACCOUNTING AND INFORMATION SYSTEMS (ACCT I S)

ACCT I S 100 – INTRODUCTORY FINANCIAL ACCOUNTING
3 credits.

Examines generally accepted accounting principles for measurement and reporting of financial information in a balance sheet, income statement, and statement of cash flows; introduction to analysis and interpretation of financial accounting data for decision-making purposes.
Requisites: Not open to students with credit for ACCT I S 300
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the role of financial reporting and accounting reports in making resource allocation decisions.
Audience: Undergraduate

2. Explain general purpose financial statements of a business from the perspective of the users of those statements.
Audience: Undergraduate

3. Articulate the business purposes behind economic transactions and basic accounting concepts to determine appropriate accounting treatments for transactions and business.
Audience: Undergraduate

4. Capture information from economic transactions into accounting systems and fully articulate the impact of those transactions on the business.
Audience: Undergraduate

5. Compile information in the accounting system to create general purpose financial statements.
Audience: Undergraduate

6. Analyze the complexity of real world events and apply judgment with respect to accounting measurements and reporting.
Audience: Undergraduate

ACCT I S 211 – INTRODUCTORY MANAGERIAL ACCOUNTING
3 credits.

Managerial accounting concepts relevant for decision-making; use of accounting information for planning, decision-making, and control of business operations in various management and business environments.
Requisites: ACCT I S 100, (ACCT I S 300 and declared in the Certificate in Accounting Fundamentals), or declared in undergraduate Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe how managerial accounting principles and tools are critical to the successful design and implementation of an organizational strategy.
Audience: Undergraduate

2. Explain how business decisions can affect the design of performance measurement systems and achievement of the organization's objectives.
Audience: Undergraduate

3. Apply cost and revenue-related concepts to planning, performance evaluation, and decision-making (e.g., product mix, outsourcing, pricing, incentive schemes, and budgeting).
Audience: Undergraduate

4. Recognize ethical issues in business, particularly as applied to the design of performance measurement and incentive schemes within the scope of management accounting.
Audience: Undergraduate

5. Recognize how to successfully apply management accounting tools and concepts to various business disciplines and the increasingly complex business environment.
Audience: Undergraduate

ACCT I S 300 – ACCOUNTING PRINCIPLES
3 credits.

Examines both financial and managerial accounting for business decisions. Emphasizes preparation and interpretation of financial statements, analysis of financial information, determination of costs for products and services, and use of accounting information for planning and control of business operations.
Requisites: Satisfied Quantitative Reasoning (QR) A requirement. Not open to students with credit for ACCT I S 100.
Course Designation: Gen Ed - Quantitative Reasoning Part B
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply accounting concepts to economic transactions to capture relevant and reliable data for business decisions
Audience: Undergraduate

2. Prepare financial statements of a business based on economic transactions and events
Audience: Undergraduate

3. Apply financial statements to draw inferences about the performance and financial condition of businesses
Audience: Undergraduate

4. Compute costs of products and services for different costing systems
Audience: Undergraduate

5. Prepare strategic budgets for a business along with analysis of budgeting results
Audience: Undergraduate

ACCT I S 301 – FINANCIAL REPORTING I
3 credits.

Examines current and emerging financial reporting theory and techniques used primarily to measure and disclose assets and determine income. Emphasis on analysis and measurement.
Requisites: ACCT I S 100 or (ACCT I S 300 and declared in the Certificate in Accounting Fundamentals)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate the measurement and valuation methods of the financial statement elements, including fair value concepts.
Audience: Undergraduate

2. Recognize that transactions are triggered by business purposes and that understanding the business purpose is important for the application of the Generally Accepted Accounting Principles (GAAP).
Audience: Undergraduate

3. Identify and analyze fundamental economic events, conduct research, and apply relevant accounting standards to these events.
Audience: Undergraduate

4. Demonstrate proper presentation and reporting of financial statement elements and transactions.
Audience: Undergraduate

5. Demonstrate how financial statements effectively communicate the financial results of an economic entity, including the use of financial statements from the perspective of the users of the financial statements.
Audience: Undergraduate

ACCT I S 302 – FINANCIAL REPORTING II
3 credits.

Examines current and emerging financial reporting theory and techniques used primarily to measure and disclose financial claims on assets.
Requisites: ACCT I S 301 or declared in undergraduate Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain complex financial events and their effect on financial statements, cash flows and accounting based contracts.
Audience: Undergraduate

2. Explain the measurement and valuation concepts of financial statement elements, including complex fair value concepts.
Audience: Undergraduate

3. Recognize and discuss controversial and emerging practices in valuation and the potential economic consequences of these accounting rules.
Audience: Undergraduate

4. Interpret how financial information may impact a company, management decisions or investor decisions.
Audience: Undergraduate

5. Identify and apply appropriate accounting standards to complex economic events.
Audience: Undergraduate

6. Analyze a problem and arrive at a conclusion that integrates all available information and justify their conclusion convincingly to others.
Audience: Undergraduate

7. Develop and demonstrate effective communication and networking skills with their class peers.
Audience: Undergraduate

8. Reflect on how to pursue their future career goals within the accounting profession and how those goals compare with those of their peers.
Audience: Undergraduate

ACCT I S 310 – COST MANAGEMENT SYSTEMS
3 credits.

Design of actual and standard cost systems for reporting product costs in job costing, process costing, and activity costing production environments. Overhead allocation methods. Budgeting and profit planning procedures. Techniques for variance analysis and performance evaluation. Behavioral considerations in the design and use of cost accounting information systems.
Requisites: ACCT I S 211 or declared in undergraduate Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe how financial and nonfinancial information serves numerous purposes in an organization, especially in relation to facilitating and influencing decisions.
Audience: Undergraduate

2. Compare different costing systems to determine what system is best given specific decision-making needs or business situations.
Audience: Undergraduate

3. Explain how managerial accountants contribute to the design and implementation of planning, performance measurement, evaluation, and compensation systems.
Audience: Undergraduate

4. Evaluate the strengths and weaknesses of common analytical tools of accounting when applied to a specific context.
Audience: Undergraduate

ACCT I S 329 – TAXATION: CONCEPTS FOR BUSINESS AND PERSONAL PLANNING
3 credits.

An introduction to the U.S. income taxation concepts with emphasis on business and personal planning strategies. Taxes are placed in a framework which considers all costs of doing business. Includes approaches and skills needed to prepare individual, corporate, and partnership income tax returns.
Requisites: ACCT I S 100, 300, or LAW 811. Not open to students declared in Business: Accounting BBA program
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Explain the objectives of taxes applicable at the federal level and become familiar with how they are calculated.
Audience: Undergraduate

2. Articulate key concepts in income tax laws and how tax principles are applicable to various business activities and transactions and the differences that apply to individuals and corporations.
Audience: Undergraduate

3. Apply a framework for integrating income tax planning into accounting and business decisions.
Audience: Undergraduate

ACCT I S 340 – ACCOUNTING INFORMATION SYSTEMS
3 credits.

Understand, document, and evaluate integrated enterprise systems and critical information tracked in core business processes, applying technology to model, capture, and query data needed, and assess system design and controls.
Requisites: ACCT I S 211 and (ACCT I S 301 or concurrent enrollment); or declared in undergraduate Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze businesses using patterned-based core business and accounting processes
Audience: Undergraduate

2. Identify the critical information to be tracked in core business processes

Audience: Undergraduate

3. Understand how integrated enterprise systems capture, manipulate, and disseminate information, specifically applying technology to model, capture, and query data needed by information providers and advisors
Audience: Undergraduate

4. Document, evaluate, and recommend improvements to basic accounting information systems used to control processes and communicate information to be used in financial reporting
Audience: Undergraduate

5. Demonstrate basic agility and adaptability with respect to emerging issues and technologies that impact business, accounting information systems, and their future careers
Audience: Undergraduate

ACCT I S 399 – READING AND RESEARCH-ACCOUNTING
1-6 credits.

Individual work suited to the needs of undergraduate students may be arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2015

ACCT I S 401 – BUSINESS ORGANIZATIONS AND NEGOTIABLE INSTRUMENTS
3 credits.

Commercial paper, real estate and personal property, partnerships, corporations, bankruptcy.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe business entity types, differentiating key elements of each, and reasons to choose one type.
Audience: Undergraduate

2. Describe the meaning of fiduciary duty and which parties are covered.
Audience: Undergraduate

3. Demonstrate how to form an entity and pick a business name.
Audience: Undergraduate

4. Describe the types, risk and use of Negotiable Instruments.
Audience: Undergraduate

5. Apply the technical legal rules covered in the course, regarding Bankruptcy, Securities Regulation, Accountants' Liability, Environmental Law, Real Property, and Employment Law.
Audience: Undergraduate

ACCT I S 406 – ACCOUNTING AND ANALYSIS FOR REPORTING ENTITIES
3 credits.

Theoretical, procedural, and practical issues associated with the preparation of financial statements of alternative reporting entities, including the accounting for mergers and acquisitions, consolidations, foreign operations, and complex financial instruments.
Requisites: ACCT I S 302, 702, declared in Business: Accounting and Business Analysis MSB, or the Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain reporting and analysis for the equity method, acquisition method, and intercompany transactions required in for-profit business entities.
Audience: Undergraduate

2. Explain reporting and analysis for non-controlling interests, variable interests, foreign currency translation, and derivatives designed to hedge foreign currency risk required in for-profit business entities.
Audience: Undergraduate

3. Explain reporting and analysis of financial statements required for governmental and not-for-profit entities.
Audience: Undergraduate

4. Analyze complex financial arrangements to support conclusions for proper application of reporting standards.
Audience: Graduate

ACCT I S 600 – PROFESSIONAL EXPERIENCE IN ACCOUNTING
1-6 credits.

An opportunity to experience a professional accounting practice first hand and to integrate this experience with the curriculum.
Requisites: Consent of instructor
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate professional characteristics and skill sets that can be applied beyond the internship.
Audience: Undergraduate

2. Articulate the dynamic nature of the profession and the emerging opportunities available after graduation.
Audience: Undergraduate

3. Develop and grow professional relationships that will extend well beyond the internship.
Audience: Undergraduate

ACCT I S 601 – PROFESSIONAL PRACTICE ISSUES IN ACCOUNTING, AUDITING, AND TAXATION
3 credits.

Study of current accounting and audit issues within a case context. Students will be required to perform computerized research, analyze topical accounting and audit issues, and make case presentations.
Requisites: None
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply fundamental accounting, auditing, or tax concepts to real client transactions and circumstances
Audience: Undergraduate

2. Develop professional characteristics and skill sets that will allow you to excel after graduation
Audience: Undergraduate

3. Apply critical thinking skills by identifying relevant professional topics, researching those topics and then effectively communicating the results in written memos and oral presentations
Audience: Undergraduate

4. Network with leading practitioners, standard setters, and regulators across the broad nature of the profession
Audience: Undergraduate

5. Address real ethical issues and interact with leading practitioners and/or scholars in analyzing important ethical issues that affect the profession
Audience: Undergraduate

6. Observe the dynamic nature of the profession and broader issues that affect accounting and its role in society
Audience: Undergraduate

ACCT I S 603 – FINANCIAL STATEMENT ANALYSIS
3 credits.

Analysis and interpretation of financial statements, including profitability and ratio analysis, cash flow analysis, accounting-based equity valuation, market impact of accounting choices, earnings quality, earnings management, mergers and acquisitions, intangibles, accounting-based trading strategies, accounting and credit ratings, and international accounting.
Requisites: ACCT I S 302 or 702
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain and apply return-on-equity disaggregation, including a breakdown into operating and nonoperating components.
Audience: Both Grad & Undergrad

2. Analyze financial statements and their accompanying notes, including all related components of the annual report filing.
Audience: Both Grad & Undergrad

3. Prepare a set of reformulated financial statements that reflect one's analysis of those statements and any adjustments that are performed.
Audience: Both Grad & Undergrad

4. Forecast financial statements (disaggregated into operating and nonoperating components) for up to ten years into the future and assess the reasonableness of those forecasts.
Audience: Both Grad & Undergrad

5. Determine company valuation using discounted future metrics of operating performance and financial condition based on valuation methods that include discounted cash flows, residual operating income, and market multiples.
Audience: Both Grad & Undergrad

6. Articulate the process of accounting analysis and valuation in practice today, including its strengths and weaknesses and its market dynamics.
Audience: Both Grad & Undergrad

7. Identify major players in accounting and advisory services, including future business opportunities and career paths.
Audience: Graduate

ACCT I S 620 – FUNDAMENTALS OF TAXATION
3 credits.

Application of federal tax provisions and administrative rules common to most taxpayers with introductions to rules specific to corporations, pass-through entities, and individuals.
Requisites: ACCT I S 301 or concurrent enrollment or declared in undergraduate Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the most relevant types of taxes applicable at the federal level and how each is calculated.
Audience: Undergraduate

2. Explain the key concepts in the federal income tax laws in the US United Staes for individuals.
Audience: Undergraduate

3. Identify how tax principles are applicable to various business activities and transactions and the differences that apply to individuals and businesses.
Audience: Undergraduate

4. Identify and evaluate planning opportunities from a variety of tax areas to which a professional is exposed in the early years of a career.
Audience: Undergraduate

5. Apply a framework for integrating income tax planning into accounting and business decisions.
Audience: Undergraduate

6. Recognize that developing effective tax planning strategies for clients requires effective research skills.
Audience: Undergraduate

7. Apply primary sources of tax authority to evaluate the impact of tax law on a client situation and effectively communicate that analysis to the client.
Audience: Undergraduate

ACCT I S 621 – CORPORATE AND ADVANCED TAXATION
3 credits.

Application of federal tax provisions and administrative rules pertaining to corporations and shareholders, including elective provisions for "S" corporations. Emphasis on tax planning and the consequences of corporate and shareholder decisions.
Requisites: ACCT I S 620, declared in Business: Accounting and Business Analysis MSB, or declared in the Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop a basic understanding of the Federal Income tax rules of the United States as they apply to the formation, operation, reorganization, and liquidation of corporations.
Audience: Undergraduate

2. Demonstrate an understanding of how the federal income tax laws relate to specific client situations and provide written communication with the client regarding various outcomes and potential tax strategy alternatives.
Audience: Undergraduate

3. Apply a framework for integrating income tax planning into accounting and business transactions as a foundation for structuring tax-efficient business transactions.
Audience: Undergraduate

ACCT I S 630 – FOUNDATIONS OF AUDITING
3 credits.

Audit and assurance services are vital to ensuring that organizations, their stakeholders, and the public can rely on organizations' financial information. Focus is on financial statement audits and their role in corporate governance and oversight. Emphasizes the components of the audit process with application to key financial accounting cycles and related internal controls. Also covers the professional role of public accountants and professional standards, norms and ethics.
Requisites: ACCT I S 301, 701, or declared in the Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the components to a high-quality audit process.
Audience: Undergraduate

2. Apply a high-quality audit process to key accounting cycles and related internal controls in a financial statement audit.
Audience: Undergraduate

3. Explain the value of a financial statement audit to a firm’s stakeholders and role of auditor independence, skepticism, audit standards, and ethics to delivering that value.
Audience: Undergraduate

4. Implement solutions to audit problems as an effective member of a team while developing your current and future professional network.
Audience: Undergraduate

ACCT I S 640 – FOUNDATION IN ACCOUNTING ANALYTICS
3 credits.

Analytics has become an integral part of accounting to support decision making, coordination and control, and compliance with regulations. Being able to identify and pursue relevant questions using data is a critical skill for new hires, as is the ability to successfully communicate one's findings. This pursuit and communication requires a strong facility with a variety of analytics technologies.
Requisites: (ACCT I S 340 or concurrent enrollment), (ACCT I S 100 and GEN BUS 307 or 317), (ACCT I S 700 or concurrent enrollment), or declared in the Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify key business questions and the central issues applied in relevant accounting contexts including financial reporting, auditing, tax, and managerial accounting.
Audience: Both Grad & Undergrad

2. Engage authentic accounting technology tools and source data.
Audience: Both Grad & Undergrad

3. Discover relevant variables and patterns in accounting datasets.
Audience: Both Grad & Undergrad

4. Interpret and communicate results.
Audience: Both Grad & Undergrad

5. Reflect on how the skills, knowledge, and inspiration acquired from learning will impact their profession and career.
Audience: Both Grad & Undergrad

6. Synthesize learning to reflect on the power and significance of the emerging field to their professional future.
Audience: Graduate

ACCT I S 700 – FINANCIAL ACCOUNTING
2-3 credits.

Measurement and reporting guidelines underlying preparation of general purpose financial statements. Explore current measurement and reporting issues. Analyze and interpret financial statement data for investment, lending, and related decisions.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain both the interrelationship and details of the structural components of financial reporting.
Audience: Graduate

2. Apply the recognition and measurement concepts to the preparation of a basic set of financial statements.
Audience: Graduate

3. Demonstrate how companies' financing, investing, and operating decisions affect their financial statements and, consequently, measures used to assess risk.
Audience: Graduate

4. Evaluate the impact of business and macro-economic events on a company's financial statements.
Audience: Graduate

5. Apply accounting data to the creation of a basic set of financial statements and understand how business transactions affect profits and cash flows.
Audience: Graduate

6. Understand that there are recognition and measurement concepts that underlie the preparation of a basic set of financial statements and that financial statements and accounting data is used extensively in business as a common language.
Audience: Graduate

ACCT I S 701 – FINANCIAL REPORTING I
3 credits.

Examines current and emerging financial accounting theory and techniques used to measure and report financial information to investors, creditors, and other external users. Emphasizes asset and liability valuations and their relationships to income determination, preparation and interpretation of financial statements, and related disclosure requirements.
Requisites: ACCT I S 700
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate the measurement and valuation methods of the financial statement elements, including fair value concepts.
Audience: Graduate

2. Recognize that transactions are triggered by business purposes and that understanding the business purpose is important for the application of the Generally Accepted Accounting Principles (GAAP).
Audience: Graduate

3. Identify and analyze fundamental economic events, conduct research, and apply relevant accounting standards to these events.
Audience: Graduate

4. Demonstrate proper presentation and reporting of financial statement elements and transactions.
Audience: Graduate

5. Demonstrate how financial statements effectively communicate the financial results of an economic entity, including the use of financial statements from the perspective of the users of the financial statements.
Audience: Graduate

6. Apply knowledge of concepts learned in the course to analyze a public company's operating results and accounting policies.
Audience: Graduate

ACCT I S 702 – FINANCIAL REPORTING II
3 credits.

Examines current and emerging financial accounting theory and techniques used to measure and report financial information to investors, creditors, and orther external users, including dilutive securities, investments, revenue recognition, income tax allocation, pensions, leases and accounting changes.
Requisites: ACCT I S 701
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain complex financial events and their effect on financial statements, cash flows and accounting-based contracts.
Audience: Graduate

2. Explain the measurement and valuation concepts of financial statement elements, including complex fair value concepts.
Audience: Graduate

3. Recognize and discuss controversial and emerging practices in valuation and the potential economic consequences of these accounting rules.
Audience: Graduate

4. Interpret how financial information may impact a company, management decisions or investor decisions.
Audience: Graduate

5. Identify and apply appropriate accounting standards to complex economic events.
Audience: Graduate

6. Analyze a problem and arrive at a conclusion that integrates all available information and justify their conclusion convincingly to others.
Audience: Graduate

7. Develop and demonstrate effective communication and networking skills with their class peers.
Audience: Graduate

8. Reflect on how to pursue their future career goals within the accounting profession and how those goals compare with those of their peers.
Audience: Graduate

9. Apply knowledge of complex financial events and concepts learned in the course to analyze a recent Form 10-K filing.
Audience: Graduate

ACCT I S 710 – MANAGERIAL ACCOUNTING
2-3 credits.

Interpretation and use of accounting data for management planning, decision making and control. Consideration of cost-volume-profit relationships, relevant costs, variable (direct) costing, activity-based costing, transfer pricing and performance evaluation of segments of the firm.
Requisites: ACCT I S 700
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand how managerial accounting principles and tools are critical to the successful design and implementation of an organizational strategy.
Audience: Graduate

2. Explain how behavioral issues can affect the design of performance measurement systems and achievement of the organization's objectives.
Audience: Graduate

3. Integrate strategic financial and nonfinancial performance metrics into an integrated performance measurement framework such as the Balanced Scorecard's four performance measurement perspectives: financial, customer, internal processes, and learning and growth.
Audience: Graduate

4. Appropriately apply cost-related concepts to planning, performance evaluation, and decision making (e.g., product mix, outsourcing, pricing, incentive schemes, and budgeting).
Audience: Graduate

5. Calculate costs based on various cost system design choices, and understand the implications of choices in designing cost management systems for products, services, customers, and other business segments.
Audience: Graduate

6. Evaluate and articulate the opportunities and challenges when balancing environmental and social objectives with financial performance.
Audience: Graduate

7. Recognize ethical issues in business, particularly as applied to the design of performance measurement and incentive schemes within the scope of management accounting.
Audience: Graduate

8. Recognize how to successfully apply management accounting tools and concepts to various business disciplines and the increasingly complex business environment.
Audience: Graduate

ACCT I S 722 – ANALYSIS OF TAXATION FOR PASS-THROUGH ENTITIES
3 credits.

Analysis of federal tax provisions and administrative rules regarding pass-through entities, such as partnerships, S-corporations, and limited liability companies; including their application to entity formation and operation, property and ownership basis, distributions, and interest transfers.
Requisites: ACCT I S 620 and graduate/professional standing, declared in Business: Accounting and Business Analysis MSB, or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate the ability to read, comprehend, and apply complex regulatory materials.
Audience: Graduate

2. Demonstrate an in-depth knowledge of the structure and principles underlying the federal income taxation of partnerships and limited liability companies.
Audience: Graduate

3. Recognize the tax implications and planning opportunities presented in the formation, operation, and liquidation of partnerships and limited liability companies.
Audience: Graduate

4. Apply a framework for integrating tax planning and structuring business and accounting transactions.
Audience: Graduate

ACCT I S 724 – TAX RESEARCH, PROCEDURE & ANALYSIS
3 credits.

Methodologies and tools for tax research; utilization of tax research tools; preparation of investigative reports; professional and interprofessional responsibilities; administrative procedures and techniques.
Requisites: Graduate/professional standing and (ACCT I S 620 or LAW 742), declared in Business: Accounting and Business Analysis MSB, or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate how to conduct tax research through exposure to the fundamentals of tax research methods and tools, developing tax research tools, using appropriate tax authorities, research services, and electronic databases.
Audience: Graduate

2. Demonstrate how to conduct and present tax research within a team structure and how to evaluate the role and success of their teams in progressively more complex situations.
Audience: Graduate

3. Describe how tax firms conduct tax practice, advise clients, and research tax laws relevant to the client's situation through exposure to tax professionals.
Audience: Graduate

4. Demonstrate an understanding of the creation and enforcement of the federal income tax laws, including an understanding of how the IRS uses statutes of limitations.
Audience: Graduate

ACCT I S 725 – ANALYSIS OF INTERNATIONAL TAXATION
3 credits.

An introduction to international tax issues. Topics covered may include tax treaties, foreign tax credit provisions, Subpart F rules, and taxation of inbound investment and business income.
Requisites: (ACCT I S 620, 621, and graduate/professional standing), LAW 742, declared in Business: Accounting and Business Analysis MSB, or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe key concepts inherent in the Federal taxation of both U.S. taxpayers abroad and foreign taxpayers in the United States.
Audience: Graduate

2. Identify potential technical problems that can arise in an international tax setting, including the transfer pricing of related party transactions.
Audience: Graduate

3. Apply federal income tax laws applicable to international transactions to advise clients on how to plan for optimal tax outcomes.
Audience: Graduate

ACCT I S 730 – ADVANCED AUDITING: ANALYSIS, POLICY, AND JUDGMENT
3 credits.

Auditors increasingly use analytics to provide assurance over financial and non-financial information. Audit and assurance principles will be viewed through the lens of an analytics mindset. Uses analytics in combination with other audit techniques as a basis for professional judgments. Examines how the contemporary audit environment influences professional judgments. Develops the technical knowledge and skills needed in many professional roles through discussion, case studies, and group projects.
Requisites: (Graduate/professional standing, ACCT I S 340, and 630), declared in Business: Accounting and Business Analysis MSB, or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and respond to relevant risks in a variety of complex audit areas
Audience: Graduate

2. Evaluate audit evidence and make well-reasoned and well-justified conclusions
Audience: Graduate

3. Describe and analyze the impact of regulatory activities on audit practice
Audience: Graduate

4. Use appropriate tools to effectively and efficiently complete audit tasks

Audience: Graduate

5. Communicate effectively in writing and in live presentations and discussions
Audience: Graduate

6. Work effectively in a team to complete challenging tasks
Audience: Graduate

ACCT I S 740 – INFORMATION RISK, CONTROL, & FORENSICS
3 credits.

Examines the control and security of accounting information systems with an auditing and forensic perspective. Topics covered include: data governance frameworks, risks to information (i.e., data), internal controls related to identified risks, types of assurance services, computer assisted audit tools and techniques (CAATTs), fraud, and other related topics.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Summarize risks and control practices related to information technology for the successful design and implementation of integrated audits as well as the performance of organizational strategy.
Audience: Graduate

2. Explain computerized information system concepts including general and application controls and related data governance frameworks.
Audience: Graduate

3. In a variety of contexts, assess information technology risks and risk mitigation strategies to develop internal controls necessary to help mitigate risks.
Audience: Graduate

4. Summarize the purpose of and develop skills related to computer assisted auditing tools (CAATs) that help expedite the determination of internal control effectiveness.
Audience: Graduate

5. Perform common analytical tools of accounting and identify their strengths and weaknesses when applied to a specific context.
Audience: Graduate

6. Interpret the complexities of information technology and related facets (e.g., security, integrity, diffusion, etc.) through interactions with accounting and technology professionals.
Audience: Graduate

ACCT I S 765 – CONTEMPORARY TOPICS
1-4 credits.

Exploration of advanced subject areas possibly to be introduced into the business curriculum.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022

ACCT I S 770 – ACCOUNTING THEORY: REPORTING INCENTIVES AND CONSEQUENCES
3 credits.

Review and analysis of theoretical foundations of corporate financial reporting; application of conceptual framework and finance/economic theories to understand development of major accounting standards.
Requisites: Graduate/professional standing and (ACCT I S 302 or 702); or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the conceptual frameworks underlying accounting standard setting in the US and internationally.
Audience: Graduate

2. Recognize how political considerations and economic consequences within a market economy affect accounting standard setting.
Audience: Graduate

3. Explain the role of information asymmetry, adverse selection and moral hazard in capital markets in addressing accounting and disclosure issues.
Audience: Graduate

4. Demonstrate how to assess accounting policy decisions in terms of underlying finance and economic theories such as efficient capital markets, decision theory, prospect theory, game theory, and signaling.
Audience: Graduate

5. Recognize how managers' motivations, especially with respect to compensation and other contracts could explain management reactions to proposed accounting policies, as well as practices such as earnings management.
Audience: Graduate

6. Apply the conceptual framework, as well as relevant finance and economic theories and academic research, in a detailed explanation of the development of a major accounting standard.
Audience: Graduate

ACCT I S 771 – ANALYSIS OF PERFORMANCE MEASUREMENT & CONTROL
3 credits.

Development and analysis of accounting data for managerial planning, control, decision-making, and costing, with a focus on the integration of financial and non-financial information needs for various managerial functions.
Requisites: Graduate/professional standing and (ACCT I S 310 or 710), or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Articulate, at an advanced level, the role of management accounting information for making strategic management decisions within an organization.
Audience: Graduate

2. Explain the complexities of applying strategic performance measurement to capture successes of an organizational strategy, and why it is still worth doing.
Audience: Graduate

3. Describe the role of intangible assets in understanding organizational strategy and how these assets provide a competitive advantage.
Audience: Graduate

4. Explain how activity-based costing, activity-based management quality, just-in-time inventory, and sustainability initiatives impact production processes across the organizational value chain.
Audience: Graduate

5. Examine the critical dimensions of Balanced Scorecard Reporting in detail, including non-financial metrics.
Audience: Graduate

6. Develop and present proposed Balanced Scorecards to reflect the execution of a company's strategic initiative.
Audience: Graduate

ACCT I S 772 – ANALYSIS OF TAXES & BUSINESS DECISIONS
3 credits.

Readings and cases in taxation; analysis and integration of related tax provisions and taxpayer impact.
Requisites: (ACCT I S 620 and graduate/professional standing) or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop a basic understanding of the tax environment and tax laws related to each of the topical areas presented.
Audience: Graduate

2. Incorporate a consistent approach to analyzing the tax implications within a variety of business decisions.
Audience: Graduate

3. Identify and evaluate planning opportunities from a variety of tax areas to which a professional is exposed in the early years of a career.
Audience: Graduate

ACCT I S/E P D/GEN BUS 781 – FINANCIAL AND BUSINESS ACUMEN
1 credit.

This course is designed with a keen awareness for the needs of the non-financial student or professional. For this class, no previous financial training is required. The intent is to equip you with the essential concepts used to develop financial literacy. Content will cover basic financial terms and reports, analytical tools to help interpret financial data and using financial data in budgets and forecasts.
Requisites: Graduate/professional standing. Not open to students declared in an MBA program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Apply the language and foundational tools of finance to analyze how a company's economic activity is reflected in its financial reports
Audience: Graduate

2. Perform high-level financial statement analysis to identify important information from financial reports
Audience: Graduate

3. Apply basic financial concepts of valuation, capital budgeting, and financial decision making
Audience: Graduate

ACCT I S 799 – READING AND RESEARCH-ACCOUNTING
1-6 credits.

Individual work suited to the needs of graduate students may be arranged both during regular sessions and the intersession periods.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2009

ACCT I S 971 – SEMINAR IN ACCOUNTING RESEARCH
3 credits.

Provides the tools needed for educated consumption of accounting research. Examines and synthesizes relevant accounting research to identify important research questions. Develops the knowledge and skills needed to conduct accounting research through discussion, presentations, and writing assignments.
Requisites: Declared in Business PHD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss scientific method as it is applied to accounting research.
Audience: Graduate

2. Acquire background in current accounting research and critical analysis.
Audience: Graduate

3. Recognize and apply prevailing practices and expectations in accounting academia with respect to conducting accounting research
Audience: Graduate

ACCT I S 990 – ACCOUNTING INDEPENDENT RESEARCH PHD THESIS
1-12 credits.

Individual work to complete dissertation requirement of Ph.D. program.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ACCT I S 999 – READING AND RESEARCH-ACCOUNTING PHD
1-6 credits.

Individual work suited to the needs of Ph.D. students may be arranged with a faculty member.
Requisites: Declared in Business PHD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ACTUARIAL SCIENCE (ACT SCI)

ACT SCI 300 – PROBABILITY FOR ACTUARIES
1 credit.

Develop a knowledge of fundamental mathematical tools for quantitatively assessing risk. Emphasize the applications of these tools to problems encountered in actuarial science.
Requisites: (STAT/MATH 309, MATH 331, STAT 333, 340, or concurrent enrollment), or declared in undergraduate Business Exchange program. Not open to graduate/professional students.
Repeatable for Credit: Yes, for 2 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Mathematically represent common single variable discrete and continuous probability functions that are relevant in actuarial applications such as Poisson, binomial, negative binomial, and geometric, uniform, exponential, and normal.
Audience: Undergraduate

2. Calculate measures related to the characteristics of single variable probability functions such as moments, mean, variance, median, mode, percentiles, etc., and interpret them in an actuarial context.
Audience: Undergraduate

3. Derive joint, marginal and conditional probabilities and densities from multivariate distributions and calculate covariance and correlation coefficients, and interpret them in an actuarial context.
Audience: Undergraduate

ACT SCI 301 – ACTUARIAL SCIENCE METHODS II
1 credit.

Develop a knowledge of mathematical tools for quantitatively assessing financial risk. Emphasize the applications to problems encountered in actuarial science.
Requisites: (ACT SCI 303 or concurrent enrollment), declared in Capstone Certificate in Actuarial Science, or declared in undergraduate Business Exchange program. Not open to graduate students.
Repeatable for Credit: Yes, for 2 number of completions
Last Taught: Spring 2024
Learning Outcomes: 1. Illustrate the impact of the time value of money on decisions both in their professional and personal life.
Audience: Undergraduate

2. Compare and contrast the dynamics of key financial instruments including annuities, bonds and loans as well as calculate the price and other significant values of these instruments.
Audience: Undergraduate

3. Demonstrate the importance of immunizing asset and liability portfolios against changes in interest rates and describe methods of immunization.
Audience: Undergraduate

4. Explain the determinants of interest rates.
Audience: Undergraduate

5. Differentiate between the different types of measures of rate of return and return on investment and calculate those rates given a set of cash flow assumptions.
Audience: Undergraduate

6. Calculate the value of interest rate swaps.
Audience: Undergraduate

ACT SCI 303 – THEORY OF INTEREST
3 credits.

Time value of money; interest compounded discretely and continuously; accumulated and present value of payments; loans and sinking funds; annuity and bond valuation; interest rate term structure; duration, immunization and interest rate swaps.
Requisites: MATH 213, 222, or declared in the Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand and illustrate the impact of the time value of money on decisions both in their professional and personal life.
Audience: Undergraduate

2. Differentiate between the different types of measures of rate of return and return on investment and calculate those rates given a set of cash flow assumptions.
Audience: Undergraduate

3. Compare and contrast the dynamics of key financial instruments including annuities, bonds and loans as well as calculate the price and other significant values of these instruments.
Audience: Undergraduate

4. Demonstrate the importance of immunizing asset and liability portfolios against changes in interest rates and describe methods of immunization.
Audience: Undergraduate

ACT SCI 365 – CONTEMPORARY TOPICS
1-3 credits.

Exploration of subject areas possibly to be introduced into the business curriculum.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023

ACT SCI 399 – READING AND RESEARCH-ACTUARIAL SCIENCE
1-3 credits.

Directed study in various areas of actuarial science that provides the opportunity to participate in more in-depth study (intermediate level) under the direct guidance of actuarial science faculty.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, for 4 number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Students will be able to communicate basic knowledge of content, analyze related data and apply knowledge in a variety of academic settings.
Audience: Undergraduate

ACT SCI 640 – ACTUARIAL STATISTICS FOR RISK MODELING
4 credits.

Introduction to statistical learning theory and methods for analyzing and modeling risks in actuarial applications. Topics include linear and nonlinear models; diagnostics and assessment of predictive models; variable and model selection; and non-supervised learning techniques.
Requisites: (GEN BUS 317, ECON 410, STAT/MATH 310, STAT 312, 333, or 340), graduate/professional standing, or declared in Capstone Certificate in Actuarial Science
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate key assumptions pertinent to various statistical methods for risk modeling in insurance.
Audience: Both Grad & Undergrad

2. Evaluate actuarial models for risk analysis using graphical procedures, hypothesis tests, and score-based approaches.
Audience: Both Grad & Undergrad

3. Demonstrate an understanding of the bias-variance trade-off within the actuarial and risk modeling context and its impact on model selection.
Audience: Both Grad & Undergrad

4. Employ resampling techniques for validating models used in risk assessment and management.
Audience: Both Grad & Undergrad

5. Explain and interpret statistical package outputs to risk managers and other stakeholders.
Audience: Both Grad & Undergrad

6. Apply supervised and unsupervised learning methods to address challenges in insurance applications.
Audience: Graduate

ACT SCI 650 – FUNDAMENTALS OF LONG-TERM ACTUARIAL MODELING
3 credits.

Advanced problems in the mathematical theory of life contingencies; force of mortality, laws of mortality; premiums and reserves for insurance and annuities based on a single life.
Requisites: ACT SCI 303 and (MATH 331, STAT/MATH 309, 431, STAT 333, or 340), declared in undergraduate Business Exchange program, or Capstone Certificate in Actuarial Science
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the key features of life and annuity insurance.
Audience: Both Grad & Undergrad

2. Apply key concepts concerning parametric and non-parametric mortality models for individual lives.
Audience: Both Grad & Undergrad

3. Estimate parameters for parametric and nonparametric survival models for actuarial applications.
Audience: Both Grad & Undergrad

4. Describe and evaluate present value random variables associated with benefits and expenses for life and annuity insurance
Audience: Both Grad & Undergrad

5. Describe and use the premium and policy value calculation processes for life and annuity insurance
Audience: Both Grad & Undergrad

6. Apply long-term actuarial modeling tools in conjunction with other techniques to address challenges in insurance applications.
Audience: Graduate

ACT SCI 651 – ADVANCED LONG-TERM ACTUARIAL MODELING
3 credits.

Joint life probabilities, annuities and insurances; multiple-decrement theory; pension fund mathematics.
Requisites: ACT SCI 650
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop and utilize multiple state models in actuarial applications and calculate premiums and reserves for policies associated with multiple state models.
Audience: Undergraduate

2. Apply special cases of multiple state model in actuarial practice, including the multiple decrement and multiple life models.
Audience: Undergraduate

3. Understand liabilities and required contributions for pension plans and post retirement health plans.
Audience: Undergraduate

4. Evaluate premiums and liabilities for Universal Life insurance policies.
Audience: Undergraduate

5. Apply profit testing methodology to price and evaluate insurance policies.
Audience: Undergraduate

ACT SCI 652 – FUNDAMENTALS OF SHORT-TERM ACTUARIAL MODELING
3 credits.

Definition and selection of probability distributions appropriate for insurance data that are heavily tailed and skewed.
Requisites: (GEN BUS 317, STAT/MATH 310, STAT 333, 340, or concurrent enrollment), declared in undergraduate Business Exchange program, or Capstone Certificate in Actuarial Science
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate the appropriateness of alternative probability models, for both frequency and severity, when applied to short-term insurance loss data.
Audience: Both Grad & Undergrad

2. Evaluate the effects of coverage modifications on severity models and adjust the models to accommodate the coverage change.
Audience: Both Grad & Undergrad

3. Explain the model building process, and estimation, for the analysis of short-term insurance loss data.
Audience: Both Grad & Undergrad

4. Build aggregate loss models that quantify the risks of an insurance system, and utilize these models in applications such as reinsurance.
Audience: Both Grad & Undergrad

5. Interpret the concepts of ratemaking and reserving, and prepare data for short-term insurance ratemaking and reserving analyses.
Audience: Both Grad & Undergrad

6. Apply short-term actuarial modeling tools in conjunction with other techniques to address challenges in insurance applications.
Audience: Graduate

ACT SCI 653 – ADVANCED SHORT-TERM ACTUARIAL MODELING
3 credits.

Estimation of parameters of probability distributions appropriate for insurance data that are heavy tailed and skewed; assessment of credibility of data for ratemaking.
Requisites: ACT SCI 652 or declared in undergraduate Business Exchange program
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Create new severity distributions through techniques including random variable transformation, mixtures, and splicing.
Audience: Undergraduate

2. Apply extreme value distributions to the estimation of tail measures and probabilities in short-term insurance applications.
Audience: Undergraduate

3. Perform model selection using graphical procedures, hypothesis tests, and score-based approaches with a focus on short-term insurance applications.
Audience: Undergraduate

4. Estimate losses for short-term insurance coverages using credibility procedures including greatest accuracy credibility and empirical Bayesian estimation.
Audience: Undergraduate

5. Apply advanced techniques for estimating outstanding claims associated with short-term insurance coverages, and understand the underlying statistical models and assumptions.
Audience: Undergraduate

6. Apply advanced techniques to calculate premiums for short-term insurance coverages, such as calculating risk classification differential changes.
Audience: Undergraduate

ACT SCI 654 – REGRESSION AND TIME SERIES FOR ACTUARIES
2-3 credits.

Foundation of multiple regression and time series analysis with focus on business. Introduction to skills needed to become critical consumers of reports that are based on regression and time series analysis.
Requisites: (ACT SCI 640, GEN BUS 656, STAT 333, or 340), or declared in undergraduate Business Exchange program
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Complete hands-on tutorials and exercises using linear regression and time series models relevant for actuarial practice.
Audience: Undergraduate

2. Utilize statistical software to estimate model parameters for regression models in business applications.
Audience: Undergraduate

3. Explain the importance of checking model assumptions and conducting residual analyses in business applications.
Audience: Undergraduate

4. Explain the impact of choices of explanatory variables and incorporate these variables in the model.
Audience: Undergraduate

5. Integrate regression concepts to other actuarial science courses including loss models, actuarial mathematics, and use of simulation.
Audience: Undergraduate

ACT SCI 655 – HEALTH ANALYTICS
3 credits.

Introduction to the broad area of health, integrating how researchers from multiple perspectives have investigated various aspects of health, along with the hands-on practice of learning and using statistical tools to analyze these topics.
Requisites: (ACT SCI 640, GEN BUS 656, STAT 333, or 340), or declared in undergraduate Business Exchange program
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss an assortment of issues in the health area to gain knowledge of the interaction of health, health care and health insurance.
Audience: Undergraduate

2. Synthesize research in assigned articles and critically discuss health-related peer-reviewed articles in a small, interactive group setting.
Audience: Undergraduate

3. Apply and extend knowledge in statistics and statistical modeling as related to health topics.
Audience: Undergraduate

4. Apply statistical methods to data from the Medical Expenditure Panel Survey (MEPS).
Audience: Undergraduate

5. Develop presentation and writing skills by critically discussing and analyzing a health analytics paper using MEPS data.
Audience: Undergraduate

ACT SCI 657 – RISK ANALYTICS
3 credits.

Develop a toolbox for modeling, communicating, and managing risk and uncertainty in business applications. Emphasis on the notation of probabilistic forecasting and introduces a predictive modeling framework that integrate modern machine learning methods with distribution-based regression models. Topics include heavy-tailed regression, count data regression, survival data analysis, feature engineering using neural networks and natural language processing, among others.
Requisites: (ACT SCI 640, GEN BUS 656, STAT 333, or 340), or declared in undergraduate Business Exchange program
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Articulate the difference between point prediction and probabilistic prediction in a business context.
Audience: Undergraduate

2. Build predictive models for the purpose of probabilistic forecasting in business applications.
Audience: Undergraduate

3. Select appropriate modeling strategy and evaluate performance of the models in a given business context.
Audience: Undergraduate

4. Perform feature engineering to incorporate complex pattern and unstructured data into the predictive model development for business applications.
Audience: Undergraduate

5. Interpret the prediction outcome and communicate results to non-technical business audiences
Audience: Undergraduate

ACT SCI 765 – CONTEMPORARY TOPICS
1-3 credits.

Exploration of subject areas possibly to be introduced into the business curriculum.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2020

AFRICAN AMERICAN STUDIES (AFROAMER)

AFROAMER 101 – INTRODUCTION TO AFRICAN AMERICAN STUDIES
3 credits.

Delve into the origins of African American Studies as an academic discipline and explore its early forms. Examine how African Americans have contributed to the understanding of the African American experience, both historically and in the present day. Analyze current struggles of the Black community for freedom, justice, and humanity.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe and critically assess seminal texts in African American thought.
Audience: Undergraduate

2. Recognize the significant contributions that African American people have made to the social, political, and economic development of the United States.
Audience: Undergraduate

3. Identify strengths and weaknesses of various frameworks for addressing antiblackness and achieving racial equity.
Audience: Undergraduate

4. Apply concepts and knowledge from the course to systemic inequities and current events.
Audience: Undergraduate

5. Develop and communicate a position on the necessity of African American Studies.
Audience: Undergraduate

6. Reflect on the field of African American Studies in relation to their own lives.
Audience: Undergraduate

7. Contribute to the further development of an informed, educated, and proactive citizenry through the application of African American Studies methodologies.
Audience: Undergraduate

8. Communicate with others in a way that displays an understanding of racial inequities in the US.
Audience: Undergraduate

AFROAMER/AMER IND/ASIAN AM/CHICLA/FOLKLORE 102 – INTRODUCTION TO COMPARATIVE US ETHNIC AND AMERICAN INDIAN STUDIES
3 credits.

Introduction to comparative ethnic studies, examining race, ethnicity, and indigeneity within the United States. Includes perspectives from African American, American Indian, Asian American, and Chican@ and Latin@ studies.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize the multicultural history of the United States of America and the essential role of Indigenous, African, Asian and Chicanx/e & Latinx/e peoples in the American story.
Audience: Undergraduate

2. Identify the creation, development and legacies of race-based discrimination in the United States.
Audience: Undergraduate

3. Explain the role of race in the creation of value systems in American society.
Audience: Undergraduate

4. Explore the heterogeneity and complexity within persistently marginalized groups as well as their relations to each other.
Audience: Undergraduate

5. Reflect on their learning experience so that they may develop as well-rounded, informed, and educated members of society who can effectively and successfully participate in a multicultural society.
Audience: Undergraduate

AFROAMER 151 – INTRODUCTION TO CONTEMPORARY AFRO-AMERICAN SOCIETY
3 credits.

Survey of the characteristics and problems of African Americans in contemporary society.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

AFROAMER 154 – HIP-HOP AND CONTEMPORARY AMERICAN SOCIETY
3 credits.

The aesthetic and political evolution of hip-hop culture and its relationship to contemporary social issues.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

AFROAMER 155 – THEY: RACE IN AMERICAN LITERATURE
3 credits.

The evolution of stereotypes. The literary manifestations of the assumptions black and white American writers hold toward members of the opposite race.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

AFROAMER 156 – BLACK MUSIC AND AMERICAN CULTURAL HISTORY
3 credits.

Examines the interaction between African American musical culture and its historical context, with an emphasis on the period from 1920 to the present.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

AFROAMER 199 – DIRECTED STUDY
1-3 credits.

Directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023

AFROAMER/AFRICAN 220 – HIPHOP, YOUTH CULTURE, AND POLITICS IN SENEGAL
3 credits.

Explores how HipHop, a quintessential manifestation of African American culture, is adopted and adapted by African youth to fight for social justice and democracy in their local contexts, while at the same time constructing a diasporic African sensibility and "cultural citizenship" that transcends boarders and oceans. Beginning with the history, culture, and politics of HipHop in the U.S., we compare and contrast HipHop's development in Africa with specific attention to Senegal. Explores the the youth culture and politics in Senegal and the ongoing process of cross-cultural flows and hybridity.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2019

AFROAMER/GEN&WS 221 – INTRODUCTION TO BLACK WOMEN'S STUDIES
3 credits.

This course will provide students with an overvview of the field of Black women's studies.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

AFROAMER/GEN&WS 222 – INTRODUCTION TO BLACK WOMEN WRITERS
3 credits.

An introduction to the writings of Afro-American women from the nineteenth to the twentieth century. Fiction, autobiography, non-fiction prose, and poetry will be read and discussed.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

AFROAMER 225 – INTRODUCTION TO AFRICAN AMERICAN DRAMATIC LITERATURE
3 credits.

Introduction to the history of African American theater and major African American playwrights and actors.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025

AFROAMER 227 – INTRODUCTION TO AFRICAN AMERICAN LITERATURE
3 credits.

Analysis of major works of African American fiction, drama, poetry and autobiography. Attention given to historical, cultural and biographical contexts.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify major literary movements in the history of Black literature
Audience: Undergraduate

2. Identify the contextual frameworks that shape cultural representations of race in the US
Audience: Undergraduate

3. Describe the ways African American history and culture shapes and informs Black literary compositions
Audience: Undergraduate

4. Apply textual analysis and cultural studies criticism to our primary readings through class discussion, written essays, and other evaluation
Audience: Undergraduate

5. Develop persuasive written arguments about the aesthetic construction, form, context, and meaning of Black authors' cultural texts and objects
Audience: Undergraduate

6. Communicate with others in ways that displays an understanding of racial inequities in the US
Audience: Undergraduate

AFROAMER 231 – INTRODUCTION TO AFRICAN AMERICAN HISTORY
3 credits.

A social history of West Africans and African Americans from the Trans-Atlantic Slave Trade through the modern Civil Rights Movement, paying special attention to the institution of slavery (1619-1865), emancipation and reconstruction (1861-1877), and the long civil rights movement (1877-1968). Major themes include the varied experiences of enslaved peoples, the roles Black people played in maintaining and sustaining North American colonies, and how African Americans helped to create the American Republic. Examine how Black people fought for their freedom and liberty, as well as, the challenges, successes, and shortcomings of the long civil rights movement.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Recognize the multitude of contributions that people of African descent made to the social, political, and economic development of the United States of America.
Audience: Undergraduate

2. Describe how race-based discrimination was used to marginalize African Americans socially, politically, and economically, and how Black people fought back against institutional oppression.
Audience: Undergraduate

3. Explain the creation, development, and legacies of race-based slavery in the United States.
Audience: Undergraduate

4. Use primary sources and secondary peer-reviewed sources to explain and discuss how certain histories have been valued and devalued and how these differences have promulgated disparities in contemporary American society.
Audience: Undergraduate

5. Demonstrate critical reading, writing, speaking, and thinking skills, specifically with respect to teaching students to harbor healthy skepticism toward knowledge claims.
Audience: Undergraduate

6. Contribute as a well-rounded, informed, and educated citizen capable of beginning to address the goals of the Ethnic Studies Requirement. engendering students' ability to participate in a multicultural society effectively and successfully and to specifically, "prepare students for life and careers in an increasingly multicultural U.S. environment, add breadth and depth to the University
Audience: Undergraduate

7. Engender students' ability to participate in a multicultural society effectively and successfully and to specifically, "prepare students for life and careers in an increasingly multicultural U.S. environment, add breadth and depth to the University curriculum, and to improve the campus climate."
Audience: Undergraduate

8. In-class discussions allow us to practice these skills and gain comfort in talking through difficult historical material. Students demonstrate the ability to have conversations with classmates about race and recognize inequities in institutions.

AFROAMER/AFRICAN 233 – GLOBAL HIPHOP AND SOCIAL JUSTICE
3 credits.

Critical interrogation of the relationship between HipHop and social justice. What is "HipHop," what is "social justice," what is their relationship, how can HipHop can be an effective force for social justice, and what obstacles mitigate against this potential? Discussions will develop familiarity with important concepts in Black studies and social theory such as race and colonialism, imperialism and hegemony, structure and agency, identity and strategic essentialism. Consider the race/class/gender dimensions of weekly topics, acquire a broader familiarity with HipHop activism, and develop new conceptual tools and critical thinking skills.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

AFROAMER/ART HIST 241 – INTRODUCTION TO AFRICAN ART AND ARCHITECTURE
3 credits.

Examines the rich heritage of African arts and architecture as they shape and have been shaped by the histories and cultural values (social, political, religious, philosophical, and aesthetic) of African peoples, both past and present, on the continent where humanity began. It includes an historical overview of selected artistic traditions from different parts of the continent from 26,000 BCE to the 21st century and thematic/cultural case studies: artists and aesthetics; textiles, decorative, and personal/body arts; architecture; and individual artists.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

AFROAMER/ART HIST 242 – INTRODUCTION TO AFRO-AMERICAN ART
3 credits.

Historical survey of African American art. Beginning with the African heritage and concluding with creativity of the 1970's, examine the evolution of African American art. Attention to the aesthetic sensibilities of diverse styles as well as the social significance of Black art within the art arena.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

AFROAMER/ANTHRO/C&E SOC/GEOG/HISTORY/LACIS/ POLI SCI/SOC/SPANISH 260 – LATIN AMERICA: AN INTRODUCTION
3-4 credits.

Latin American culture and society from an interdisciplinary perspective; historical developments from pre-Columbian times to the present; political movements; economic problems; social change; ecology in tropical Latin America; legal systems; literature and the arts; cultural contrasts involving the US and Latin America; land reform; labor movements; capitalism, socialism, imperialism; mass media.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Analyze Latin American culture and society from an interdisciplinary perspective.
Audience: Undergraduate

2. Examine historical developments from pre-Columbian times to the present.
Audience: Undergraduate

3. Identify political movements, economic problems, social change, and ecology in Latin America.
Audience: Undergraduate

AFROAMER 265 – AFRICAN-AMERICAN AUTOBIOGRAPHY
3 credits.

Autobiographies of major African Americans studied in depth to locate the constants and variables in the Black American experience. Focus on the variety of individual responses to conditions in the United States.
Requisites: Sophomore standing; not open to special students
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

AFROAMER/GEN&WS 267 – ARTISTIC/CULTURAL IMAGES OF BLACK WOMEN
3 credits.

Cultural images by and about Black women; feminine creativity in the arts within their historical, cultural, social, and political contexts.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

AFROAMER 270 – SELECTED TOPICS IN AFRICAN AMERICAN STUDIES
1-3 credits.

Introduction to a historical and/or contemporary topic concerning the African American experience. Explores key factors of African American experiences that impact current society.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the history, culture and social conditions of African Americans in the United States and, secondarily, in the African diaspora.
Audience: Undergraduate

2. Recognize inequities in personal and institutional contexts.
Audience: Undergraduate

3. Explain the results of academic research in the area of race to various audiences.
Audience: Undergraduate

4. Develop an understanding of the connection between different disciplinary approaches to the study of race.
Audience: Undergraduate

AFROAMER 271 – SELECTED TOPICS IN AFRICAN AMERICAN CULTURE
3 credits.

Introductory level course on specific topics in African American culture.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

AFROAMER 272 – RACE AND AMERICAN POLITICS FROM THE NEW DEAL TO THE NEW RIGHT
3 credits.

Survey of the decisive role played by race in American politics, 1932-present. Focus on origins and accomplishments of "the Second Reconstruction"; Black Power and white backlash; contemporary racial politics and issues.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

AFROAMER/HIST SCI 275 – SCIENCE, MEDICINE, AND RACE: A HISTORY
3-4 credits.

Surveys the medical and scientific constructions of categories of race, placing the development of racial theories in a broad social and political context. Pays particular attention to the importance of racial science in slavery and colonialism.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Identify and analyze within their social, cultural and economic contexts key historical issues, and their significance, in the history of the idea of race as it relates to scientific and medical developments.
Audience: Undergraduate

2. Develop an understanding of the mutually shaping interactions between ideas about race and perceptions of social hierarchy, health, illness and medical and anthropological categories.
Audience: Undergraduate

3. Analyze the role of social factors like gender and class, among others, in shaping cultural realities related to race and body normativity.
Audience: Undergraduate

4. Identify the role that scientists, physicians, patients, healthcare providers, scientific institutions and the state play in modeling, ideas about race.
Audience: Undergraduate

5. Discern the impact of programs of global science as they intersect with international politics in the shaping of ideas about human rights, ethnicity, and race.
Audience: Undergraduate

AFROAMER/AFRICAN/ANTHRO/GEOG/HISTORY/POLI SCI/SOC 277 – AFRICA: AN INTRODUCTORY SURVEY
4 credits.

African society and culture, polity and economy in multidisciplinary perspectives from prehistory and ancient kingdoms through the colonial period to contemporary developments, including modern nationalism, economic development and changing social structure.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze African society and culture from a multidisciplinary perspective.
Audience: Undergraduate

2. Discuss polity and economy from prehistory and ancient kingdoms through the colonial period to contemporary developments.
Audience: Undergraduate

3. Study contemporary nationalism, economic development and changing social structure.
Audience: Undergraduate

AFROAMER/AFRICAN/HISTORY/POLI SCI 297 – AFRICAN AND AFRICAN-AMERICAN LINKAGES: AN INTRODUCTION
4 credits.

Analysis of retention of African elements in African-American oral, written, and material culture. Social, cultural, and political issues regarding race, self-definition, and self-determination in both Africa and North America will be examined.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze the retention of African elements in African-American oral, written, and material culture.
Audience: Undergraduate

2. Explore social, cultural, and political issues regarding race in both Africa and North America.
Audience: Undergraduate

3. Examine self-determination in both Africa and North America.
Audience: Undergraduate

AFROAMER 302 – UNDERGRADUATE STUDIES IN AFRO-AMERICAN HISTORY
3 credits.

In-depth treatment of a key theme in black historical studies.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

AFROAMER 303 – BLACKS, FILM, AND SOCIETY
3 credits.

Study of the interpretations of the African American past conveyed via theatrical films and television; relationship to other images of blacks found throughout the popular culture; relationship to societal trends.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

AFROAMER/DANCE/MUSIC 318 – CULTURAL CROSS CURRENTS: WEST AFRICAN DANCE/MUSIC IN THE AMERICAS
3 credits.

The influence of traditional West African dance/music heritage in historical, artistic, social contexts in the development of new hybrid forms of music/dance created by cross-pollination of cultures of Africans, Europeans and indigenous peoples in the New World.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

AFROAMER/ASIAN AM/DANCE/FOLKLORE 319 – AFRO ASIAN IMPROV: FROM HIP HOP TO MARTIAL ARTS FUSION
3 credits.

An Afro Asian perspective provides a lens through which intersections between Asian American and African American dance and martial arts are studied and practiced. Asian American and African American movement genres provide tools to explore dance fusion, choreography, and improvisation, to create dances informed by African American and Asian American legacies of struggle, innovation and transformation, while cognizant of historical forces of oppression and racism. Building connections through respectful communication with others are learned through dance practice, discussion and writing about concepts learned through readings, videos, and guest artist visits. Engagement with dance as a cultural vehicle for creative problem-solving and risk-taking occurs through guided class or smaller group activities.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Articulate perspectives on the diversity of the human condition through critical andinterpretive skills to analyze the past, present, and future of human movement in a complex world
Audience: Undergraduate

2. Prepare for participation in a multicultural society through developing a consciousness of self and other and building empathy towards others' perspective, thinking critically and questioning assumptions of certain valued or devalued histories, and analyzing how these differences have promulgated disparities in contemporary American society
Audience: Undergraduate

3. Demonstrate skills in writing and speaking about dance in its historical, contemporary and cultural contexts
Audience: Undergraduate

4. Articulate Afro Asian perspectives on the intersections of Asian American and African American cultural, social and historical knowledge, and communicate important ideas through dance and story-telling performance
Audience: Undergraduate

5. Practice Asian American and African American foundational movement toolboxes as a basis for improvisation and dance choreography supported by concepts of theater and culturally-based learning traditions
Audience: Undergraduate

6. Engage in imagination-led and creative problem-solving movement activities
Audience: Undergraduate

7. Build connections with others through class practice, discussions, working groups within and outside of class
Audience: Undergraduate

8. Use the skills you learn to lead a calmer, more focused, responsible and productive life
Audience: Undergraduate

AFROAMER/HISTORY 321 – AFRO-AMERICAN HISTORY SINCE 1900
3-4 credits.

Survey of African American history from 1900 to the present. Topics covered include segregation, the Civil Rights Movement, the political, social and cultural changes of the late 20th century, and the Obama presidency.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Interpret African Americans' lives during the 20th and 21st centuries as well as that of the country at large
Audience: Both Grad & Undergrad

2. Describe the broader social context in which that history has unfolded and continues to evolve
Audience: Both Grad & Undergrad

3. Identify the rich resources for African American research available to students on campus and in archives throughout the country
Audience: Undergraduate

4. Conduct extensive archival research using the methodologies and practices by scholars of African American history
Audience: Graduate

5. Articulate the historical and continuing marginalization of African Americans
Audience: Both Grad & Undergrad

AFROAMER/HISTORY 322 – AFRICAN AMERICAN HISTORY TO 1900
3 credits.

Survey of African American history from its roots in Africa to the end of the 19th century. Topics considered include the slave trade, the political and cultural practices of enslaved communities, forms of resistance, Reconstruction, and systems of segregation.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2016
Learning Outcomes: 1. Recognize the multitude of contributions that people of African descent made to the social, political, and economic development of the United States of America.
Audience: Both Grad & Undergrad

2. Explain the creation, development, and legacies of race-based slavery in the United States.
Audience: Both Grad & Undergrad

3. Describe how race-based discrimination was used to marginalize African Americans socially, politically, and economically, and how Black people fought back against institutional oppression
Audience: Both Grad & Undergrad

4. Use primary sources and secondary peer-reviewed sources to explain and discuss how certain histories have been valued and devalued and how these differences have promulgated disparities in contemporary American society.
Audience: Both Grad & Undergrad

5. Demonstrate critical reading, writing, speaking, and thinking skills, specifically concerning teaching students to harbor healthy skepticism toward knowledge claims.
Audience: Both Grad & Undergrad

6. Contribute as a well-rounded, informed, and educated citizen capable of beginning to address the goals of the Ethnic Studies Requirement, including engendering students' ability to participate in a multicultural society effectively and successfully.
Audience: Undergraduate

7. Apply the primary theories and methods employed by historians of African American history.
Audience: Graduate

AFROAMER/GEN&WS 323 – GENDER, RACE AND CLASS: WOMEN IN U.S. HISTORY
3 credits.

Historical interplay of racism and sexism in the lives of Black and White women of different class backgrounds in the United States.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2017
Learning Outcomes: 1. Explain the relationship between gender, race, and class in the United States.
Audience: Both Grad & Undergrad

2. Appreciate the multitude of contributions made by women of African descent in the social, political, cultural, and economic development of the United States of America.
Audience: Both Grad & Undergrad

3. Identify how certain histories have been valued and devalued, and how these differences have promulgated disparities in contemporary American society.
Audience: Both Grad & Undergrad

4. Critique canonical US history and its impact on gender and race relations in the US, developing a healthy skepticism of knowledge claims.
Audience: Both Grad & Undergrad

5. Use primary sources and secondary peer-reviewed sources in written assignments to connect course topics to the lived experiences of African Americans.
Audience: Both Grad & Undergrad

6. Communicate with others in a way that displays an understanding of racial inequities in the US.
Audience: Undergraduate

7. Understand and apply the primary theories and methods employed by historians of African American history.
Audience: Graduate

AFROAMER/GEN&WS 324 – BLACK WOMEN IN AMERICA: RECONSTRUCTION TO THE PRESENT
3 credits.

Explores African American women's experience from waning days of slavery to present. Topics include slavery, emancipation, reconstruction, segregation, migration, urban and rural poverty, civil rights, nationalism, feminism and sexual politics.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2017
Learning Outcomes: 1. Explain the implications of being Black and female in the United States since the Reconstruction era.
Audience: Both Grad & Undergrad

2. Appreciate the multitude of contributions made by women of African descent in the social, political, cultural, and economic development of the United States of America.
Audience: Both Grad & Undergrad

3. Describe how certain histories have been valued and devalued, and how these differences have promulgated racial disparities in contemporary American society.
Audience: Both Grad & Undergrad

4. Critique canonical US history and its impact on gender and race relations in the US, developing a healthy skepticism of knowledge claims.
Audience: Both Grad & Undergrad

5. Use primary sources and secondary peer-reviewed sources in written assignments to connect course topics to the lived experiences of African Americans.
Audience: Both Grad & Undergrad

6. Communicate with others in a way that displays an understanding of racial inequities in the US.
Audience: Undergraduate

7. Understand and apply the primary theories and methods employed by historians of African American history.
Audience: Graduate

AFROAMER/GEN&WS 326 – RACE AND GENDER IN POST-WORLD WAR II U.S. SOCIETY
3 credits.

Assesses how race and gender (as well as socio-economic status, age, sexuality, region, etc.) shaped the experiences and options of African Americans, especially women, in U.S. society from WW II to the present.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

AFROAMER/GEN&WS 333 – BLACK FEMINISMS
3 credits.

Uses an interdisciplinary framework to interrogate core assumptions, arguments, and silences in past and present black feminist thought.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

AFROAMER 337 – THE HARLEM RENAISSANCE
3 credits.

Black literature and culture during the 1920's. Focus on unique Black literary expression of era, historical background, esthetics, polemical essays.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

AFROAMER 338 – THE BLACK ARTS MOVEMENT
3 credits.

Focuses on the notion of blackness as it is developed in the poetry and drama of key figures of the 1960s Black Arts Movement. Emphasizes the emergence of a critical discourse specific to a "new" black aesthetic.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

AFROAMER/HISTORY 347 – THE CARIBBEAN AND ITS DIASPORAS
3-4 credits.

Surveys the history of the Caribbean from the 15th century to the present. Emphasizes the importance of colonialism, commodity-based capitalism, globalization, slavery, and forced labor for the modeling of the region's social, economic, cultural, and political structures. Pay particular attention to the resilient, creative and resourceful ways in which Caribbean people have responded to these adverse conditions. Examine the circumstances that have shaped migrations from the region to the United States and Canada during the 20th and 21st centuries. Study how these diasporic communities have created social spaces in these two countries that have remained closely linked to the Caribbean through economic, political, and filial networks.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Identify the historical roots of the racial, political, cultural, and social structures of contemporary Caribbean societies and their diasporas
Audience: Undergraduate

2. Recognize the multiple ethnic and cultural origins of Caribbean communities and the impact these communities had in the modeling of Atlantic and global historical developments
Audience: Undergraduate

3. Analyze and synthesize information, provide evidence-based interpretations about the past, and develop arguments regarding the history of Caribbean societies and their global diasporas
Audience: Undergraduate

4. Identify and analyze within their social, cultural, and economic contexts key historical developments in the history of the Caribbean from the fifteenth century to the present
Audience: Both Grad & Undergrad

5. Analyze the role that social and cultural factors—such as gender, religion, ethnicity, and class, among others—had in shaping Caribbean historical developments
Audience: Both Grad & Undergrad

6. Identify and analyze within the their social, cultural and economic contexts the history of the idea of race as it relates to the history of the Caribbean
Audience: Both Grad & Undergrad

7. Discern the impact of local and global political and economic developments, in the shaping of ideas about racial, ethnic, social, and cultural hierarchies and public policies in Caribbean nations
Audience: Both Grad & Undergrad

8. Understand the different methodological approaches and research strategies that historians, anthropologists, and other scholars have used to examine the histories of the Caribbean from the sixteenth century to the present
Audience: Graduate

AFROAMER/GEN&WS 367 – ART AND VISUAL CULTURE: WOMEN OF THE AFRICAN DIASPORA AND AFRICA
3 credits.

Art and visual culture by/or pertaining to women throughout the African Diaspora and Africa. Though the focus is on 10th century art by black women, it will go into visual culture (art objects, photographs, images, dress, culturally-coded representation) concerning black women historically.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze and interpret works of art by women artists of the African Diaspora and Africa.
Audience: Both Grad & Undergrad

2. Apply critical thinking and analytical skills regarding gender, race, and other social categories of identity and oppression to the study of visual images by and about Black women.
Audience: Both Grad & Undergrad

3. Demonstrate basic knowledge of 20th century artistic terminology and aesthetic movements.
Audience: Undergraduate

4. Develop an advanced research project on Black women artists and their art.
Audience: Graduate

AFROAMER/HISTORY 393 – SLAVERY, CIVIL WAR, AND RECONSTRUCTION, 1848-1877
3-4 credits.

African-American slavery and its impact on mid-19th century social, political, and economic life; the causes, course, and consequences of the Civil War; the rise and fall of postwar Reconstruction and non-racial citizenship; the impact of these histories on contemporary American society.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

AFROAMER/AFRICAN 413 – CONTEMPORARY AFRICAN AND CARIBBEAN DRAMA
3-4 credits.

A critical study of the major works.
Requisites: Sophomore standing and (AFRICAN 201, 203, 211, 231, or FOLKLORE/AFRICAN 210), or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

AFROAMER/LEGAL ST 435 – CIVIL RIGHTS: POLICING, PRISONS, VOTING, HOUSING, EMPLOYMENT
3-4 credits.

Exploration of civil rights. Question what it means to discriminate (on the basis of race, sex, national origin, religion, and disability), how we might investigate and detect acts of discrimination, and the legal constraints on governmental efforts to remedy discrimination in employment, housing, and voting. Explore the intersection of government power and civil rights. Examine how the government targets groups during times of national crisis. Consider what constitutes acceptable conditions of incarceration for prisoners. Finally, learn police use-of-force doctrine, and discuss the challenge of protecting both officer and civilian safety.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify key historical events that led to the conception and creation of civil rights.
Audience: Both Grad & Undergrad

2. Identify constitutional justifications for the use of federal authority to legislate in the area of civil rights.
Audience: Both Grad & Undergrad

3. Summarize statutes and cases that protect against discrimination in employment, housing, and voting.
Audience: Both Grad & Undergrad

4. Demonstrate an understanding of major civil rights controversies surrounding political detainees, prison inmates, and those subject to police force during street encounters.
Audience: Both Grad & Undergrad

5. Demonstrate an advanced understanding of the historical context, constitutional arguments, and current scholarly debates concerning civil rights law.
Audience: Graduate

AFROAMER/POLI SCI 519 — AFRICAN AMERICAN POLITICAL THEORY
3-4 credits.

Explores a range of theories that African Americans have drawn upon to cope with and ameliorate their political circumstances in the United States within the specific parameters of political theory.
Requisites: Sophomore standing and (POLI SCI 160 or AFROAMER 151) or (POLI SCI 209 taken prior to fall 2017) or graduate/professional standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Analyze how African American thinkers simultaneously reflect and complicate liberal, conservative, nationalist, and materialist political thought.
Audience: Undergraduate

2. Examine how African American thinkers understand sexism in African American political thought and racism in feminist thought.
Audience: Undergraduate

3. Interrogate contemporary debates in African American political theory including, but not limited to, the parameters of effective black leadership.
Audience: Undergraduate

4. Assess the state of a body of scholarly literature related to course themes, identify gaps in that literature, and formulate an original research question in the context of those gaps.
Audience: Graduate

AFROAMER/HIST SCI/MED HIST 523 — RACE, AMERICAN MEDICINE AND PUBLIC HEALTH
3 credits.

Provides historical perspectives on current dilemmas facing black patients and health care professionals.
Requisites: Junior standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify key developments, actors, ideas, and institutions in the broad history of race, medicine and public health in America between 1700 and 2000.
Audience: Both Grad & Undergrad

2. Analyze and write critically about primary and secondary historical sources by examining diverse interpretations of past events and ideas in their historical contexts.
Audience: Both Grad & Undergrad

3. Evaluate the ways in which ideas about race and assumptions about the meaning of racial difference influenced the care patients of color received and how they experienced their illnesses and injuries.
Audience: Both Grad & Undergrad

4. Understand how conceptions of race profoundly influenced the medical and nursing professions, as well as medical institutions (dispensaries, hospitals, and blood donation centers).
Audience: Both Grad & Undergrad

5. Evaluate the different methodological approaches historians have used to analyze the multiple histories of race, medicine, and public health in the United States in the last two centuries.
Audience: Graduate

AFROAMER 525 — MAJOR AUTHORS
3 credits.

Intensive literary criticism of the works of selected authors. Emphasis on fiction, but non-fiction when appropriate. Works of one or two authors.
Requisites: Junior standing; not open to special students
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

AFROAMER/ED POL 567 – HISTORY OF AFRICAN AMERICAN EDUCATION
3 credits.

An examination of the social, economic, political, and cultural issues influencing the education of Black Americans from the early nineteenth century to the 1960s.
Requisites: Junior standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

AFROAMER 621 – SLAVERY AND CAPITALISM IN THE UNITED STATES
3 credits.

Addresses the relationship between slavery and capitalism in the British North American colonies and the United States of America. Drawing on recent scholarship that explores how slavery and capitalism are independent systems, examines how the labor of enslaved people affected the development and growth of wage labor; the impact of the growth and dominance of capitalism as an economic system on the institution of slavery; and the experiences of enslaved people.
Requisites: Junior standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Explain the relationship between the institution of race-based slavery and the emergence of modern capitalism in the United States.
Audience: Both Grad & Undergrad

2. Appreciate the multitude of contributions made by people of African descent in the social, political, and economic development of the United States of America.
Audience: Both Grad & Undergrad

3. Understand the creation, development, and legacies of race-based slavery in the United States.
Audience: Both Grad & Undergrad

4. Understand the primary theories and methods employed by historians of race-based slavery
Audience: Graduate

AFROAMER/GEN&WS 624 – AFRICAN AMERICAN WOMEN'S ACTIVISM (19TH & 20TH CENTURIES)
3 credits.

Examines Black women's struggles for racial justices; reconsiders conventional notions of leadership, politics and protest. Topics include abolitionism, anti-lynching campaigns, woman suffrage, labor movement, club movement, cultural expressions, civil rights protest, Black feminism/womanism, poverty and welfare rights, environmental racism, etc.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022

AFROAMER/GEN&WS 625 – GENDER, RACE AND THE CIVIL RIGHTS MOVEMENT
3 credits.

This course focuses on the emerging field of gender studies in the scholarship on the post-World War II civil rights movement in the United States.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

AFROAMER/HISTORY 628 – HISTORY OF THE CIVIL RIGHTS MOVEMENT IN THE UNITED STATES
3 credits.

Civil rights history from 1930-1970. Legal, historical and economic origins of the civil rights movement. Study of the movement's impact on United States culture, politics, and international relations.
Requisites: Junior standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

AFROAMER 631 – COLLOQUIUM IN AFRO-AMERICAN HISTORY
3 credits.

Research and discussion of topics in African American History.
Requisites: Junior standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020

AFROAMER 671 – SELECTED TOPICS IN AFRO-AMERICAN HISTORY
3 credits.

An intensive analysis of specific historical themes in African Americans' experiences.
Requisites: Junior standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

AFROAMER/ENGL 672 – SELECTED TOPICS IN AFRO-AMERICAN LITERATURE
3 credits.

An intensive analysis of specific themes in the Afro-American experience. Subjects vary with instructor.
Requisites: Junior standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

AFROAMER 673 – SELECTED TOPICS IN AFRO-AMERICAN SOCIETY
3 credits.

An intensive analysis of specific societal themes in African Americans' experiences.
Requisites: Junior standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

AFROAMER 675 – SELECTED TOPICS IN AFRO-AMERICAN CULTURE
3 credits.

An intensive analysis of specific cultural themes in African Americans' experiences.
Requisites: Junior standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

AFROAMER/GEN&WS 677 – CRITICAL AND THEORETICAL PERSPECTIVES IN BLACK WOMEN'S WRITINGS
3 credits.

Analyses and interpretations of literary works by black women writers through historical, philosophical, political, feminist, and other contemporary critical methods.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

AFROAMER 678 – TRADITIONS IN AFRICAN AMERICAN HUMOR
3 credits.

Introduction to works of literary satire in the African American tradition with special attention to social and cultural contexts.
Requisites: Junior standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Identify major literary movements in the history of the Black satirical tradition
Audience: Both Grad & Undergrad

2. Identify the contextual frameworks that shape representations of race across a broad range of cultural texts and objects
Audience: Both Grad & Undergrad

3. Describe the goals, challenges, and questions raised by the thematic and aesthetic choices of Black satirists
Audience: Both Grad & Undergrad

4. Develop persuasive written arguments about the aesthetic construction, form, context, and meaning of Black satirists' cultural texts and objects
Audience: Both Grad & Undergrad

5. Communicate with others in a way that displays an understanding of racial inequities in the US
Audience: Undergraduate

6. Write compelling and coherent arguments using textual analysis and cultural studies criticism employed by literary scholars
Audience: Graduate

AFROAMER 681 – SENIOR HONORS THESIS
3 credits.

Mentored individual research and study for students completing a thesis in an Honors program.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2007

AFROAMER 682 – SENIOR HONOR THESIS
3 credits.

Mentored individual research and study for students completing a thesis in an Honors program.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2008

AFROAMER 691 – SENIOR THESIS
2-3 credits.

Mentored individual research and study for students completing a senior thesis.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2010

AFROAMER 692 – SENIOR THESIS
2-3 credits.

Mentored individual research and study for students completing a senior thesis.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2010

AFROAMER 699 – DIRECTED STUDY IN AFRO-AMERICAN STUDIES
1-6 credits.

Advanced directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

AFROAMER/ED POL/HISTORY 712 – EDUCATION AND THE CIVIL RIGHTS MOVEMENT
3 credits.

Explores the historical relationship between education and the African American freedom struggle from the early twentieth century to the present. Topics include school segregation, desegregation, and resegregation; high school and college student activism; Black Power; civil rights protest strategies and tactics, and the role of the federal government.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

AFROAMER 790 – RESEARCH AND THESIS
1-12 credits.

Mentored individual research and study for students completing a Master's thesis.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

AFROAMER/ART HIST 801 – HISTORIOGRAPHY, THEORY AND METHODS IN VISUAL CULTURE
3 credits.

Focuses on the knowledge, theories, and methods that are fundamental to the transdisciplinary discipline of Visual Cultures. Develops skills in critical reading, research, analysis, writing, and oral presentation.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Show comprehension of the history, theories, and methods of Visual Culture as a field of study as they are practiced in the field of Visual Cultures.
Audience: Graduate

2. Demonstrate critical ability to work with and develop Visual Culture theories and methods.
Audience: Graduate

3. Develop capacity to conduct original research in Visual Culture.
Audience: Graduate

4. Show ability to work with Visual Culture theories and methods in the analysis and presentation of original research which may take oral, written, and visual forms.
Audience: Graduate

5. Develop the critical analytic, rhetorical, and technical skills necessary to effectively communicate original research in Visual Culture.
Audience: Graduate

AFROAMER/ART HIST 802 – VISUAL CULTURES: TOPICS IN VISUAL CULTURES
3 credits.

Content will vary to facilitate in-depth engagement with a particular topic in Visual Culture. Topics will be pursued with analytic attention to gender, sexuality and race.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Develop ability to work with Visual Culture theories and methods
Audience: Graduate

2. Develop ability to critique, extend and even revise visual culture theories
Audience: Graduate

3. Demonstrate a practice-based, working knowledge of visual culture theories and methods in producing original research which may take written or visual form
Audience: Graduate

4. Develop the critical analytic, rhetorical, and technical skills necessary to effectively communicate original research in Visual Culture.
Audience: Graduate

AFROAMER/AFRICAN 813 – CONTEMPORARY AFRICAN AND CARIBBEAN DRAMA
3 credits.

Historical and critical study of the classics of contemporary African and Caribbean literary drama written in English. Thematic issues include the African encounter with Europe, postcolonial disillusionment and the betrayal of ideals, and also stylistic matters as the relationship(s) between traditional drama and other performance forms, and modern drama written in European languages. Considers theories and critical approaches to understanding the cross-continental drama traditions and their contexts. Examines the long histories of cultural, performance, and theatrical relationships between Africa and the Caribbean and how the relationships have been shaped by race and economics, past and present. Considers and questions conventional claims made by others and your own assumptions; stimulates analytical thinking about identity.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

AFRICAN CULTURAL STUDIES (AFRICAN)

AFRICAN 100 – INTRODUCTION TO AFRICAN CULTURAL EXPRESSION
3 credits.

An introduction to current research in African cultural studies, ranging from various literary genres and uses of discourse; to diverse media including screen media, music, cartoons, and journalism; and to other forms of popular expression like soccer and drama. Through an introduction to these forms, study the diverse methods used by scholars in this field, such as textual analysis, film criticism, ethnomusicology, discourse analysis, and ethnography; and to the cultural diversity of Africa and its diasporic cultures.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

AFRICAN/HISTORY 106 – INTRODUCTION TO AFRICAN HISTORY
3-4 credits.

Introductory exploration of a thematic or chronological area of African history. Topics vary by instructor.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Evaluate and interpret a wide range of historical evidence in order to makearguments about changes over time in African societies
Audience: Undergraduate

2. Identify multiple methodologies that historians use to study the African past
Audience: Undergraduate

3. Interpret African history from different viewpoints and perspectives
Audience: Undergraduate

AFRICAN/HISTORY 129 – AFRICA ON THE GLOBAL STAGE
3-4 credits.

Explores the interplay between Africa and the World from the 19th century to the present, covering subjects such as the slave- trade, repatriation, Africanizing of culture in the Americas and Europe, the spread and revival of world religions, colonialism, global capitalism, the rise of global popular culture such as pop music and video films, environmental concerns and global epidemics.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

AFRICAN 201 – INTRODUCTION TO AFRICAN LITERATURE
3 credits.

Survey of African literary traditions and introduction to literary analysis.
Requisites: None
Course Designation: Gen Ed - Communication Part B
Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

AFRICAN 202 – INTRODUCTORY TOPICS IN AFRICAN CULTURAL STUDIES
3 credits.

Various topics in African cultural studies and African expressive cultures. Topics will include cultural and/or political themes that cut across multiple media and genres, including two or more of the following: literature, film, media, music, performance, language use, etc.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize canonical authors and texts, historical forms, genres, and structures, and recognize aesthetic and cultural concerns in Africa and its diasporas.
Audience: Undergraduate

2. Understand their own learning processes and possess the capacity to intentionally seek, evaluate, and learn from information, and recognize and reduce bias in their thinking.
Audience: Undergraduate

3. Communicate effectively through essays, oral presentations, and discussion, so they may share their knowledge, wisdom, and values with others across social and professional settings.
Audience: Undergraduate

4. Discuss cultural texts from various theoretical and critical perspectives, formulate ideas and make connections between literary/cultural concepts and themes.
Audience: Undergraduate

5. Develop a level of proficiency in the different “ways of knowing” Africa and the diaspora through language, literatures, and cultures.
Audience: Undergraduate

6. Effectively retrieve and comprehend primary sources in English and African languages, and secondary sources from a range of disciplines.
Audience: Undergraduate

7. Show knowledge of conventional rhetorical strategies, and integrate research by other authors while distinguishing between their own ideas and those of others.
Audience: Undergraduate

AFRICAN 203 – INTRODUCTORY TOPICS IN AFRICAN LITERATURE
3 credits.

Introduction to a special topic in African literature, focused on a specific region or genre.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize canonical authors and texts, historical forms, genres, and structures, and recognize aesthetic and cultural concerns in Africa and its diasporas.
Audience: Undergraduate

2. Demonstrate their understanding of major theories, approaches, concepts, and current and classical research findings in African and diaspora literary and cultural studies.
Audience: Undergraduate

3. Develop a level of proficiency in the different "ways of knowing" Africa through literatures.
Audience: Undergraduate

4. Understand their own learning processes and possess the capacity to intentionally seek, evaluate, and learn from information, and recognize and reduce bias in their thinking.
Audience: Undergraduate

5. Effectively retrieve and comprehend primary sources in English and secondary sources in literary criticism.
Audience: Undergraduate

6. Communicate effectively through essays, oral presentations, and discussion, so they may share their knowledge, wisdom, and values with others across social and professional settings.
Audience: Undergraduate

7. Show knowledge of conventional rhetorical strategies and integrate research by other authors while distinguishing between their own ideas and those of others.
Audience: Undergraduate

8. Discuss literature from various perspectives, formulate ideas and make connections between literary concepts and themes.
Audience: Undergraduate

AFRICAN 204 – INTRODUCTORY TOPICS IN AFRICAN LANGUAGES
3 credits.

Special topics related to African languages and/or linguistics at the introductory level. Introduction to the diversity of African languages, superdiverse multilingual African societies, and the relationships between language and other societal issues.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize the names of major African language families and important African languages, and important terms for the study of African languages
Audience: Undergraduate

2. Demonstrate their understanding of major theories, approaches, concepts, and current and classical research findings in the study of African languages
Audience: Undergraduate

3. Develop a level of proficiency in the different "ways of knowing" Africa and the diaspora through languages and cultures.
Audience: Undergraduate

4. Understand their own learning processes and possess the capacity to intentionally seek, evaluate, and learn from information, and recognize and reduce bias in their thinking.
Audience: Undergraduate

5. Effectively retrieve and comprehend primary sources and secondary sources from a range of disciplines.
Audience: Undergraduate

6. Communicate effectively through essays, oral presentations, and discussion, so they may share their knowledge, wisdom, and values with others across social and professional settings.
Audience: Undergraduate

7. Discuss linguistic analysis and examples from various theoretical and critical perspectives, formulate ideas and make connections between linguistic and social concepts and themes.
Audience: Undergraduate

AFRICAN 206 – INTRODUCTION TO AFRICAN LINGUISTIC PRACTICES
3 credits.

An introduction to various approaches to studying African languages in societal context from the perspective of experts in sociolinguistics, linguistic ethnography, and language pedagogy. Topics covered will include multilingualism, codeswitching, codemixing, translanguaging, language invention/disinvention, interactional practices, discourse analysis, language and politics, language and identity, language in education, language, gender, and sexuality, language and the media, language choice in literature and film, language and popular culture, translation, and language learning.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Recognize major African languages and where they are spoken, and the relationship between languages and ethnic groups.
Audience: Undergraduate

2. Demonstrate their understanding of major theories, approaches, concepts, and current and classical research findings in African sociolinguistics and linguistic anthropology.
Audience: Undergraduate

3. Develop a level of proficiency in the different "ways of knowing" Africa and the diaspora through languages and cultures.
Audience: Undergraduate

4. Communicate effectively through essays, oral presentations, and discussion, so they may share their knowledge, wisdom, and values with others across social and professional settings.
Audience: Undergraduate

5. Show knowledge of conventional rhetorical strategies, and integrate research by other authors while distinguishing between their own ideas and those of others.
Audience: Undergraduate

6. Write and speak across disciplinary boundaries with regard to existing research about African languages.
Audience: Undergraduate

7. Demonstrate command of the terminology of sociolinguistics.
Audience: Undergraduate

AFRICAN/FOLKLORE 210 – THE AFRICAN STORYTELLER
3 credits.

The oral tradition and the written word; the composition of stories, relationship between performer and audience, and transmission of tradition in various African societies.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

AFRICAN 212 – INTRODUCTION TO AFRICAN POPULAR CULTURE
3 credits.

Popular culture (such as popular literature, music, television, news media, movies, etc.) will be used to introduce the African continent and its cultures, people, and languages. Explore text from a different regions on the continent, with a focus on differences and similarities across the continent at the level of aesthetics and context.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Recognize canonical authors and texts, historical forms, genres, and structures, and recognize aesthetic and cultural concerns in Africa and its diasporas.
Audience: Undergraduate

2. Develop a level of proficiency in the different "ways of knowing" Africa and the diaspora through language, literatures, and cultures.
Audience: Undergraduate

3. Understand their own learning processes and possess the capacity to intentionally seek, evaluate, and learn from information, and recognize and reduce bias in their thinking.
Audience: Undergraduate

4. Communicate effectively through essays, oral presentations, and discussion, so they may share their knowledge, wisdom, and values with others across social and professional settings.
Audience: Undergraduate

5. Show knowledge of conventional rhetorical strategies, and integrate research by other authors while distinguishing between their own ideas and those of others
Audience: Undergraduate

AFRICAN/FRENCH 216 – MODERN AND CONTEMPORARY FRANCOPHONE TOPICS
3 credits.

Modern and contemporary topics in the African francophone world, which includes both the African continent and the African diaspora. Taught in English.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, for 2 number of completions
Learning Outcomes: 1. Recognize canonical authors (writers and directors), historical forms, genres, and structures, in Africa and its diasporas.
Audience: Undergraduate

2. Develop a level of proficiency in the different "ways of knowing" Africa and the diaspora through cinema and/or literature.
Audience: Undergraduate

3. Discuss visual and literary texts from various theoretical and critical perspectives, formulate ideas and make connections between visual/cultural concepts and themes.
Audience: Undergraduate

AFRICAN/AFROAMER 220 – HIPHOP, YOUTH CULTURE, AND POLITICS IN SENEGAL
3 credits.

Explores how HipHop, a quintessential manifestation of African American culture, is adopted and adapted by African youth to fight for social justice and democracy in their local contexts, while at the same time constructing a diasporic African sensibility and "cultural citizenship" that transcends boarders and oceans. Beginning with the history, culture, and politics of HipHop in the U.S., we compare and contrast HipHop's development in Africa with specific attention to Senegal. Explores the the youth culture and politics in Senegal and the ongoing process of cross-cultural flows and hybridity.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2019

AFRICAN 230 – INTRODUCTION TO YORUBA LIFE AND CULTURE
3 credits.

Introduction to some aspects of the life and culture of Yoruba-speaking people of West Africa, Cuba, Brazil, and Haiti, including the importance of Yoruba culture in the Americas.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2022

AFRICAN 231 – INTRODUCTION TO ARABIC LITERARY CULTURE
3 credits.

Overview on Arabic cultural production. Develops a historic and critical understanding of Arabic literary traditions, as well as related musical and visual arts, up to the twenty-first century.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023

AFRICAN/AFROAMER 233 – GLOBAL HIPHOP AND SOCIAL JUSTICE
3 credits.

Critical interrogation of the relationship between HipHop and social justice. What is "HipHop," what is "social justice," what is their relationship, how can HipHop can be an effective force for social justice, and what obstacles mitigate against this potential? Discussions will develop familiarity with important concepts in Black studies and social theory such as race and colonialism, imperialism and hegemony, structure and agency, identity and strategic essentialism. Consider the race/class/gender dimensions of weekly topics, acquire a broader familiarity with HipHop activism, and develop new conceptual tools and critical thinking skills.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

AFRICAN/AFROAMER/ANTHRO/GEOG/HISTORY/POLI SCI/SOC 277 – AFRICA: AN INTRODUCTORY SURVEY
4 credits.

African society and culture, polity and economy in multidisciplinary perspectives from prehistory and ancient kingdoms through the colonial period to contemporary developments, including modern nationalism, economic development and changing social structure.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze African society and culture from a multidisciplinary perspective.
Audience: Undergraduate

2. Discuss polity and economy from prehistory and ancient kingdoms through the colonial period to contemporary developments.
Audience: Undergraduate

3. Study contemporary nationalism, economic development and changing social structure.
Audience: Undergraduate

AFRICAN/AFROAMER/HISTORY/POLI SCI 297 – AFRICAN AND AFRICAN-AMERICAN LINKAGES: AN INTRODUCTION
4 credits.

Analysis of retention of African elements in African-American oral, written, and material culture. Social, cultural, and political issues regarding race, self-definition, and self-determination in both Africa and North America will be examined.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze the retention of African elements in African-American oral, written, and material culture.
Audience: Undergraduate

2. Explore social, cultural, and political issues regarding race in both Africa and North America.
Audience: Undergraduate

3. Examine self-determination in both Africa and North America.
Audience: Undergraduate

AFRICAN 300 – AFRICAN LITERATURE IN TRANSLATION
3 credits.

Introduction to the literature, oral or written, of a coherent cultural area of Africa, for those for whom texts in the original language are not accessible.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

AFRICAN/INTL ST 302 – ARABIC LITERATURE AND CINEMA
3 credits.

An introduction to the most significant topics of contemporary Arabic literature and cinema. Discuss the legacy of colonialism, repressive nature of post-independence regimes, discourses on nationalism, religion vs. secularization, gender relations, representation of cultural otherness, and the Arab Springs. Materials will be drawn from a variety of cultural forms including literature, film, music, and performance; and scholarship, exploring the social, cultural, political, and economic contexts in which texts and films are written and exhibited.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize canonical authors and texts, historical forms, genres, and structures, and recognize aesthetic and cultural concerns among Arabic language authors and filmmakers of the 20th and 21st centuries, within their social, cultural and political contexts.
Audience: Undergraduate

2. Demonstrate—in writing, discussion, and presentations—an engagement with literary texts and movies with an eye to aesthetic genres, tendencies, and techniques.
Audience: Undergraduate

3. Discuss cultural texts from various theoretical and critical perspectives, formulate ideas and make connections between literary/cultural concepts and themes.
Audience: Undergraduate

4. Analyze the complex ways culture relates to individual choice, values, ideas, and the human experience across cultures.
Audience: Undergraduate

5. Value people and groups whose traditions and beliefs differ from our own.
Audience: Undergraduate

6. Communicate effectively through essays, oral presentations, and discussion, to share knowledge, wisdom, and values with others.
Audience: Undergraduate

7. Analyze contemporary political and cultural realities globally from multi-disciplinary perspectives.
Audience: Undergraduate

8. Understand the social, political, economic and cultural forces and conditions that have given rise to the unity and diversity of the Arab world.
Audience: Undergraduate

AFRICAN 303 – AFRICAN LITERATURE AND VISUAL CULTURE
3 credits.

An introduction to literature and visual culture of Africa in various periods and places; specific topics will vary.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

AFRICAN 304 – SOCCER IN AFRICA
3 credits.

Examines representations of soccer in sub-Saharan Africa. It is meant to make us think about African soccer as a cultural and political practice, while keeping in mind that this is a sport or a game. What does this sport, "the beautiful game" as it is called, the most widely followed and adored game, mean to Africans? What is the role of fans and spectators, alongside readers of literature and viewers of film? How does soccer link Africa to the rest of the world? Briefly cover the history of the game, in the world and in Africa, and its social impact; learn about both magic and racism in African soccer; read novels, discuss paintings, and watch films that represent soccer in meaningful ways and connect it to important issues of the neocolonial world.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Understand historical, cultural, and theoretical information about the world of soccer, through Africa and as a "way of knowing" Africa.
Audience: Undergraduate

2. Use relevant tools and vocabulary to analyze visual and written texts.
Audience: Undergraduate

3. Demonstrate knowledge about soccer in the African artistic world, as it relates with the rest of the world.
Audience: Undergraduate

4. Demonstrate understanding of major theories, approaches, and concepts (current and classical) in regard to the Global South/Global North division.
Audience: Undergraduate

5. Communicate effectively through essays, oral presentations, and discussions, so one may share knowledge, wisdom, and values with others across social and professional settings.
Audience: Undergraduate

AFRICAN 321 – FIRST SEMESTER ARABIC
5 credits.

For beginning learners of Modern Standard Arabic; emphasis on proficiency through speaking, listening, reading, and writing, and on communication in cultural context.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

AFRICAN 322 – SECOND SEMESTER ARABIC
5 credits.

For beginning learners of Modern Standard Arabic; emphasis on proficiency through speaking, listening, reading, and writing, and on communication in cultural context.
Requisites: AFRICAN 321 or 339
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand the main idea and some pieces of information on familiar topics from sentences and series of connected sentences within Arabic texts that are spoken and written.
Audience: Undergraduate

2. Participate in spontaneous spoken and written conversations on familiar topics, creating sentences and series of sentences to ask and answer a variety of questions.
Audience: Undergraduate

3. Communicate information, make presentations, and express thoughts about familiar topics, using sentences and series of connected sentences through written and spoken Modern Standard Arabic.
Audience: Undergraduate

4. Interact at a functional level in some familiar contexts using Modern Standard Arabic.
Audience: Undergraduate

AFRICAN 323 – THIRD SEMESTER ARABIC
4 credits.

For intermediate learners of Modern Standard Arabic; emphasis on proficiency through speaking, listening, reading, and writing, and on communication in cultural context.
Requisites: AFRICAN 322 or 340
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand the main idea and some pieces of information on familiar topics from sentences and series of connected sentences within texts that are spoken, written, or signed.
Audience: Undergraduate

2. Exchange information in conversations on familiar topics and some researched topics, creating sentences and series of sentences and asking a variety of follow-up questions.
Audience: Undergraduate

3. Participate in spontaneous spoken, written, or signed conversations on familiar topics, creating sentences and series of sentences to ask and answer a variety of questions.
Audience: Undergraduate

4. Communicate information, make presentations, and express my thoughts about familiar topics, using sentences and series of connected sentences through spoken, written, or signed language.
Audience: Undergraduate

5. Make comparisons between products and practices to help you understand perspectives in your culture and other cultures.
Audience: Undergraduate

6. Interact at a functional level in some familiar contexts.
Audience: Undergraduate

AFRICAN 324 – FOURTH SEMESTER ARABIC
4 credits.

For intermediate learners of Modern Standard Arabic. Emphasis on proficiency through speaking, listening, reading, and writing, and on communication in cultural context.
Requisites: AFRICAN 323 or 341
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand the main idea and some pieces of information on familiar topics from sentences and series of connected sentences within texts that are spoken, written or signed.
Audience: Undergraduate

2. Participate in spontaneous spoken, written, or signed conversations on familiar topics.
Audience: Undergraduate

3. Communicate information, make presentations, and express my thoughts about familiar topics, using sentences and series of connected sentences through spoken, written or signed language.
Audience: Undergraduate

AFRICAN 329 – FIFTH SEMESTER ARABIC
3 credits.

For advanced learners of Modern Standard Arabic; emphasis on proficiency through speaking, listening, reading, and writing, and on communication in cultural context.
Requisites: AFRICAN 324 or 342
Course Designation: Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Handle successfully uncomplicated tasks and social situations requiring an exchange of basic information related to their work, school, recreation, particular interests, and areas of competence.
Audience: Undergraduate

2. Narrate and describe in all major time frames using relatively connected discourse of paragraph length.
Audience: Undergraduate

3. Express personal meaning by combining and recombining known elements and conversational input to produce responses typically consisting of sentences and strings of sentences.
Audience: Undergraduate

4. Read and comprehend a variety of texts appropriate for your proficiency level.
Audience: Undergraduate

5. Write compositions on various topics using different types of writing using both present, future and past tenses.
Audience: Undergraduate

AFRICAN 330 – SIXTH SEMESTER ARABIC
3 credits.

For advanced learners of Modern Standard Arabic; emphasis on proficiency through speaking, listening, reading, and writing, and on communication in cultural context.
Requisites: AFRICAN 329 or 343
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand the main message and supporting details on a wide variety of familiar and general interest topics across various time frames from complex, organized texts that are spoken, written, or signed.
Audience: Undergraduate

2. Maintain spontaneous spoken, written, or signed conversations and discussions across various time frames on familiar, as well as unfamiliar, concrete topics, using series of connected sentences and probing questions.
Audience: Undergraduate

3. Deliver detailed and organized presentations on familiar as well as unfamiliar concrete topics, in paragraphs and using various time frames through spoken, written, or signed language.
Audience: Undergraduate

4. Explain some diversity among products and practices (of my own and other cultures) and how it relates to perspectives.
Audience: Undergraduate

5. Interact at a competent level in familiar and some unfamiliar contexts.
Audience: Undergraduate

AFRICAN 331 – FIRST SEMESTER SWAHILI
5 credits.

For beginning learners of Standard Swahili; emphasis on proficiency through speaking, listening, reading, and writing, and on communication in cultural context.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

AFRICAN 332 – SECOND SEMESTER SWAHILI
5 credits.

For beginning learners of Swahili; emphasis on proficiency through speaking, listening, reading, and writing, and on communication in cultural context.
Requisites: AFRICAN 331
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify the general topic and some basic information in both very familiar and everyday contexts by recognizing practiced or memorizedwords, phrases, and simple sentences in texts that are spoken or written.
Audience: Undergraduate

2. Communicate in spontaneous spoken or written conversations on both very familiar and everyday topics, using a variety of practiced ormemorized words, phrases, simple sentences, and questions.
Audience: Undergraduate

3. Present information on both very familiar and everyday topics using avariety of practiced or memorized words, phrases, and simple sentences through spoken or written language.
Audience: Undergraduate

4. Identify products and practices to help understand perspectives in your own culture and in Swahili cultures.
Audience: Undergraduate

5. Interact at a survival level in some familiar everyday contexts in a Swahili-speaking community.
Audience: Undergraduate

6. Develop a level of proficiency in the different "ways of knowing" Africa and the diaspora through language and cultures.
Audience: Undergraduate

7. Develop or improve speaking, listening, writing, reading skills in Swahili and integrate these skills to communicate effectively.
Audience: Undergraduate

AFRICAN 333 – THIRD SEMESTER SWAHILI
4 credits.

Four-skills approach (speaking, listening, writing, reading) centered around authentic texts, recordings, and images. Grammar review, concerted vocabulary expansion, and intensive practice.
Requisites: AFRICAN 332
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

AFRICAN 334 – FOURTH SEMESTER SWAHILI
4 credits.

Four-skills approach (speaking, listening, writing, reading) centered around authentic texts, recordings, and images. Grammar review, concerted vocabulary expansion, and intensive practice.
Requisites: AFRICAN 333
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

AFRICAN 335 – FIRST SEMESTER-A LANGUAGE OF SOUTHERN AFRICA
5 credits.

For beginning learners of a Southern African language; emphasis on proficiency through speaking, listening, reading, and writing, and on communication in cultural context.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

AFRICAN 336 – SECOND SEMESTER-A LANGUAGE OF SOUTHERN AFRICA
4-5 credits.

For beginning learners of a Southern African language; emphasis on proficiency through speaking, listening, reading, and writing, and on communication in cultural context.
Requisites: AFRICAN 335
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023

AFRICAN 339 – FIRST SEMESTER SUMMER ARABIC
4 credits.

Emphasis on proficiency through speaking, listening, reading and writing, and on communication in cultural context.
Requisites: Declared in Arabic, Persian, and Turkish Language Institute
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Master the Arabic alphabet and sound system, recognize and pronounce correctly all Arabic sounds and write accurately from dictation.
Audience: Undergraduate

2. Initiate social interactions, ask for basic information, and comprehend basic cultural aspects of social interaction in the Arab world.
Audience: Undergraduate

3. Talk about yourself, your education, and your family with native speakers of Arabic accustomed to interacting with learners.
Audience: Undergraduate

4. Comprehend simple print texts on familiar topics.
Audience: Undergraduate

5. Comprehend simple audio/video texts on familiar topics.
Audience: Undergraduate

6. Compose simple paragraphs about yourself and your family and friends.
Audience: Undergraduate

7. Identify the differences between formal and spoken Arabic, recognize both registers, and use basic expressions in at least one dialect.
Audience: Undergraduate

8. Develop an active vocabulary of about 300 Arabic words.
Audience: Undergraduate

AFRICAN 340 – SECOND SEMESTER SUMMER ARABIC
4 credits.

Emphasis on proficiency through speaking, listening, ready and writing, and on communication in cultural context.
Requisites: Declared in Arabic, Persian, and Turkish Language Institute and (AFRICAN 339 or 321)
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Improve basic skills of reading, writing, listening and speaking.
Audience: Undergraduate

2. Read with more speed and better comprehension.
Audience: Undergraduate

3. Expand vocabulary repertoire to about 500 words.
Audience: Undergraduate

4. Expand on issues related to the verb system: types, characteristics, conjugations and derivative meanings.
Audience: Undergraduate

5. Expand on repertoire of linguistic idioms.
Audience: Undergraduate

6. Learn idiomatic translations from Arabic to English through lengthier and more complex texts.
Audience: Undergraduate

7. Expand on cultural dimensions of the language through biographies, stories, original literary writings, articles from media texts and other targeted texts.
Audience: Undergraduate

AFRICAN 341 – THIRD SEMESTER SUMMER ARABIC
4 credits.

Emphasis on proficiency through speaking, listening, reading, and writing, and on communication in cultural context.
Requisites: Declared in Arabic, Persian, and Turkish Language Institute and (AFRICAN 340 or 322)
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Improve essential Arabic language skills in the areas of speaking, writing, reading, and listening.
Audience: Undergraduate

2. Acquire new vocabulary, learn to recognize word roots, and internalize sets of new morphological and syntactical formulas
Audience: Undergraduate

3. Use Arabic expressions and exchange information about self, family, school, work, interests, and immediate needs with confidence and ease, especially in straightforward social situations.
Audience: Undergraduate

4. Broaden cultural knowledge of the Arab world.
Audience: Undergraduate

5. Produce paragraph-length expressions in past, present and future tenses.
Audience: Undergraduate

AFRICAN 342 – FOURTH SEMESTER SUMMER ARABIC
4 credits.

Emphasis on proficiency through speaking, listening, reading, and writing, and on communication in cultural context.
Requisites: Declared in Arabic, Persian, and Turkish Language Institute and (AFRICAN 341 or 323)
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Improve essential Arabic language skills in the areas of speaking, writing, reading, and listening.
Audience: Undergraduate

2. Learn new vocabulary, learn to recognize word roots, and internalize sets of new morphological and syntactical formulas.
Audience: Undergraduate

3. Learn and use of Arabic expressions and exchange information about self, family, school, work, interests, and immediate needs with confidence and ease, especially in straightforward social situations.
Audience: Undergraduate

4. Expand cultural knowledge of the Arab world.
Audience: Undergraduate

AFRICAN 343 – FIFTH SEMESTER SUMMER ARABIC
4 credits.

Emphasis on proficiency through speaking, listening, reading, and writing, and on communication in cultural context.
Requisites: Declared in Arabic, Persian, and Turkish Language Institute and (AFRICAN 342 or 324)
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Increase vocabulary and develop abilities in oral and written expression.
Audience: Undergraduate

2. Identify and summarize the main points and significant details and make appropriate inferences and predictions from a spoken source, such as a broadcast news report or a lecture on an academic or cultural topic related to the Arabic#speaking world.
Audience: Undergraduate

3. Make appropriate inferences and predictions from a written text such as a newspaper/magazine article or contemporary literary excerpt.
Audience: Undergraduate

4. Write cohesive and coherent analytical or persuasive essays in reaction to a text on a personal, academic, cultural or social issue, with control of grammar and syntax.
Audience: Undergraduate

5. Use the language in meaningful ways in real-world situations.
Audience: Undergraduate

6. Specifically focus on developing oral proficiency skills, and practice writing through analysis of literary works.
Audience: Undergraduate

AFRICAN 344 – SIXTH SEMESTER SUMMER ARABIC
4 credits.

Emphasis on proficiency through speaking, listening, reading, and writing, and on communication in cultural context.
Requisites: Declared in Arabic, Persian, and Turkish Language Institute and (AFRICAN 343 or 329)
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Increase vocabulary and develop abilities in oral and written expression.
Audience: Undergraduate

2. Identify and summarize the main points and significant details and make appropriate inferences and predictions from a spoken source, such as a broadcast news report or a lecture on an academic or cultural topic related to the Arabic#speaking world
Audience: Undergraduate

3. Make appropriate inferences and predictions from a written text such as a newspaper/magazine article or contemporary literary excerpt
Audience: Undergraduate

4. Write cohesive and coherent analytical or persuasive essays in reaction to a text or on a personal, academic, cultural or social issue, with control of grammar and syntax.
Audience: Undergraduate

5. Use the language in meaningful ways in real-world situations.
Audience: Undergraduate

6. Specifically focus on developing oral proficiency skills, and practice writing through analysis of literary works.
Audience: Undergraduate

AFRICAN 361 – FIRST SEMESTER HAUSA
5 credits.

For beginning learners of Hausa; emphasis on proficiency through speaking, listening, reading, and writing, and on communication in cultural context.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023

AFRICAN 362 – SECOND SEMESTER HAUSA
4-5 credits.

For beginning learners of Hausa; emphasis on proficiency through speaking, listening, reading, and writing, and on communication in cultural context.
Requisites: AFRICAN 361
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

AFRICAN/ASIAN/RELIG ST 370 – ISLAM: RELIGION AND CULTURE
3-4 credits.

The emergence and development of Islam; schism; theology; asceticism; speculative and popular mysticism; literatures in diverse Islamic languages. Not open to students with credit for LCA 370 prior to Fall 2019.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023

AFRICAN 371 – FIRST SEMESTER YORUBA
5 credits.

For beginning learners of Standard Yoruba; emphasis on proficiency through speaking, listening, reading, and writing, and on communication in cultural context.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

AFRICAN 372 – SECOND SEMESTER YORUBA
5 credits.

For beginning learners of standard Yoruba; emphasis on proficiency through speaking, listening, reading, and writing, and on communication in cultural context.
Requisites: AFRICAN 371
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

AFRICAN 373 – THIRD SEMESTER YORUBA
4 credits.

Advanced grammar and conversational practice. Reading contemporary Yoruba literature and other writings.
Requisites: AFRICAN 372
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

AFRICAN 374 – FOURTH SEMESTER YORUBA
4 credits.

Continue to develop and refine competence and performance in linguistic skills.
Requisites: AFRICAN 373
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025

AFRICAN 391 – FIRST SEMESTER-A LANGUAGE OF WEST AFRICA
5 credits.

For beginning learners of a West African language; emphasis on proficiency through speaking, listening, reading, and writing, and on communication in cultural context.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024
Learning Outcomes: 1. Identify the general topic and some basic information in both very familiar and everyday contexts by recognizing practiced or memorized words, phrases, and simple sentences in texts that are spoken or written in a West African language
Audience: Undergraduate

2. Communicate in spontaneous spoken or written conversations on both very familiar and everyday topics, using a variety of practiced or memorized words, phrases, simple sentences, and questions in a West African language
Audience: Undergraduate

3. Present information on both very familiar and everyday topics using a variety of practiced or memorized words, phrases, and simple sentences through speech or writing in a West African language
Audience: Undergraduate

4. Identify products and practices to help understand perspectives in your own culture and in a West African culture.
Audience: Undergraduate

5. Interact at a survival level in some familiar everyday contexts in a community that speaks a West African language
Audience: Undergraduate

6. Develop a level of proficiency in the different "ways of knowing" Africa and the diaspora through language and cultures
Audience: Undergraduate

7. Develop or improve speaking, listening, writing, and reading skills in a West African language and integrate these skills to communicate effectively
Audience: Undergraduate

AFRICAN 392 – SECOND SEMESTER-A LANGUAGE OF WEST AFRICA
4-5 credits.

For beginning learners of a West African language; emphasis on proficiency through speaking, listening, reading, and writing, and on communication in cultural context.
Requisites: AFRICAN 391
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2020

AFRICAN 393 – THIRD SEMESTER-A LANGUAGE OF WEST AFRICA
4 credits.

For intermediate learners of a West African language. Four-skills approach (speaking, listening, writing, reading) centered around authentic texts, recordings, and images. Grammar review, concerted vocabulary expansion, and intensive practice.
Requisites: AFRICAN 392
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

AFRICAN 394 – FOURTH SEMESTER-A LANGUAGE OF WEST AFRICA
4 credits.

For intermediate learners of a West African language. Four-skills approach (speaking, listening, writing, reading) centered around authentic texts, recordings, and images. Grammar review, concerted vocabulary expansion, and intensive practice.
Requisites: AFRICAN 393
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

AFRICAN 399 – DIRECTED STUDY OF AN AFRICAN LANGUAGE
3 credits.

Directed language study for students experienced in language self instruction. The instructor will continue to consult with the student and monitor progress.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2017

AFRICAN 402 – THEORY OF AFRICAN LITERATURE
3-4 credits.

Approaches to the analysis of African oral narrative performances, heroic poetry, epic, and the genres of written literature: Aesthetic, symbolic, and structural analysis and their interrelationships.
Requisites: AFRICAN 201, 203, 211, 231, FOLKLORE/AFRICAN 210, or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2020

AFRICAN 403 – THEORIES OF AFRICAN CULTURAL STUDIES
3 credits.

A study of culture and cultural production, circulation, consumption, and meaning making in Africa. Discussions foreground material and imaginative cultural forms and practices-their origins, languages, contents, forms, functions, genres, and audiences. Examines the uses to which particular meanings of culture and its forms are put, by whom, and to what purpose, and how meanings are fought over, reshaped, and reconstituted, and under what conditions those are or can be possible. Surveys the entrenched modes of both conceptual and critical apprehension of the cultural forms and practices (from Negritude to postcolonialism and postmodernism), explores their methods of reading, raises the issue of their linkages to sources in Euro-America, and assesses the extent to which the unique concerns of the biography of culture in Africa (expressed by its creators and scholars) have tried to tame and refashion what are now globally shared critical tools of cultural reading.
Requisites: Sophomore standing and 3 credits in AFRICAN
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

AFRICAN 405 – TOPICS IN AFRICAN CULTURAL STUDIES
3 credits.

Examines various mediated cultural forms such as broadcasting, news, performance, music, film, or social media created and used across regions and countries in Africa, addressing issues such as cultural identity, nation building, constraints on expression, access, and reception, and the interaction of global and African cultural forms.
Requisites: Sophomore standing and 3 credits in AFRICAN, or graduate/professional standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate their understanding of major theories, approaches, concepts, and current and classical research findings in African and diaspora literary and cultural studies.
Audience: Both Grad & Undergrad

2. Communicate effectively through essays, oral presentations, and discussion, so they may share their knowledge, wisdom, and values with others across social and professional settings.
Audience: Both Grad & Undergrad

3. Write and speak across disciplinary boundaries with regard to existing research about Africa and the diaspora in the humanities and social sciences.
Audience: Both Grad & Undergrad

4. Demonstrate command of the terminology and methodology of cultural studies, construct complex arguments, and use primary and secondary sources to support arguments.
Audience: Graduate

AFRICAN 406 – TOPICS IN AFRICAN LITERATURE
3 credits.

Provides a conceptual focus for the study of various forms of literature from around the African world. Literary forms studied may include novels, drama, poetry, short stories, cinema, and more. Depending on the conceptual focus, texts from a particular region, period, or language may be stressed, or they will coalesce around certain themes, such as modernity, cultural identity, nation building, ideology, globalization, and more.
Requisites: Sophomore standing and (AFRICAN 201, 203, 211, 231, or FOLKLORE/AFRICAN 210), or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023
Learning Outcomes: 1. Make connections between the place and date of a literary publication and its socio-political context
Audience: Both Grad & Undergrad

2. Engage in sophisticated and informed discussions about the language of literary production
Audience: Both Grad & Undergrad

3. Communicate clearly and effectively, both verbally and in writing, about the relationship between literary production and its socio-political context
Audience: Both Grad & Undergrad

4. Critically and creatively engage major scholarly works in the field
Audience: Graduate

5. Conceptualize and execute a focused writing project requiring extensive research
Audience: Graduate

AFRICAN 407 – TOPICS IN AFRICAN LANGUAGES
3 credits.

Topics in African languages, especially sociocultural linguistics and critical applied linguistics in Africa.
Requisites: Sophomore standing and AFRICAN 204, or graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

AFRICAN/RELIG ST 408 – EVERYDAY RELIGION IN AFRICA
3 credits.

Explore the diverse lived experiences of religion in Africa, examine the role of religion in shaping individual and communal identities, and understand the complex ways in which religion is practiced, experienced, and expressed in various African contexts.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Analyze diverse value and belief systems in various contexts.
Audience: Both Grad & Undergrad

2. Define key terms in religious studies and African studies.
Audience: Both Grad & Undergrad

3. Communicate effectively through close reading, writing, oral presentations, and discussion.
Audience: Both Grad & Undergrad

4. Interpret the interrelationships and impact of religious worldviews and communities in Africa.
Audience: Both Grad & Undergrad

5. Recognize cultural assumptions and knowledge claims as they relate to Africa and religion.
Audience: Both Grad & Undergrad

6. Demonstrate empathy toward the cultural perspectives and worldviews of others.
Audience: Both Grad & Undergrad

7. Utilize the terminology and methodology of cultural studies and religious studies in speech and writing.
Audience: Graduate

8. Construct complex arguments using primary and secondary sources to support arguments about lived religion in Africa.
Audience: Graduate

AFRICAN 409 – TOPICS IN US AND GLOBAL BLACK MUSIC STUDIES
3 credits.

Introduces the phenomenon of "musical blackness" as a US-based, transnational cultural form and practice. Explores (topics will vary) how US-based, racially specified black musical forms, together with global forms also identified as "black," were constituted as part of the legacies of European colonial encounter and US imperial expansion; the categories of "traditional" music and popular style took shape and have been experienced as something part and parcel of this historical process. Gives close consideration to genre, style, and performance practice, in order to understand the many ways in which musical sound and social/political ideas are inextricably linked.
Requisites: Sophomore standing and 3 credits in AFRICAN, or graduate/professional standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

AFRICAN 412 – CONTEMPORARY AFRICAN FICTION
3 credits.

A critical study of the major works.
Requisites: Sophomore standing and (AFRICAN 201, 203, 211, 231, or FOLKLORE/AFRICAN 210), or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2016
Learning Outcomes: 1. Read literature attentively, critically, as well as joyously
Audience: Both Grad & Undergrad

2. describe several examples from the rich archive of contemporary African writing
Audience: Both Grad & Undergrad

3. discover and implement new ideas and craft good questions
Audience: Both Grad & Undergrad

4. convey thoughts about literature in writing that involves discovery, surprises, and emotional resonance
Audience: Both Grad & Undergrad

5. analyze the relationship between contemporary African writing and the history of African literary production
Audience: Graduate

AFRICAN/AFROAMER 413 – CONTEMPORARY AFRICAN AND CARIBBEAN DRAMA
3-4 credits.

A critical study of the major works.
Requisites: Sophomore standing and (AFRICAN 201, 203, 211, 231, or FOLKLORE/AFRICAN 210), or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

AFRICAN/RELIG ST 414 – ISLAM IN AFRICA AND THE DIASPORA
3 credits.

Explore African Muslim communities and Black Muslim communities in the US as an under-examined archive of Islamic authenticity and authority. Involves close readings of ethnographies, fiction, films, and other forms of cultural expression and examination of the practice of Islam and representation of Muslims in Africa and Muslims of African ancestry in the US. Through both primary and secondary sources, explore themes of not just authenticity and authority but also related issues of representation, positionality, difference, otherness, essentialism, and normativity. Ultimately, form a deeper understanding of the diversity and complexity of Islam and Muslims of African ancestry.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate understanding of major theories, approaches, concepts, and current and classical research findings in African and diaspora literary, cultural studies, and religious studies related to Islam and Muslims.
Audience: Both Grad & Undergrad

2. Communicate effectively through close reading, essays, oral presentations, and discussion about Islam and Muslims, to share knowledge, wisdom, and values with others across social and professional settings.
Audience: Both Grad & Undergrad

3. Write and speak across disciplinary boundaries with regard to existing research about Africa, the diaspora, and Islam in the humanities.
Audience: Both Grad & Undergrad

4. Access, appraise, and utilize a variety of resources and methods for research across disciplinary lines
Audience: Both Grad & Undergrad

5. Analyze and compare diverse systems of value and belief in a variety of contexts
Audience: Both Grad & Undergrad

6. Demonstrate global and local religious literacy by identifying, evaluating, and interpreting the interrelationships and impact of religious worldviews and communities in the United States and globally
Audience: Both Grad & Undergrad

7. Articulate how the past has affected present day circumstances regarding race and racial inequalities in the US, Africa, and other African diasporic communities.
Audience: Both Grad & Undergrad

8. Recognize and question cultural assumptions and knowledge claims as they relate to race and ethnicity.
Audience: Both Grad & Undergrad

9. Demonstrate self-awareness and empathy toward the cultural perspectives and worldviews of others.
Audience: Both Grad & Undergrad

10. Apply course concepts to their lives outside the classroom by respectfully participating in our multicultural society.

AFRICAN 435 – FIFTH SEMESTER SWAHILI
3 credits.

For advanced learners of Standard Swahili; emphasis on proficiency through speaking, listening, reading, and writing, and on communication in cultural context.
Requisites: AFRICAN 334
Course Designation: Breadth - Humanities
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Demonstrate the ability to successfully handle uncomplicated tasks and social situations requiring an exchange of basic information related to their work, school, recreation, particular interests, and areas of competence.
Audience: Undergraduate

2. Demonstrate the ability to narrate and describe in all major time frames using relatively connected discourse of paragraph length
Audience: Undergraduate

3. Demonstrate the ability to express personal meaning by combining and recombining known elements and conversational input to produce responses typically consisting of sentences and strings of sentences.
Audience: Undergraduate

4. Read and comprehend a variety of texts appropriate for their proficiency level
Audience: Undergraduate

5. Write compositions on various topics using different types of writing using both present, future and past tenses.
Audience: Undergraduate

AFRICAN 436 – SIXTH SEMESTER SWAHILI
3 credits.

For advanced learners of Standard Swahili; emphasis on proficiency through speaking, listening, reading, and writing, and on communication in cultural context.
Requisites: AFRICAN 435
Course Designation: Breadth - Humanities
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Communicate ideas, and participate in most informal and some formal conversations in Swahili on topics related to school, home, employment, current events, and matters of public and community interest.
Audience: Undergraduate

2. Narrate and describe in the major time frames of past, present, and future in paragraph-length Swahili discourse with some control of aspect appropriate vocabulary, expressions, and structures
Audience: Undergraduate

3. Defend personal views in Swahili as well as understand the opposing viewpoint
Audience: Undergraduate

4. Read and comprehend a variety of texts in Swahili
Audience: Undergraduate

5. Write compositions in Swahili on various topics using different types of writing including description, narration, using both present and past tenses.
Audience: Undergraduate

AFRICAN/FRENCH 440 – AFRICAN/FRANCOPHONE FILM
3 credits.

Overview of cinematic works from francophone Africa and/or other areas of Africa. Teaches analysis and writing about cinema. Explores links between cinema and national or regional politics and ideology. Examines spectatorship in relation to questions of identity formation.
Requisites: Sophomore standing and 3 credits in AFRICAN, or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2021

AFRICAN/COM ARTS/L I S 444 – TECHNOLOGY AND DEVELOPMENT IN AFRICA AND BEYOND
3 credits.

Surveys the past 20 years of digital technology and communications culture on the African continent, cross-referenced with discourse on technology experiences in other parts of the developing world, through the framework of development studies. Readings include case studies of micro-tech practices as well as political and social use of new media, and government and NGO-led tech interventions. Information Communication Technology for Development (ICT4D) is a key area of focus. Cross-discipline areas include communications and media studies, African, Latin American and International area studies, as well as the social anthropology of technology and science, and design. Think critically about technology use in the context of different tech cultures from around the world. Apply this perspective towards new media solutions to social problems.
Requisites: Junior standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Identify canonical authors and texts, historical forms, genres, and structures in African culture studies and information and communication studies. Students will demonstrate their understanding of major theories, approaches, concepts and current and classical research findings.
Audience: Both Grad & Undergrad

2. Understand their own learning processes and possess the capacity to intentionally seek, evaluate and learn from information, and recognize and reduce bias in their thinking.
Audience: Both Grad & Undergrad

3. Communicate effectively through essays, oral presentations and discussion and project based work, so they may share their knowledge, wisdom and values with others across social and professional settings.
Audience: Both Grad & Undergrad

4. Write and speak across disciplinary boundaries with regard to existing research about Africa, the African diaspora and international development.

Audience: Graduate

5. Explain the social, economic, and/or environmental dimensions of the sustainability challenge(s) of the historic and contemporary challenges of development-oriented tech projects, and identify areas within ICT which could assist in their sustainability. [Sustainability]
Audience: Both Grad & Undergrad

6. Analyze sustainability issues and/or practices using a systems-based approach of information access and media communications within the sustainability framework with regards to environmental change, public infrastructure for clean water and sanitation, urban growth, education, governance and democracy, and public health. [Sustainability]
Audience: Both Grad & Undergrad

AFRICAN/PORTUG 451 – LUSOPHONE AFRICAN LITERATURE
3 credits.

Chronological and thematic survey of major trends, authors, and works of Lusophone Africa since 1936.
Requisites: PORTUG 221 and 312
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022

AFRICAN/JEWISH/MEDIEVAL/RELIG ST 462 – MUSLIMS AND JEWS
3 credits.

Explores the historical relationship between Muslims and Jews in a variety of contexts from the seventh century to the present. Surveys literary and cultural exchanges against the background of shifting political and social conditions across the Middle East, Europe, and the United States. Considers also the parallel legacies of anti-Semitism, Orientalism, and Islamophobia. Major themes include comparative religion, secularization, migration, and colonialism, as well as the politics of history and cultural memory. Introduces readings in English translation of medieval and modern texts originally written across languages, and especially in Hebrew and Arabic.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate contextual knowledge of major historical events, figures, social conditions, religious communities, and geographies of Muslim Iberia (al-Andalus) from the eighth to sixteenth centuries
Audience: Undergraduate

2. Situate al-Andalus in relation to wider developments in politics, culture, and religion of the Middle East and North Africa, from the eighth century to the present
Audience: Undergraduate

3. Understand the terms and conditions that have shaped Muslim-Jewish relations from the seventh century until the present, including frameworks of theology, lived religious experience, and Orientalist representation
Audience: Undergraduate

4. Integrate relevant theoretical frameworks, debates, and conversations regarding the distinction between historical writing and cultural memory
Audience: Undergraduate

5. Discern divergent and contradictory representations of the history of al-Andalus in contemporary memory culture
Audience: Undergraduate

6. Cultivate skills in textual analysis and evaluate a range of formal and structural elements in written and visual materials across genres (philosophy, literature, religion, film) as well as in primary and secondary historical sources
Audience: Undergraduate

7. Generate original ideas and texts, through coherent writing and compelling argumentation, by experimenting and taking risks, solving problems, and answering questions in a range of media
Audience: Undergraduate

AFRICAN 605 – ADVANCED TOPICS IN AFRICAN CULTURAL STUDIES
3 credits.

Introduces foundational texts in the study of modern Africa and the social, political, and economic contexts of the continent's cultural production and productivity. Conceptual explorations of interesting issues such as the African encounter with Europe, anticolonialism, race, racialism, and subjectivity, African and European languages and epistemology, transformations in gendered structures, and the environment, and the circulation and consumption of cultural forms and practices. Examines the long histories and theories of cultural production and practices in Africa, the local/global provenance of forms and styles, and the contexts of their local, national, and global circulation and consumption. Promotes critical thinking by putting like and unlike texts together and considering rhetoric and implied meanings, all in the context of Africa's interactive history with the world in the modern era.
Requisites: Junior standing and (AFRICAN 402, 403, 405, 406, 407, 409, 412, 413, 440, 453, or 471), or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023

AFRICAN 606 – ADVANCED TOPICS IN AFRICAN LITERATURE
3 credits.

A critical and historical study of selected topics in African literary studies.
Requisites: Junior standing and (AFRICAN 402, 403, 405, 406, 407, 409, 412, 413, 440, 453, or 471), or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2019

AFRICAN 670 – THEORIES AND METHODS OF LEARNING A LESS COMMONLY TAUGHT LANGUAGE
2 credits.

A theoretical and practical exploration of second language acquisition (SLA) and self-instructional methods. Tests and/or modifies one or more theories/methods by putting these self-instructional methods into practice in order to learn a less commonly taught language (LCTL).
Requisites: Concurrent enrollment in AFRICAN 671
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Create an individualized study plan for learning a less commonly taught language (LCTL)
Audience: Graduate

2. Find, evaluate, and create learning materials for a LCTL
Audience: Graduate

3. Train a conversation partner to help you learn a language
Audience: Graduate

4. Use the internet to conduct research and share information with others
Audience: Graduate

5. Use metacognitive strategies to evaluate and improve your learning, compare different learning strategies, and style-shift
Audience: Graduate

6. Explain the characteristics of a good language learner according to SLA theories
Audience: Graduate

7. Discuss and write about the application of SLA theories to language self-instruction
Audience: Graduate

AFRICAN 671 – MULTILANGUAGE SEMINAR
4 credits.

Discusses use of self-instructional methods to learn a less commonly taught language (LCTL), gets feedback on individualized syllabi and assessment plans, and presents progress reports orally and in writing. Homework includes continuous self-instruction in the chosen LCTL including reading, writing, oral, and listening skills; work with a conversation partner; and cultural knowledge.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Create an individualized study plan for learning a less commonly taught language (LCTL)
Audience: Graduate

2. Find, evaluate, and create learning materials for a LCTL
Audience: Graduate

3. Train a conversation partner to help you learn a language
Audience: Graduate

4. Use the internet to conduct research and share information with others
Audience: Graduate

5. Assess your achievement of your learning goals
Audience: Graduate

AFRICAN 672 – INTENSIVE SUMMER MULTILANGUAGE SEMINAR
8 credits.

A theoretical and practical exploration of second language acquisition (SLA) and self-instructional methods. Test and/or modify one or more theories/methods by putting these self-instructional methods into practice in order to learn a less commonly taught language (LCTL).
Requisites: Admitted to Summer Immersion Language Institute (SILI)
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Create an individualized study plan for learning a less commonly taught language (LCTL)
Audience: Graduate

2. Explain the characteristics of a good language learner according to SLA theories
Audience: Graduate

3. Discuss and write about the application of SLA theories to language self-instruction
Audience: Graduate

4. Find, evaluate, and create learning materials for a LCTL
Audience: Graduate

5. Train a conversation partner to help you learn a language
Audience: Graduate

6. Use the internet to conduct research and share information with others
Audience: Graduate

7. Use metacognitive strategies to evaluate and improve your learning, compare different learning strategies, and style-shift
Audience: Graduate

8. Assess your achievement of your learning goals
Audience: Graduate

AFRICAN 681 – SENIOR HONORS THESIS
3 credits.

Mentored individual research and study for students completing African Cultural Studies Honors in the Major.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 1991

AFRICAN 682 – SENIOR HONORS THESIS
3 credits.

Mentored individual research and study for students completing African Cultural Studies Honors in the Major.
Requisites: Consent of instructor
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 1989

AFRICAN 698 – DIRECTED STUDY
1-6 credits.

Advanced directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No

AFRICAN 699 – DIRECTED STUDY
1-6 credits.

Advanced directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

AFRICAN 700 – READING AND WRITING AFRICAN CULTURAL STUDIES
3 credits.

Covers the norms and expectations that inhere in academic writing as well as the mechanics of producing original scholarship. Designed to develop a full understanding of the craft of marshaling evidence to support an argument in the humanities, particularly African cultural studies.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

AFRICAN 703 – TOPICS IN TEACHING AFRICAN LANGUAGES
1 credit.

Theories and teaching methodologies for second language acquisition plus practical classroom techniques for teaching and directing programs in African languages.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

AFRICAN 803 – THEORIES OF AFRICAN CULTURAL STUDIES
3 credits.

A study of culture and cultural production, circulation, consumption, and meaning making in Africa. Discussions foreground material and imaginative cultural forms and practices-their origins, languages, contents, forms, functions, genres, and audiences. Examines the uses to which particular meanings of culture and its forms are put, by whom, and to what purpose, and how meanings are fought over, reshaped, and reconstituted, and under what conditions those are or can be possible. Surveys the entrenched modes of both conceptual and critical apprehension of the cultural forms and practices (from Negritude to postcolonialism and postmodernism), explores their methods of reading, raises the issue of their linkages to sources in Euro-America, and assesses the extent to which the unique concerns of the biography of culture in Africa (expressed by its creators and scholars) have tried to tame and refashion what are now globally shared critical tools of cultural reading.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

AFRICAN 804 – CRITICAL APPLIED LINGUISTICS WORKING GROUP
3 credits.

Collaborative exploration and discussion of current research and literature on critical approaches to applied linguistics (CALx), including critical discourse analysis (CDA), mostly in African contexts. Develop a large-scale research project (QP or doctoral dissertation), conduct a review of current research, and present work in progress to receive critical feedback.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 10 number of completions
Last Taught: Spring 2023
Learning Outcomes: 1. Recognize canonical authors and texts in the field of sociolinguistics, especially Africanist sociolinguistics
Audience: Graduate

2. Develop in-depth knowledge in critical applied linguistics and critical discourse analysis
Audience: Graduate

3. Understand their own learning processes and demonstrate the capacity to intentionally seek, evaluate, and learn from information, and recognize and reduce bias in their thinking.
Audience: Graduate

4. Effectively retrieve and comprehend primary sources in English and African languages, and secondary sources from a range of language-related disciplines.
Audience: Graduate

5. Demonstrate firm knowledge of existing research in their area of specialization and its gaps, while articulating the place of their own research in relation to existing research on related topics.
Audience: Graduate

6. Demonstrate an understanding of professional and ethical responsivity with regard to producing original research and working with human subjects.
Audience: Graduate

7. Communicate effectively through essays, oral presentations, and discussion, so they may share their knowledge, wisdom, and values with others across social and professional settings.
Audience: Graduate

8. Show knowledge of conventional rhetorical strategies, while integrating research by other authors and distinguishing between their own ideas and those of others.
Audience: Graduate

9. Write and speak across disciplinary boundaries with regard to existing research about Africa and the diaspora in the humanities and social sciences.
Audience: Graduate

10. Demonstrate the ability to organize a chapter or article-length piece of writing.
Audience: Graduate

11. Demonstrate command of the terminology and methodology of critical applied linguistics, construct complex arguments, and use primary and secondary sources to support arguments.
Audience: Graduate

AFRICAN/AFROAMER 813 – CONTEMPORARY AFRICAN AND CARIBBEAN DRAMA
3 credits.

Historical and critical study of the classics of contemporary African and Caribbean literary drama written in English. Thematic issues include the African encounter with Europe, postcolonial disillusionment and the betrayal of ideals, and also stylistic matters as the relationship(s) between traditional drama and other performance forms, and modern drama written in European languages. Considers theories and critical approaches to understanding the cross-continental drama traditions and their contexts. Examines the long histories of cultural, performance, and theatrical relationships between Africa and the Caribbean and how the relationships have been shaped by race and economics, past and present. Considers and questions conventional claims made by others and your own assumptions; stimulates analytical thinking about identity.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

AFRICAN 901 – SEMINAR IN MODERN AFRICAN LITERATURE
3 credits.

Special topics in modern African literature, covering various genres (prose, poetry, drama).
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

AFRICAN 905 – SEMINAR IN AFRICAN CULTURAL STUDIES: TOPICS
3 credits.

Examines various mediated cultural forms such as broadcasting, news, performance, music, film, or social media created and used and across regions and countries in Africa, addressing issues such as cultural identity, nation building, constraints on expression, access, and reception, and the interaction of global and African cultural forms.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

AFRICAN 926 – SEMINAR IN RESEARCH METHODS IN AFRICAN CULTURAL STUDIES
3 credits.

Field methods, techniques, and analytical approaches. Topics vary but may include ethnography, narrative analysis, critical discourse analysis, and other research methods.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2022

AFRICAN/ANTHRO/ECON/GEOG/HISTORY/POLI SCI 983 – INTERDEPARTMENTAL SEMINAR IN AFRICAN STUDIES TOPICS
3 credits.

Interdisciplinary inquiry in African societies and cultures.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Develop in-depth knowledge in a sub-field of specialization within African studies
Audience: Graduate

2. Acquire and demonstrate understanding of major theories, approaches, concepts, currently informing African studies
Audience: Graduate

3. Understand your process of learning and possess the capacity to intentionally seek, evaluate, and learn from information, and to recognize and reduce bias in thinking.
Audience: Graduate

4. Gain firm knowledge of existing research in African studies
Audience: Graduate

5. Develop and improve speaking, readings, listening, and writing skills
Audience: Graduate

6. Write and speak across disciplinary boundaries
Audience: Graduate

7. Analyze texts from various theoretical and critical perspectives
Audience: Graduate

AFRICAN 990 – THESIS
1-9 credits.

Advanced level mentored reading, writing, and research for students with dissertator status.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

AFRICAN 999 – INDEPENDENT READING AND RESEARCH
1-3 credits.

Advanced level mentored reading, writing, and research for dissertators.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2024

AGRICULTURAL AND APPLIED ECONOMICS (A A E)

A A E 101 – INTRODUCTION TO AGRICULTURAL AND APPLIED ECONOMICS
4 credits.

Introduction to economic ways of thinking about a wide range of problems and issues. Topics include consumption, production, prices, markets, finance, trade, pollution, growth, farms, taxes, and development.
Requisites: Satisfied Quantitative Reasoning (QR) A requirement
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate competency in fundamental economic concepts.
Audience: Undergraduate

2. Develop analytical tools necessary to critically analyze applied economic topics including agricultural economics.
Audience: Undergraduate

3. Evaluate a variety of economic issues and relevant policies, such as the challenges facing agriculture and related government interventions.
Audience: Undergraduate

4. Apply concepts to real life examples.
Audience: Undergraduate

5. Explain the social, economic, and/or environmental dimensions of the sustainability challenges related to farming, pollution, and population growth.
Audience: Undergraduate

6. Analyze the causes of and solutions for the sustainability challenge of agricultural and industrial production.
Audience: Undergraduate

A A E/ENVIR ST 244 – THE ENVIRONMENT AND THE GLOBAL ECONOMY
4 credits.

The "economic way of thinking" about global and regional environmental issues. Topics include climate change, biodiversity preservation, ocean fisheries, environmental impacts of international trade, poverty and the environment, and sustainability.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge of economic concepts to think critically about relationships between economic activity and global environmental challenges ranging from climate change to biodiversity loss.

Audience: Undergraduate

2. Use appropriate tools to analyze how governmental policies affect the use and conservation of natural resources.
Audience: Undergraduate

3. Explain the social, economic, and/or environmental dimensions of the sustainability challenges of balancing healthy global economies with environmental quality.
Audience: Undergraduate

4. Analyze the causes of and solutions for the sustainability challenges of maintaining environmental quality and healthy economies.
Audience: Undergraduate

A A E 246 – CLIMATE CHANGE ECONOMICS AND POLICY
3 credits.

Climate change and the role of applied economics in related policy analysis and research. Economics of mitigation, adaptation and geo-engineering; integrated assessment; environmental implications of energy use; climate change impacts on land use. Use of economic analysis and modeling for public policy design.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Understand why climate change arises due to a market failure.
Audience: Undergraduate

2. Evaluate policies for reducing carbon emissions using economic concepts such as marginal costs and total welfare.
Audience: Undergraduate

3. Explain the social, economic, and/or environmental dimensions of the sustainability challenge(s) of climate change.
Audience: Undergraduate

4. Analyze the causes of and solutions for the sustainability challenge of climate change.
Audience: Undergraduate

A A E 250 – TRADING FUTURES IN COMMODITY MARKETS
1 credit.

Introduction to the engaging world of commodity futures trading. Learn to analyze market trends and make informed trading decisions using both fundamental and technical analysis techniques. Hands-on experience with real world platforms. Develop the skills needed to excel in the futures market.
Requisites: A A E 101 (215 prior to Fall 2024), ECON 101, or 111
Repeatable for Credit: No
Learning Outcomes: 1. Apply fundamental and technical analysis skills for trading commodity futures
Audience: Undergraduate

2. Execute mock trades on commodity futures using a popular trading platform.
Audience: Undergraduate

3. Explain the real-world application of trading techniques, including risk management and brokerage practices
Audience: Undergraduate

A A E 267 – CAREER DEVELOPMENT FOR AAE & ABM MAJORS
1 credit.

Career and professional development geared toward the field of agricultural and applied economics or agricultural business management. Topics include resumes, cover letters, interviewing skills, internship and job applications, writing, career exploration, and networking. Panelists include faculty, alumni, and employers.
Requisites: Sophomore standing and declared in Agricultural and Applied Economics or Agricultural Business Management BS
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop professional skills that will lead to success in future endeavors, including preparing a resume, writing a cover letter, building a professional network, finding an internship, having a successful interview, and maximizing the job or internship experience
Audience: Undergraduate

2. Apply principles of the career development process to create short- and long-term personal career goals and implement a plan to evaluate progress toward them
Audience: Undergraduate

3. Use campus resources to help search and apply for internships and jobs
Audience: Undergraduate

4. Create professional relationships with fellow students, department alumni, potential employers, and AAE and ABM faculty and staff
Audience: Undergraduate

A A E 289 – HONORS INDEPENDENT STUDY
1-2 credits.

Research work under direct guidance of an AAE faculty or instructional academic staff member. Students are responsible for arranging the work and credits with the supervising instructor. Intended for students in the CALS Honors Program.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Investigate an economic topic in conjunction with other investigators to develop a deep understanding of a research problem.
Audience: Undergraduate

2. Identify a research problem and develop a basic knowledge of the academic literature on this topic.
Audience: Undergraduate

3. Use basic economic theory to frame the problem and state testable hypotheses.
Audience: Undergraduate

4. Communicate the results of investigations via written and/or oral means to an appropriate audience.
Audience: Undergraduate

A A E 299 – INDEPENDENT STUDY
1-3 credits.

Research work under direct guidance of a faculty or instructional academic staff member. Students are responsible for arranging the work and credits with the supervising instructor.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Investigate an economic topic in conjunction with other investigators to develop a deep understanding of a research problem.
Audience: Undergraduate

2. Identify a research problem and develop a basic knowledge of the academic literature on this topic.
Audience: Undergraduate

3. Use basic economic theory to frame the problem and state testable hypotheses.
Audience: Undergraduate

4. Communicate the results of investigations via written and/or oral means to an appropriate audience.
Audience: Undergraduate

A A E/ECON/REAL EST/URB R PL 306 – THE REAL ESTATE PROCESS
3 credits.

Introductory overview focused on the key aspects of the real estate process: developing real estate, permitting real estate, buying and selling real estate, understanding the economics of real estate, financing real estate, valuing real estate, leasing real estate, and managing real estate.
Requisites: (ECON 101, 111, A A E 101, or 215 prior to Fall 2024) or declared in undergraduate Business Exchange program
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop a working knowledge of the real estate process, including the roles of the various key real estate professionals and the unique challenges associated with the real estate asset class.
Audience: Undergraduate

2. Explain the characteristics, advantages, and disadvantages of the primary commercial real estate property types.
Audience: Undergraduate

3. Discuss the role of debt and equity in a real estate transaction as well as the fundamental terms, conditions, and requirements of commercial real estate financing.
Audience: Undergraduate

4. Navigate the basic regulatory framework governing the real estate process, including land use planning, zoning and the required project approvals.
Audience: Undergraduate

5. Describe the role of leasing in the commercial real estate transaction, including the critical terms and conditions of commercial leases.
Audience: Undergraduate

A A E 319 – THE INTERNATIONAL AGRICULTURAL ECONOMY
3 credits.

The nature of trade in agricultural products, trade policies and practices of importing and exporting nations, agricultural policies of major trading blocks, market instability and other primary commodity problems, recent history and current developments in multilateral trade policy.
Requisites: A A E 101 (215 prior to Fall 2024), ECON 101, or 111
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2022
Learning Outcomes: 1. Apply basic models of international trade to agricultural markets.
Audience: Undergraduate

2. Describe how different domestic policies shape international agricultural trade flows.
Audience: Undergraduate

3. Demonstrate how factors including comparative advantage, market power, and market instability impact international agricultural trade for both small and large countries.
Audience: Undergraduate

4. Summarize the current state of international agricultural trade and its effects on economic, social, and environmental outcomes.
Audience: Undergraduate

A A E 320 – AGRICULTURAL SYSTEMS MANAGEMENT
3 credits.

Application of economics to managing agricultural production systems. Topics include optimizing agricultural production, farm financial analysis, tax management, business entities, federal commodity support programs, and the structure and challenges in the US agricultural sector.
Requisites: A A E 101 (215 prior to Fall 2024), ECON 101, or 111
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply economic principles for optimizing input use in agricultural production.
Audience: Undergraduate

2. Analyze a balance sheet and income statement and common agricultural modifications for depreciation, valuation basis and cash accounting.
Audience: Undergraduate

3. Describe major taxes applying to agricultural operations, commonly used business entities and their tax and legal implications, including transfer of farm assets.
Audience: Undergraduate

4. Define major federal risk management programs that support agriculture and how they function, including crop insurance and commodity support programs.
Audience: Undergraduate

5. Describe Wisconsin agriculture and the US food system, and the justification for income and commodity support programs.
Audience: Undergraduate

A A E 322 – COMMODITY MARKETS
4 credits.

Principles and practices in marketing systems for U.S. agricultural commodities. Vertical organization; forward contracts, future markets, agricultural options and price formation. Alternate management at the farm, processor, wholesale and retail levels.
Requisites: A A E 101 (215 prior to Fall 2024), ECON 101, or 111
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand the purpose of and major operations in commodity market institutions.
Audience: Undergraduate

2. Apply economic logic and quantitative techniques to understand price relations in commodity markets.
Audience: Undergraduate

3. Understand spatial and temporal dynamics of futures prices of agricultural commodities.
Audience: Undergraduate

4. Analyze risk management strategies using futures and options.
Audience: Undergraduate

A A E 323 – COOPERATIVES AND ALTERNATIVE FORMS OF ENTERPRISE OWNERSHIP
3 credits.

Cooperatives, credit unions, and other alternative forms of enterprise are unique businesses in which users (rather than investors) are the owners. Topics will include why these models emerge, who they serve, how they differ from other forms of enterprise, and the ways in which they can be used to address social, economic, and environmental challenges.
Requisites: Sophomore standing and satisfied Quantitative Reasoning (QR) A requirement
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Communicate the characteristics of cooperatives, credit unions, and other alternative forms of enterprise and their role in our economy and society.
Audience: Undergraduate

2. Describe the social, economic, and environmental dimensions of enterprise ownership structures and identify potential tradeoffs and interrelationships among these dimensions at a level appropriate to the course.
Audience: Undergraduate

3. Discern when a cooperative or alternative form of enterprise ownership is the appropriate response to a social, economic, or environmental challenge.
Audience: Undergraduate

4. Appreciate how ownership structures affect enterprise behavior, strategy, and decision-making.
Audience: Undergraduate

5. Apply knowledge of cooperatives and alternative ownership models to a real world community economic development challenge.
Audience: Undergraduate

6. Use sustainability principles for developing personal goals and professional values.
Audience: Undergraduate

A A E 335 – INTRODUCTION TO DATA ANALYSIS USING SPREADSHEETS
2 credits.

Introduction to data analysis for social scientists using spreadsheets software - with specific applications to economics, business and finance - including data management and manipulation; formulas and calculations; data visualization and presentation using charts and graphics; statistical and visual analysis of economic indicators using tables, functions, graphs and descriptive statistics; and optimization of functions with economic and financial data.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use basic Excel software, download and manipulate economic and financial data, and create basic formulas and functions.
Audience: Undergraduate

2. Create, refine and interpret Excel charts and other graphics with real world economic and financial data, and display and organize data using tables and PivotTables.
Audience: Undergraduate

3. Present, analyze and interpret trends and relationships among and between various economic indicators.
Audience: Undergraduate

4. Use Solver and Goal Seek to numerically find optimal solutions.
Audience: Undergraduate

A A E 336 – ECONOMIC ANALYSIS USING SPREADSHEETS
1 credit.

Build practical skills related to economic analysis and interpretation of macroeconomic data using spreadsheet software, including downloading and cleaning data; statistical analysis of economic indicators using tables, functions and descriptive statistics; and data visualization using graphs, charts and maps. Apply knowledge to real-world data sets and interpret and analyze data via a final report.
Requisites: A A E 335 or concurrent enrollment
Repeatable for Credit: No

A A E/C&E SOC/SOC 340 – ISSUES IN FOOD SYSTEMS
3-4 credits.

With primary emphasis on the U.S., the course covers social, economic and biological dimensions of food systems. Using classroom and community experience, the course combines academic approaches with practitioner knowledge. A community project is required.
Requisites: SOC/C&E SOC 140, SOC 181, 210, or 211
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze the community food system from production, distribution, and consumption including cultural, environmental and social factors that influence food options.
Audience: Undergraduate

2. Investigate strategies communities engage to access nutrient-rich foods, including food justice/security/sovereignty movements
Audience: Undergraduate

3. Develop and conduct survey research and family oral histories to understand the significance of cultural food ways
Audience: Undergraduate

A A E/ECON/ENVIR ST 343 – ENVIRONMENTAL ECONOMICS
3-4 credits.

Microeconomic principles underlying the use of natural resources such as air, water, forests, fisheries, minerals and energy. These principles are applied in the examination of pollution control, preservation vs. development, deforestation, and other environmental issues.
Requisites: A A E 101 (215 prior to Fall 2024), ECON 101, or 111
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Understand why environmental problems occur in a market-based economy.
Audience: Undergraduate

2. Identify market-based environmental policies to address market failures.
Audience: Undergraduate

3. Explain the social, economic, and/or environmental dimensions of the sustainability challenge(s) of pollution control.
Audience: Undergraduate

4. Apply sustainability principles and/or frameworks to addressing the challenge of optimizing the use of scarce resources over time.
Audience: Undergraduate

A A E/NUTR SCI 350 – WORLD HUNGER AND MALNUTRITION
3 credits.

Hunger and poverty in developing countries and the United States. Topics include: nutrition and health, population, food production and availability, and income distribution and employment.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Demonstrate a basic understanding of the complex links between nutrition and malnutrition.
Audience: Undergraduate

2. Learn and apply the economic tools of supply and demand to solving/analyzing issues including income and population growth, income and population policies, and agricultural supply topics.
Audience: Undergraduate

3. Synthesize knowledge about the economics and nutritional aspects of world hunger to better understand solutions.
Audience: Undergraduate

4. Communicate effectively through written reports and online discussions.
Audience: Undergraduate

5. Apply sustainability principles and/or frameworks to addressing the challenge of addressing issues of population growth, hunger and poverty.
Audience: Undergraduate

6. Describe the social, economic, and environmental dimensions of food, hunger and malnutrition. Identify potential tradeoffs and interrelationships among these dimensions at a level appropriate to the course.
Audience: Undergraduate

A A E 352 – GLOBAL HEALTH: ECONOMICS, NATURAL SYSTEMS, AND POLICY
4 credits.

Sustaining global health and well-being depends critically on interactions between human and natural systems at multiple spatial and temporal scales. Economics provides a useful paradigm for understanding these interactions and the pathways through which individual and societal decisions made in the face of scarce resources, and threats to the natural environment, generate health and well-being outcomes. Provides students with an opportunity to use basic economic and social science reasoning to describe global heath challenges; understand the causes and consequences of health discrepancies; evaluate health and environmental policies; and appreciate the interconnectedness of planetary health and economic outcomes.
Requisites: Satisfied Quantitative Reasoning (QR) A requirement
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss the multitude of mechanisms through which human interactions with natural systems condition health and well-being outcomes in both developing and developed country contexts.
Audience: Undergraduate

2. Use positive (descriptive) economic reasoning to identify how individual and community decisions made in the face of income, political, policy, cultural, and environmental constraints lead to differential health and well-being outcomes.
Audience: Undergraduate

3. Use normative (prescriptive) economic reasoning to evaluate the efficacy of social, health, and environmental policies affecting human well-being.
Audience: Undergraduate

4. Demonstrate basic knowledge in challenge areas such air and water pollution, climate change and fisheries depletion.
Audience: Undergraduate

A A E/PL PATH/PLANTSCI 367 – INTRODUCTION TO ORGANIC AGRICULTURE: PRODUCTION, MARKETS, AND POLICY
3 credits.

Provides an in-depth understanding of the history of organic agriculture, its production, processing, marketing, and social dimensions, and its impact on environmental, community, and human health.
Requisites: ENVIR ST/AGROECOL/C&E SOC/ENTOM 103, AGRONOMY 100, HORT 120, PLANTSCI 110, BOTANY/PL PATH 123, SOC/C&E SOC 222, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the history of current organic systems and how it influences the way that organic farms and industries work.
Audience: Both Grad & Undergrad

2. Explore the biological, ecological, and agricultural underpinnings of organic production systems.
Audience: Both Grad & Undergrad

3. Examine how organic systems, social initiatives, and regulations are developed and how they shape business activities, community development efforts, and human and environmental health outcomes.
Audience: Both Grad & Undergrad

4. Evaluate the benefits and limitations of organic systems, social initiatives, and regulations from environmental, social, economic, and racial justice perspectives.
Audience: Both Grad & Undergrad

5. Analyze sustainability issues and/or practices using a systems-based approach.
Audience: Both Grad & Undergrad

6. Describe the social, economic, and environmental dimensions of organic farming and identify potential tradeoffs and interrelationships among these dimensions at a level appropriate to the course.
Audience: Both Grad & Undergrad

7. Develop the capacity to evaluate sustainability and resilience outcomes of organic and other agricultural production and processing systems using interdisciplinary methods.
Audience: Graduate

A A E/ECON 371 – ENERGY, RESOURCES AND ECONOMICS
3 credits.

Use microeconomic theory to analyze energy markets. Discuss the economics of oil, gas, and electricity and learn about applications to contemporary issues and policy questions.
Requisites: A A E 101 (215 prior to Fall 2024), ECON 101, or 111
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Use economic tools to describe energy demand
Audience: Undergraduate

2. Apply economic models of competition to energy markets
Audience: Undergraduate

3. Analyze how policies to mitigate climate change affect energy markets
Audience: Undergraduate

4. Analyze the causes of and solutions for the sustainability challenge of climate change
Audience: Undergraduate

5. Describe the social, economic, and environmental dimensions of energy policy and identify potential tradeoffs and interrelationships among these dimensions at a level appropriate to the course
Audience: Undergraduate

A A E/INTL ST 373 – GLOBALIZATION, POVERTY AND DEVELOPMENT
3 credits.

Addresses the process of globalization -- trade, international capital flows, labor migration and remittances, and aid -- from the perspective of developing economies and the development process.
Requisites: A A E 101 (215 prior to Fall 2024), ECON 101, 102, or 111
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop an informed perspective on economic drivers of globalization over the past 30 years and the links between globalization, economic development and poverty in low-income countries.
Audience: Undergraduate

2. Gain familiarity with ongoing debates concerning economic policy in developing countries and the role of international institutions in influencing those decisions.
Audience: Undergraduate

3. Learn multiple sources of information regarding economic circumstances of poverty-vulnerable countries.
Audience: Undergraduate

4. Use Excel and other computational tools to analyze and interpret large, multi-dimensional datasets.
Audience: Undergraduate

5. Demonstrate competence in writing about economic issues through reflections on topic reading assignments and in academic style in two longer writing assignments.
Audience: Undergraduate

A A E/INTL ST 374 – THE GROWTH AND DEVELOPMENT OF NATIONS IN THE GLOBAL ECONOMY
3 credits.

This course explores the roles of markets, states, and civil institutions, using economic theory, computer simulations, and historical experience to better understand the forces that shape the wealth and well-being of nations and people around the world.
Requisites: A A E 101 (215 prior to Fall 2024), ECON 101, 102, or 111
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Evaluate the importance of economic growth and globalization in the process of economic development of nations.
Audience: Undergraduate

2. Understand how economic theory and data can help identify and measure factors contributing to economic growth and the effects of globalization.
Audience: Undergraduate

3. Assess the historical and recent evolution of economic growth and globalization over time and across countries.
Audience: Undergraduate

4. Understand the role of policy and its effects on economic growth, globalization, and on the process of economic development.
Audience: Undergraduate

5. Demonstrate basic economic and statistical literacy for evaluating economic growth and globalization.
Audience: Undergraduate

6. Explain the social, economic, and/or environmental dimensions of the sustainability challenges of economic growth and globalization.
Audience: Undergraduate

7. Describe the social, economic, and environmental dimensions of economic growth and globalization and identify potential tradeoffs and interrelationships among these dimensions at a level appropriate to the course.
Audience: Undergraduate

A A E 375 – SPECIAL TOPICS
1-4 credits.

Special topics on contemporary issues relevant to agricultural and applied economics.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Investigate a special topic in conjunction with other investigators to develop an understanding of how economists would approach this topic.
Audience: Undergraduate

2. Understand the basic economic principles involved in the topic.
Audience: Undergraduate

3. Use basic economic theory to frame the problem and state testable hypotheses.
Audience: Undergraduate

4. Communicate the results of investigations via written and/or oral means to an appropriate audience.
Audience: Undergraduate

A A E 399 – COORDINATIVE INTERNSHIP/COOPERATIVE EDUCATION
1-8 credits.

An internship under guidance of a faculty or instructional academic staff member in Agricultural and Applied Economics and internship site supervisor. Students are responsible for arranging the work and credits with the AAE faculty or instructional academic staff member and the internship site supervisor.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Workplace - Workplace Experience Course
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Perform assigned responsibilities in a professional setting.
Audience: Undergraduate

2. Identify and employ standards of professionalism at work site.
Audience: Undergraduate

3. Articulate through discussion with faculty mentor how concepts learned in applied economics relate to real work situations.
Audience: Undergraduate

4. Synthesize and apply knowledge from the ag & applied economics curriculum and broader coursework to solve problems on the worksite.
Audience: Undergraduate

5. Create and submit a final report to a faculty mentor.
Audience: Undergraduate

A A E 400 – STUDY ABROAD IN AGRICULTURAL AND APPLIED ECONOMICS
1-6 credits.

Provides an area equivalency for courses taken on Madison Study Abroad Programs that do not equate to existing UW courses. Current enrollment in a UW-Madison study abroad program
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions

A A E 419 – AGRICULTURAL FINANCE
3 credits.

Introduction to basic finance concepts. Topics include financial statements, ratio analysis and interpretation, investment analysis, capital budgeting, credit concepts, and capital markets.
Requisites: A A E 101 (215 prior to Fall 2024), ECON 101, 111, or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Correctly interpret accounting and financial statements
Audience: Undergraduate

2. Explain the time value of money and how this concept relates to interest rates
Audience: Undergraduate

3. Conduct firm-level investment analyses and develop capital budgeting strategies
Audience: Undergraduate

4. Summarize characteristics of agricultural credit and capital markets for both borrowers and lenders
Audience: Undergraduate

5. Construct comprehensive financial analyses of agricultural enterprises, employing advanced quantitative methodologies and techniques that extend beyond basic financial statement interpretation
Audience: Graduate

6. Integrate recent literature in financial analyses to support informed decision-making in management.
Audience: Graduate

A A E/ECON 421 – ECONOMIC DECISION ANALYSIS
4 credits.

Managerial oriented, applied presentation of microeconomic theory. Quantitative emphasis with extensive homework use of spreadsheets and written executive summaries of applied economic analyses. Applications on natural resources and agricultural markets.
Requisites: STAT 301, 371, ECON 310, SOC/C&E SOC 360, PSYCH 210, or (GEN BUS 306 and 307)
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Manipulate, organize, and visualize quantitative economic data using computer software.
Audience: Undergraduate

2. Conduct statistical analyses and estimate basic linear regression models of economic data.
Audience: Undergraduate

3. Correctly report and interpret results from statistical analyses in the context of informing economic decisions.
Audience: Undergraduate

4. Set up and solve linear and non-linear programming problems that inform economic decision-making using computer software.
Audience: Undergraduate

5. Integrate uncertainty into the analysis of economic decisions and articulate how uncertainty influences economic behavior.
Audience: Undergraduate

6. Effectively communicate verbally, visually, and in writing the process and results of economic decision analyses.
Audience: Undergraduate

A A E 422 – FOOD SYSTEMS AND SUPPLY CHAINS
3 credits.

Examination of the structure of supply chains for food and agriculture and key business decisions in the the broader context of food systems.
Requisites: A A E 101 (215 prior to Fall 2024), ECON 101, 111, or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe food supply chain (network) components, processes, objectives, drivers and performance metrics, and the main differences in characteristics and management practices for food and agricultural supply chains compared to supply chains for non-food manufactured products.
Audience: Both Grad & Undergrad

2. Analyze sourcing and purchasing decisions for raw materials or finished goods, use business process analyses for food supply chain improvement and determine appropriate production or service capacity strategic decisions for food supply chains.
Audience: Both Grad & Undergrad

3. Apply basic inventory management decision methods, such as the Economic Order Quantity (EOQ) and Re-Order Point (ROP), decision models for logistics including transportation modes and distribution network configurations, and Sales & Operations Plans (Aggregate Plans) for a food manufacturer.
Audience: Both Grad & Undergrad

4. Describe the metrics and processes that food businesses use to monitor and improve sustainability, in the context of Corporate Social Responsibility.
Audience: Both Grad & Undergrad

5. Define the basic characteristics of a food system and its linkages to food and agricultural supply chains, and use basic systems modeling concepts for the development of qualitative assessment of food systems and understand their use in quantitative models of food systems.
Audience: Both Grad & Undergrad

6. Use systems modeling approaches to assess key food supply chain and food system issues such as the impacts of food supply chains on human nutrition, programs for farmers, agriculture research and development and localization of food systems.
Audience: Both Grad & Undergrad

7. Undertake a review of a subset of relevant literature on a topic or issue related to food supply chains or food systems (with pre-approval of the instructor), and relate the content of that review to the concepts covered in this course.
Audience: Graduate

A A E/F&W ECOL 430 – DECISION METHODS FOR NATURAL RESOURCE MANAGERS
3 credits.

Applications of quantitative methods, including optimization and simulation, to the management of natural resources, especially forests.
Requisites: MATH 112, 114, or 171 or placement into MATH 211 or 221. Not open to students with credit for A A E 652 prior to Fall 2025.
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Quantify the timber and non-timber values of forest resources
Audience: Undergraduate

2. Describe and apply financial decision criteria to evaluate forest investments
Audience: Undergraduate

3. Explain how optimal rotation ages are determined and what factors affect this calculation
Audience: Undergraduate

4. Create harvest scheduling models and apply them to diverse landowner objectives
Audience: Undergraduate

5. Apply knowledge of mathematical models and financial theory to determine optimal rotation age for a given species and communicate findings in written and verbal formats
Audience: Undergraduate

A A E/ECON/INTL BUS 462 – LATIN AMERICAN ECONOMIC DEVELOPMENT
3 credits.

A historico-institutional analysis of development problems in the principal Latin American countries, with attention to differentiation of national growth patterns and alternative development strategies.
Requisites: A A E 101 (215 prior to Fall 2024), ECON 101, or 111
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Demonstrate mastery of the language of international development economics
Audience: Undergraduate

2. Develop proficiency in an array of concepts from primary product exports to conditional cash transfers to migration and remittances to corruption and civil conflict.
Audience: Undergraduate

3. Examine how markets and distinct development strategies and processes provide different opportunities and returns for the rich and the poor, urban and rural, latino and indigenous peoples, large and small countries, and so on.
Audience: Undergraduate

4. Explain the strengths and weaknesses of contending theories of economic development.
Audience: Undergraduate

5. Apply contending theories to markets, state policies, social initiatives, and historical experiences in Latin American countries.
Audience: Undergraduate

A A E/ECON 473 – ECONOMIC GROWTH AND DEVELOPMENT IN SOUTHEAST ASIA
3 credits.

Evaluates economic development strategies in Southeast Asia and their implications for growth, distribution and environment. Students learn trade and development theory as well as specific knowledge of Southeast Asian economic development.
Requisites: A A E 101 (215 prior to Fall 2024), ECON 101, 111, or graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Demonstrate basic economic and statistical literacy relevant to the study of economic development.
Audience: Both Grad & Undergrad

2. Understand basic models of international trade and economic growth.
Audience: Both Grad & Undergrad

3. Demonstrate a working knowledge of available data on the economies of Southeast Asia.
Audience: Both Grad & Undergrad

4. Identify and analyze problems of economic development in Southeast Asia.
Audience: Undergraduate

5. Identify and analyze problems of economic development in Southeast Asia using formal methods of economic theory and evidence.
Audience: Graduate

A A E/ECON 474 – ECONOMIC PROBLEMS OF DEVELOPING AREAS
3 credits.

Analyzes aggregate growth, income distribution and poverty in lower income economies. Uses microeconomics of imperfect labor, capital and insurance markets to explore why some individuals advance economically as their economies grow and others fall behind. Considers implications of aggregate and micro analysis for national and international economic policy.
Requisites: A A E 101 (215 prior to Fall 2024), ECON 101, or 111
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge of current research in development economics to explain cases and identify areas that policy can influence.
Audience: Undergraduate

2. Calculate basic measures of poverty, inequality and economic development.
Audience: Undergraduate

3. Differentiate empirical methods used to analyze poverty and poverty alleviation.
Audience: Undergraduate

4. Use economic models and empirical methods to evaluate development policy.
Audience: Undergraduate

A A E/ECON 477 – AGRICULTURAL AND ECONOMIC DEVELOPMENT IN AFRICA
3 credits.

Composition, organization, and techniques of agricultural production; economic change and development of agriculture, economic policies, special problems of developing African agriculture.
Requisites: A A E 101 (215 prior to Fall 2024), ECON 101, 111, or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Explain the economic problems of African nations including economic history, different sectors of the economy, economic development, and economic growth.
Audience: Both Grad & Undergrad

2. Use empirical evidence to evaluate an economic argument, including interpreting and explaining economic data.
Audience: Both Grad & Undergrad

3. Apply the tools of economic analysis (both theoretical and empirical tools) to evaluate specific policy proposals, especially as they relate to contemporary issues in African development.
Audience: Graduate

4. Communicate effectively in written and graphical form about issues in African development.
Audience: Both Grad & Undergrad

5. Explain the social, economic, and/or environmental dimensions of the sustainability challenges of development of African nations.
Audience: Both Grad & Undergrad

6. Analyze the causes of and solutions for the sustainability challenge of generating agricultural and economic development of African countries.
Audience: Both Grad & Undergrad

A A E 500 – SENIOR CAPSTONE EXPERIENCE
3 credits.

Teaches students how to apply economic theory to economic problems, utilize quantitative techniques in economic analyses, and communicate findings and results of economic analyses.
Requisites: Senior standing and (declared in Agricultural & Applied Economics, B.S. or Agricultural Business Management, B.S.)
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply economic and business theories and tools to real world applied economic and business problems.
Audience: Undergraduate

2. Write a clear report that uses the tools of applied economics and business to answer consultant, business, and/or research questions and communicates clearly the results of analysis and data to a reader.
Audience: Undergraduate

3. Communicate effectively an oral summary of a research or consulting report or a business plan to an audience.
Audience: Undergraduate

4. Work in teams including effective project and time management, communication, and teamwork.
Audience: Undergraduate

A A E/REAL EST/URB R PL 520 – COMMUNITY ECONOMIC ANALYSIS
3 credits.

Economic theory (location and growth) applicable to community economic development; the role of private and public sector in local economic development, and techniques for economic analysis of community.
Requisites: ECON 301 or 311 or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Synthesize an overview of economic theory as applied to small open economies.
Audience: Both Grad & Undergrad

2. Identify the strengths and weaknesses of the community's economy.
Audience: Both Grad & Undergrad

3. Implement alternative processes for affecting change at the community level.
Audience: Both Grad & Undergrad

4. Demonstrate literacy of economic factors affecting change at the local level.
Audience: Both Grad & Undergrad

5. Describe the community within a sustainable systems thinking approach.
Audience: Both Grad & Undergrad

6. Identify appropriate roles for community economic development practitioners in a variety of community settings.
Audience: Graduate

A A E/ECON 526 – QUANTITATIVE METHODS IN AGRICULTURAL AND APPLIED ECONOMICS
4 credits.

Use of quantitative methods (mathematics, statistics, and optimization) to analyze problems faced by decision makers in natural resources and agriculture. Extensive homework requiring use of quantitative methods via spreadsheet tools to solve problems from an applied decision context.
Requisites: (MATH 211 or 221), ECON 301, and STAT 301, or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Develop an understanding of the use of calibrated economic models to study economic policy and the underlying applied price theory.
Audience: Both Grad & Undergrad

2. Gain expertise in the formulation of numerical economic equilibrium models with application to trade, public finance, climate and energy policy applications.
Audience: Both Grad & Undergrad

3. Describe data sources for sectoral and economy-wide policy applications of calibrated economic equilibrium models.
Audience: Both Grad & Undergrad

4. Use GAMS, Excel and other visualization tools to analyze and interpret large, multi-dimensional datasets and models.
Audience: Both Grad & Undergrad

5. Demonstrate competence in writing about economic issues on the basis of evidence-based analysis of economic policy proposals.
Audience: Both Grad & Undergrad

6. Learn equivalent formulations of partial and general economic equilibrium models in primal, dual and complementarity formats.
Audience: Graduate

A A E/ECON/F&W ECOL 531 – NATURAL RESOURCE ECONOMICS
3 credits.

Economic concepts and tools relating to management and use of natural resources, including pricing principles, cost-benefit analysis, equity, externalities, economic rent, renewable and nonrenewable resources, and resource policy issues.
Requisites: ECON 301 or 311 or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Employ appropriate concepts in order to correctly define the economic benefits accrued from different natural resources.
Audience: Both Grad & Undergrad

2. Apply appropriate methodologies and tools to demonstrate the conditions under which the benefits are likely to be captured or dissipated by real world actors.
Audience: Both Grad & Undergrad

3. Explain the social, economic, and/or environmental dimensions of the sustainability challenges of maintaining healthy supplies of forests, biodiversity, fish and wildlife, and freshwater.
Audience: Both Grad & Undergrad

4. Analyze the causes of and solutions for the sustainability challenges of maintaining healthy supplies of forests, biodiversity, fish and wildlife, and freshwater.
Audience: Both Grad & Undergrad

5. Apply academic principles of natural resource economics to a real-world policy problem.
Audience: Graduate

A A E/M H R 540 – INTELLECTUAL PROPERTY RIGHTS, INNOVATION AND TECHNOLOGY
3 credits.

Uses economic concepts to illustrate the nature of technological innovation, competition, and economic growth. Topics: economics of the intellectual property protection (IPP); market structure and innovation; interaction between public and private sectors; IPP and anticompetitive policies; globalization.
Requisites: Graduate/professional standing and (ECON 301 or 311)
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Describe major issues in economics of intellectual property protection (IPP), technology and innovation.
Audience: Both Grad & Undergrad

2. Employ basic economic analysis of IPP, technology and innovation related policy issues.
Audience: Both Grad & Undergrad

3. Articulate and critique theories and firms' commercial strategies related to IPP, technology and innovation.
Audience: Graduate

4. Communicate clearly economic and policy issues related to IPP, technology and innovation.
Audience: Both Grad & Undergrad

A A E/CIV ENGR/ENVIR ST/URB R PL 561 – ENERGY MARKETS
3 credits.

Energy resources are an essential element of the world's business, political, technical and environmental landscape. Analytic tools provided by the discipline of economics expands our understanding of this critical issue. Energy supply markets reviewed include both fossil fuels and renewable resources. Energy demand sectors include residential, commercial, industrial and transportation. Electricity represents an intermediate energy market. The interactions among these markets participants indicate how scarce resources are allocated among competing needs in the world economy.
Requisites: A A E 101 (215 prior to Fall 2024), ECON 101, 111, or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

A A E 601 – APPLIED ECONOMICS
3 credits.

Micro- and macroeconomic analysis of consumer behavior, markets, business strategy and government policy. Topics include supply and demand, equilibrium, elasticity, welfare, trade, externalities, market structure, economic growth, unemployment, and inflation.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Apply microeconomic theories to explain consumer behavior and business strategy
Audience: Graduate

2. Explain market equilibrium and price determination
Audience: Graduate

3. Evaluate government policy, such as taxes, regulation, and subsidies
Audience: Graduate

4. Describe the costs and benefits of international trade
Audience: Graduate

5. Discuss fundamental macroeconomic concepts, such as GDP, unemployment, and inflation
Audience: Graduate

6. Critically evaluate economic arguments in media and policy sources
Audience: Graduate

A A E 625 – AGRIBUSINESS ECONOMICS AND MANAGEMENT
3 credits.

Includes a sequential study of subject material in agribusiness management and managerial economics related to the management of agricultural businesses. Topics related to agribusiness management in the U.S., including organizational structure, marketing, strategy, financial statements, financing and production planning. Concepts from managerial economics as applied to the agribusiness firm, including production theory, cost analysis, pricing strategies, cost-benefit analysis, investment decisions and competition strategies.
Requisites: (ECON 301 or 311) and A A E 335, or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Evaluate the different organizational and operational structures of contemporary agricultural businesses and the advantages and disadvantages of each.
Audience: Both Grad & Undergrad

2. Identify the role and impact of marketing and human resource management used in decision making within the firm and across the supply chain.
Audience: Both Grad & Undergrad

3. Interpret financial statements and calculate and analyze a variety of important financial ratios used in making managerial decisions.
Audience: Both Grad & Undergrad

4. Examine an agricultural business to determine its strengths, weaknesses, and opportunities for improvement.
Audience: Both Grad & Undergrad

5. Explain the profit function and how to determine areas of profit maximization and cost minimization.
Audience: Graduate

6. Evaluate various pricing and competition strategies.
Audience: Graduate

A A E 635 – APPLIED MICROECONOMIC THEORY
3 credits.

Microeconomic theory applied to consumers, producers, markets, and welfare analysis. Emphasis is on the mathematics of duality and optimization methods. Computer applications of the theory. One semester of linear algebra highly recommended.
Requisites: MATH 222 and (ECON 301 or 311), or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply models of economic problems such as production and consumption allocations and the efficiency consequences.
Audience: Both Grad & Undergrad

2. Use models for applied economic analysis.
Audience: Both Grad & Undergrad

3. Articulate and critique theories and practices in such analyses.
Audience: Graduate

4. Communicate clearly economic and policy issues related to such analyses.
Audience: Graduate

A A E 636 – APPLIED ECONOMETRIC ANALYSIS I
3 credits.

Introduction to the standard linear regression model with an emphasis on application issues. Includes statistical foundation, hypothesis testing, functional form, model selection and procedures for handling violations of model assumption.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand the technical aspects of linear regression and statistical inference.
Audience: Graduate

2. Critically evaluate estimates of linear models.
Audience: Graduate

3. Gauge the appropriateness of different model assumptions for different types of applied problems.
Audience: Graduate

A A E 637 – APPLIED ECONOMETRIC ANALYSIS II
4 credits.

Focus on extending the standard regression model. Topics include nonlinear regression models, maximum likelihood estimation, panel data, simultaneous equations, linear and nonlinear systems, analysis of discrete choice, limited dependent variables, empirical economic applications and policy analysis.
Requisites: A A E 636
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Extend the standard linear regression models to nonlinear regression models, estimate them, and interpret the results.
Audience: Graduate

2. Estimate models beyond ordinary least squares (OLS), to include Maximum Likelihood (MLE), analysis of discrete choice and limited dependent variables.
Audience: Graduate

3. Provide an overview of the latest techniques being developed using panel data and apply these methods in an independent estimation exercise.
Audience: Graduate

4. Select the experimental or quasi-experimental method appropriate for the analysis at hand.
Audience: Graduate

A A E 641 – FOUNDATIONS OF AGRICULTURAL ECONOMICS
3 credits.

Overview of the economic performance of agriculture in feeding the growing world population. Examines contemporary economic issues in the food sector, along with research methods used in their analysis. Covers production analysis, risk and uncertainty, food demand, market structure, policy and welfare analysis.
Requisites: A A E 635 and 636
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Understand common models used by economists who study agriculture.
Audience: Graduate

2. Describe the importance of institutions (formal and informal) common to food and agricultural industries.
Audience: Graduate

3. Understand contemporary issues related to agricultural economics and linkages between agriculture and the broader economy, including interactions with land, water and soil resources; connections to food, fuel, and fiber industries; role in early development of societies and nation states; rural-urban population flows; and growth and development of modern economies.
Audience: Graduate

4. Analyze policies that are a response to market frictions and distributive conflict among populations.
Audience: Graduate

A A E 642 – FOUNDATIONS OF DEVELOPMENT ECONOMICS
3 credits.

An overview of development economics, covering both basic theory and empirical applications. Topics include economic growth, trade, measurement of poverty and inequality, human capital, agricultural household models, technology adoption, migration, credit, savings, insurance, infrastructure, and the environment.
Requisites: A A E 635 and 636
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Articulate and critique theories of development economics, including basic closed and open economy macroeconomic models, microeconomic models of individual and household decisions to invest in human capital, agricultural household models, models of credit and insurance markets in developing countries, and a basic understanding of technology adoption decisions.
Audience: Graduate

2. Apply measures of poverty and inequality using household data.
Audience: Graduate

3. Identify and apply empirical approaches used to analyze problems in development, including the use of observational data, both cross-sectional and panel, natural experiments, and intentional experiments.
Audience: Graduate

4. Use economic models and empirical methods to evaluate development policy or issues relevant to developing economies and be able to clearly communicate this analysis orally and in writing.
Audience: Graduate

A A E 643 – FOUNDATIONS OF ENVIRONMENTAL AND NATURAL RESOURCE ECONOMICS
3 credits.

Survey of historical topics and contemporary research questions in environmental and resource economics. Focus areas include foundational models of human/environment interaction, definition and evaluation of the suite of environmental policy instruments, measuring environmental costs and benefits, and examining natural resource use.
Requisites: A A E 635 and 636
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Summarize the breadth of topics that constitute the field of environmental economics.
Audience: Graduate

2. Use the field's historical canon to organize current research topics.
Audience: Graduate

3. Critically read and assess research papers in the field.
Audience: Graduate

4. Identify knowledge gaps in the field.
Audience: Graduate

5. Demonstrate knowledge about significant research in the field by writing a literature summary.
Audience: Graduate

A A E 670 – MATHEMATICS FOR AGRICULTURAL AND APPLIED ECONOMICS
3 credits.

The fundamental mathematics and statistics necessary for the study of quantitative methods in agricultural and applied economics (AAE). Topics include the mathematics of optimization and its role in basic welfare theory and consumer demand; linear and matrix algebra and their application in both modeling consumer behavior and the statistical analysis of models; and the fundamentals of statistical analysis relevant to econometric analysis, including probability theory, sampling distributions and statistical inference.
Requisites: (ECON 101, 111, A A E 101, or 215 prior to Fall 2024) and (MATH 211, 217, or 221) or graduate/professional standing
Repeatable for Credit: No
Last Taught: Summer 2024
Learning Outcomes: 1. Solve a constrained optimization problem by applying calculus rules.
Audience: Undergraduate

2. Create and interpret basic data visualizations.
Audience: Undergraduate

3. Articulate the law of large numbers as it pertains to empirical economic analysis.
Audience: Undergraduate

4. Determine statistical significance of parameter estimates & interpret the results.
Audience: Undergraduate

5. Use R for basic calculations and simulations.
Audience: Undergraduate

6. Explain statistical concepts to a general audience.
Audience: Undergraduate

A A E/ECON/ENVIR ST/URB R PL 671 – ENERGY ECONOMICS
3 credits.

The method, application, and limitations of traditional economic approaches to the study of energy problems. Topics include microeconomic foundations of energy demand and supply; optimal pricing and allocation of energy resources; energy market structure, conduct, and performance; macro linkages of energy and the economy; and the economics of regulatory and other public policy approaches to the social control of energy.
Requisites: Graduate/professional standing or (senior standing and ECON 101, 111, A A E 101, or 215 prior to Fall 2024)
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020
Learning Outcomes: 1. Understand fundamentals of energy sources and technologies.
Audience: Both Grad & Undergrad

2. Be familiar with microeconomic theory with applications to energy industries and markets.
Audience: Both Grad & Undergrad

3. Build analytical skills in economic analysis and be able to apply the economic thinking to historical and contemporary energy-related issues.
Audience: Graduate

4. Analyze the causes of and solutions for the sustainability challenge of affordable and clean energy.
Audience: Both Grad & Undergrad

5. Apply sustainability principles and/or frameworks to addressing the challenge of affordable and clean energy.
Audience: Both Grad & Undergrad

A A E 681 – SENIOR HONORS THESIS
2-4 credits.

Individual study for majors completing theses for Honors degrees as arranged with a faculty member. Requires consent of supervising instructor. Enrolled in CALS Honors Program.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2009
Learning Outcomes: 1. Investigate a topic in conjunction with other investigators to develop a deep understanding of a research problem.
Audience: Undergraduate

2. Identify a research problem and develop a set of testable hypotheses.
Audience: Undergraduate

3. Carry out analysis using data and/or economic models related to the research problem under investigation.
Audience: Undergraduate

4. Communicate the results of investigations via written and/or oral means to an appropriate audience.
Audience: Undergraduate

5. Write an honors thesis that contains an abstract, background, a demonstration of research skills, analysis of the research question, and a summary of the impact of the work.
Audience: Undergraduate

A A E 682 – SENIOR HONORS THESIS
2-4 credits.

Individual study for majors completing theses for Honors degrees as arranged with a faculty member. Requires consent of supervising instructor. Continuation of 681. Enrolled in CALS Honors Program.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2010
Learning Outcomes: 1. Investigate a topic in conjunction with other investigators to develop a deep understanding of a research problem.
Audience: Undergraduate

2. Identify a research problem and develop a set of testable hypotheses.
Audience: Undergraduate

3. Carry out analysis using data and/or economic models related to the research problem under investigation.
Audience: Undergraduate

4. Communicate the results of investigations via written and/or oral means to an appropriate audience.
Audience: Undergraduate

5. Write an honors thesis that contains an abstract, background, a demonstration of research skills, analysis of the research question, and a summary of the impact of the work.
Audience: Undergraduate

A A E 691 – SENIOR THESIS
2 credits.

Individual study for majors completing theses for AAE degrees as arranged with a faculty member. Requires consent of supervising instructor.
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Fall 2022
Learning Outcomes: 1. Investigate a topic in conjunction with other investigators to develop a deep understanding of a research problem.
Audience: Undergraduate

2. Identify a research problem and develop a set of testable hypotheses.
Audience: Undergraduate

3. Carry out analysis using data and/or economic models related to the research problem under investigation.
Audience: Undergraduate

4. Communicate the results of investigations via written and/or oral means to an appropriate audience.
Audience: Undergraduate

5. Write a thesis that contextualizes the work, presents the research question, describes the analysis performed to answer the question, and analyzes the results.
Audience: Undergraduate

A A E 692 – SENIOR THESIS
2 credits.

Individual study for majors completing theses for AAE degrees as arranged with a faculty member. Requires consent of supervising instructor. Continuation of A A E 691.
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Investigate a topic in conjunction with other investigators to develop a deep understanding of a research problem.
Audience: Undergraduate

2. Identify a research problem and develop a set of testable hypotheses.
Audience: Undergraduate

3. Carry out analysis using data and/or economic models related to the research problem under investigation.
Audience: Undergraduate

4. Communicate the results of investigations via written and/or oral means to an appropriate audience.
Audience: Undergraduate

5. Write a thesis that contextualizes the work, presents the research question, describes the analysis performed to answer the question, and analyzes the results.
Audience: Undergraduate

A A E 699 – SPECIAL PROBLEMS
1-4 credits.

Independent research guided by an AAE faculty or instructional academic staff member. Students are responsible for arranging the work and credits with the supervising instructor.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Investigate a special topic in conjunction with the faculty member and other investigators to develop an understanding of how economists would approach this topic.
Audience: Undergraduate

2. Meet with the faculty member based on their requirements and demonstrate how the independent work is progressing.
Audience: Undergraduate

3. Communicate the results of investigations via written and/or oral means to an appropriate audience.
Audience: Undergraduate

A A E 701 – APPLIED ECONOMIC DATA ANALYSIS
4 credits.

Application of data science methods to economic analyses. Integration of data acquisition, cleaning, analysis, and interpretation in managerial contexts. Emphasis on applications in the agri-food supply chain.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Manipulate, organize, and visualize quantitative economic data using computer software
Audience: Graduate

2. Conduct statistical analyses and estimate basic linear regression models of economic data
Audience: Graduate

3. Correctly report and interpret results from statistical analyses of economic data in the context of informing managerial decisions
Audience: Graduate

4. Set up and solve linear and non-linear programming problems that inform economic decision-making using computer software
Audience: Graduate

5. Integrate uncertainty into the analysis of economic decisions and articulate how uncertainty influences managerial decisionmaking
Audience: Graduate

6. Effectively communicate verbally, visually, and in writing the process and results of data analysis for managerial decisionmaking
Audience: Graduate

A A E 705 – APPLIED MICROECONOMICS
3 credits.

Focuses on developing a conceptual as well as empirical analysis of microeconomic behavior, including production and consumption analysis, technical change, and investment. Emphasizes empirical applications of microeconomics, with implications for efficiency and welfare analysis. Knowledge of statistics such as STAT/MATH 309 is recommended.
Requisites: A A E 635 and graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2020
Learning Outcomes: 1. Understand formal models of economic problems such as production and consumption allocations and the efficiency consequences.
Audience: Graduate

2. Employ analytical and mathematical models to analyze economic problems.
Audience: Graduate

3. Articulate and critique theories and practices in such analyses.
Audience: Graduate

4. Communicate clearly economic and policy issues related to such analyses.
Audience: Graduate

A A E 706 – APPLIED RISK ANALYSIS
3 credits.

Conceptual empirical analysis of economic behavior under risk and its implications for management and policy decisions. Emphasis on economic applications to the agricultural and food sector.
Requisites: A A E 635 and graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Evaluate the linkages between economic theory and the analysis of behavior under risk.
Audience: Graduate

2. Describe and employ alternative models used in risk analysis.
Audience: Graduate

3. Formulate, analyze and report on current and emerging issues related to risk assessment, risk management and public decision making related to risk management.
Audience: Graduate

4. Conduct applied risk analysis.
Audience: Graduate

A A E 718 – DATA SCIENCE FOR AGRICULTURAL AND APPLIED ECONOMICS
3 credits.

Introduction to data and data processing using both Python and R programming languages. Concepts covered include loading data, data acquisition, cleaning data, visualization/exploring data, and storing data.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Use Python and R to load, clean and visualize data.
Audience: Graduate

2. Prepare and manipulate/transform data to support analysis in Python and R.
Audience: Graduate

3. Create effective visualizations to communicate complex data.
Audience: Graduate

4. Implement Simple Linear Regression in Python and R.
Audience: Graduate

5. Apply the above R and Python methods to public-use datasets related to agricultural and applied economics.
Audience: Graduate

A A E 719 – APPLIED BUSINESS ECONOMICS
4 credits.

Overview of fundamental topics related to macroeconomics, economic measurement, financial markets and forecasting. Concepts include fiscal and monetary policy, the money system, models of aggregate supply and demand, business cycles, financial instruments, productivity, measurements and indicators of employment and economic growth, financial institutions, international trade and finance, and various forecasting methods and models.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain, contrast and analyze topics related to business economics such as forecasting, business cycle analysis, fiscal and monetary policy, and financial markets.
Audience: Graduate

2. Compare and contrast the relevant strengths and weaknesses of established macroeconomic theories.
Audience: Graduate

3. Identify and visualize data related to business economics, analyze trends in light of macroeconomic principles, and apply forecasting methods.
Audience: Graduate

4. Effectively communicate relevant ideas through writing and presentation.
Audience: Graduate

A A E 720 – SEMINAR IN QUANTITATIVE AND APPLIED ECONOMICS
1 credit.

This is a 1 credit seminar that will be offered each spring. There will be different presenters each year.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Understand and evaluate the arguments and methods of presentations from industry and academia.
Audience: Graduate

2. Employ the vocabulary relevant to an economics topic, understand the economic context for the issue, and pros/cons associated with potential solutions.
Audience: Graduate

3. Professionally present results of economic analysis.
Audience: Graduate

A A E 721 – PROFESSIONAL COMMUNICATION OF APPLIED ECONOMIC ANALYSIS
1 credit.

Professional communication for careers in applied economics. Writing for technical and non-technical audiences, including writing about research findings, client memos executive summaries, detailed analysis reports etc.
Requisites: A A E 636
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and use elements of reader-friendly writing strategies
Audience: Graduate

2. Communicate effectively with technical and non-technical audiences
Audience: Graduate

3. Summarize different types of econometric analyses and explain the intuition behind them to non-economists
Audience: Graduate

4. Situate analysis results into a larger context and reflect on their implications
Audience: Graduate

5. Differentiate between some of the ethical and non-ethical uses of generative AI tools as writing/editing assistants in a professional setting
Audience: Graduate

A A E 722 – MACHINE LEARNING IN APPLIED ECONOMIC ANALYSIS
4 credits.

The basic methods, implementation and applications of machine learning for understanding contemporary economic issues using large data sets. Building upon understanding of standard econometric models, the topics include data mining techniques; regression model selection and regularization; post selection inference and economic applications; tree-based methods; neural networks; random forests and casual inference; and unsupervised learning.
Requisites: A A E 636 or ECON 704
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe and explain the mechanics of basic machine learning methods
Audience: Graduate

2. Employ data exploration and visualization tools for analyzing large amounts of data
Audience: Graduate

3. Select model and conduct post-selection inference of high-dimensional data
Audience: Graduate

4. Apply machine learning methods on large data sets for economic and policy analysis
Audience: Graduate

5. Demonstrate the ability to use statistical packages for methods covered in the course
Audience: Graduate

A A E 723 – PROFESSIONAL DEVELOPMENT SEMINAR
1 credit.

Professional development for applied economists in sequential contexts. Examples include understanding and preparing for the professional economist job market; preparing and packaging job search materials; technical and non-technical interactions with potential employers and clients; understanding leadership styles and exploring leadership potential; examining professional ethics and norms; and gaining exposure to trends in professional development. Students will develop career skills by completing stand-alone activities, and by coordinating soft skill development tasks with exercises in simultaneously or previously offered theory and econometric classes.
Requisites: A A E 721
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Summarize different career paths for applied economists.
Audience: Graduate

2. Produce a suite of written materials, including a resume, curriculum vitae, online webpage and short project proposals.
Audience: Graduate

3. Identify and apply for specific jobs, including writing targeted cover letters.
Audience: Graduate

4. Organize and apply strategies for in-person interviewing by participating in practice interviews.
Audience: Graduate

A A E 724 – PRACTICUM FOR APPLIED ECONOMISTS
4 credits.

Quantitative methods typically used by economic analysts in a professional setting. Synthesize and apply previous coursework to conduct econometric analysis and produce a professional report.
Requisites: A A E 637 or 719
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and clarify project objectives
Audience: Graduate

2. Identify and prepare the data to be used to meet the project objectives
Audience: Graduate

3. Develop the relevant analytical approach and the models to be used in the analysis
Audience: Graduate

4. Conduct the analysis and report analysis results and conclusions in a written report
Audience: Graduate

5. Communicate clearly both in written report and oral presentation relevant applied economic and policy issues in the analysis
Audience: Graduate

A A E 730 – FRONTIERS IN DEVELOPMENT ECONOMICS 1
3 credits.

Theory and empirical evidence on growth and development in low-income countries. Topics may include: measurement of poverty and inequality, risk and insurance, social networks, technology adoption, education, corruption, institutions, and behavioral economics.
Requisites: ECON 709 and 711
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Construct models of credit and insurance markets in developing countries and measure their impacts empirically.
Audience: Graduate

2. Measure corruption and governance and their impact on economic development.
Audience: Graduate

3. Use and evaluate econometric concepts including fixed effects, attenuation bias, and instrumental variables.
Audience: Graduate

4. Think critically about empirical research and write a referee report.
Audience: Graduate

A A E 731 – FRONTIERS IN DEVELOPMENT ECONOMICS 2
3 credits.

Theory and evidence on growth and development in emerging economies, with primary focus on globalization, trade, labor markets and human capital. We use open-economy general equilibrium models to examine welfare implications of global shocks and domestic economic policies.
Requisites: ECON 709 and 711
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand the general equilibrium approach to problems of economic growth and development.
Audience: Graduate

2. Understand intersectoral linkages in factor and product markets as well as the constraints imposed by resource endowments, international markets, and domestic technology and preferences.
Audience: Graduate

3. Apply models to parse the economic effects of exogenous events such as resource export booms, world market shocks and domestic policy innovations on prices, sectoral production, investment incentives, incomes and income distribution, and key measures of poverty and household welfare.
Audience: Graduate

4. Interpret the implications of these results for long-run economic growth and development, including some political economy aspects.
Audience: Graduate

5. Understand and work creatively with models of international trade and globalization insofar as they inform the development process.
Audience: Graduate

A A E 737 – APPLIED ECONOMETRIC ANALYSIS III
3 credits.

Preparation for empirical work by examining contemporary econometric techniques as they are used in development, environment and natural resources, and agricultural economics. Review a selection of applied models using past and current research as examples. Develop a deeper understanding of the many facets of empirical research in economics.
Requisites: (ECON 709 and 710) or (A A E 636 and 637)
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Explain and assess the concepts of causal inference and identification in econometric analyses.
Audience: Graduate

2. Articulate the necessary assumptions underpinning various applied identification strategies.
Audience: Graduate

3. Assess and critique specific applications of various identification strategies.
Audience: Graduate

4. Conduct and interpret econometric analyses applying various identification strategies using statistical software.
Audience: Graduate

5. Summarize ongoing debates about the validity of empirical research in economics including issues of internal validity, external validity, and replicability.
Audience: Graduate

A A E 746 – FRONTIERS IN AGRICULTURAL ECONOMICS 1
3 credits.

Economics of agricultural technology innovation and adoption, properties and measurement of production and productivity, and impact evaluation. Empirical methods, including surveys, experiments, randomized trials, and instrumental variable methods of testing applied microeconomic models.
Requisites: ECON 709 and 711
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand the tools used in applied policy analysis.
Audience: Graduate

2. Apply economic concepts to analyze efficiency and equity impacts of policies.
Audience: Graduate

3. Understand the role of uncertainty in analyzing impacts of policy.
Audience: Graduate

4. Understand how political factors may constrain or impact policy choices.
Audience: Graduate

A A E/ECON 747 – FRONTIERS IN AGRICULTURAL ECONOMICS 2
3 credits.

Organization, design, and performance of food and agricultural markets. Industrial organization; firm boundaries, contracting, and collective action; spatial, temporal, and quality dimensions of market design.
Requisites: ECON 709 and 711
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Describe the general state and history of the American agricultural sector, agricultural policy, and the major subfields of agricultural economics.
Audience: Graduate

2. Apply and extend economic models in agricultural contexts to evaluate or predict economic behavior or outcomes.
Audience: Graduate

3. Conduct and interpret econometric analyses motivated by economic theory.
Audience: Graduate

4. Synthesize and summarize research in the field of agricultural economics through clear writing.
Audience: Graduate

5. Generate interesting and relevant research questions informed by the economic literature.
Audience: Graduate

A A E 750 – PROFESSIONAL DEVELOPMENT FOR AGRIBUSINESS MANAGERS
3 credits.

Development of professional and communication skills beyond standard technical training critical for career success. Foster interpersonal and professional career skills by engaging with academic practitioners and industry professionals. Topics include verbal and written communication, project management, leadership, networking, strategic decision-making, active listening, business intelligence, teamwork, and business culture.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Describe and evaluate information presented orally through the use of active listening skills
Audience: Graduate

2. Communicate orally and in writing with technical and non-technical audiences
Audience: Graduate

3. Apply communication skills to the larger context of strategic decision-making
Audience: Graduate

4. Assess the implications of management decisions
Audience: Graduate

5. Discuss professional ethics and norms, leadership styles, and business culture
Audience: Graduate

6. Develop written materials for the job-search
Audience: Graduate

7. Communicate formally and informally with potential employers
Audience: Graduate

A A E 760 – FRONTIERS IN ENVIRONMENTAL AND NATURAL RESOURCE ECONOMICS 1
3 credits.

Economic tools and principles pertaining to the optimal management of natural resources. Theoretical models characterize efficient resource use and predict management decisions under different institutional settings. Empirical applications relate to public and private management of forests, fish, wildlife, minerals, and energy resources. Examples highlight the importance of discount rates, property rights, and government policies.
Requisites: ECON 709 and 711
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Model the dynamic management of natural resources by rational economic actors.
Audience: Graduate

2. Apply appropriate methodologies to demonstrate the conditions under which benefits from resources are likely to be captured or dissipated by real world actors.
Audience: Graduate

3. Develop and hone presentation skills.
Audience: Graduate

4. Develop the beginning of their own research agenda.
Audience: Graduate

A A E 762 – FRONTIERS IN ENVIRONMENTAL AND NATURAL RESOURCE ECONOMICS 2
3 credits.

The role of markets and government in the allocation of environmental goods and services. Topics include public goods, externalities and market failure; policy instruments for dealing with environmental quality problems such as air pollution; and distributional impacts of environmental regulations.
Requisites: ECON 709 and 711
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Read research papers with an eye towards understanding, critiquing, and extending research in environmental economics.
Audience: Graduate

2. Hone presentation skills related to peer interactions about research ideas.
Audience: Graduate

3. Develop a working knowledge of the frontier or research in key areas in environmental economics.
Audience: Graduate

4. Begin to develop their own research ideas.
Audience: Graduate

A A E 770 – INTRODUCTION TO QUANTITATIVE METHODS IN RESOURCE AND ENERGY ECONOMICS
3 credits.

The fundamental mathematics and statistics necessary for the study of quantitative methods in resource and energy demand. Topics include the mathematics of optimization and its role in basic welfare theory and consumer demand; linear and matrix algebra and their application in both modeling consumer behavior and the statistical analysis of models; and the fundamentals of statistical analysis relevant to econometric analysis of resource and energy demand, including probability theory, sampling distributions, and statistical inference.
Requisites: Declared in the Resource and Energy Demand Analysis program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2020

A A E 771 – MICROECONOMICS OF RESOURCES AND ENERGY: THEORY TO PRACTICE
3 credits.

Applying economic theory to the practice of resource and energy demand analysis. Topics include consumer demand theory and the proper modeling of demand systems, theoretical underpinnings of behavioral economics, welfare theory, cost benefit analysis and cost-effectiveness analysis, and technology adoption and diffusion.
Requisites: Declared in the Resource and Energy Demand Analysis program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2020

A A E 772 – APPLIED ECONOMETRICS OF RESOURCE AND ENERGY DEMAND
4 credits.

The estimation of the economic models of resource and energy demand, including evaluation of energy and resource programs, estimating demand systems in the study of dynamic pricing models, estimating discrete choice models, forecasting resource and energy demand from econometric models, and topics in the application of big-data analytics in resource and energy demand analysis.
Requisites: A A E 636 and declared in Agricultural Applied Economics: Resource and Energy Demand Analysis
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022

A A E 773 – SEMINAR IN RESOURCE AND ENERGY DEMAND ANALYSIS
1-2 credits.

Current issues in resource and demand analysis, with presentations by academic researchers and industry professionals, to introduce students to current issues in resource and demand analysis, and to develop their critical thinking about addressing these issues.
Requisites: Declared in the Resource and Energy Demand Analysis program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2021

A A E 774 – PRACTICUM IN RESOURCE AND ENERGY DEMAND ANALYSIS I
1 credit.

The first in a 2-course sequence that comprises the capstone course in Resource and Energy Demand Analysis, in which students synthesize their training in a simulated "real world" analysis. The course is designed to reflect the full range of professional responsibilities of a resource/energy demand analyst, from data retrieval/cleaning to analysis to reporting.
Requisites: A A E 636 and declared in Agricultural Applied Economics: Resource and Energy Demand Analysis
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021

A A E 776 – PRACTICUM IN RESOURCE AND ENERGY DEMAND ANALYSIS II
3 credits.

The second in a 2-course sequence that comprises the capstone course in Resource and Energy Demand Analysis, in which students synthesize their training in a simulated "real world" analysis. The courses is designed to reflect the full range of professional responsibilities of a resource/energy demand analyst, from data retrieval/cleaning, to analysis, to reporting.
Requisites: A A E 772 and declared in Agricultural Applied Economics: Resource and Energy Demand Analysis
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2021

A A E 777 – SURVEY AND SAMPLE DESIGN IN APPLIED ECONOMICS
2 credits.

Teaches generation and use of survey data. Topics include identification of target population, random, stratified, cluster sampling, power analysis, survey collection implementation, retrospective and prospective surveys of respondent choice, experimental choice in survey design, and econometric modeling of respondent choices.
Requisites: Declared in the Resource and Energy Demand Analysis program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021

A A E 780 – RESEARCH COLLOQUIUM
3 credits.

For AAE Ph.D. students to develop a dissertation proposal. Working in groups and with some additional feedback from individual advisors. Developing research questions, literature search, word models, math models, testable hypotheses, identification strategies. Working with data, using LATEX, giving presentations. Peer review of weekly assignments. Developing cohort for subsequent feedback through dissertation writing and job search.
Requisites: Declared in Agricultural & Applied Economics, Ph.D.
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Give constructive peer feedback.
Audience: Graduate

2. Compose a dissertation proposal.
Audience: Graduate

3. Produce a clear and professional proposal defense presentation.
Audience: Graduate

4. Summarize the main characteristics of the data and empirical strategy for the dissertation.
Audience: Graduate

A A E/POLI SCI 835 – GAME THEORY AND POLITICAL ANALYSIS
3 credits.

An introduction to the tools of game theoretic analysis, with reference to the use of game theory in political science. Intended for those desiring a basic familiarity with the theory, and for those planning further work in formal modeling.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

A A E 875 – SPECIAL TOPICS
1-4 credits.

Special topics on contemporary issues relevant to agricultural and applied economics.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze and critique research in applied economics.
Audience: Graduate

2. Evaluate the significance of current research in applied economics by presenting and/or critiquing scientific presentations.
Audience: Graduate

3. Synthesize the state of the literature related to the applied economics topic being studied.
Audience: Graduate

A A E/ENVIR ST/POP HLTH/PUB AFFR 881 – BENEFIT-COST ANALYSIS
3 credits.

Presents the welfare economics underpinnings for evaluating the social benefits and costs of government activities. Issues such as uncertainty, the social discount rate, and welfare weights will be discussed; case studies from the environmental, social policy, and agricultural areas will be studied.
Requisites: Graduate/professional standing and (PUB AFFR 818 and 880), or POP HLTH/I SY E 875, or A A E 635
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the basic mechanics of performing a Cost Benefit Analysis, including methods for valuing costs and benefits, aggregating over time, and analyzing uncertainties.
Audience: Graduate

2. Evaluate the strengths and weaknesses of different CBAs and propose strategies to address any shortcomings.
Audience: Graduate

3. Debate the advantages and limitations of CBA for public policy and compare it to other approaches.
Audience: Graduate

4. Create a CBA for a real-world client from beginning to end, including scoping, background research, valuation of costs and benefits, uncertainty analysis, and interpretation.
Audience: Graduate

A A E 899 – AAE GRADUATE PRACTICAL TRAINING/INTERNSHIP
1-6 credits.

Real-world, hands-on collaboration with industry partners to offer practical training projects or internships under the direction and oversight of an instructor in the Department of Agricultural and Applied Economics. The goal of both internships and practical training is to offer valuable opportunities to acquire practical, industry-related skills through hands-on learning.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 3 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply theoretical knowledge gained in coursework to an experiential learning opportunity with a stakeholder business/organization
Audience: Graduate

2. Produce and deliver recommendations to stakeholder business/organization through a formal written report and professional oral presentation
Audience: Graduate

A A E/ANTHRO/C&E SOC/GEOG/HISTORY/LACIS/POLI SCI/PORTUG/SOC/SPANISH 982 – INTERDEPARTMENTAL SEMINAR IN THE LATIN-AMERICAN AREA
1-3 credits.

Interdisciplinary inquiry in Latin American society and culture.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

A A E 990 – RESEARCH AND THESIS
1-12 credits.

Independent research and writing to complete dissertation requirement.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Conduct and report on applied economics research under the guidance of a qualified instructor.
Audience: Graduate

2. Develop novel research questions and propose methods to answer the questions using tools from applied economics.
Audience: Graduate

3. Connect their research clearly to other research in their field of study.
Audience: Graduate

A A E 999 – SPECIAL WORK - AGRICULTURAL AND APPLIED ECONOMICS
1-3 credits.

Directed study projects for graduate students as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Conduct and report on independent applied economics research topic under the guidance of a qualified instructor.
Audience: Graduate

2. Independently develop research questions in agricultural or applied economics.
Audience: Graduate

3. Connect their research to the broader literature and express where the research makes new contributions.
Audience: Graduate

AGROECOLOGY (AGROECOL)

AGROECOL/C&E SOC/ENTOM/ENVIR ST 103 – AGROECOLOGY: AN INTRODUCTION TO THE ECOLOGY OF FOOD AND AGRICULTURE
3 credits.

Agroecology has blossomed across the world in recent decades as not only a science, but also a practice, and a movement. Employ the multiple disciplines and perspectives that Agroecology affords to analyze our agricultural and food systems within a broader context of dynamic social and ecological relationships.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain and analyze basic biophysical processes of agricultural ecosystems and the challenges and benefits of various management systems
Audience: Undergraduate

2. Interrogate social, economic, and political structures underlying agriculture at local, regional, national, and global scales
Audience: Undergraduate

3. Describe how they personally connect to local to global agricultural landscape as humans, ecological actors, food and fuel consumers, and thoughtful citizens
Audience: Undergraduate

AGROECOL 187 – PLANTS AND THE SCIENCE OF SURVIVAL
3 credits.

Could you grow and gather enough food to feed yourself? Learn the biology behind how to grow healthy plants in a healthy ecosystem by creating plans for a large food garden. Focus on understanding the scientific method, analyzing data and sources, and using scientific research as a tool to make decisions. Identify credible information sources for solving unpredictable, real-world problems faced by food growers. Practice awareness and understanding of the natural world.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Create an evidence-based plan for a growing space
Audience: Undergraduate

2. Explain how the structure, function, growth, origin, evolution, distribution, and taxonomy of plants impact humans' use of them as food and medicine
Audience: Undergraduate

3. Demonstrate knowledge of scientific concepts and assumptions as they apply to growing and harvesting plants
Audience: Undergraduate

4. Analyze, interpret, and locate scientific evidence about homesteading-related topics
Audience: Undergraduate

5. Demonstrate knowledge of the scientific method
Audience: Undergraduate

6. Apply scientific reasoning to determine when scientific information supports a given conclusion about plant use and production
Audience: Undergraduate

7. Critically evaluate the impacts of plant sciences on our communities and food systems
Audience: Undergraduate

AGROECOL/HIST SCI 301 – (HORTI)CULTURAL ROOTS: HUMAN HISTORIES OF PLANTS AND SCIENCE
4 credits.

Dig into the history of plant sciences to understand why plants and humans have the relationships they do today. Focus on the experiences of Indigenous Americans and People of Color to understand the roots of inequities in horticulture, agriculture, and other plant sciences. Practice skills as a translator of science and history through engagement with scientific publications, library resources, and archival materials. Define important societal questions, collect and analyze evidence, present original conclusions, and contribute to ongoing discussions about the relationship of people and plants.
Requisites: Satisfied Communications A requirement
Course Designation: Gen Ed - Communication Part B
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Compare and contrast plant-human systems in multiple historical contexts with an emphasis on the impact of racism
Audience: Undergraduate

2. Produce written and spoken work that incorporates critical reading, logical thinking, and use of evidence that is appropriate to the plant sciences
Audience: Undergraduate

3. Recognize ethnic, racial, and religious minorities' historical and ongoing marginalization in horticulture, agriculture, botany, and other plant-related disciplines
Audience: Undergraduate

4. Effectively participate in a multicultural society through written and spoken contributions to ongoing discussions
Audience: Undergraduate

5. Translate current research into a written and spoken format that is relevant and understandable to a public audience and scholars in other disciplines
Audience: Undergraduate

6. Apply core library resources to research and communication about human-plant systems
Audience: Undergraduate

AGROECOL 303 – AGROECOLOGICAL SYSTEMS: WORKING TOWARDS SUSTAINABILITY
3 credits.

Explores in-depth agriculture systems as coupled ecological and social complexities. Examines the components of agricultural systems and analyzes how different ecological and social contexts influence and are influenced by the agricultural system. Explores and analyzes how management decisions (crop breeding, in-crop management, landscape-level, etc.) ramify to influence processes and outcomes at different levels of complexity (e.g., ecosystem, landscape, social well-being, human health, economic) and the socio-ecological tradeoffs that ensue. Develops skills to analyze how the design and implementation of integrated agricultural systems can contribute to solutions for pressing societal challenges such as climate change, biodiversity declines, unsustainable resource use and social inequality.
Requisites: ENVIR ST/AGROECOL/C&E SOC/ENTOM 103
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify ecological biotic and abiotic aspects of agricultural systems as stocks and flows of energy and matter within and between organizational levels (e.g. cellular, organismal, ecosystem, landscape, and global)
Audience: Undergraduate

2. Describe the social dimensions of agricultural systems as stocks and flows of knowledge, information, and beliefs at organizational levels within agroecosystems
Audience: Undergraduate

3. Explain and analyze how the management of agroecosystems influences ecological and social processes
Audience: Undergraduate

4. Evaluate how agriculture can be designed and managed to be a solution for modern ecological and social challenges of today (e.g.climate change, unsustainable resources use, biodiversity declines, social inequality) in different socio-ecological contexts
Audience: Undergraduate

5. Compare and contrast careers in agroecology through interactions with a wide variety of persons working in the field, from practitioners to industry professionals
Audience: Undergraduate

6. Solve problems individually and as part of teams using the scientific method, logic, and reasoning by identifying and differentiating the strength and value of information, evidence, and approaches related to the management and sustainability of agroecosystems
Audience: Undergraduate

7. Reflect on one's participation in food systems from local to global scales
Audience: Undergraduate

AGROECOL 370 – GRASSLAND ECOLOGY
3 credits.

Understand factors driving global, continental, regional, and local distribution of grasslands. Discuss how management affects provision of grassland ecosystem goods and services. Compare and contrast plant community and ecosystem dynamics in native prairie and intensively managed pastures.
Requisites: PL PATH/BOTANY 123, BOTANY/BIOLOGY 130, SOIL SCI/ENVIR ST 101, SOIL SCI/ATM OCN/BSE 132, ZOOLOGY/BIOLOGY/BOTANY 151, BIOCORE 381, BOTANY 100, PLANTSCI 110, AGRONOMY 100, ENTOM/AGROECOL/C&E SOC/ENVIR ST 103, or graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the social, economic, and environmental dimensions of the sustainability challenges of grasslands
Audience: Undergraduate

2. Describe the social, economic, and environmental dimensions of grasslands and identify potential trade-offs and interrelationships among these dimensions
Audience: Both Grad & Undergrad

3. Predict the distribution, structure, function, and services of grasslands from global to local levels of resolution
Audience: Graduate

AGROECOL 375 – SPECIAL TOPICS
1-4 credits.

Special topics on issues relevant to agroecology.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Explain concepts relating to an agroecology topic outlined in the title
Audience: Undergraduate

AGROECOL 377 – GLOBAL FOOD PRODUCTION AND HEALTH
3 credits.

Crops, food, and cropping systems from different parts of the world and their impact on global sustainability and health. Introduction to crop biology, environmental requirements, and agronomic production practices of major food crops. Environmental, socioeconomic, and health impacts of farming systems and how to assess their sustainability. A global perspective on agroecology, food, environment, health, and agriculture.
Requisites: BOTANY/BIOLOGY/ZOOLOGY 151, BIOLOGY/ZOOLOGY 101, BIOLOGY/BOTANY 130, BIOCORE 381, HORT 120, AGRONOMY 100, ENVIR ST/AGROECOL/C&E SOC/ENTOM 103, PLANTSCI 110, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe, analyze, and understand cropping systems of different parts of the world.
Audience: Both Grad & Undergrad

2. Describe the social, economic, and environmental dimensions of cropping systems and identify potential trade-offs and interrelationships among these dimensions.
Audience: Both Grad & Undergrad

3. Analyze sustainability issues and/or practices using a systems-based approach within the Agroecology framework.
Audience: Both Grad & Undergrad

4. Reflect about engaging in international sustainable agriculture and health issues.
Audience: Both Grad & Undergrad

5. Communicate effectively ideas in written reports and oral presentations.
Audience: Both Grad & Undergrad

6. Use sustainability principles for developing personal goals and professional values.
Audience: Both Grad & Undergrad

7. Explain the social, economic, and/or environmental dimensions of the sustainability challenges of global food production systems and health.
Audience: Graduate

AGROECOL 399 – COORDINATIVE INTERNSHIP/COOPERATIVE EDUCATION
1-8 credits.

Internship under guidance of a faculty or instructional academic staff member in Agroecology and internship site supervisor. Students are responsible for arranging the work and credits with the faculty or instructional academic staff member and the internship site supervisor.
Requisites: Consent of instructor
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Apply concepts learned in coursework to authentic professional situations
Audience: Undergraduate

2. Demonstrate professional skills appropriate for the industry
Audience: Undergraduate

3. Identify and reflect on how concepts learned in coursework apply to specific work settings and situations
Audience: Undergraduate

AGROECOL 400 – STUDY ABROAD IN AGROECOLOGY
1-6 credits.

Provides an area equivalency for courses taken on Madison Study Abroad Programs that do not equate to existing UW courses. Current enrollment in a UW-Madison study abroad program
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions

AGROECOL 503 – AGROECOLOGY CAPSTONE
3 credits.

A stepping stone between the classroom and society. Emphasizes integration of diverse bodies of agroecological knowledge, critical thinking, and engagement with real-world problems and current research. Topics such as: bioproducts, food systems and security, economic vitality of communities, climate change, humans and their environment, biodiversity, resource management and policy, and social equity.
Requisites: ENVIR ST/AGROECOL/C&E SOC/ENTOM 103, AGROECOL 303, and senior standing
Repeatable for Credit: No
Learning Outcomes: 1. Integrate diverse bodies of knowledge to solve an agroecological problem or formulate a policy of society importance
Audience: Undergraduate

2. Evaluate the strength and value of information, evidence, and approaches relevant to a specific problem or policy
Audience: Undergraduate

3. Discuss and lead discussions with peers regarding a specific agroecological problem or policy
Audience: Undergraduate

4. Write and present comprehensive reports regarding a specific agroecological problem or policy for scientists or policymakers
Audience: Undergraduate

5. Write and present comprehensive reports regarding a specific agroecological problem or policy for the general public
Audience: Undergraduate

AGROECOL 699 – SPECIAL PROBLEMS
1-3 credits.

Scholarship on special topics, under the supervision of an agroecology faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024
Learning Outcomes: 1. Frame an agricultural problem using an agroecological lens
Audience: Undergraduate

2. Describe multifunctional agricultural solutions
Audience: Undergraduate

AGROECOL 701 – THE FARM AS SOCIO-ENVIRONMENTAL ENDEAVOR
3 credits.

Farms may be analyzed as intentional entities shaped by the contexts in which they must operate. This course explores how these biophysical and social contexts both exert constraints and provide opportunities, leading to the diversity of farms observed.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop a vision of agriculture as a social and ecological activity for which we have many diverse demands
Audience: Graduate

2. Differentiate the roles of the natural and social sciences of agriculture, including their basic methods of inquiry
Audience: Graduate

3. Apply an agroecological imagination to think about food and agriculture contextually
Audience: Graduate

4. Reflect on the organizational, political, and personal challenges to cultivating a more beneficent agriculture
Audience: Graduate

5. Engage with the organizational, political, and personal challenges of this contextualized diversity for the cultivation of a more beneficent agriculture

Audience: Graduate

AGROECOL 702 – THE MULTIFUNCTIONALITY OF AGRICULTURE
3 credits.

Agroecology systems provide a variety of social, economic, and ecological functions to society, each with a different network of stakeholders. This course explores methods of evaluating these diverse functions and perspectives, with a special focus on participatory approaches.
Requisites: Declared in Agroecology MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Collect, analyze, and interpret data on an agroecology-related issue
Audience: Graduate

2. Integrate and apply multiple disciplinary perspectives such as technical, economic, socio-political, and environmental factors in the context of complex agroecology problems
Audience: Graduate

3. Plan and manage a long-term project
Audience: Graduate

4. Communicate effectively with clients and multidisciplinary teams
Audience: Graduate

5. Produce professional-quality deliverables such as presentations and reports
Audience: Graduate

AGROECOL 710 – SEMINAR IN AGROECOLOGY
1 credit.

Facilitated discussions on agroecology-related scholarship, policies, and practices. May include presentations on current or proposed research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Present current or proposed research
Audience: Graduate

2. Facilitate discussion of agroecology-related scholarship
Audience: Graduate

3. Integrate and apply multidisciplinary perspectives to evaluate and propose solutions to agroecology problems
Audience: Graduate

4. Analyze and discuss agroecology research, policies, and practices
Audience: Graduate

5. Evaluate peer presentations
Audience: Graduate

AGROECOL 720 – AGROECOLOGY FIELD STUDY
1-3 credits.

Field study of farms, processing, marketing, distribution, and policy-making in the food system. Courses will be several days of visits, discussions with the operators, and student-faculty discussion sections. Presentations or written reports may be required.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Interact with practitioners of agroecology, such as farmers, ranchers, field researchers, policy makers, social scientists
Audience: Graduate

2. Describe the scope of agriculture in Wisconsin and relationships among the university and the community
Audience: Graduate

AGROECOL/ENVIR ST 724 – AGROECOSYSTEMS AND GLOBAL CHANGE
3 credits.

Impacts of global change drivers (climate change, atmospheric chemistry, bioenergy, urbanization, policy) on agroecosystems and their associated goods and services; environmental impacts of agricultural land use and feedbacks to climate; modeling approaches; critical review of current scientific literature.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain key physical, biological, and social drivers of change to agroecosystems on planet Earth
Audience: Graduate

2. Apply important biophysical and biological concepts to describe how a changing climate and changes in atmospheric composition impact agricultural systems
Audience: Graduate

3. Describe how agricultural land management impacts the Earth's climate system through changing biogeochemical cycling
Audience: Graduate

4. Discuss how agricultural land management impacts Earth's climate system through biogeophysical processes that effect energy and water balance in the soil-plant-atmosphere system
Audience: Graduate

5. Identify and summarize ecosystem services that are impacted by agroecosystems and land management decision-making, and how this effects global environmental sustainability
Audience: Graduate

AGROECOL 799 – PRACTICUM IN AGROECOLOGY TEACHING
1-3 credits.

Instructional orientation to teaching at the higher education level in Agroecology, direct evidence-based teaching experience under faculty supervision, experience in testing and evaluation of students, and the analysis of teaching performance.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Articulate learning goals for the practicum in cooperation with supervising instructor
Audience: Graduate

2. Prepare and/or implement lesson plans for a class period, week, or module of the class
Audience: Graduate

3. Deliver course content and/or facilitate discussion
Audience: Graduate

4. Identify pedagogical strengths and opportunities for growth based on classroom assessment and/or feedback
Audience: Graduate

AGROECOL/ATM OCN/BOTANY/ENTOM/ENVIR ST/F&W ECOL/ GEOG/ZOOLOGY 953 – INTRODUCTION TO ECOLOGY RESEARCH AT UW-MADISON
1-2 credits.

Introduction to diverse ecological research across the UW-Madison Campus. Discussions on adapting to graduate school and graduate-level ecological research, key topics in professional development, and research presentations by faculty members.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop an appreciation for the foundations and legacy of ecology research and conservation science at UW-Madison
Audience: Graduate

2. Recognize the diversity and strength of current research in ecology at UW-Madison
Audience: Graduate

3. Differentiate expectations between undergraduate education and those of independent research for graduate degrees in ecology
Audience: Graduate

4. Develop appropriate expectations for advisors and advisees
Audience: Graduate

5. Reason through hypothetical ethical challenges and identify potential solutions based on professional codes of ethics
Audience: Graduate

6. Develop an understanding of the suite of skills associated with success in graduate school and in science
Audience: Graduate

AGROECOL 990 – RESEARCH
1-12 credits.

Independent research on the student's thesis or degree project.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Conduct agroecological research including framing with a multifunctional perspective, engaging in co-learning with communities, and communicating with diverse partners
Audience: Graduate

AIR FORCE AEROSPACE STUDIES (A F AERO)

A F AERO 101 – HERITAGE AND VALUES I
1 credit.

An introduction to the Air Force (AF), potential careers, and role of the United States Air Force today. Examine general aspects of the Department of the Air Force, AF Leadership, AF benefits, and opportunities for AF officers. Provides the foundation for becoming an Airman by outlining our heritage and values, as well as a historical perspective such as lessons on war and US military, AF operations, principles of war, and airpower. Gain a knowledge-level understanding for the employment of air and space power, from an institutional, doctrinal, and historical perspective.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand the Air Force Core Values and their importance to Airmen.
Audience: Undergraduate

2. Remember how air power developments helped create the U.S. Air Force.
Audience: Undergraduate

3. Remember Air Force dress and appearance standards.
Audience: Undergraduate

4. Remember the fundamental customs and courtesies of the U.S. Air Force.
Audience: Undergraduate

5. Remember The Tongue & Quill (T&Q) guidance to develop and deliver a professional military briefing.
Audience: Undergraduate

6. Remember basic guidelines for writing official AF papers.
Audience: Undergraduate

7. Remember the variety of career fields available to AFROTC cadets.
Audience: Undergraduate

8. Remember the monetary benefits of service for Air Force Airmen.
Audience: Undergraduate

A F AERO 102 – HERITAGE AND VALUES II
1 credit.

Continuation of A F AERO 101. An introduction to the Air Force (AF), potential careers, and role of the United States Air Force today. Examine general aspects of the Department of the Air Force, AF Leadership, AF benefits, and opportunities for AF officers. Provides the foundation for becoming an Airman by outlining our heritage and values, as well as a historical perspective such as lessons on war and US military, AF operations, principles of war, and airpower. Gain a knowledge-level understanding for the employment of air and space power, from an institutional, doctrinal, and historical perspective.
Requisites: None
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Remember the course material to be covered, course requirements to be met, and the opportunities and benefits available to cadets.
Audience: Undergraduate

2. Understand basic warfare as it pertains to the US military.
Audience: Undergraduate

3. Remember the importance of proper social media interactions for Air Force members.
Audience: Undergraduate

4. Remember the evolution of the Air Force, and its significance from 1947 to today.
Audience: Undergraduate

5. Understand how the principles of war and tenets of airpower contribute to warfare.
Audience: Undergraduate

6. Remember the Air Force organizational structure, its mission, and basic facts about leadership positions.
Audience: Undergraduate

7. Comprehend the Air Force's core values of integrity, service before self, and excellence in all we do and the importance of maintaining these values.
Audience: Undergraduate

8. Remember the levels of Air Force Doctrine and the types of operations providing airpower to the United States.
Audience: Undergraduate

9. Remember the mission and organization of the United States Air Force Major Commands.
Audience: Undergraduate

A F AERO 201 – TEAM AND LEADERSHIP FUNDAMENTALS I
1 credit.

Provides a fundamental understanding of leadership and team building. Discover the many layers to Air Force leadership, such as understanding oneself, listening to others, and being a good follower. Apply these leadership perspectives when completing team building activities and discussing topics such as Full Range Leadership, Problem Solving, and Motivation. Demonstrate basic verbal and written communication skills.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Comprehend the basics of leadership and team building.
Audience: Undergraduate

2. Comprehend the process of building and developing cohesive teams.
Audience: Undergraduate

3. Appreciate the intricacies of human resources management.
Audience: Undergraduate

4. Comprehend basic problem-solving processes
Audience: Undergraduate

5. Understand and exercise ethical decision making using examples and case studies.
Audience: Undergraduate

6. Demonstrate basic verbal and written communication skills.
Audience: Undergraduate

A F AERO 202 – TEAM AND LEADERSHIP FUNDAMENTALS II
1 credit.

Continuation of A F AERO 202. Provides a fundamental understanding of leadership and team building. Discover the many layers to Air Force leadership, such as understanding oneself, listening to others, and being a good follower. Apply these leadership perspectives when completing team building activities and discussing topics such as Full Range Leadership, Problem Solving, and Motivation. Demonstrate basic verbal and written communication skills.
Requisites: None
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Comprehend the basics of leadership and team building
Audience: Undergraduate

2. Comprehend the process of building and developing cohesive teams.
Audience: Undergraduate

3. Appreciate the intricacies of human resources management.
Audience: Undergraduate

4. Comprehend basic conflict management processes.
Audience: Undergraduate

5. Understand and exercise ethical decision-making using examples and case studies.
Audience: Undergraduate

6. Demonstrate basic verbal and written communication skills.
Audience: Undergraduate

A F AERO 301 – LEADING PEOPLE AND EFFECTIVE COMMUNICATION I
3 credits.

Provides a fundamental understanding of leadership. Learn about the leadership process with its complex interaction among leaders, followers and circumstances. Focus on developing intermediate to advanced verbal and written communication skills. Cadets apply knowledge in leadership laboratories and other cadet wing activities.
Requisites: A F AERO 202
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand how effective leadership can enable mission success in diverse organizations.
Audience: Undergraduate

2. Know the impact of embracing, supporting, and leading change on mission accomplishment.
Audience: Undergraduate

3. Know Leadership and Force Development Doctrine, the Air Force enlisted force structure and effective supervision techniques.
Audience: Undergraduate

4. Embrace attributes to be a leader of character, a coalition builder and a continuous learner.
Audience: Undergraduate

5. Comprehend the Code of Conduct and DoD Directive 5500.7-R, Joint Ethics Regulation.
Audience: Undergraduate

6. Apply clear and concise verbal and written communications.
Audience: Undergraduate

A F AERO 302 – LEADING PEOPLE AND EFFECTIVE COMMUNICATION II
3 credits.

Continuation of A F AERO 301. Provides a fundamental understanding of leadership. Learn about the leadership process with its complex interaction among leaders, followers and circumstances. Focus on developing intermediate to advanced verbal and written communication skills. Cadets apply knowledge in leadership laboratories and other cadet wing activities. Demonstrate intermediate to advanced verbal and written communication skills.
Requisites: A F AERO 301
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand how leadership enables mission success in diverse and dynamic organizations.
Audience: Undergraduate

2. Comprehend how leadership, vision, goals, listening and communication enhance the mission.
Audience: Undergraduate

3. Adopt the role of an officer to enable the safety and well-being of Airmen and their families.
Audience: Undergraduate

4. Comprehend how motivation, feedback, boundaries, expectations, self-assessment and mentoring impact individual performance and subordinate development.
Audience: Undergraduate

5. Embrace the Air Force core values, heritage, and character and continuous learning attributes.
Audience: Undergraduate

6. Value proper organizational climate, media engagement and use of social media.
Audience: Undergraduate

7. Apply clear and concise verbal and written communications.
Audience: Undergraduate

A F AERO 401 – NATIONAL SECURITY AFFAIRS
3 credits.

Provides a fundamental understanding of National Security Strategy and the organization of the Department of Defense. Introduces strategic-level thinking by exploring the various domains in which the Air Force operates. Discuss joint operations and the integration of air, space, land and sea forces. Demonstrate intermediate to advanced verbal and written communication skills.
Requisites: A F AERO 302
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Comprehend the basic elements of national security policy and process
Audience: Undergraduate

2. Comprehend the air and space power operations as well as understand selected roles of the military in society and current domestic and international issues affecting the military profession.
Audience: Undergraduate

3. Comprehend the responsibility, authority, and functions of an Air Force commander and selected provisions of the military justice system.
Audience: Undergraduate

4. Demonstrate basic verbal and written communication skills.
Audience: Undergraduate

A F AERO 402 – LEADERSHIP RESPONSIBILITIES & COMMISSIONING PREPARATION
3 credits.

Prepares cadets for life as Second Lieutenants. Covers various human resources topics to prepare each future officer for mid- to upper-level management positions, including evaluation systems, supervision and counseling, and annual training requirements. Become familiar with a myriad of officer responsibilities that they will incur upon joining the Active Duty community. Demonstrate intermediate to advanced verbal and written communication skills.
Requisites: A F AERO 401
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Comprehend the basics of supervision and counseling
Audience: Undergraduate

2. Distinguish between professional and unprofessional relationships
Audience: Undergraduate

3. Comprehend core human resource topics and be prepared to handle issues related to suicide and sexual assault prevention, ethical decision-making, and religious accommodation
Audience: Undergraduate

4. Comprehend the Law of Armed Conflict and the military justice system
Audience: Undergraduate

5. Comprehend the Officer and Enlisted Evaluations Systems and be prepared to administer these programs as well as performance feedback, awards and decorations, and progressive discipline
Audience: Undergraduate

6. Understand the pay, allowance, leave and retirement systems
Audience: Undergraduate

7. Demonstrate basic verbal and written communication skills
Audience: Undergraduate

A F AERO 501 – LEADERSHIP LABORATORY I
1 credit.

Apply officer education training and serve as an orientation to Air Force procedures, leadership roles, and other topics dealing with the professional development of future Air Force Officers.
Requisites: Member of Air Force Reserve Officer Training Corps (AFROTC)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Provide first-year cadets an informative and motivational program designed to recruit, retain, and familiarize cadets with the Air Force way of life and foster leadership, followership, teamwork, and esprit de corps.
Audience: Undergraduate

2. Provide cadets scheduled to attend Field Training (FT) with the mental and physical skills needed to succeed in the AFROTC FT environment
Audience: Undergraduate

3. Provide cadets returning from FT sufficient opportunities to demonstrate and develop the leadership and management skills needed to successfully function as active duty officers.
Audience: Undergraduate

4. Provide cadets to be commissioned additional opportunities to demonstrate and develop the leadership and management skills needed to successfully function as an active duty officer and to adequately prepare them to transition from the AFROTC environment to active duty.
Audience: Undergraduate

A F AERO 502 – LEADERSHIP LABORATORY II
1 credit.

Apply leadership training and orient to Air Force procedures, leadership roles, and other topics dealing with the professional development of future Second Lieutenants.
Requisites: Member of Air Force Reserve Officer Training Corps (AFROTC)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Provide first-year cadets an informative and motivational program designed to recruit, retain, and familiarize cadets with the Air Force way of life and foster leadership, followership, teamwork, and esprit de corps.
Audience: Undergraduate

2. Provide cadets scheduled to attend Field Training (FT) with the mental and physical skills needed to succeed in the AFROTC FT environment.
Audience: Undergraduate

3. Provide cadets returning from FT sufficient opportunities to demonstrate and develop the leadership and management skills needed to successfully function as active duty officers.
Audience: Undergraduate

4. Provide cadets to be commissioned additional opportunities to demonstrate and develop the leadership and management skills needed to successfully function as an active duty officer and to adequately prepare them to transition from the AFROTC environment to active duty.
Audience: Undergraduate

AMERICAN INDIAN STUDIES (AMER IND)

AMER IND 100 – INTRODUCTION TO AMERICAN INDIAN STUDIES
3 credits.

Focus is history, social organization, political experience, artistic expression of North American Indians, using methods and materials from a number of disciplines as an introduction to the interdisciplinary field.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the complexity and diversity of Indian country, both from a historical and contemporary perspective.
Audience: Undergraduate

2. Recognize Native perspectives on identity and explain the impact of external influences on individual and tribal identity, including the role of Native stereotypes and (mis)representations of Native people.
Audience: Undergraduate

3. Discuss the impact of colonialism and federal Indian policy on tribal sovereignty and Native people and give examples of the ways tribal sovereignty and treaty rights have been eroded over time.
Audience: Undergraduate

4. Examine the impact of racism, privilege, marginalization and oppression on the production of contemporary disparities in Indian country.
Audience: Undergraduate

AMER IND/AFROAMER/ASIAN AM/CHICLA/FOLKLORE 102 – INTRODUCTION TO COMPARATIVE US ETHNIC AND AMERICAN INDIAN STUDIES
3 credits.

Introduction to comparative ethnic studies, examining race, ethnicity, and indigeneity within the United States. Includes perspectives from African American, American Indian, Asian American, and Chican@ and Latin@ studies.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize the multicultural history of the United States of America and the essential role of Indigenous, African, Asian and Chicanx/e & Latinx/e peoples in the American story.
Audience: Undergraduate

2. Identify the creation, development and legacies of race-based discrimination in the United States.
Audience: Undergraduate

3. Explain the role of race in the creation of value systems in American society.
Audience: Undergraduate

4. Explore the heterogeneity and complexity within persistently marginalized groups as well as their relations to each other.
Audience: Undergraduate

5. Reflect on their learning experience so that they may develop as well-rounded, informed, and educated members of society who can effectively and successfully participate in a multicultural society.
Audience: Undergraduate

AMER IND/LAND ARC 106 – EARTH PARTNERSHIP INDIGENOUS ARTS AND SCIENCES
3 credits.

In collaboration with Tribal partners in Wisconsin, emphasize environmental science rooted in land stewardship and land management aligned with cultural values and Indigenous science processes. Experience the culture and ecology of a place while engaging in ecological restoration and stewardship, reflecting on relationships to the land and as global citizens. The intersection of Indigenous knowledge and Western science helps explain the need for a diversity of perspectives to respond to social and environmental justice in our changing world.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate the importance of legitimizing diverse cultural perspectives and knowledge, and forming equitable relationships in a multicultural society
Audience: Undergraduate

2. Recognize Indigenous and other cultural groups' contributions to addressing environmental and social justice issues locally, regionally, and globally
Audience: Undergraduate

3. Comprehend how past traumas of colonization and racism impact communities today along with how inaccurate assumptions impact all peoples
Audience: Undergraduate

4. Apply an approach to restoration and stewardship that considers diverse perspectives and assets related to equity and inclusion
Audience: Undergraduate

5. Reflect and deepen one's understanding of the ancestral and contemporary lands of the Ho-Chunk Nation on whose land UW-Madison resides
Audience: Undergraduate

6. Experience firsthand the resiliency and self-determination of Indigenous communities in Wisconsin.
Audience: Undergraduate

7. Apply the four guiding principles of respect, responsibility, relationship, and reciprocity with the land community (including human and non-human members) through work in restoration and stewardship.
Audience: Undergraduate

8. Demonstrate understanding of Earth Parternship's 10 steps for restoration by applying appropriate steps to community-based projects and local Mound restoration efforts.
Audience: Undergraduate

AMER IND/ENGL 172 – LITERATURES OF NATIVE AMERICA
3 credits.

Introduction to the oral and written literatures of the peoples of native North America. An engagement with texts across historical periods, tribal groups, and regions to examine forms such as oratory, sermon, testimony, autobiography, and contemporary poetry and novels.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Engage in thoughtful and respectful group discussions revolving not only around course texts, but controversial subjects that lie within.
Audience: Undergraduate

2. Familiarize and display understanding of community in Indigenous culture(s).
Audience: Undergraduate

3. Identify and make skillful use of relevant, reliable, and high-quality research sources appropriate to the study of Native and Indigenous literatures.
Audience: Undergraduate

4. Develop a fledgling idea into a formal paper presenting stages of the process to peers, including brainstorming, drafting, incorporating feedback, and revising.
Audience: Undergraduate

AMER IND 185 – INDIGENOUS ATHLETES AND SPORTS
3 credits.

Offers an overview of physical, competitive games, from ancient Mesoamerica to the United States today, highlighting those with Indigenous cultural and social connections. Profile Indigenous athletes competing in both team and individual sports, from schoolyards to professional competitions with a central focus on Indigenous contributions to sports in North America.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Describe the role of Indigenous sports in traditional culture and modern society
Audience: Undergraduate

2. Conduct entry-level research into an understudied area of Indigenous sports
Audience: Undergraduate

3. Demonstrate understanding of individual Indigenous athletes' struggles and achievements as role models, past and present
Audience: Undergraduate

4. Articulate research outcomes in both the verbal and written mediums
Audience: Undergraduate

5. Recognize and question long-held assumptions and stereotypes about Indigenous people in general and specifically in all levels of sport, including collegiate arenas
Audience: Undergraduate

6. Acquire an awareness of history’s impact on the present through the study of Indigenous athletes and their sports
Audience: Undergraduate

AMER IND/HISTORY 190 – INTRODUCTION TO AMERICAN INDIAN HISTORY
3-4 credits.

A broad survey of American Indian history which centers Indigenous peoples, communities, and nations in the context of U.S. policy and culture that emphasizes decolonial methods and Native ways of knowing the past.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe and explain the significance of the historical events, structures, and themes which historians have identified as foundational to the field of American Indian history.
Audience: Undergraduate

2. Deploy interdisciplinary Indigenous studies frameworks, theoretics, and methodologies in the analysis of historical events, structures, and themes to prioritize Indigenous worldviews and perspectives on American Indian history.
Audience: Undergraduate

3. Interpret the continuities and shifts in the lives of various Native peoples, communities, and nations in relation to political, cultural, and material conditions in U.S. history using terminology used within the field of American Indian history to describe processes (such as racialization) and structures (such as settler colonialism).
Audience: Undergraduate

4. Discuss tribal sovereignty and processes of racialization, which impact the historical experiences and contemporary struggles facing Native nations and peoples in the United States.
Audience: Undergraduate

5. Analyze historical sources to curate a collection that draws on both Euro-American and Native ways of knowing the past.
Audience: Undergraduate

AMER IND 199 – DIRECTED STUDY
1-3 credits.

Independent study for freshmen and sophomores in collaboration with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2009

AMER IND 230 – INDIGENOUS RESISTANCE AND ACTIVISM
3 credits.

Examines historic and contemporary forms of Indigenous resistance including grassroots organizing, treaty rights, language revitalization, art and media, and environmental justice from Indigenous perspectives in North America and the Pacific.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Examine the diversity of Indigenous perspectives and worldviews predominantly within North America and the western hemisphere
Audience: Undergraduate

2. Identify historic and contemporary issues that impact Indigenous nations and communities and analyze connections between them and systems of discrimination, racism, and marginalization
Audience: Undergraduate

3. Discuss a range of responses and solutions generated by Indigenous peoples, nations, and communities to historic and contemporary issues within localized, national, and transnational contexts
Audience: Undergraduate

4. Describe and define key concepts and terms that are used within Indigenous studies, particularly as they relate to activism, community organizing, and their attendant issues
Audience: Undergraduate

AMER IND/ENGL 246 – LITERATURE BY AMERICAN INDIAN WOMEN
3 credits.

Presents a broad range of literatures from diverse Native traditions and eras, to provide students with a basic knowledge of major issues affecting and best-known texts by American Indian women authors.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop critical thinking skills about subject matter presented by Indigenous female writers.
Audience: Undergraduate

2. Articulate critical thinking in both written forms and verbal exchange.
Audience: Undergraduate

3. Display productive use of core library resources appropriate to the study of Native and Indigenous literatures as evidence in written work.
Audience: Undergraduate

4. Communicate a deeper understanding of community, both in Native America and the smaller and larger communities of which we are members.

Audience: Undergraduate

AMER IND 250 – INDIANS OF WISCONSIN
3 credits.

Introduction to the various American Indian Nations within Wisconsin's borders with an emphasis on their history, culture, and sovereignty. Examines individual tribes and bands as well as common issues that affect tribal and non-tribal people in Wisconsin.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Describe the general policy and legal history of the relationship between the Native Nations, the states, and the federal government as it plays out in the specific context of Wisconsin.
Audience: Undergraduate

2. Identify the places American Indians have occupied in the American cultural and political imagination over time and analyze the consequences of those images for American Indian people tied to Wisconsin today.
Audience: Undergraduate

3. Distinguish between conceiving of belonging and exclusion in terms of race, society, culture, ethnicity, and polity as it informs contemporary life and issues for the Native Nations connected to Wisconsin.
Audience: Undergraduate

AMER IND 301 – BEGINNER LEVEL OJIBWE LANGUAGE
3 credits.

Introduction to the Ojibwe language, spoken and written, with emphasis on oral tradition and extensive study of grammar.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe Ojibwe language, culture, and history, and of key historical and ongoing relations with the United States.
Audience: Undergraduate

2. Read and write the Ojibwe language using the standard orthography in use in Wisconsin and Minnesota.
Audience: Undergraduate

3. Carry on basic conversation in Ojibwe (speaking and understanding) in a variety of common social situations, such as greetings and leave-takings, talking about the weather, sharing meals, and asking informational questions and giving appropriate responses.
Audience: Undergraduate

4. Recognize the basic grammar of Ojibwe as it applies to communicative functions (making statements, asking questions and giving commands), and be able to inflect (decline and conjugate) nouns and verbs in various basic functions.
Audience: Undergraduate

AMER IND 302 – BEGINNER LEVEL OJIBWE LANGUAGE II
3 credits.

Continuation of Ojibwe language study, with an emphasis on traditional winter cycle myths.
Requisites: AMER IND 301
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Inflect common verb forms for transitive and intransitive verbs
Audience: Undergraduate

2. Carry on a basic conversation about various aspects of daily life; including describing weather, telling time, asking about and reporting on personal activities personal daily activities, such as cooking, eating, and going to and from places.
Audience: Undergraduate

3. Demonstrate a growing ability to learn new aspects of Ojibwe independently
Audience: Undergraduate

AMER IND 303 – BEGINNER LEVEL INDIGENOUS LANGUAGE
3 credits.

Gain an understanding of the grammatical and cultural features of an Indigenous language. Includes exploration of cultural practices and values through the study of oral and written narrative.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate basic knowledge of Native language, culture, and history, and of key historical and ongoing relations with the United States.
Audience: Undergraduate

2. Use the standard orthography to read and write the Native language Texts and Materials
Audience: Undergraduate

3. Engage in conversation in Native Language (speaking and understanding) in a variety of common social situations, such as greetings and leave-taking, talking about the weather, sharing meals, and asking informational questions and giving appropriate responses.
Audience: Undergraduate

4. Learn the usage of appropriate grammatical structures which include beginning-level vocabulary, and verb conjugations.
Audience: Undergraduate

AMER IND 304 – BEGINNER LEVEL INDIGENOUS LANGUAGE II
3 credits.

Focus on proficiency in reading, speaking, and writing of an Indigenous language. Includes exploration of cultural practices and values through the study of oral and written narrative.
Requisites: AMER IND 303
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Review and improve the use of grammatical structures that include advanced vocabulary, verb conjugations, and regional usage of common lexicon
Audience: Undergraduate

2. Use listening and speaking skills in multiple group activities to express opinions.
Audience: Undergraduate

3. Write descriptive and summary paragraphs with clear topic sentences and supporting detail
Audience: Undergraduate

4. Analyze reading segments on a diverse number of cultural topics.
Audience: Undergraduate

5. Engage in discussions about creative and artistic ideas.
Audience: Undergraduate

AMER IND/ENVIR ST 306 – INDIGENOUS PEOPLES AND THE ENVIRONMENT
3 credits.

Indigenous peoples often have very close relationships to ancestral homelands, species and natural resources. However, definitions of "indigenous" can be controversial and highly politicized. Diverse outlooks on identities, worldviews and environmental governance clarify the complex meanings of indigeneity in the US. Highlights American Indian perspectives, conservation practices, and policy environments through consideration of US and international case studies. American Indian experiences shed light on pressing issues of resource sustainability and sovereignty, and demonstrate linkages to global Indigenous environmental issues and strategies.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify diverse Indigenous experiences of and relationships to landscapes
Audience: Undergraduate

2. Recognize that American Indian and Global Indigenous identities are inextricably linked with the environment
Audience: Undergraduate

3. Analyze how American Indian and Global Indigenous histories and epistemologies have been marginalized
Audience: Undergraduate

4. Evaluate relationships between local Wisconsin and global Indigenous environmental issues
Audience: Undergraduate

5. Reflect on personal, family, and cultural identity
Audience: Undergraduate

6. Explore outside of cultural and academic comfort zones
Audience: Undergraduate

7. Practice global citizenry skills, i.e. cultural communications and protocols
Audience: Undergraduate

8. Critique American Indian stereotypes, exploring subtle versus overt racism
Audience: Undergraduate

9. Synthesize diverse approaches to addressing global environmental issues
Audience: Undergraduate

10. Demonstrate skills in articulating these concepts in multi-media formats
Audience: Undergraduate

11. Recognize contributions of indigenous perspectives and actions to environmental resource protection and management
Audience: Undergraduate

12. Articulate different perspectives on how indigenous identities are defined in academia and lived in indigenous communities

AMER IND 308 – BEGINNER LEVEL HOOCAK/HO-CHUNK LANGUAGE
3 credits.

Learn the sounds and writing system of the language and examine the associated grammar and vocabulary. Develop literacy and an understanding of the unique sentence and verb structures, and utilize basic introductory conversational skills currently being used among Hoocak speakers. Hoocak (Ho-Chunk, formerly referred to as the Wisconsin Winnebago) is one of the five Indigenous aboriginal languages spoken in the state of Wisconsin and part of a larger Souian language family found only in North America.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Utilize proper Orthography of the Hoocak
Audience: Undergraduate

2. Construct proper sentences (TSOV) in conversational settings including greetings, introductions, sentence negations.
Audience: Undergraduate

3. Discuss Hoocak clans and the kinship system; converse on family relations
Audience: Undergraduate

4. Count 1-99
Audience: Undergraduate

5. Use wa'u and identify positionals correctly.
Audience: Undergraduate

6. Conjugate class 1 verbs
Audience: Undergraduate

AMER IND 309 – BEGINNER LEVEL HOOCAK/HO-CHUNK LANGUAGE II
3 credits.

Learn the sounds and writing system of the language and examine the associated grammar and vocabulary. Develop literacy and an understanding of the unique sentence and verb structures, and utilize basic introductory conversational skills currently being used among Hoocak speakers. Hoocak (Ho-Chunk, formerly referred to as the Wisconsin Winnebago) is one of the five Indigenous aboriginal languages spoken in the state of Wisconsin and part of a larger Souian language family found only in North America.
Requisites: AMER IND 308
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Speak fluidly about general statements and questions introduced in Hoocak 1
Audience: Undergraduate

2. Discuss the locations of objects, use object orientation positional
Audience: Undergraduate

3. Identify and construct verb modifiers that demonstrate how an action is being done.
Audience: Undergraduate

4. Construct increasingly complex sentences with time-subject-object-verb grammar structures
Audience: Undergraduate

5. Expand vocabulary of everday objects.
Audience: Undergraduate

6. Expand vocabulary of verbs.
Audience: Undergraduate

7. Negate sentences with accuracy
Audience: Undergraduate

8. Implement proper use of wa'u and correct positionals
Audience: Undergraduate

9. Formulate and use inflection for actor/undergoer including in inclusive and dual forms
Audience: Undergraduate

AMER IND 310 – BEGINNER LEVEL MENOMINEE LANGUAGE
3 credits.

Focus on proficiency in reading, speaking, and writing of the Menominee language. Includes exploration of cultural practices and values through the study of oral and written narrative.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss Menominee language, culture, and history, and key historical and ongoing relations with the United States.
Audience: Undergraduate

2. Cultivate conversation in Menominee Language (speaking and understanding) in a variety of common social situations, such as greetings and leave-taking, talking about the weather, sharing meals, and asking informational questions and giving appropriate responses.
Audience: Undergraduate

3. Utilize appropriate grammatical structures which include beginning-level vocabulary, and verb conjugations.
Audience: Undergraduate

4. Use the standard orthography to read and write the Menominee language texts and materials
Audience: Undergraduate

AMER IND 311 – BEGINNER LEVEL MENOMINEE LANGUAGE II
3 credits.

Focus on proficiency in reading, speaking, and writing of the Menominee language. Includes exploration of cultural practices and values through the study of oral and written narrative.
Requisites: AMER IND 310
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Discuss Menominee language, culture, and history, and key historical and ongoing relations with the United States
Audience: Undergraduate

2. Cultivate conversation in Menominee Language (speaking and understanding) in a variety of common social situations, such as greetings and leave-taking, talking about the weather, sharing meals, and asking informational questions and giving appropriate responses.
Audience: Undergraduate

3. Utilize appropriate grammatical structures which include beginning-level vocabulary, and verb conjugations.
Audience: Undergraduate

4. Use the standard orthography to read and write the Menominee language texts and materials
Audience: Undergraduate

AMER IND 312 – BEGINNER LEVEL ONEIDA LANGUAGE
3 credits.

Introduction to the morphology of Oneida at the most basic level, including the interaction with, and awareness for, Ukwehuwehneha and an Oneida universal perspective. An emphasis on the development of a basic understanding of the syntactic structure of Ukwehuhwehneha and a base vocabulary. Includes the utilization of existing resources, becoming familiar with current best practices for endangered language learning, and building language proficiency.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use grammatical structures that include introductory vocabulary, verb conjugations, and regional usage of common lexicon.
Audience: Undergraduate

2. Convey thoughts in discussions about creative and artistic ideas.
Audience: Undergraduate

3. Write descriptive and summary paragraphs with clear topic sentences and supporting detail.
Audience: Undergraduate

4. Use listening and speaking skills in multiple group activities to express opinions.
Audience: Undergraduate

5. Analyze reading segments on a diverse number of cultural topics.
Audience: Undergraduate

AMER IND 313 – BEGINNER LEVEL ONEIDA LANGUAGE II
3 credits.

Introduction to the morphology of Oneida at the most basic level, including the interaction with, and awareness for, Ukwehuwehneha and an Oneida universal perspective. An emphasis on the development of a basic understanding of the syntactic structure of Ukwehuhwehneha and a base vocabulary. Includes the utilization of existing resources, becoming familiar with current best practices for endangered language learning, and building language proficiency.
Requisites: AMER IND 312
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Use grammatical structures that include introductory vocabulary, verb conjugations, and regional usage of common lexicon.
Audience: Undergraduate

2. Convey thoughts in discussions about creative and artistic ideas.
Audience: Undergraduate

3. Write descriptive and summary paragraphs with clear topic sentences and supporting detail.
Audience: Undergraduate

4. Use listening and speaking skills in multiple group activities to express opinions.
Audience: Undergraduate

5. Analyze reading segments on a diverse number of cultural topics.
Audience: Undergraduate

AMER IND/ANTHRO 314 – INDIANS OF NORTH AMERICA
3 credits.

Description and analysis of native cultures, and the role of environmental and historical factors in North America.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2020

AMER IND 325 – AMERICAN INDIANS IN FILM
3 credits.

A critical examination of the portrayal of the American Indian in film, including documentaries and films made by Native filmmakers.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Outline the history of Native and Indigenous representation in American film from silent film to Hollywood to Indigenous documentaries
Audience: Undergraduate

2. Recognize and question long-held assumptions about Native America and its peoples as conveyed through the film industry
Audience: Undergraduate

3. Describe the ways historical representations impact contemporary representation and understanding of Native and Indigenous peoples in film today
Audience: Undergraduate

4. Engage with nuanced conversations and academic scholarship about representation and understanding of Native and Indigenous peoples in film today
Audience: Undergraduate

5. Apply academic research methods in discussion of Indigenous representation and participation in the American film industry
Audience: Undergraduate

AMER IND/CSCS 330 – AMERICAN INDIAN COMMUNITIES: SOVEREIGNTY, STRUGGLES, AND SUCCESSES
3 credits.

Learn about contemporary Native communities, both domestically and globally, through a carefully curated selection of readings, podcasts, and videos from Indigenous scholars, community members, knowledge holders, and activists. Offers a broad historical overview of Native American communities in the United States that illustrates the historical trajectory from early colonization and dispossession through self-determination and the recognition of tribal sovereignty in action by local, state, and federal governments.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Awareness of History's Impact on the Present: Understand and identify the relationships and effects of colonial & historical trauma that shaped and continues to influence current sovereignty issues, health disparities, food inequalities, and Tribal lifeways for both rural and urban communities.
Audience: Undergraduate

2. A Consciousness of Self and Other: Explore individual implicit biases in which to construct respectful and culturally responsive self-awareness.
Audience: Undergraduate

3. Identify key ways Native communities differ from other racial/ethnic groups. Students will "unlearn" and question assumptions about Native communities in the US and reflect on their own racial/ethnic identity.
Audience: Undergraduate

4. Describe the role of sovereignty for Native American communities historically and contemporarily.
Audience: Undergraduate

5. Evaluate the impact and significance of colonization on Native communities in the US including global Indigenous populations. Students will offer a critical analysis of who has and who continues to benefit from dominant narratives of colonization.
Audience: Undergraduate

6. Apply learned knowledge to interrogate the complex systems of oppression and marginalization that Native communities continue to face.
Audience: Undergraduate

7. Compare and analyze the efforts of Native communities working to make systemic changes in their own communities and better understand the cultural perspectives of those communities.
Audience: Undergraduate

AMER IND/ENVIR ST 341 – INDIGENOUS ENVIRONMENTAL COMMUNICATORS
3 credits.

Native Nations show leadership globally in addressing major environmental issues. Indigenous languages describe deep relationships with the natural world, including information on environmental stewardship - harvesting, caretaking and reciprocity. Indigenous scholars contribute crucial perspectives to conversations about human relationships to the Earth - cultural relationships to wildlife and plants, and the ethical and practical roles of humans in socio-ecological systems. Focuses on indigenous environmental scholarship, including the ongoing legacy of oral traditions, developing research, writing, and public speaking skills.
Requisites: Satisfied Communications A requirement and sophomore standing, or graduate/professional standing
Course Designation: Gen Ed - Communication Part B
Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Engage in protocols for learning with Tribes, including Elder epistemology and active listening
Audience: Undergraduate

2. Identify styles of indigenous environmental writing and communications from throughout the US and the world
Audience: Undergraduate

3. Summarize major theories and research findings in the field of environmental writing
Audience: Undergraduate

4. Demonstrate skills in articulating Indigenous environmental concepts in multimedia formats
Audience: Undergraduate

5. Engage in critical reading and the use of evidence
Audience: Undergraduate

6. Apply appropriate style and disciplinary conventions in writing and speaking
Audience: Undergraduate

7. Use core library resources specific to indigenous studies, environmental studies, and environmental communications
Audience: Undergraduate

8. Hone writing, public speaking, and library research skills
Audience: Undergraduate

9. Analyze how Native American and Global Indigenous histories and epistemologies have been marginalized
Audience: Undergraduate

10. Critique Native American stereotypes, exploring subtle versus overt racism
Audience: Undergraduate

11. Articulate different perspectives on how indigenous identities are defined in academia and lived in indigenous communities
Audience: Undergraduate

12. Engage in effective and respectful thinking and expression
Audience: Undergraduate

AMER IND/ENVIR ST/GEOG 345 – CARING FOR NATURE IN NATIVE NORTH AMERICA
3 credits.

Surveys the concepts, practices, and issues associated with caring for nature in American Indian communities.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Interpret the diverse arrangements for tribal sovereignty, indigenous landtenure, and claims to natural resources and the environment.
Audience: Undergraduate

2. Illustrate natural resource and environmental issues important to bothAmerican Indians and Wisconsin Indians.
Audience: Undergraduate

3. Identify similarities and differences between indigenous knowledge systemsand Western Science.
Audience: Undergraduate

4. Discuss the marked cultural and natural diversity across native NorthAmerica.
Audience: Undergraduate

5. Recall the many different conceptions of place, nature, and development innative North America.
Audience: Undergraduate

6. Describe the diversity of American Indian experiences and their variedresponses to assorted histories of exclusion and marginalization.
Audience: Undergraduate

7. Demonstrate an awareness of history's impact on the present.
Audience: Undergraduate

AMER IND/ANTHRO 354 – ARCHAEOLOGY OF WISCONSIN
3 credits.

Introduction to the archaeological evidence for the diverse Native American cultures of Wisconsin over the past 12,000 years.
Requisites: Junior standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Communicate fundamental knowledge of the Native American ancient past (and aspects of the present) in Wisconsin.
Audience: Undergraduate

2. Understand and appreciate the complexities of Wisconsin's deep history, the important and often invisible contributions of Native culture and peoples to our lives today, and the value of heritage preservation.
Audience: Undergraduate

3. Articulate an informed and individualized perspective on the full span of Native American history in Wisconsin and archaeology that might carry over into your professional life or influence your attitude toward historic preservation.
Audience: Undergraduate

4. More effectively participate in our multicultural society.
Audience: Undergraduate

5. Express a heightened awareness of history's impact on the present.
Audience: Undergraduate

6. Refine your critical thinking skills and ability to recognize and question myths, stereotypes, and assumptions about ancient Native Americans.
Audience: Undergraduate

7. Summarize the academic literature assigned for this course.
Audience: Graduate

AMER IND/ANTHRO 355 – ARCHAEOLOGY OF EASTERN NORTH AMERICA
3 credits.

Learn about the great diversity of Native American cultures in eastern North America, with an emphasis on those of the Midwest and Southeast. More than twelve thousand years of accommodations to diverse natural and social environments are covered, starting with archaeological evidence for and oral traditions describing the initial peopling of the Americas and ending with the European invasion and interactions with the Native Americans of the Eastern Woodlands.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Demonstrate a grasp of fundamental knowledge about the Native American ancient past (and aspects of the present) in eastern North America with a focus on the Southeast and Midwest, including the complexities of the deep history of Native Americans, the important and often invisible contributions of Native culture and peoples to our lives today, and the value of heritage preservation
Audience: Both Grad & Undergrad

2. Explain how archaeologists build empirical inferences about past human societies and use different theoretical perspectives to guide their interpretations
Audience: Both Grad & Undergrad

3. Build an informed and individualized perspective on the full span of Native American history in eastern North America and archaeology that might carry over into your professional life or influence your attitude toward historic preservation
Audience: Both Grad & Undergrad

4. Compare and contrast multiple perspectives on the past and present with reference to evidence
Audience: Undergraduate

5. Analyze, evaluate, and synthesize complex information learned in the class and through independent research
Audience: Graduate

6. Improve the effectiveness with which you participate in our multicultural society
Audience: Undergraduate

7. Recognize history's impact on the present
Audience: Undergraduate

8. Assess the myths, stereotypes, and assumptions about ancient and present-day Native Americans
Audience: Both Grad & Undergrad

AMER IND/LINGUIS 371 – SURVEY OF NORTH AMERICAN INDIAN LANGUAGES
3 credits.

Overview of native languages of North America, including topics such as history, distribution, diversity, government policy, language endangerment, elaboration of cultural domains, language and worldview, speech styles, language structure (phonology, morphology, grammatical categories), performance (narrative, song), writing systems.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Identify the scope and breadth of the Native languages of North America.
Audience: Both Grad & Undergrad

2. Apply basic concepts in linguistics to data from different North American languages and families.
Audience: Both Grad & Undergrad

3. Recognize common misconceptions about these languages.
Audience: Both Grad & Undergrad

4. Identify factors in language attrition and endangerment.
Audience: Both Grad & Undergrad

5. Identify and illustrate the significance of language revitalization and reclamation.
Audience: Both Grad & Undergrad

6. Identify the causes of Indigenous language loss in North America, and the methods and goals of Indigenous language revitalization and reclamation programs.
Audience: Graduate

AMER IND/HISTORY 380 – SOVEREIGNTY AND THE SCHOOLHOUSE
3 credits.

Introduction to the history of American Indian education. Evaluate the relationship between education and sovereignty through a survey of schools including missions, boarding schools, survival schools, tribal colleges, language nests, charter schools, and more.
Requisites: AMER IND 100, HISTORY/AMER IND 190, or graduate/professional standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Identify important concepts in the history of education and American Indian studies to understand how the past has affected present day circumstances regarding inequalities in education in Indian Country and in the U.S.
Audience: Both Grad & Undergrad

2. Evaluate theories of schooling and sovereignty through the interpretation of primary sources related to American Indian education to practice historical empathy toward the cultural perspectives and worldviews of others.
Audience: Both Grad & Undergrad

3. Craft rigorous historical arguments in the form of an original research paper on the history of an American Indian school, and question cultural assumptions and knowledge claims as they relate to race, ethnicity, and sovereignty in education.
Audience: Both Grad & Undergrad

4. Assess the foundational works in the historiography on schooling in Native lives, communities, and nations as part of the field of contemporary Indigenous Studies.
Audience: Graduate

AMER IND 401 – INTERMEDIATE LEVEL OJIBWE LANGUAGE
3 credits.

Develop an upper intermediate level of the Ojibwe writing system and examine the associated morphology and syntactical verb structures. Develop literacy and an understanding of the unique verb-based sentence structures, and utilize conversational skills currently being used among Ojibwe speakers. Explore the relationships between the language, culture, and history of the Ojibwe people. Ojibwe is one of the five Indigenous aboriginal languages spoken in the state of Wisconsin and part of a larger Algonquian language family found only in North America. Taught primarily using the dialect of the eastern Minnesota and western Wisconsin region. Ojibwe is considered to be a severely endangered language.
Requisites: AMER IND 302
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use key grammatical concepts, verb conjugations, and vocabulary items as needed for basic conversations.
Audience: Undergraduate

2. Cultivate conversations within a structured environment via asking and answering questions regarding common objects from the surrounding environment.
Audience: Undergraduate

3. Present information on familiar topics using a series of simple spoken sentences, with the assistance of graphic aids.
Audience: Undergraduate

4. Develop strategies for decoding unfamiliar words using grammar concepts and existing Ojibwe language resources.
Audience: Undergraduate

5. Describe connections between Ojibwe culture and language as present in vocabulary, grammar, and storytelling and conversational norms.
Audience: Undergraduate

AMER IND 402 – INTERMEDIATE LEVEL OJIBWE LANGUAGE II
3 credits.

Continuation of the Ojibwe language, focusing on conversational skills.
Requisites: AMER IND 401
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand and use key grammatical concepts, verb conjugations, and vocabulary items as needed for basic conversations.
Audience: Undergraduate

2. Cultivate conversations within a structured environment via asking and answering questions regarding common objects from the surrounding environment.
Audience: Undergraduate

3. Present information on familiar topics using a series of simple and complex spoken sentences, with the assistance of graphic aids.
Audience: Undergraduate

4. Develop strategies for decoding unfamiliar words using grammar concepts and existing Ojibwe language resources.
Audience: Undergraduate

5. Describe connections between Ojibwe culture and language as present in vocabulary, grammar, and storytelling and conversational norms.
Audience: Undergraduate

AMER IND 403 – INTERMEDIATE LEVEL INDIGENOUS LANGUAGE
3 credits.

Build on elementary skills of a specific indigenous language. Advanced grammar and syntax; advanced conversation and composition; cultural background of Indigenous people speaking the language through reading of stories, histories and cultural exploration. Requires completion of AMER IND 304 in the same language.
Requisites: Consent of instructor
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Interpersonal communication: Participate in short conversations on a number of familiar topics using simple sentences and handle short social interactions in everyday situations by asking and answering simple questions.
Audience: Undergraduate

2. Presentational speaking: Present information on familiar topics using a series of simple spoken sentences.
Audience: Undergraduate

3. Presentational writing: Write briefly about familiar topics and present information using a series of simple sentences.
Audience: Undergraduate

4. Interpretive listening: Understand the main idea in short, simple messages and presentations on familiar topics, and understand the main idea of simple conversations.
Audience: Undergraduate

5. Interpretive reading: Understand the main idea of short and simple texts when the topic is familiar
Audience: Undergraduate

AMER IND 404 – INTERMEDIATE LEVEL INDIGENOUS LANGUAGE II
3 credits.

Build on intermediate skills of a specific indigenous language. Increased focus on developing conversational skills. Requires completion of AMER IND 403 in the same language.
Requisites: Consent of instructor
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Fluently converse about everyday topics, based on the learning of short dialogues.
Audience: Undergraduate

2. Determine the meaning of every word in our readings, by using the research tool of the dictionary, and applying grammatical understanding derived from course lectures and assignments.
Audience: Undergraduate

3. Produce all basic forms for any noun or verb.
Audience: Undergraduate

AMER IND 405 – INTERMEDIATE LEVEL HOOCAK/HO-CHUNK LANGUAGE
3 credits.

Develop literacy and an understanding of the unique sentence and verb structures and utilize basic to intermediate conversational skills currently being used among Hoocak speakers. Utilize a growing vocabulary that is appropriate for higher level conversations. Hoocak (Ho-Chunk, formerly referred to as the Wisconsin Winnebago) is one of the five Indigenous aboriginal languages spoken in the state of Wisconsin and part of a larger Souian language family found only in North America.
Requisites: AMER IND 309
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Engage in conversations using the Hoocak language that are fluid and organic, showing an understanding of sentence types, verb modification, and negation.
Audience: Undergraduate

2. Demonstrate listening comprehension when listening to stories told by first language speakers without needing to relisten to the recordings.
Audience: Undergraduate

3. Demonstrate language proficiency by varying sentence structures when telling/asking locations of objects and using the object orientation positional.
Audience: Undergraduate

4. Utilize appropriate vocabulary and grammar for the difficulty of conversations, including refining formulation and using the actor/undergoer and inclusive or dual forms.
Audience: Undergraduate

AMER IND 406 – INTERMEDIATE LEVEL HOOCAK/HO-CHUNK LANGUAGE II
3 credits.

Learn to implement, explore and understand the complex construction of verb conjugations of the Hoocak language. Formulate and utilize some of the more complex word contractions and sentence structures used by first language speakers. Hoocak (Ho-Chunk, formerly referred to as the Wisconsin Winnebago) is one of the five Indigenous languages spoken in the state of Wisconsin and part of a larger Siouan language family found only in North America.
Requisites: AMER IND 405
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Use key grammatical concepts, complex verb conjugations, complex sentence structures, and vocabulary items correctly and as needed for basic conversations
Audience: Undergraduate

2. Cultivate conversations within a structured environment via asking and answering questions regarding common objects from the surrounding
Audience: Undergraduate

3. Develop strategies to understand and deconstruct complex, contracted, and speculative stories as told by first-language speakers
Audience: Undergraduate

4. Engage in impromptu conversations with other students using general statements and common questions as introduced in Hoocak 1, 2 and 3.
Audience: Undergraduate

AMER IND 407 – INTERMEDIATE LEVEL MENOMINEE LANGUAGE
3 credits.

Learn the sounds and writing system of the language and examine the associated morphology and syntactical verb structures. Develop literacy and an understanding of the unique verb-based polysynthetic sentence structures, and utilize basic conversational skills currently being used among Menominee speakers. Menominee is one of the five Indigenous aboriginal languages spoken in the state of Wisconsin and part of a larger Algonquian language family found only in North America. Menominee is considered to be a highly endangered language.
Requisites: AMER IND 311
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Engage in discussions on basic knowledge of Menominee language, culture, and history, and of key historical and ongoing relations with the United States.
Audience: Undergraduate

2. Engage in conversation in Native Language (speaking and understanding) in a variety of common social situations, such as greetings and leave-taking, talking about the weather, sharing meals, and asking informational questions and giving appropriate responses.
Audience: Undergraduate

3. Converse easily with the use of appropriate grammatical structures which include beginning and intermediate level vocabulary, and verb conjugations.
Audience: Undergraduate

4. Use the standard orthography to read and write the Native language
Texts and Materials
Audience: Undergraduate

AMER IND 408 – INTERMEDIATE LEVEL MENOMINEE LANGUAGE II
3 credits.

Continue practice in the writing system of the Menominee language and examine the associated morphology and syntactical verb structures. Develop increased literacy and an understanding of the unique verb-based polysynthetic sentence structures, and utilize basic conversational skills currently being used among Menominee speakers. Menominee is one of the five Indigenous aboriginal languages spoken in the state of Wisconsin and part of a larger Algonquian language family found only in North America. Menominee is considered to be a highly endangered language.
Requisites: AMER IND 407
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No

AMER IND/GEOG 410 – CRITICAL INDIGENOUS ECOLOGICAL KNOWLEDGES
3 credits.

Critical Indigenous Ecological Knowledges are a set of diverse understandings, responsibilities, and laws held by distinct groups of Indigenous peoples that are enacted in multiple ways across socio-political and geographical contexts. These knowledges intersect with Indigenous political sovereignties and longstanding, complex, and nuanced relationships to the more-than-human world. Learn multiple entry points to exploring and examining these knowledge sets in the context of what's for now called the U.S. and Canada to think critically about the politics of Nature, environmentalism, race, indigeneity, and colonialism both historically and in the contemporary moment. Reflect upon how critical Indigenous knowledges about ecology, environment, and government have been erased, co-opted, criminalized, and also continually practiced, reimagined, and revitalized in multiple spheres through a range of interdisciplinary, critical, and cutting-edge Native scholarships and writings.
Requisites: Junior standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Gain understandings of the diversity of Ecological Thought among Native peoples across the U.S. and Canada.
Audience: Both Grad & Undergrad

2. Gain understanding of the intersections between Critical Indigenous Ecological Knowledges and Indigenous Sovereignty.
Audience: Both Grad & Undergrad

3. Identify forces of colonialism that have negatively shaped access to and continuation of Ecological Knowledges in Native communities both historically and in ongoing forms.
Audience: Both Grad & Undergrad

4. Identify and gain understanding of the ongoing practices of Indigenous Ecological Knowledges that have persisted against colonialism.
Audience: Both Grad & Undergrad

5. Identify and gain understanding of practices of revitalization that Native peoples practice to reestablish and reimagine relationships with their knowledges, languages, and lands
Audience: Both Grad & Undergrad

6. Engage and demonstrate knowledge with the latest and most cutting edge literature in the discipline of Native American and Indigenous Studies.
Audience: Graduate

7. Gain an ability to analyze and synthesize the political, philosophical, and analytical import of Native American and Indigenous Studies, especially in the context relating to Critical Indigenous Ecological Knowledges.
Audience: Graduate

AMER IND 411 – INTERMEDIATE LEVEL ONEIDA LANGUAGE
3 credits.

Learn the sounds and writing system of the language and examine the associated morphology and syntactical verb structures. Develop literacy and an understanding of the unique verb-based polysynthetic sentence structures, and utilize basic conversational skills currently being used among Ukwehuwehneha speakers. Ukwehuwehneha (Oneida) is one of the five Indigenous aboriginal languages spoken in the state of Wisconsin and part of a larger Iroquoian language family found only in North America. Ukwehuwehneha is considered to be a critically endangered language.
Requisites: AMER IND 313
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss insights into Ukwehuwehneha and an Oneida universal perspective.
Audience: Undergraduate

2. Converse using the syntactic structure of Ukwehuhwehneha, including using basic vocabulary correctly.
Audience: Undergraduate

3. Utilize existing resources and implement current best practices for endangered language learning.
Audience: Undergraduate

AMER IND 425 – SPECIAL TOPICS IN AMERICAN INDIAN STUDIES
3 credits.

Special focus on American Indian thought and perspectives on subjects in the arts and sciences.
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Articulate and apply the key principles related to the Special Topic
Audience: Both Grad & Undergrad

2. Understand the historical and contemporary events and circumstances which impact the Special Topic
Audience: Both Grad & Undergrad

3. Critically examine the impact of key dynamics related to the Special Topic on society.
Audience: Both Grad & Undergrad

AMER IND/ANTHRO/FOLKLORE/GEN&WS 437 – AMERICAN INDIAN WOMEN
3 credits.

Examines and interprets the roles of American Indian women in traditional societies, and in contemporary North America.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

AMER IND 450 – ISSUES IN AMERICAN INDIAN STUDIES
3 credits.

Special focus on American Indian thought and perspectives on subjects in the arts and sciences.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Articulate and apply the key principles related to the Special Topic
Audience: Both Grad & Undergrad

2. Understand the historical and contemporary circumstances which impact the Special Topic
Audience: Both Grad & Undergrad

3. Critically examine the impact of key dynamics related to the Special Topic on society.
Audience: Both Grad & Undergrad

AMER IND/ANTHRO/BOTANY 474 – ETHNOBOTANY
3-4 credits.

Study of the interactions between human cultures and plants. Topics include: traditional resource management and agriculture; crop domestication, evolution, and conservation; archaeobotany; indigenous knowledge; folk taxonomy; plants in symbolism and religion; dietary patterns; phytochemistry; global movement of plants and peoples.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Biological Science or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

AMER IND/C&E SOC/SOC 578 – POVERTY AND PLACE
3 credits.

The allocation of economic and social rewards in the United States; emphasis on persistently poor regions and communities; analysis of selected minority groups and their poverty statuses; poverty programs and their consequences for structural and cultural changes.
Requisites: SOC/C&E SOC 140, 210, 211, or SOC 181
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze measures of poverty, inequality, and population health and draw conclusions from them
Audience: Undergraduate

2. Describe the places and communities in the United States in which poverty is deepest and most persistent and understand the historical processes that have reproduced such disadvantage
Audience: Undergraduate

3. Place an understanding of local social conditions and change in the global context of rural and urban life, including political, ecological, economic, geographic, historical, and cultural dimensions
Audience: Undergraduate

4. Describe how social conditions of poverty affect people's lives in distinct social contexts
Audience: Undergraduate

5. Contrast and evaluate theoretical approaches to explaining poverty
Audience: Undergraduate

6. Discuss racial and ethnic disparities in social conditions linked to poverty
Audience: Undergraduate

7. Compare the US to peer nations in terms of poverty levels, rates of attendant social problems, and kinds of policies affecting the poor
Audience: Undergraduate

8. Engage in ethical reasoning about how poverty and the policies that impact it relate to shared values
Audience: Undergraduate

9. Interpret and critique texts that describe and analyze poverty
Audience: Undergraduate

10. Identify a case of poverty in a geographic context and apply social scientific literature to support of analysis that contributes to the literature
Audience: Undergraduate

AMER IND/SOC WORK 636 – SOCIAL WORK IN AMERICAN INDIAN COMMUNITIES: THE INDIAN CHILD WELFARE ACT
3 credits.

The role of social workers and social services in American Indian and tribal communities, particularly compliance with the Indian Child Welfare Act. Historical context includes land removal and loss, the boarding school and adoption eras, and social determinants of health including the impacts of historical and intergenerational trauma.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Engage diversity and difference in practice
Audience: Graduate

2. Advance Human Rights and Social, Economic, and Environmental Justice
Audience: Graduate

3. Engage in Policy Practice
Audience: Graduate

4. Engage with Individuals, Families, Groups, Organizations, and Communities
Audience: Graduate

5. Assess Individuals, Families, Groups, Organizations, and Communities
Audience: Graduate

6. Intervene with Individuals, Families, Groups, Organizations and Communities
Audience: Graduate

7. Evaluate Practice with Individuals, Families, Groups, Organizations and Communities
Audience: Graduate

8. Demonstrate awareness of the history of American Indian Tribes, including historical and intergenerational trauma and the impact on the Present experience of American Indians.
Audience: Undergraduate

9. Demonstrate the ability to recognize and question assumptions regarding American Indian Tribes and people.
Audience: Undergraduate

10. Apply knowledge learned in this course to practice in a multicultural society
Audience: Undergraduate

AMER IND 699 – DIRECTED STUDY
1-3 credits.

Independent study for junior, senior and graduate students in collaboration with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023

ANATOMY & PHYSIOLOGY (ANAT&PHY)

ANAT&PHY 235 – HUMAN PHYSIOLOGY AND HEALTH
4 credits.

Learn basic physiological concepts, apply them to understand human health and disease, and link them to broader core concepts in biology. Complete a project that applies conceptual understanding of general biology and physiology to investigate and create informational materials for the public about a disease or health promotion strategy. The foundational knowledge covered serves those interested in health sciences majors, as well as non-science students interested in life-long health.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate basic knowledge of the function of human organ systems
Audience: Undergraduate

2. Demonstrate knowledge of biology core concepts and use them to contextualize and understand physiological processes and organ system function in humans
Audience: Undergraduate

3. Define the components of physiological feedback systems and explain the fundamental role that feedback systems play in regulating physiological processes
Audience: Undergraduate

4. Apply knowledge of organ systems and their regulation to explain the integration of functions across systems at the organismal level - homeostatis
Audience: Undergraduate

5. Apply knowledge of human physiology to understand the human condition in health and disease
Audience: Undergraduate

6. Demonstrate ability to critically read and apply scientific information in daily life
Audience: Undergraduate

ANAT&PHY 335 — PHYSIOLOGY
5 credits.

Core concepts in human physiology from cells to organ-systems via online lectures and active learning activities including laboratory experiments. Topics include homeostasis, membrane transport, cellular physiology, regulation of metabolism, and functions of the nervous, endocrine, muscular, reproductive, cardiovascular, respiratory, renal, and gastrointestinal system.
Requisites: Sophomore standing, (ZOOLOGY/BIOLOGY 101, BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY/BOTANY 151, ZOOLOGY 153 or BIOCORE 381) and (CHEM 103, 108, 109 or 115), or graduate/professional standing. Not open to students with credit for PHYSIOL 435 or ANAT&PHY 435
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge of the basic functions of the major human organ systems, from the cellular level to the whole organism.
Audience: Undergraduate

2. Describe why homeostasis is a central theme of physiology and how it relates to the function of each human organ system.
Audience: Undergraduate

3. Integrate knowledge of how organ systems interact to regulate physiological processes in order to maintain homeostasis.
Audience: Undergraduate

4. Apply knowledge of physiology to predict outcomes, and justify those predictions, when homeostasis is not maintained due to disease or experimental manipulation.
Audience: Undergraduate

5. Develop critical and scientific thinking skills through the application of physiology knowledge in preparation for real-world situations and further educational settings.
Audience: Undergraduate

6. Demonstrate effective collaboration and communicate with peers to achieve shared outcomes.
Audience: Undergraduate

ANAT&PHY 337 — HUMAN ANATOMY
3 credits.

Uses a regional approach to provide a foundation of knowledge in human anatomy. Units cover an introduction to anatomical systems; back and limbs; thorax, abdomen, and pelvis; and head and neck.
Requisites: Not open to first-year freshman students
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate a thorough understanding of the anatomy of the human body
Audience: Undergraduate

2. Explain how structure governs function in the human body
Audience: Undergraduate

3. Describe how systems work together in normal function
Audience: Undergraduate

4. Discuss how anatomy can contribute to dysfunction or pathology
Audience: Undergraduate

5. Use anatomical terminology when discussing the human body
Audience: Undergraduate

6. Describe key transformative features occurring in the human body throughout the lifespan
Audience: Undergraduate

7. Apply anatomical knowledge to reason through clinical scenarios
Audience: Undergraduate

ANAT&PHY 338 — HUMAN ANATOMY LABORATORY
2 credits.

Takes a regional approach to cover the gross anatomy of the human body in four units: introduction to anatomical systems; back and limbs; thorax, abdomen, and pelvis; and head and neck. A variety of tools, including interactive software, models, and specimens, will be used.
Requisites: ANAT&PHY 337 (KINES 337 before fall 2018), or KINES 328, or concurrent enrollment
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify key structures of the human body, including muscles, organs, and bones, and their characteristics
Audience: Undergraduate

2. Explain how structure governs function
Audience: Undergraduate

3. Recognize how structures work together in normal function
Audience: Undergraduate

4. Use anatomical terminology in communication with others in the health field
Audience: Undergraduate

5. Apply anatomical knowledge and identification skills in preparation for practice as a clinician in a variety of health fields
Audience: Undergraduate

ANAT&PHY 399 — INDEPENDENT STUDY
1-3 credits.

Individual work in the fields of anatomy and/or physiology offers the opportunity to participate in more in-depth study (beginning to intermediate level) under the direct guidance of anatomy and/or physiology faculty.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Express basic knowledge of content, analyze related data and apply knowledge in a variety of academic settings.
Audience: Undergraduate

ANAT&PHY 435 — FUNDAMENTALS OF HUMAN PHYSIOLOGY
5 credits.

Explores the major organ systems including nervous, endocrine, muscular, cardiovascular, renal, and gastrointestinal. The main learning objective is an understanding of the cellular and molecular mechanisms through which homeostasis is integrated and maintained. Not open to students with credit for PHYSIOL 335 or 435 prior to fall 2018 or ANAT&PHY 335
Requisites: Junior standing, (ZOOLOGY/BIOLOGY 101, BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY/BOTANY 151, ZOOLOGY 153, or BIOCORE 381), (CHEM 103, 108, 109, or 115) and (PHYSICS 103, 201, or 207) or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe and illustrate the physiological mechanisms within a human body
Audience: Undergraduate

2. Explain how the organs and their functional units work together as a system within the human body
Audience: Undergraduate

3. Explain how human homeostasis is maintained by a contribution from each organ system and understand what has gone wrong in the illustrative pathophysiological situations
Audience: Undergraduate

ANAT&PHY 699 — INDEPENDENT STUDY
1-3 credits.

Individual work in the fields of anatomy and/or physiology will offer the opportunity to participate in more in-depth study (advanced level) under the direct guidance of anatomy and/or physiology faculty.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024
Learning Outcomes: 1. Express advanced knowledge of content, analyze related data and apply knowledge in a variety of academic settings.
Audience: Undergraduate

ANATOMY (ANATOMY)

ANATOMY 622 – HUMAN ANATOMY FOR PHYSICAL AND OCCUPATIONAL THERAPY STUDENTS
6 credits.

Dissection-based gross human anatomy relevant with a physical and occupational therapy focus. Special emphasis is placed on the musculoskeletal and peripheral nervous systems, and living subject and surface anatomy.
Requisites: Declared in Doctor of Physical Therapy Program or Occupational Therapy OTD Program
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Acquire foundational knowledge of anatomy, with an emphasis on the musculoskeletal and peripheral nervous systems.
Audience: Graduate

2. Develop spatial reasoning skills in the anatomy lab.
Audience: Graduate

3. Explore structure-function relationships and their clinical implications.
Audience: Graduate

4. Develop clinical reasoning skills by solving anatomically-based clinical problems.
Audience: Graduate

5. Develop team-based professional skills.
Audience: Graduate

ANATOMY 699 – INDEPENDENT STUDY
1-4 credits.

Directed study projects as arranged with instructor.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2019
Learning Outcomes: 1. Define learning objectives for an independent, dissection-based anatomy project.
Audience: Undergraduate

2. Create a detailed dissection of a specific anatomical region or structure.

Audience: Undergraduate

3. Design and construct an individual project integrating anatomy, histology, embryology, and neuroanatomy with a relevant clinical condition.

Audience: Undergraduate

ANESTHESIOLOGY (ANESTHES)

ANESTHES 699 – INDEPENDENT STUDY
0-5 credits.

Independent study projects as arranged with faculty or instructional staff.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Develop critical, analytical, and independent thinking skills
Audience: Undergraduate

ANESTHES 910 – INDEPENDENT READING & RESEARCH IN ANESTHESIOLOGY
1-4 credits.

Independent research under the direct supervision of Anesthesiology Faculty. Each student's research project is individualized to meet student research goals within the context of the faculty research needs.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Formulate a hypothesis or specific objective if study does not involve hypothesis generating research
Audience: Graduate

2. Conduct a thorough literature review as it pertains to the specific scholarly project
Audience: Graduate

3. Select and apply, and/or understand statistical methodologies as appropriate for the proposed scholarly project
Audience: Graduate

4. Interpret results correctly and in context of previous findings from literature review
Audience: Graduate

ANESTHES 911 – THE SHOCK COURSE
2 credits.

Early recognition and aggressive management of shock states is one of the most challenging and rewarding patient care experiences. If done well the patient impact is incredible and lives can be saved. Integrate detailed physiologic understanding of shock states and shock evaluation - including echocardiography - with the pharmacology of shock management to develop a practical approach to patient care. Echocardiography training will emphasize obtaining views, recognizing anatomy and appreciating biventricular function as a method to differentiate shock states and select an appropriate treatment plan. The in-depth science of the course will be supplemented by clinical experiences focusing on shock evaluation and management in the cardiothoracic critical care unit, medical intensive care unit and, when possible, with cardiac anesthesiology enabling the student to develop a practical bedside approach to the evaluation and management of shock.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021
Learning Outcomes: 1. Describe the autonomic nervous system innervation and receptor function (alpha-1, alpha-2, beta-1, beta-2, dopamine (1 and 2). Describe the receptor function for the vasopressin and angiotensin systems.
Audience: Graduate

2. Describe the pharmacology of available vasoactive drugs and drips including vasoconstrictors, vasodilators and inotropes. Describe the resulting changes in hemodynamics when each drug is given.
Audience: Graduate

3. Define the term “shock”.
Audience: Graduate

4. Describe the relevant goal directed, limited physical examination for a patient in “shock”. Describe echo findings for varied shock states.
Audience: Graduate

5. Describe the invasive and non-invasive monitors we use to evaluate patients with shock. Understand how shock states will change the monitor results (e.g. cardiogenic shock may decrease pulse pressure on an arterial line by decreasing stroke volume; severe acute hemorrhagic shock will yield tachycardia, low stroke volume and low CVP).
Audience: Graduate

6. Describe which vasoactive to select for a given physical examination, or echocardiographic finding, and be able to describe in words or write the rationale for that medication or combination of medications.
Audience: Graduate

7. Independently obtain views for a limited point of care transthoracic echocardiogram and for pleural ultrasound
Audience: Graduate

8. Recognize anatomy on transesophageal echocardiography (TEE).
Audience: Graduate

9. Recognize basic anatomy for each view for both transthoracic echocardiogram (TTE) and TEE.
Audience: Graduate

10. Recognize shock states including hypovolemic, hyperdynamic, cor pulmonale, cardiogenic shock, obstructive shock (AS, MS, pulmonary embolism).

ANESTHES 919 – INDIVIDUALIZED ANESTHESIOLOGY CLINICAL ELECTIVE
2-4 credits.

In-depth exposure to inpatient and outpatient anesthesiology as well as sub-specialty anesthesiology, working under the direct supervision of Anesthesiology faculty, residents, fellows and advanced practice providers. Each student's schedule is individualized to meet each location's capacity and student preference.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Perform an anesthetically-relevant history and physical exam
Audience: Graduate

2. Develop and present a weighted differential diagnosis for medical and surgical conditions
Audience: Graduate

3. Using clinical evidence, adapt and justify the working diagnosis
Audience: Graduate

4. Correctly interpret imaging and laboratory findings and communicate results to team members
Audience: Graduate

5. Develop and present effective anesthetic plans
Audience: Graduate

6. Review, interpret, and present current literature to support patient care
Audience: Graduate

7. Communicate effectively with patients, families, physicians and non-physician team members
Audience: Graduate

8. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care
Audience: Graduate

9. Avoid medical jargon when communicating with patients and families
Audience: Graduate

10. Recognize limitations and seek assistance as appropriate
Audience: Graduate

11. Recognize perioperative conditions that determine patient level of care and interpret physiologic changes that require changing that level of care
Audience: Graduate

12. Perform minor procedures with supervision
Audience: Graduate

13. Demonstrate the ability to manage time and understand, access, and utilize the resources and systems necessary to provide optimal patient care
Audience: Graduate

ANESTHES 920 – CLINICAL ANESTHESIOLOGY ELECTIVE
2-4 credits.

Supervised by house staff, clinical anesthetists and attending physicians. Activities include: pre-operative chart review and anesthetic plan proposal, participating in scheduled procedures, presenting cases and teaching topics, and discussing patient cases. Evaluate and learn to co-manage the full spectrum of inpatient and ambulatory anesthesia patients. Care for patients undergoing sedation, monitored anesthesia care, general and regional anesthesia. Learn the indications for and data provided by various invasive and non-invasive monitoring techniques. Become familiar with relevant pharmacology including, anesthetic agents, muscle relaxants, resuscitation drugs and pain medications. Learn fundamental airway management skills including bag-mask ventilation, supraglottic airway placement, and endotracheal intubation skills. Intravenous access technique practice is taught, including a central line placement course.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate the initial steps of resuscitation, including IV access, central venous acess, and airway management.
Audience: Graduate

2. Explain the anatomy, physiology, and pharmacology relevant to anesthetic induction, maintenance, and emergence.
Audience: Graduate

3. Perform pre-operative airway examination; identify airway anatomy and structures, including innervation and rationale for/approach to awake intubation.
Audience: Graduate

4. Identify medical conditions that affect anesthetic risk by organ system and describe the role of medical management of these conditions.
Audience: Graduate

5. Propose comprehensive anesthetic plans for surgery or procedures to resident and attending physician mentors.
Audience: Graduate

6. Demonstrate effective, respectful communication with patients, faculty, and staff to provide high-level patient care.
Audience: Graduate

7. Incorporate feedback regarding technical skill and clinical performance into improved clinical skill technique and patient care.
Audience: Graduate

8. Interpret the medical literature and apply it to the practice of evidence-based medicine.
Audience: Graduate

9. Interpret basic Transesophageal Echocardiogram, (TEE) images.
Audience: Graduate

ANESTHES 922 – CARDIOTHORACIC INTENSIVE CARE UNIT CLINICAL ANESTHESIA ELECTIVE
2-4 credits.

Participate in the care of critically ill patients assigned to the Cardiothoracic Intensive Care Unit (CITCU) critical care team. Includes post-surgical patients who have undergone coronary artery bypass grafting, cardiac valvular procedures, ventricular assist device placements, cardiac transplantation and lung transplantation. May include patients with significant cardiothoracic surgical history (e.g. patients who have a ventricular assist device or who had prior lung transplantation) who are admitted for "medical" reasons including sepsis or shock of varying etiologies. As part of the CTICU team, participate in management of patients requiring venovenous and venoatrial extracorporeal membrane oxygenator (ECMO) support. The students are supervised by residents (house staff), fellows (largely in critical care anesthesiology, occasionally in pulmonology critical care) and attending physicians.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Define shock and list the categories of Shock
Audience: Graduate

2. Describe the clinical presentation of all forms of shock including hypovolemic under resuscitated hemorrhagic cardiogenic of valvular left ventricle and right ventricle etiologies vasoplegic and mixed shock states
Audience: Graduate

3. Describe a goal orientated physical examination for a patient in shock
Audience: Graduate

4. Diagnose a patient's shock state with the use of physical examination and advanced monitors including arterial lines pulmonary arterial catheters central venous pressure and echocardiography
Audience: Graduate

5. Develop a management plan for a patient's shock state by appropriate use avoidance of fluids pressors vasodilators and inotropes of varying combinations
Audience: Graduate

6. Describe the different valvular cardiomyopathies and describe the hemodynamic goals for these clinical states in the precorrection and post correction states
Audience: Graduate

7. Describe lung protective ventilation
Audience: Graduate

8. Describe how optimal PEEP is determined at the bedside
Audience: Graduate

9. Assess for ventilator synchrony and compliance
Audience: Graduate

10. Describe ventilator modes and breath delivery for the following: pressure regulated volume control pressure control assist control volume control assist control synchronized intermittent mechanical ventilation and pressure support
Audience: Graduate

11. Adjust ventilator settings to improve synchrony or the acid base status of a patient
Audience: Graduate

ANESTHES 930 – RESUSCITATION ANESTHESIOLOGY ELECTIVE
1 credit.

An expanded version of the American Heart Association's Advanced Cardiac Life Support (ACLS) course designed to provide the necessary knowledge and skills to manage the first minutes of a cardiorespiratory emergency using ACLS protocols. Opportunities to learn the proper management of the ten core cases (i.e. Asystole, Bradycardia, Tachycardia, etc.) in the three rescuer roles: lone rescuer; resuscitation team member; and resuscitation team leader. Learn essential resuscitation skills including: recognition of cardiac arrest rhythms and common bradycardias and tachycardias; proper use of conventional and automated external defibrillators (AED); use of transcutaneous pacing devices; advanced airway management; administration of drugs via intravenous and endotracheal routes; recognition of the 12-lead electrocardiogram signs of acute injury and ischemia; adult CPR.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022
Learning Outcomes: 1. Manage a code with confidence
Audience: Graduate

2. Describe the physiology of cardiac arrest
Audience: Graduate

3. Ability to perform advanced CPR
Audience: Graduate

4. Practice team leader skills and utilize them not only in a code, but in other high acuity settings
Audience: Graduate

5. Successfully complete the AHA ACLS course
Audience: Graduate

6. Define systems of care
Audience: Graduate

ANESTHES 940 – INTEGRATED ELECTIVE IN PAIN MANAGEMENT
2 credits.

Direct supervision by residents, fellows, and attending physicians in Anesthesiology, Neurology, and Palliative Care departments, including but not limited to the Acute Pain Service, Regional Anesthesia service, Chronic Pain Service, Chronic Pain Clinic, Headache Clinic, Carbone Cancer Center, and Madison Surgery Center. Participate in regularly scheduled supervisor-student meetings, which involve some or all of the following: rounding on service patients, interviewing clinic patients, participating in scheduled procedures, presenting cases and teaching topics, and discussing patient cases. Complete independent activities including some or all of the following: reading about patient conditions and preparing for direct patient care as needed. Complete other patient care related learning activities as assigned by instructors; these are dependent on the individual student, the patients under the student's care, and the location.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Distinguish between acute pain as a symptom indicating actual or potential tissue damage, and while chronic pain, that has no physiological function.
Audience: Graduate

2. Describe the pathophysiological effects of poorly controlled acute pain.

Audience: Graduate

3. Discuss the epidemiology and risk factors for developing chronic pain.
Audience: Graduate

4. Demonstrate ability to assess pain and its impact on function, mood and QOL including in adults and children.
Audience: Graduate

5. Describe differences in treatment approaches for acute and chronic pain.
Audience: Graduate

6. Discuss causes, clinical presentation and treatment of common chronic pain disorders, e.g. low back pain, fibromyalgia, osteoarthritis, CRPS, headaches, and neuropathy.
Audience: Graduate

7. Describe the prevalence of pain in cancer and palliative care settings, mechanisms of pain, evaluation and treatment approaches.
Audience: Graduate

8. Describe evidence for use of different drugs, including opiod analgesics in acute and chronic pain treatments
Audience: Graduate

9. Describe evidence for use of non-pharmacological approaches (rehabilitation treatments and behavior psychology) in acute and chronic pain treatments
Audience: Graduate

10. Describe evidence for interventional approaches (regional anesthetic blocks, spinal injections, nerve and joint injections) in pain management.
Audience: Graduate

ANIMAL SCIENCES (AN SCI)

AN SCI/DY SCI 101 – INTRODUCTION TO ANIMAL SCIENCES
3 credits.

An overview of animal sciences covering anatomy, physiology, nutrition, reproduction, genetics, management, animal welfare, and behavior of domesticated animals. Food animals are emphasized to discuss their contributions to humans.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate a uniform background of animal agriculture including animal growth, nutrition, reproduction, behavior, and breeds to facilitate learning in subsequent animal science courses
Audience: Undergraduate

2. Accurately use terminology associated with animal agriculture including but not limited to animals, management practices, industry, and equipment
Audience: Undergraduate

3. Identify major animal groups and breeds in the topic areas of companion, service, draft, food, and biomedical, their uses, and their care
Audience: Undergraduate

4. Critically analyze past, current, and future controversial issues in animal agriculture and demonstrate capacity for ethical reasoning and action
Audience: Undergraduate

5. Situate common contemporary animal production systems within the context of economic, social, and environmental sustainability
Audience: Undergraduate

6. Characterize the impacts of animal agriculture at global, national, regional, and local levels
Audience: Undergraduate

AN SCI/DY SCI 102 – INTRODUCTION TO ANIMAL SCIENCES LABORATORY
1 credit.

Hands-on experience and demonstrations to develop practical skills with animals and to better understand the application of science to food production animals. It covers anatomy, physiology, nutrition, reproduction, genetics, management, animal welfare, and behavior of domesticated animals.
Requisites: DY SCI/AN SCI 101 or concurrent enrollment
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall and summarize fundamental concepts in animal growth, nutrition, reproduction, and behavior to facilitate learning in subsequent animal science courses
Audience: Undergraduate

2. Accurately use terminology associated with animal agriculture including but not limited to animals, management practices, industry, and equipment
Audience: Undergraduate

3. Demonstrate proper handling, restraint, care, and management of food animals
Audience: Undergraduate

4. Identify anatomical parts of animal gastrointestinal and reproductive tracts, and explain the key functions of each part
Audience: Undergraduate

5. Classify common feedstuff and nutritional analysis used in the livestock industry
Audience: Undergraduate

6. Effectively engage in collaborative problem-solving and reflective practice
Audience: Undergraduate

7. Interpret and discuss scientific literature
Audience: Undergraduate

AN SCI 135 – GRAND CHALLENGES AND CAREER OPPORTUNITIES IN ANIMAL AND DAIRY SCIENCES
1 credit.

Covers the current key challenges and opportunities in the broad fields of animal agriculture, animal biology, animal health, and veterinary medicine, as well as internship and career opportunities and professional development activities that will maximize the value of an undergraduate career at UW-Madison and provide preparation for post-graduation endeavors.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the Grand Challenges in our broad field, including Animal Health and Welfare, Food Safety, Land and Water Stewardship, Precision Livestock Farming, and Biomedical Advancements
Audience: Undergraduate

2. Identify animal-related faculty and coursework, and create plans for courses and co-curricular opportunities that support your degree and future goals
Audience: Undergraduate

3. Describe common independent and experiential learning opportunities, including undergraduate research, internships, study abroad, international study tours, intercollegiate competitions, and related activities
Audience: Undergraduate

4. Identify internships, graduate and professional programs, and career opportunities in the public, private, and non-profit sectors related to animal agriculture, animal biology, animal health, veterinary medicine, and related fields
Audience: Undergraduate

5. Develop professional skills that will help undergraduate students succeed in future endeavors, including preparing a resume, writing a cover letter, building a professional network, finding an internship, having a successful interview, and maximizing the job or internship experience
Audience: Undergraduate

AN SCI 140 – INTRODUCTION TO POULTRY: FROM BACKYARD CHICKENS TO COMMERCIAL PRODUCTION
1 credit.

Overview of poultry science and production. Topics include anatomy and physiology, nutrition, health, reproduction, genetics, egg and meat quality, and management. Includes information on poultry flocks of various sizes and purposes, from hobby flocks to commercial production.
Requisites: None
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe common methods of poultry production and management.
Audience: Undergraduate

2. Explain basic biological aspects of poultry, including health, nutrition, and reproduction.
Audience: Undergraduate

3. Discuss the organization and structure of the poultry industry.
Audience: Undergraduate

4. Identify measures of quality in poultry and egg products.
Audience: Undergraduate

AN SCI 200 – THE BIOLOGY AND APPRECIATION OF COMPANION ANIMALS
3 credits.

A systematic coverage of many of the animals (including birds) that humans keep as their social companions. The classification, nutritional requirements, environmental considerations, reproductive habits, health, legal aspects and economics of companion animals and their supportive organizations.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize a broad range of types of companion animals and identify some unique characteristics of each
Audience: Undergraduate

2. Characterize the basic biology of most companion animals, including health, nutrition, reproduction, etc
Audience: Undergraduate

3. Summarize the basic requirements of care and husbandry for a variety of companion animals
Audience: Undergraduate

4. Identify differences in the biology and requirements of various types of companion animals.
Audience: Undergraduate

5. Identify current topics regarding companion animals.
Audience: Undergraduate

6. Characterize some ethical issues associated with animal ownership, care, and use.
Audience: Undergraduate

AN SCI 210 – YOU AND YOUR FOOD: FARM TO TABLE
2 credits.

Develop an understanding of the global food supply from farm to table by exploring ruminant animals, non-ruminant animals including insects, and selected agricultural materials. Topics such as the following will be discussed: land usage, environmental impacts from different feeding operations, utilization of food waste, and health risks associated with food consumption.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Discuss topics related to agriculture and food manufacturing
Audience: Undergraduate

2. Identify unique aspects of ruminant animals that turn inedible plants and byproducts into human edible food with unique nutritional attributes
Audience: Undergraduate

3. Describe the role of side-stream utilization and circular economy of food production.
Audience: Undergraduate

4. Explain the role of alternative feedstuffs for animals in having a resilient food supply
Audience: Undergraduate

5. Describe how animal tissues are converted to protein-rich ingredients uniquely enriched in 'bioactive' molecules
Audience: Undergraduate

6. Describe how stabilization steps (a process or additive) convert protein-rich raw materials to food products, providing a diverse food supply
Audience: Undergraduate

7. Evaluate the tension between extending shelf life to limit food waste and health concerns from utilizing certain ingredients
Audience: Undergraduate

AN SCI 232 – CARE AND MANAGEMENT OF DOGS AND CATS
3 credits.

Covers a broad range of knowledge regarding current best practices in the care and management of dogs and cats from a veterinary medical perspective. Focuses on these animals kept as pets, with additional information about other scenarios adjacent to pet ownership (e.g. breeding or working animals) provided when relevant. Discusses ethical considerations and healthcare choices that a pet owner may face throughout their dog or cat's lifespan from an evidence-based perspective. Presents topics ranging from acquiring a pet, to training and veterinary care, to end-of-life decisions with the goal of dispelling common myths and misinformation.
Requisites: Sophomore standing
Repeatable for Credit: No
Learning Outcomes: 1. Describe the general care needs of dogs and cats

Audience: Undergraduate

2. Explain the how and why of basic veterinary care diagnostics and procedures
Audience: Undergraduate

3. Use an evidence-based approach to evaluate the numerous decisions and ethical considerations related to pet care
Audience: Undergraduate

4. Identify and discuss the industries/entities that support pet ownership and animal health (e.g. breeding, animal shelters and related social programs, pet food, pet supplies, pharmaceuticals, training and behavior, scientific research, and veterinary medicine)
Audience: Undergraduate

AN SCI 240 — ANCIENT ANIMALS AND PEOPLES
3 credits.

Provides an introduction to human and animal relationships from prehistory to the present. Examines how animals have influenced social and economic structures of past societies, with a focus on the advent of domestication. Explores the cultural and economic changes that domestication has had on human societies, as well as the behavioral, genetic, and morphological changes that this process had on once wild animals. Emphasizes the methods used to retrace human-animal interactions, drawing on cross-cultural examples from anthropology, ethnozoology, archaeology, history, and genetics.
Requisites: None
Course Designation: Breadth - Either Biological Science or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2022
Learning Outcomes: 1. Develop skills in searching for and identifying literature using online and library resources, and gain familiarity with citing and referencing different source types.
Audience: Undergraduate

2. Synthesize scholarly articles in the areas of animal science, archaeology, biology, and history.
Audience: Undergraduate

3. Understand animal-human interactions from a global and historical perspective.
Audience: Undergraduate

4. Evaluate the archaeological, historical, and genetic lines of evidence used to generate hypothesis on past animal-human interactions.
Audience: Undergraduate

5. Develop a general chronology of the history of animal husbandry, livestock, and pet keeping around the world.
Audience: Undergraduate

6. Analyze the process of artificial selection and the different pathways to domestication (commensal, prey, or directed).
Audience: Undergraduate

7. Differentiate domesticated from tamed from feral and identify the behavioral and biological characteristics which makes certain animal favorable to domestication.
Audience: Undergraduate

8. Apply course material to evaluate the role of past animal interactions on contemporary issues in conservation and food security.
Audience: Undergraduate

AN SCI 245 — ANIMAL WELFARE
3 credits.

Explores animal welfare topics from the animal's perspective. Analyzes contemporary welfare issues and policies based on our scientific understanding of the experiences of animals. Emphasizes farmed animals, but also draws on examples from zoo, lab, and companion animals.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss the scientific process as applied to animal welfare
Audience: Undergraduate

2. Apply scientific concepts to analyze contemporary animal welfare issues
Audience: Undergraduate

3. Identify situations that may compromise welfare in diverse species and contexts
Audience: Undergraduate

4. Interpret scientific literature to evaluate animal welfare assurance programs
Audience: Undergraduate

5. Articulate concepts of animal welfare in oral and written format
Audience: Undergraduate

AN SCI 289 — HONORS INDEPENDENT STUDY
1-2 credits.

Honors research work under direct guidance of a faculty member in an area of Animal Sciences. Students are responsible for arranging the work and credits with the supervising instructor.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2007
Learning Outcomes: 1. Demonstrate content knowledge and skills as signified in an honors project or scholarly honors work.
Audience: Undergraduate

2. Articulate their honors experience to peers.
Audience: Undergraduate

3. Apply perspectives to composed work through engagement in academic experiences.
Audience: Undergraduate

AN SCI 299 – INDEPENDENT STUDY
1-3 credits.

Individual introductory to intermediate work under direct guidance of a faculty member in an area of Animal Sciences. Students are responsible for arranging the work and credits with the supervising instructor.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Summarize intellectual growth associated with independent study work through mentor discussion.
Audience: Undergraduate

2. Identify diversity of viewpoints through critical thinking.
Audience: Undergraduate

3. Illustrate growth in reading, writing, and communication skills..
Audience: Undergraduate

AN SCI/FOOD SCI 305 – INTRODUCTION TO MEAT SCIENCE AND TECHNOLOGY
4 credits.

Application of biological, technological, and economical principles to muscle and related tissue utilized for food.
Requisites: (ZOOLOGY/BIOLOGY/BOTANY 152 or ZOOLOGY/BIOLOGY 101 and 102) and (CHEM 103, 109, or 115) or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss the nutritional value of fresh and processed meats in addition to addressing diet/health issues and food safety of these products
Audience: Both Grad & Undergrad

2. Describe the processes associated with animal harvest and explain the differences among different livestock species
Audience: Both Grad & Undergrad

3. Demonstrate where carcass fabrication cuts are made to produce the major carcass primal cuts and the ability to separate out and identify major muscles of economic importance
Audience: Both Grad & Undergrad

4. Describe how the biochemical properties of meat proteins relate to muscle function
Audience: Both Grad & Undergrad

5. Explain of the chemical and physical properties of fresh meat and how these properties can be evaluated and analyzed
Audience: Both Grad & Undergrad

6. Collect carcass data and determine USDA quality and yield grades
Audience: Both Grad & Undergrad

7. Calculate the appropriate amounts of non-meat ingredients and explain the applicable manufacturing procedures to produce various types of processed meats including whole muscle products and finely comminuted sausages
Audience: Both Grad & Undergrad

8. Explain how an understanding of muscle microstructure ultrastructure, and changes in postmortem biochemistry can be used to predict ultimate meat quality characteristics
Audience: Graduate

AN SCI/DY SCI/NUTR SCI 311 – COMPARATIVE ANIMAL NUTRITION
3 credits.

Nutrients and their assimilation, function, and interactions that affect metabolism in mammals. Differences among species will be used to emphasize unique digestive and physiological functions and how these differences affect metabolism of nutrients. Humans will be used in some comparisons. Follows physiological progression of nutrients, starting with an overview of the digestive tract followed by water and builds on specific roles of nutrients and substrates needed to provide basic processes required for maintenance, tissue accretion, and homeostatic regulation of nutrients.
Requisites: CHEM 341, 343, (BIOCHEM 301 or concurrent enrollment), or (BIOCHEM 501 or concurrent enrollment)
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recall and summarize the cellular, tissue, and whole-body metabolism and function of nutrients
Audience: Undergraduate

2. Identify key elements of digestive anatomy that enable digestion and absorption of consumed nutrients
Audience: Undergraduate

3. Explain the physiological processes required for assimilation of consumed macro- and micro-nutrients
Audience: Undergraduate

4. Compare the similarities and differences in nutritional and metabolic strategies across species
Audience: Undergraduate

5. Evaluate the interactions between nutrients, animals, environment, physiological status, and functions and integrate these interactions to understand whole-animal nutrition
Audience: Undergraduate

AN SCI/DY SCI 320 – ANIMAL HEALTH AND DISEASE
3 credits.

Provides an introduction to and exploration of the interconnectivity between factors that affect health and disease and the central role of the immune system using infectious disease in animals as a key focus. Explores principal causes and identification of animal diseases, common diseases of farm animals, zoonoses and public health, disease prevention and management including biosecurity measures and host immune responses. Fosters appreciation for the translatability and universality of knowledge between human and animal health and disease.
Requisites: ZOOLOGY/BIOLOGY/BOTANY 151, (ZOOLOGY/BIOLOGY 101 and 102), BIOCORE 383, or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the interconnectivity and interdependence between factors that influence health and disease
Audience: Both Grad & Undergrad

2. Discuss fundamental biological and scientific concepts valuable for a career in animal agriculture, veterinary medicine, human medicine or biomedical animal research
Audience: Both Grad & Undergrad

3. Translate novel knowledge of health and disease in one species to another
Audience: Both Grad & Undergrad

4. Integrate concepts covered in the course and explore in depth how they are relevant to a specific challenge currently faced in animal health or disease.
Audience: Graduate

AN SCI/FOOD SCI 321 – FOOD LAWS AND REGULATIONS
1 credit.

Food laws and regulations, regulatory and commerical grading standards used in the food industry.
Requisites: Junior standing
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify major food laws, their authoritative departments and enforcement agencies (regulatory framework)
Audience: Undergraduate

2. Identify, examine and analyze the implications of laws and regulations required for the manufacture and sale of food products
Audience: Undergraduate

3. Discuss current topics of importance to the food industry that have the potential to generate new or refine existing regulations on food laws and regulations that apply to specific segments of the food industry
Audience: Undergraduate

4. Find pertinent information on food laws and regulations that apply to specific segments of the food industry
Audience: Undergraduate

AN SCI 324 – APPLIED COMPANION ANIMAL BEHAVIOR AND LEARNING
3 credits.

Explore companion animal behavior and learning. Examine species-specific and abnormal behavior in a variety of environments where companion animals exist. Investigate basic learning principles and how they can be applied to companion animals.
Requisites: (DY SCI/AN SCI 102 or concurrent enrollment) or graduate/professional standing
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe species-specific behavior in companion animals
Audience: Both Grad & Undergrad

2. Construct an ethogram and use it to record and track companion animal behavior
Audience: Both Grad & Undergrad

3. Differentiate between different forms of behavior modification
Audience: Both Grad & Undergrad

4. Identify abnormal behavior and theorize how the behavior developed and is maintained
Audience: Both Grad & Undergrad

5. Identify a problem behavior in a companion animal, and design a behavior modification plan to address that behavior
Audience: Graduate

AN SCI/BOTANY/MICROBIO 335 – THE MICROBIOME OF PLANTS, ANIMALS, AND HUMANS
3 credits.

Examination of the structure and function of microbial communities that live inside and on host organisms (plants, animals, and humans). Introduction to general concepts of the microbiome and microbiota, and their relationship to host nutrition, health, and disease.
Requisites: MICROBIO 101 or 303 or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe how microorganisms interact with plant and animal (including human) hosts in beneficial, neutral or detrimental ways.
Audience: Undergraduate

2. Express how the environment affects these host-microbe interactions.
Audience: Undergraduate

3. Summarize new molecular and bioinformatic methods that allow for the study of microbial communities.
Audience: Undergraduate

4. Describe how microbial communities are essential for life as we know it, and the processes that support life.
Audience: Undergraduate

5. Articulate several ways in which microbial communities are essential to plant and animal (including human) health.
Audience: Undergraduate

6. Explain our current knowledge about the diversity of microbial life and why its effects and potential benefits have not been fully explored.
Audience: Undergraduate

AN SCI 336 – ANIMAL GROWTH AND DEVELOPMENT
3 credits.

Covers growth and development of an animal from a single cell to an organism and factors such as nutrition, hormone, genetics and gut microbials influencing growth and development in both cell and tissue levels. Includes the molecular and cellular basis of prenatal and postnatal growth and development. Focuses on development and growth of tissues including muscle, adipose, connective, mammary, and bone tissues that are associated with animal production. Also includes the use of growth promotants in livestock to improve growth performance and increase the quality of carcasses and animal production.
Requisites: (ZOOLOGY/BIOLOGY/BOTANY 151 and 152), (ZOOLOGY/BIOLOGY 101 and 102), or BIOCORE 383
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the process of growth and development from a single cell level to a whole organism level
Audience: Undergraduate

2. Describe the principles and basic biological functions associated with animal growth and development applied to animal production systems
Audience: Undergraduate

3. Explain what factors affect livestock growth and development and how alteration of these factors impacts growth performance of livestock
Audience: Undergraduate

4. Integrate and apply multi-disciplinary knowledge acquired from this course to estimate and enhance growth and efficiency of animal products
Audience: Undergraduate

AN SCI/BSE 344 – DIGITAL TECHNOLOGIES FOR ANIMAL MONITORING
3 credits.

Introduces key concepts of sensor technology used for livestock and companion animal monitoring and veterinary medicine. Describes applications of Artificial Intelligence (AI) systems for livestock animals and veterinary medicine, including animal monitoring, computer-aided diagnosis, and optimized farm management decisions.
Requisites: (MATH 112, 114, 171, or placement into MATH 221) or graduate/professional standing
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain what precision livestock is and why it is needed
Audience: Undergraduate

2. Demonstrate familiarity with data science and artificial intelligence principles as applied to agricultural systems and veterinary medicine
Audience: Undergraduate

3. Describe the current sensor sensing technologies used in livestock and companion animals
Audience: Undergraduate

4. Explain principles and applications of sensor technology applied to animals
Audience: Undergraduate

5. Identify artificial intelligence applications in veterinary medicine
Audience: Undergraduate

6. Evaluate the major ethical concerns associated with Artificial Intelligence for agriculture
Audience: Undergraduate

AN SCI/DY SCI 361 – INTRODUCTION TO ANIMAL AND VETERINARY GENETICS
2 credits.

The molecular basis for inheritance of monogenic and polygenic traits related to animal disease and production. An introduction to the principles of improving animal health and performance by selection and mating systems in companion animals, horses, livestock, and poultry.
Requisites: ZOOLOGY/BIOLOGY/BOTANY 151, (ZOOLOGY/BIOLOGY 101 and 102), or (BIOCORE 382, 383, and 384) or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Retrieve, analyze and interpret gene and genomic data for species conservation, genetic variants and gene function
Audience: Both Grad & Undergrad

2. Apply genotype data to determination of animal parentage and mapping of variants underlying genetic variation for animal traits
Audience: Both Grad & Undergrad

3. Articulate knowledge of methods used to discover and modify genetic information for purposes of altering phenotypes
Audience: Both Grad & Undergrad

4. Identify the key components of the basic genetic model describing the expression of phenotypic traits
Audience: Both Grad & Undergrad

5. Explain the four forces that change gene frequency: selection, drift, mutation and migration
Audience: Both Grad & Undergrad

6. Calculate and interpret the coe#cients of a simple linear regression to determine the expected genetic change from phenotypic selection
Audience: Both Grad & Undergrad

7. Calculate the detection probability of a recessive genotype for some simple mating systems
Audience: Both Grad & Undergrad

8. Examine opportunities for genetic improvement of a trait in a species of interest using knowledge gained in the course, comparing alternative strategies and expected outcomes with the results of their analysis
Audience: Graduate

AN SCI/DY SCI 362 – VETERINARY GENETICS
2 credits.

The genetic basis for predisposition to disease or resistance to disease in livestock and companion animal species. Genetic defects, their discovery, diagnosis and treatment.
Requisites: DY SCI/AN SCI 361 or concurrent enrollment
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Evaluate critically the primary literature in the genetic variants and their role in animal phenotypes and disease
Audience: Both Grad & Undergrad

2. Describe how gene x environment interactions affect gene expression and how these effects can be transmitted to the next generations
Audience: Both Grad & Undergrad

3. Use animal biotechnology knowledge and biomedical models to design experiments to treat animal diseases and alter phenotypes
Audience: Both Grad & Undergrad

4. Explain the processes by which epigenetic marks regulate gene expression and how these marks can be manipulated
Audience: Both Grad & Undergrad

5. Generate a hypothesis from a set of observations related to the genetic basis of animal production and then design experiments to test the hypothesis
Audience: Graduate

AN SCI/DY SCI 363 – PRINCIPLES OF ANIMAL BREEDING
2 credits.

Application of the principles of quantitative genetics to the improvement of livestock and poultry; breeding value estimation and selection techniques; effects of inbreeding and hybrid vigor; crossbreeding systems.
Requisites: DY SCI/AN SCI 361 or concurrent enrollment
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Calculate and interpret the values of narrow and broad sense herdabilities as well as repeatability of quantitative traits given their genetic and environmental variance components
Audience: Both Grad & Undergrad

2. Apply additive and multiplicative adjustments on phenotypic traits to correct for environmental effects
Audience: Both Grad & Undergrad

3. Interpret key components of sire summaries
Audience: Both Grad & Undergrad

4. Calculate expected correlated response to selection
Audience: Both Grad & Undergrad

5. Calculate retained hybrid vigor for various crossbreeding schemes in livestock
Audience: Both Grad & Undergrad

6. Perform quantitative genetic analysis of family data using linear regression and analysis of variance techniques
Audience: Graduate

AN SCI 366 – CONCEPTS IN GENOMICS
3 credits.

Genomics has revolutionized many fields of science, including animal breeding, plant breeding, physiology, microbiology, and human medicine. A basic overview of the latest concepts in genomics, including 3D genome organization, the importance of genome annotation, the use of genomic testing in plant and animal breeding, the potential of genomic prediction on human medicine, and the latest advances in omics integration.
Requisites: Junior Standing and BOTANY/BIOLOGY/ZOOLOGY 152, (BIOLOGY/ZOOLOGY 101, 102, and BIOLOGY/BOTANY 130), BIOCORE 381, or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize the importance of functional annotation
Audience: Both Grad & Undergrad

2. Explain the principles of gene mapping and genomic testing
Audience: Both Grad & Undergrad

3. Describe the impact of genomic selection on agriculture
Audience: Both Grad & Undergrad

4. Recognize the potential of genomic prediction on human medicine
Audience: Both Grad & Undergrad

5. Describe the lastest advances in multi-omics data integration
Audience: Both Grad & Undergrad

6. Explain the principles of pathway analysis and network inference
Audience: Graduate

7. Describe available tools and software for omics analyses
Audience: Graduate

AN SCI/DY SCI 370 – LIVESTOCK PRODUCTION AND HEALTH IN AGRICULTURAL DEVELOPMENT
3 credits.

Physical, biological and social nature of animal agriculture systems and their improvement in developing countries; analysis of the state of livestock research and development in the developing countries and the world role of U.S. animal agriculture.
Requisites: DY SCI/AN SCI 101, ZOOLOGY/BIOLOGY/BOTANY 151, ZOOLOGY/BIOLOGY 101, or (BIOCORE 381 and 382), or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Describe the physical, biological and social nature of animal agriculture and its improvement in developing countries.
Audience: Both Grad & Undergrad

2. Analyze the constraints to improving livestock production on resource poor farms in developing countries.
Audience: Both Grad & Undergrad

3. Demonstrate knowledge about institutional infrastructures involved in research, education, and development projects in animal agriculture.
Audience: Both Grad & Undergrad

4. Develop skills needed to analyze and project strategies for improvement of a a production system in a developing country.
Audience: Graduate

AN SCI/DY SCI 373 — ANIMAL PHYSIOLOGY
3 credits.

Covers physiological processes that regulate the body and the anatomy and function of different physiological systems. Includes interactions between organ systems, analysis of a single organ system from the molecular to the organismal, and comparisons and contrasts of organ systems among different domestic animal species.
Requisites: ZOOLOGY/BIOLOGY/BOTANY 151, (ZOOLOGY/BIOLOGY 101 and 102), or BIOCORE 383
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Integrate the physiological processes that regulate the body of different animal species (largely domestic animals and humans)
Audience: Undergraduate

2. Synthesize the regulation of an organ system from the molecular level all the way to the whole animal level and apply knowledge of a physiological mechanism to explain how a whole animal physiological process occurs
Audience: Undergraduate

3. Integrate interactions between different organ systems (homeostasis) and explain the anatomy of different physiological systems and their specific functions
Audience: Undergraduate

4. Determine how changes in internal or external environment will alter physiologic processes to deal with these changes
Audience: Undergraduate

5. Determine how changes in one physiological system may impact a different physiological system
Audience: Undergraduate

6. Describe similarities and differences in physiologic systems between animal species (with emphasis on domestic animals and humans)
Audience: Undergraduate

AN SCI 375 — SPECIAL TOPICS
1-4 credits.

Various topics in Animal Science of current interest to undergraduate students.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze concepts and processes related to specific topics in Animal Sciences.
Audience: Undergraduate

2. Integrate and apply knowledge to understand issues associated with in animal industries.
Audience: Undergraduate

3. Synthesize scientific literature to develop critical thinking skills.
Audience: Undergraduate

AN SCI 377 — INTEGRATIVE ANIMAL PHYSIOLOGY LABORATORY
1 credit.

Provides immersive, hands-on training in large animal procedural and surgical techniques to develop knowledge and appreciation for the interconnectivity and interdependence between physiological processes of the various organ systems. Serves as an introduction to translatable skills for careers in biomedical animal research, veterinary medicine, or human medicine.
Requisites: ZOOLOGY/BIOLOGY/BOTANY 151, (ZOOLOGY/BIOLOGY 101 and 102), or BIOCORE 383
Repeatable for Credit: No
Learning Outcomes: 1. Describe the interconnectivity and interdependence between physiological processes and anatomical systems.
Audience: Undergraduate

2. Perform basic techniques in animal handling, anesthesia, and surgical procedures.
Audience: Undergraduate

3. Communicate information and thoughts effectively within a team performing complex procedures.
Audience: Undergraduate

AN SCI 399 – COORDINATIVE INTERNSHIP/COOPERATIVE EDUCATION
1-8 credits.

An internship under guidance of a faculty or instructional academic staff member in Animal and Dairy Sciences and internship site supervisor. Students are responsible for arranging the work and credits with the faculty or instructional academic staff member and the internship site supervisor.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Workplace - Workplace Experience Course
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Establish a network of mentors to support academic and professional growth.
Audience: Undergraduate

2. Develop and illustrate specialized skills relavant to the focus of study associated with internship program.
Audience: Undergraduate

3. Differentiate a diversity of disciplinary approaches and viewpoints in the agriculture industry.
Audience: Undergraduate

AN SCI 400 – STUDY ABROAD IN ANIMAL SCIENCES
1-6 credits.

Provides an area equivalency for courses taken on Madison Study Abroad Programs that do not equate to existing UW courses.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions

AN SCI/DY SCI 414 – RUMINANT NUTRITION & METABOLISM
3 credits.

Integrates nutritional and biochemical concepts to understand digestive and metabolic processes in dairy and beef cattle, which are then quantitatively represented to predict and manipulate production and health outcomes.
Requisites: DY SCI/AN SCI/NUTR SCI 311, (BIOCHEM 301 or 501) or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Integrate nutritional and biochemical concepts to understand digestion and metabolism of nutrients.
Audience: Both Grad & Undergrad

2. Predict quantitative metabolic and production outcomes in ruminants.
Audience: Both Grad & Undergrad

3. Determine the role of metabolism in feed efficiency, animal production and health, and environmental load of ruminant production systems.
Audience: Both Grad & Undergrad

4. Investigate, interpret, summarize, and debate findings from scientific literature in order to develop and communicate recommendations for ruminant diets to identified audiences.
Audience: Both Grad & Undergrad

5. Apply research models to experimental and production data to predict metabolic outcomes
Audience: Graduate

AN SCI 415 – APPLICATION OF MONOGASTRIC NUTRITION PRINCIPLES
2 credits.

Nutrient requirements for growth and production of monogastric animals. Discuss concepts of establishing nutrient requirements and feeding strategies. Laboratory exercises are designed to develop problem solving skills required for the assessment of nutritional adequacy and economical soundness of feeding programs.
Requisites: DY SCI/AN SCI/NUTR SCI 311, (BIOCHEM 301 or 501) or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify classifications and profiles of major feed ingredients used to supply nutrients for monogastric animals
Audience: Both Grad & Undergrad

2. Assess the major nutrient requirements for monogastric animals established by empirical experimental methods
Audience: Both Grad & Undergrad

3. Build spreadsheets to calculate mathematical solutions required for formulations of complete diets for monogastric animals
Audience: Both Grad & Undergrad

4. Design an experiment and critique the results
Audience: Both Grad & Undergrad

5. Participate in discussions of laboratory assignments and presentations of experimental results
Audience: Both Grad & Undergrad

6. Provide a completed statistical analysis of the data from the animal trials with a defense for the analysis provided in the oral presentation
Audience: Graduate

AN SCI 420 – MICROBIOMES OF ANIMAL SYSTEMS
3 credits.

Provides a knowledgebase in both theoretical and applied scientific approaches associated with microbiome sciences in animal production systems. Covers the basic principles of microbiology through applied practical approaches in using cross-species comparisons in companion and agricultural species from classical microbiological techniques to novel next-generation sequence-based approaches.
Requisites: (BIOLOGY/ZOOLOGY 101 and 102, BOTANY/BIOLOGY/ZOOLOGY 151, BOTANY/BIOLOGY 130, or BIOCORE 383) and (CHEM 341, 343, or BIOCHEM 301), or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Compare and contrast the anatomic differences and basic functions of the GI tract across agricultural species.
Audience: Both Grad & Undergrad

2. Apply biochemical concepts to evaluate the impact of substrates on microbial bioenergetics, growth yield, and the establishment and stability of microbial communities
Audience: Both Grad & Undergrad

3. Evaluate and recommend approaches to assess microbiome diversity and function.
Audience: Both Grad & Undergrad

4. Relate basic principles of microbial community membership and function in the context of host-microbe crosstalk.
Audience: Both Grad & Undergrad

5. Associate internal versus external environmental pressures that influence microbial niches and cross-kingdom interactions.
Audience: Both Grad & Undergrad

6. Critically evaluate key literature related to studying the microbiome of animal systems
Audience: Graduate

AN SCI 431 – BEEF CATTLE PRODUCTION
3 credits.

Application of genetics, systems of mating, physiology, nutrition and economics to the production of beef.
Requisites: NUTR SCI/AN SCI/DY SCI 311, DY SCI/AN SCI 361, and (DY SCI/AN SCI 434 or concurrent registration) or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022
Learning Outcomes: 1. Apply principles from pre-requisite courses to production systems for beef cattle and appreciate management practices specific to these systems.
Audience: Both Grad & Undergrad

2. Integrate fundamental principles of beef cattle biology and economics into a business plan of their design.
Audience: Both Grad & Undergrad

3. Analyze and evaluate beef production systems.
Audience: Graduate

AN SCI 432 – SWINE PRODUCTION
3 credits.

Application of research findings in breeding, feeding, management and marketing to modernize production. Lab may include farm visits, practical exercises in testing changes, and "tools" used by producers.
Requisites: NUTR SCI/AN SCI/DY SCI 311, DY SCI/AN SCI 361, DY SCI/AN SCI 434, or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Be able to describe and contrast current topics in the context of historical perspectives that influence the current and future US commercial swine industry.
Audience: Both Grad & Undergrad

2. Evaluate and integrate the foundational principles in swine nutrition, reproduction, breeding, genetic selection, herd health management, biosecurity protocols, animal behavior, swine husbandry, marketing, and housing to discern swine production practices which improve animal well-being and sustainable swine production in a manner that is acceptable to consumers
Audience: Both Grad & Undergrad

3. Develop an ability to link components of a production system to market costs and revenues.
Audience: Both Grad & Undergrad

4. Gain hands-on experience with common swine production techniques
Audience: Both Grad & Undergrad

5. Diversify student experience with a major food animal species and the industries and career opportunities associated with the swine industry.
Audience: Both Grad & Undergrad

6. Extend academic experience acquired in the Animal Sciences department into areas of personal interest and develop new ideas working with academic and industrial organizations
Audience: Graduate

AN SCI/DY SCI 434 – REPRODUCTIVE PHYSIOLOGY
3 credits.

Principles of reproductive physiology, improvement of fertility, and artificial insemination.
Requisites: ZOOLOGY/BIOLOGY/BOTANY 152, (ZOOLOGY/BIOLOGY 101 and 102) or (BIOCORE 382, 383, and 384) or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify structures and function of reproductive anatomy in the male and female of all livestock species, humans, pets and wildlife
Audience: Both Grad & Undergrad

2. Identify hormones, their production site, physiology impacts and how to manipulate specific hormones to control reproduction either positively or negatively
Audience: Both Grad & Undergrad

3. Summarize critical components of reproductive technologies involved in breeding, semen collection, gamete biology and embryonic development. Demonstrate ability to monitor and manipulate cyclicity, artificial insemination, and pregnancy detection in both horses and pigs
Audience: Both Grad & Undergrad

4. Summarize events in reproduction from the cellular to whole animal level in livestock species, humans, pet species and wildlife
Audience: Both Grad & Undergrad

5. Communicate via oral, written, podcast, and website modalities
Audience: Both Grad & Undergrad

6. Solve reproductive physiology problems associated with a foreign country or novel region of U.S. including how to digitally communicate with local residents who may not speak English
Audience: Both Grad & Undergrad

7. Identify how ethical issues in global agriculture, wildlife management, and federal grazing lands impact reproductive management of livestock
Audience: Both Grad & Undergrad

8. Evaluate effective learning outcomes of a specific lab and access its impact on undergraduate students
Audience: Graduate

AN SCI 435 – ANIMAL SCIENCES PROSEMINAR
2 credits.

Methods of assessing information quality are studied. Each student develops an analytical and critical seminar on a topic of personal interest in the animal sciences.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply the knowledge and skills acquired in the different areas of Animal Sciences to solve a specific problem using a multidisciplinary approach
Audience: Undergraduate

2. Analyze academic, professional, societal, economic, ethical, or scientific issues related to Animal Science and construct creative solutions for those issues
Audience: Undergraduate

3. Communicate and extend the capstone experience to refine research skills and demonstrate proficiency in written and oral forms
Audience: Undergraduate

4. Extend academic experience acquired in the Animal Sciences department into areas of personal interest and develop new ideas working with academic and industrial organizations.
Audience: Undergraduate

AN SCI/DY SCI/FOOD SCI/SOIL SCI 472 – ANIMAL AGRICULTURE AND GLOBAL SUSTAINABLE DEVELOPMENT
1 credit.

Examines issues related to global agriculture and healthy sustainable development. Using a regional approach and focusing on crops and livestock case studies, students will learn the interdependence between US agriculture and agriculture in emerging economies. Some topics covered include population and food, immigration, the environment; crop and livestock agriculture; global trade; sustainability; food security, the role of women in agriculture, and the role of dairy products in a healthy diet.
Requisites: None
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Apply sustainability principles and/or framework to addressing the challenge of feeding an increasing world population sustainably.
Audience: Undergraduate

2. Define and characterize sustainability, sustainable agriculture and Sustainable Development
Audience: Undergraduate

3. Analyze the contributions of animal agriculture to the Sustainable Development Goals both in developing and developed countries.
Audience: Undergraduate

4. Explain the social, economic, and/or environmental dimensions of the sustainability challenges of diverse animal agricultural systems both in developing and developed countries.
Audience: Undergraduate

5. Evaluate the role of livestock in communities where poverty, hunger and marginalization are embedded as a way of life.
Audience: Undergraduate

6. Critically evaluate the causes of –and ways to break– the chains of hunger and poverty among the poorest of the poor.
Audience: Undergraduate

AN SCI/DY SCI/FOOD SCI/SOIL SCI 473 – INTERNATIONAL FIELD STUDY IN ANIMAL AGRICULTURE AND SUSTAINABLE DEVELOPMENT
2 credits.

Examines issues related to global agriculture and healthy sustainable development. Using a regional approach and focusing on crops and livestock case studies, students will learn the interdependence between US agriculture and agriculture in emerging economies. Some topics covered include population and food, immigration, the environment; crop and livestock agriculture; global trade; sustainability; and the role of women in agriculture and the role of dairy products in a healthy diet.
Requisites: DY SCI/AN SCI/FOOD SCI/SOIL SCI 472
Repeatable for Credit: No
Learning Outcomes: 1. Improve communication and interpersonal skills associated with participating in team-based intercultural experiences
Audience: Undergraduate

2. Be better prepared for professional success in an interconnected world by navigating unfamiliar cultural norms and societal differences
Audience: Undergraduate

3. Reflect on US-centric personal and cultural values while building an appreciation and respect for the Latin America culture.
Audience: Undergraduate

4. Explain the social, economic, and/or environmental dimensions of the sustainability challenge of alleviating poverty and malnutrition in Mexico
Audience: Undergraduate

5. Apply sustainability principles and/or framework to addressing the challenge of fostering prosperity in marginalized indigenous communities
Audience: Undergraduate

6. Analyze both from their own disciplinary lens and from an interdisciplinary lens the contributions of dairy farming to the Sustainable Development Goals
Audience: Undergraduate

7. Evaluate the sustainability of subsistence, market-oriented, and industrial-scale farming systems
Audience: Undergraduate

AN SCI/FOOD SCI 515 — COMMERCIAL MEAT PROCESSING
2 credits.

Principles and procedures in the commercial manufacture of processed meat products; sausage manufacturing, curing, smoking, freezing and packaging.
Requisites: AN SCI/FOOD SCI 305, FOOD SCI 410, or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Summarize the various chemical and physical properties of meat and non-meat ingredients used to manufacture processed meats
Audience: Both Grad & Undergrad

2. Formulate various processed meats in compliance with governmental regulations
Audience: Both Grad & Undergrad

3. Identify basic meat processing principles
Audience: Both Grad & Undergrad

4. Demonstrate the ability to determine if a thermal processing procedure will produce a safe product
Audience: Graduate

5. Recognize how various types of meat processing equipment operate
Audience: Both Grad & Undergrad

6. Summarize proper cleaning and sanitation procedures
Audience: Both Grad & Undergrad

AN SCI/F&W ECOL/ZOOLOGY 520 — ORNITHOLOGY
3 credits.

Introduction to bird biology, ecology, and behavior. Topics include the evolutionary origin of birds and flight, anatomy and physiology, functional morphology, migration, communication, reproductive strategies, ecological adaptations and roles, and biogeographical patterns.
Requisites: ZOOLOGY/BIOLOGY 101 and 102, ZOOLOGY/BIOLOGY/BOTANY 152, (BIOCORE 381 and 382), or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

AN SCI/F&W ECOL/ZOOLOGY 521 — BIRDS OF SOUTHERN WISCONSIN
3 credits.

Outdoor and indoor labs/lectures emphasizing identification of southern Wisconsin birds by sight and vocalization. Two required Saturday field trips in Southern Wisconsin.
Requisites: ZOOLOGY/BIOLOGY 101 and 102, ZOOLOGY/BIOLOGY/BOTANY 152, (BIOCORE 381 and 382), or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

AN SCI 610 — QUANTITATIVE GENETICS
3 credits.

An advanced approach with emphasis on statistical foundations. Classical theory with extensions to maternal and paternal effects. Selection theory is considered in depth.
Requisites: Graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. demonstrate an understanding regarding the various components contributing to variation of phenotypic traits
Audience: Graduate

2. estimate basic genetic parameters of phenotypic traits using family data
Audience: Graduate

3. compare different selection strategies in terms of expect genetic change
Audience: Graduate

4. perform gene mapping using molecular marker data
Audience: Graduate

5. examine and critically evaluate technical literature related to quantitative genetics
Audience: Graduate

6. assess advantages and disadvantages of indirect genetic selection
Audience: Graduate

7. perform mixed model analysis to infer variance components and to compute estimated breeding values
Audience: Graduate

AN SCI/NUTR SCI 626 – EXPERIMENTAL DIET DESIGN
1 credit.

Discuss nutrient requirements, composition of ingredients used to meet requirements and the mathematical steps involved in diet formulation with emphasis on research animals and human subjects.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Develop an understanding of nutrient requirements, ingredients used to meet requirements, and the mathematical steps involved in diet formulation, with emphasis on research animals.
Audience: Both Grad & Undergrad

2. Develop skills required to formulate and prepare research diets
Audience: Both Grad & Undergrad

3. Develop an appreciation of nutrient requirements and the nutrient content of foods in development of healthy human diets.
Audience: Graduate

AN SCI 681 – SENIOR HONOR THESIS
2-4 credits.

Individual study for majors completing theses for Honors degrees as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop objectives and formulate hypothesis into experimental methods
Audience: Undergraduate

2. Participate in a supportive community of academically engaged peers
Audience: Undergraduate

3. Develop a research proposal and implement research project under supervision of a honors faculty mentor
Audience: Undergraduate

4. Demonstrate intellectual curiosity through engagement in challenging academic experiences
Audience: Undergraduate

AN SCI 682 – SENIOR HONORS THESIS
2-4 credits.

Second semester of individual study for majors completing theses for Honors degrees as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024
Learning Outcomes: 1. Demonstrate advanced content knowledge as reflected in an honors thesis, publication, performance, or scholarly work
Audience: Undergraduate

2. Articulate the value of the honors experience to peers and to a broader community
Audience: Undergraduate

AN SCI 691 – THESIS
2 credits.

Individual study for majors completing theses as arranged with a faculty member.
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Fall 2022
Learning Outcomes: 1. Develop questions to address important gaps in the scientific literature of your topic of interest
Audience: Undergraduate

2. Analyze and select optimal research approaches to address scientific questions
Audience: Undergraduate

3. Develop objectives and formulate hypothesis into experimental methods
Audience: Undergraduate

4. Implement research project under supervision of thesis mentor
Audience: Undergraduate

AN SCI 692 – THESIS
2 credits.

Second semester of individual study for majors completing theses as arranged with a faculty member.
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Implement research project under supervision of thesis mentor
Audience: Undergraduate

2. Understand outcomes of statistical analysis or research data
Audience: Undergraduate

3. Report on scientific honors research through divers means of communication
Audience: Undergraduate

4. Demonstrate excellent reading, writing, communication, and research skills
Audience: Undergraduate

AN SCI 699 – SPECIAL PROBLEMS
1-3 credits.

Individual advanced work in an area of Animal Sciences under the direct guidance of a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Integrate and apply knowledge to understand issues associated with in Animal industries or associated with animal scientific research
Audience: Undergraduate

2. Report findings through divers means of communication
Audience: Undergraduate

3. Develop and illustrate specialize skills relevant to a focused body of work associated with a specific learning experience
Audience: Undergraduate

4. Summarize intellectual growth associate with independent study work
Audience: Undergraduate

AN SCI/FOOD SCI 710 – CHEMISTRY OF THE FOOD LIPIDS
2 credits.

Chemical constitution, structures, reactions, stereochemistry of fats, phospholipids, related compounds; methods of isolation, characterization; synthesis; relation of structure to physical properties.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Write a clear and concise research paper
Audience: Graduate

2. Improve oral communication by presenting major points of the research paper
Audience: Graduate

3. Utilize software to illustrate a protein containing a bound lipid at atomic resolution.
Audience: Graduate

4. Explain lipid functions in relation to varying environmental conditions and electron transfer reactions
Audience: Graduate

5. Develop a detailed understanding of lipid analysis, lipid synthesis as well as digestion and transport of dietary lipids in different vertebrates.
Audience: Graduate

6. Derive the likely volatiles to be generated during storage of any unsaturated fatty acid using the beta-scission of a linoleic acid hydro peroxide as a template
Audience: Graduate

7. Determine if a given reaction is thermodynamically favorable based on standard one-electron reduction potentials and concentrations of reactants (oxidized/reduced couples)
Audience: Graduate

AN SCI/FOOD SCI 711 – FOOD BIOCHEMISTRY
3 credits.

Explores methods for interrogating structure-function relationships, molecular profiles, and microstructure of foods. Provides hands-on experience using computational approaches to model protein-small molecule interactions, analysis of small molecules using high-resolution MS, and protein composition and morphology with fluorescence spectroscopy and microscopy. Knowledge of food chemistry or organic chemistry (such as FOOD SCI 410, CHEM 341, 343, or 345) required.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Critically evaluate recent literature in the field of food chemistry
Audience: Graduate

2. Illustrate the interactions between food molecules (lipids, protein, carbohydrates, bioactive) at atomic resolution using software.
Audience: Graduate

3. Analyze and differentiate the molecular composition of a food or ingredient using HPLC-MS/MS data; fluorescence spectroscopy; and microscopy
Audience: Graduate

4. Propose and analyze how reactions and physical changes affect food microstructure and composition
Audience: Graduate

AN SCI 799 – PRACTICUM IN ANIMAL SCIENCES TEACHING
1-3 credits.

Instructional orientation to teaching at the higher education level in the agricultural and life sciences, direct teaching experience under faculty supervision, experience in testing and evaluation of students, and the analysis of teaching performance.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. articulate learning goals of the practicum separately from the main educational goals of the course in which the practicum takes place;
Audience: Graduate

2. gain experience in creating, revising, critiquing course syllabi, that is, get firsthand experience in developing course requirements and policies
Audience: Graduate

3. develop a strategy process to align course materials and course assignments with course objectives.
Audience: Graduate

4. practice teaching under distinct instructional modalities; lecture vs discussion vs labs; synchronous vs asynchronous remote instruction
Audience: Graduate

5. prepare and implement lesson plans of a class period, a week of instruction, or a module of the class
Audience: Graduate

6. acquire classroom management skills including how to deliver content, lead a discussion, handle questions and answers
Audience: Graduate

7. develop both formative and summative evaluation instruments to gain feedback on how to assess and improve the teaching and learning process
Audience: Graduate

AN SCI/DY SCI 824 – RUMINANT NUTRITIONAL PHYSIOLOGY I
4 credits.

Focuses on rumen microbiology, metabolite modeling, as well as protein and VFA nutrition and metabolism.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Assess source, digestion, absorption, utilization, and metabolism of nutrients in ruminants
Audience: Graduate

2. Integrate concepts of carbon and nitrogen tracing and flux through ruminant body systems
Audience: Graduate

3. Develop a command of modeling nutrient flux through tissues and be able to apply and extrapolate concepts to nutrient utilization and tracing methodology
Audience: Graduate

4. Clearly communicate the conceptual basis, assumptions, and limitations of techniques and methodology necessary to quantify digestive and metabolic processes
Audience: Graduate

5. Evaluate nutritional recommendations and current topics in ruminant nutrition
Audience: Graduate

AN SCI/DY SCI 825 – RUMINANT NUTRITIONAL PHYSIOLOGY II
4 credits.

Focuses on calf and heifer nutrition, regulation of dry matter intake, plant and forage chemistry, vitamins, lipids, and starch.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Assess source, digestion, absorption, utilization, and metabolism of nutrients in ruminants
Audience: Graduate

2. Integrate concepts of carbon and nitrogen tracing and flux through ruminant body systems
Audience: Graduate

3. Develop a command of modeling nutrient flux through tissues and be able to apply and extrapolate concepts to nutrient utilization and tracing methodology
Audience: Graduate

4. Clearly communicate the conceptual basis, assumptions, and limitations of techniques and methodology necessary to quantify digestive and metabolic processes
Audience: Graduate

5. Evaluate nutritional recommendations and current topics in ruminant nutrition
Audience: Graduate

AN SCI/GENETICS/POP HLTH 849 – GENOMIC EPIDEMIOLOGY
2 credits.

An introduction to genomic epidemiology, including a general overview of genetics and Mendelian and complex inheritance, as well as various elements of study design, such as participant ascertainment; phenotype definition; biologic sample selection; genotyping, sequencing, and quality control; measurement of covariates; and choice of analytic methods. Briefly covers original study designs; focuses on current study designs.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Evaluate and discuss genetic/genomic epidemiological literature.
Audience: Graduate

2. Design simple genetic/genomic epidemiological studies.
Audience: Graduate

3. Identify and apply appropriate tests of association between genetic variants and both qualitative and quantitative outcomes using either unrelated individuals or families.
Audience: Graduate

4. Summarize and interpret the results of genetic/genomic tests of association.
Audience: Graduate

AN SCI 865 – DESIGN AND ANALYSIS OF BIOLOGICAL STUDIES
4 credits.

Experimental design and proper data analysis are critical processes for scientific research. Planning and performing research studies have statistical implications that influence how results are interpreted. Learn the fundamentals of generalized linear models, experimental design, and data analysis using common examples from biological studies.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Use regression models properly
Audience: Graduate

2. Select the most appropriate experimental design for a particular experiment
Audience: Graduate

3. Select the most appropriate method of data analysis
Audience: Graduate

4. Determine the most appropriate model that fits the data
Audience: Graduate

5. Interpret the results of the data analysis
Audience: Graduate

6. Use the statistical software R to analyze data
Audience: Graduate

AN SCI 875 – SPECIAL TOPICS
1-4 credits.

Specialized subject matter of current interest to graduate students.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze and critique research results, interpretations and proposals.
Audience: Graduate

2. Demonstrate critical thinking and knowledge about the significance of current research in the fields of animal and dairy science by presenting and/or critiquing scientific presentations
Audience: Graduate

AN SCI/DY SCI 931 – SEMINAR IN ANIMAL NUTRITION
1 credit.

Discussion of literature that has a bearing on animal nutrition. Students are to survey the literature and present a seminar.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

AN SCI/DY SCI/GENETICS 951 – SEMINAR IN ANIMAL BREEDING
0-1 credits.

Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020

AN SCI/OBS&GYN/ZOOLOGY 954 – SEMINAR IN ENDOCRINOLOGY-REPRODUCTIVE PHYSIOLOGY
0-1 credits.

Promotes scientific and professional development. Presenters develop and deliver research presentations to a scientific audience, field questions, and receive critiques about their presentation style and scientific approach. Additional presentations include professional development, career advancement opportunities, and topics of interest to the endocrinology and reproduction community at large.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge of cutting-edge research in and related to one's research area through the development and delivery of research presentations
Audience: Graduate

2. Communicate complex ideas in research presentations and questions in a clear and understandable manner
Audience: Graduate

3. Evaluate presentations and providing effective feedback
Audience: Graduate

AN SCI 990 – RESEARCH
1-12 credits.

Independent research in preparation of a graduate thesis under supervision of a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ANTHROPOLOGY (ANTHRO)

ANTHRO 100 – GENERAL ANTHROPOLOGY
3 credits.

General understanding of humans in relation to cultures, evolutionary development and racial diversity, capacities for society, and the development of the world's major cultures.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ANTHRO 102 – ARCHAEOLOGY AND THE PREHISTORIC WORLD
3 credits.

Introduction to the ancient world from origins of human culture to the beginnings of written history as revealed by archaeological research at great sites and ruins around the globe. Archaeological analyses of important sites as case studies to illustrate concepts and techniques used by archaeologists in their efforts to understand the diversity of the human past.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ANTHRO 104 – CULTURAL ANTHROPOLOGY AND HUMAN DIVERSITY
3 credits.

Introduction to cultural anthropology. Comparative cross-cultural consideration of social organization, economics, politics, language, religion, ecology, gender, and cultural change. Includes a primary focus on U.S. ethnic and racial minorities.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ANTHRO 105 – PRINCIPLES OF BIOLOGICAL ANTHROPOLOGY
3 credits.

Genetic basis of morphological, physiological and behavioral variations within and between human populations, and their origins and evolution.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ANTHRO 120 – FRESHMAN/SOPHOMORE SEMINAR IN ANTHROPOLOGY
3 credits.

Intensive study of a problem in human variability through study of nontechnical materials. Emphasis on acquiring anthropological concepts through discussion and direct experience of ethnographic, archaeological, or human physical evidence.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

ANTHRO/FOLKLORE/INTL ST/LINGUIS 211 – GLOBAL LANGUAGE ISSUES
3 credits.

Focuses on language and its culture, example topics include: extinction and revival, language and nationhood, how widely and deeply languages differ, language and worldview, writing systems and literacy, language discrimination and inequality.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Identify ways that geographic, social, and political events, movements, and trends shape the sociolinguistic context of the world's languages
Audience: Undergraduate

2. Demonstrate an understanding of subfields of global sociolinguistic inquiry, including language contact, variation, change, and death; language revitalization; the intersections of language, race, and ethnicity; the intersections of language and gender, and sexuality
Audience: Undergraduate

3. Critically evaluate specific examples of language use in a variety of linguistic and cultural contexts
Audience: Undergraduate

4. Design and conduct a sociocultural linguistic research project, including: identify a research question; collect appropriate resources and data; conduct data analysis and interpretation; draw conclusions, and summarize results
Audience: Undergraduate

ANTHRO 212 – PRINCIPLES OF ARCHAEOLOGY
3 credits.

Introduction to the methods, historical development, and scientific principles of archaeology. Discover how archaeologists generate and interpret information about the human past. Introduces scientific inquiry and provides a foundation for pursuing advanced archaeological courses and field research.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ANTHRO/MED HIST 231 – INTRODUCTION TO SOCIAL MEDICINE
3 credits.

Provides analytical tools for the critical examination of the social, cultural, political and economic determinants of health conditions and medical practice. Pays special attention to how these factors determine how patients and providers experience and ideate disease and treatment, and how they respond to specific health care policies. Emphasizes the important role that conditions of structural violence and inequality play as determinants of health conditions in a globalized world.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2020
Learning Outcomes: 1. Identify and analyze within their social, cultural and economic contexts key historical issues, and their significance, in the history of healing practices and public health.
Audience: Undergraduate

2. Develop an understanding of the mutually shaping interactions between perceptions of health, illness and medical practices and culture and society.
Audience: Undergraduate

3. Analyze the role of social factors, race, gender, ethnicity, class, among others, in shaping cultural realities related to body normativity, health, medical practice, public health and medical education.
Audience: Undergraduate

4. Identify the role that patients, healthcare providers, institutions and the state play in modeling medical practice, ideas about the body, public health policies, and medical education.
Audience: Undergraduate

5. Discern the impact of programs of global health as they intersect with international politics in the shaping of ideas about human rights, race, medical hierarchies and public health policies.
Audience: Undergraduate

ANTHRO 237 – CUT 'N' MIX: MUSIC, RACE, AND CULTURE IN THE CARIBBEAN
3 credits.

Explores the history and culture of the Caribbean by focusing on its musics, both religious and secular. Special attention will be directed to the impact of colonialism on the emergence of racially stratified societies. Music will also enable us to investigate the concepts of diaspora and creolization. Other topics include: gender and sexuality, the role of technology in the production and distribution of music, music and politics, the impact of tourism, and the global impact of Caribbean musics.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

ANTHRO/AFROAMER/C&E SOC/GEOG/HISTORY/LACIS/ POLI SCI/SOC/SPANISH 260 – LATIN AMERICA: AN INTRODUCTION
3-4 credits.

Latin American culture and society from an interdisciplinary perspective; historical developments from pre-Columbian times to the present; political movements; economic problems; social change; ecology in tropical Latin America; legal systems; literature and the arts; cultural contrasts involving the US and Latin America; land reform; labor movements; capitalism, socialism, imperialism; mass media.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Analyze Latin American culture and society from an interdisciplinary perspective.
Audience: Undergraduate

2. Examine historical developments from pre-Columbian times to the present.
Audience: Undergraduate

3. Identify political movements, economic problems, social change, and ecology in Latin America.
Audience: Undergraduate

ANTHRO/ART HIST/DS/HISTORY/LAND ARC 264 – DIMENSIONS OF MATERIAL CULTURE
4 credits.

This course introduces students to the interdisciplinary field of material culture studies. It is intended for students interested in any professional endeavor related to material culture, including careers in museums, galleries, historical societies, historic preservation organizations, and academic institutions. During the semester, students have varied opportunities to engage with and contemplate the material world to which people give meaning and which, in turn, influences their lives. Sessions combine in some way the following: presentations from faculty members and professionals who lecture on a phase of material culture related to his/her own scholarship or other professional work; discussion of foundational readings in the field; visits to collections and sites on campus and around Madison; discussion of readings assigned by visiting presenters or the professors; and exams and short papers that engage material culture topics.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ANTHRO 265 – INTRODUCTION TO CULTURE AND HEALTH
3 credits.

Uses the conceptual tools of anthropology to explore how culture, biology, and power together shape the ways people are born, experience good and poor health, seek therapeutic aid, and die. Draws on material from around the world, with a particular focus on the experience of marginalized minority people in the United States.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ANTHRO/AFRICAN/AFROAMER/GEOG/HISTORY/POLI SCI/SOC 277 – AFRICA: AN INTRODUCTORY SURVEY
4 credits.

African society and culture, polity and economy in multidisciplinary perspectives from prehistory and ancient kingdoms through the colonial period to contemporary developments, including modern nationalism, economic development and changing social structure.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze African society and culture from a multidisciplinary perspective.
Audience: Undergraduate

2. Discuss polity and economy from prehistory and ancient kingdoms through the colonial period to contemporary developments.
Audience: Undergraduate

3. Study contemporary nationalism, economic development and changing social structure.
Audience: Undergraduate

ANTHRO 300 – CULTURAL ANTHROPOLOGY: THEORY AND ETHNOGRAPHY
3 credits.

Survey of cultural anthropology with emphasis on ethnographic description, methodology, and contemporary theories. Focuses on humanistic and social scientific approaches to human sociocultural diversity.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ANTHRO/LINGUIS 301 – INTRODUCTION TO LINGUISTICS: DESCRIPTIVE AND THEORETICAL
3 credits.

Elementary theory and practical work in phonetics, phonology, morphology, and syntax, with attention to formal grammar.
Requisites: Graduate/professional standing. Not open to students with credit for LINGUIS 101.
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Read and write phonetic transcriptions of speech using the International Phonetic Alphabet
Audience: Undergraduate

2. Describe the mechanisms at work during the production of human speech sounds
Audience: Undergraduate

3. List from memory the distinctive features of the sounds of English, and be familiar with the phonetic features of many non-English sounds
Audience: Undergraduate

4. Use appropriate tests to determine the morphological and syntactic structure of English words and sentences.
Audience: Undergraduate

5. Apply knowledge of phonetics, phonology, morphology, and syntax in analyzing linguistic datasets from a wide variety of unfamiliar languages
Audience: Undergraduate

6. Use basic linguistic terms and concepts to read and summarize academic research in linguistics
Audience: Undergraduate

ANTHRO 302 – HOMINOID EVOLUTION
3 credits.

The evolution of the Hominoidea is reconstructed from direct and indirect evidence. Cladistic and phylogenetic analyses are used to study the relationships among species. Interpretations of the fossil record are presented from a historical perspective, focusing on the hominoid-hominid transition.
Requisites: ANTHRO 105 or graduate/professional standing
Course Designation: Breadth - Either Biological Science or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019

ANTHRO 303 – HUMAN SKELETAL ANATOMY
4 credits.

A comprehensive examination of skeletal anatomy at both the gross and histologic levels. Utilizes laboratory methods for the archaeological identification of skeletal fragments; criteria for the estimation of age, sex, stature, and other aspects of forensic anthropology.
Requisites: ANTHRO 105 or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ANTHRO 304 – HEREDITY, ENVIRONMENT AND HUMAN POPULATIONS
3 credits.

Cultural and ecological factors influencing the composition and structure of human populations; variation and distribution of genes within and between populations; history and evolution of human populations as evidenced by genomes.
Requisites: ANTHRO 105, ZOOLOGY/BIOLOGY/BOTANY 152, ZOOLOGY/BIOLOGY 101, F&W ECOL/ENVIR ST/ZOOLOGY 360, BIOCORE 382, ZOOLOGY/BOTANY/ENVIR ST 260, ZOOLOGY/ANTHRO/BOTANY 410, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ANTHRO/ASIAN 305 – ANTHROPOLOGY OF SOUTH ASIA
3 credits.

South Asia has long been a region of significance in anthropology, offering rich and varied contexts for exploring questions about social organization, cultural practices, and religious diversity. Engage with evolving anthropological perspectives on the region, drawing from foundational theorizations of caste, kinship, and the state while attending to contemporary ethnographic insights on care, poverty, health, medicine, and gender. Address questions like: How does the ethnographic method reveal the complexities of social worlds and cultural life in South Asia? What insights and limitations does this approach offer? How might it be enriched with other analytical tools? Engage critically with anthropological theory and recent ethnographies to explore the structures, relationships, and beliefs that shape everyday experiences and broader social patterns in India and the region in local and global frameworks.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Discuss key anthropological frameworks used to study South Asia, including theories of caste, kinship, the state, and contemporary issues related to care, poverty, gender, and medicine.
Audience: Undergraduate

2. Evaluate the ways in which anthropology has shaped, and been shaped by, colonial and postcolonial knowledge production, particularly in relation to South Asia.
Audience: Undergraduate

3. Engage with scholarly and popular narratives about South Asia, synthesizing diverse perspectives to challenge simplistic or essentialist representations of the region.
Audience: Undergraduate

4. Apply anthropological concepts to case studies and contemporary debates using effective written and oral communication skills.
Audience: Graduate

5. Critically analyze ethnographic methods and their role in revealing the complexities of social life in South Asia, while recognizing their limitations and potential for theoretical innovation.
Audience: Graduate

6. Analyze primary and secondary sources and produce a research-based paper suitable for publication or presentation at an academic conference.
Audience: Graduate

ANTHRO 310 – TOPICS IN ARCHAEOLOGY
3 credits.

Selected areas, periods or problems in archaeology.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ANTHRO 311 – ARCHAEOLOGICAL SCIENCE
3 credits.

Critical study of the field of Archaeological Science using laboratory based approaches in archaeometry, archaeological chemistry, and materials analyses.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Describe the breadth of fields employed in archaeological science
Audience: Both Grad & Undergrad

2. Recognize some of the critical hands-on laboratory methods in archaeological science
Audience: Both Grad & Undergrad

3. Explain how archaeologists build empirical inferences about past human societies and use different archaeological science methods to guide their interpretations
Audience: Both Grad & Undergrad

4. Critique archeological science methods applied to existing research and identify methods for improved interpretations.
Audience: Graduate

5. Carry out original archaeological research and/or a critical review adopting archaeological science techniques to produce quality work that is publishable or of a quality to be submitted to extramural research grant agencies (graduate)
Audience: Graduate

6. Formulate research ideas and designs incorporating archaeological science technique(s).
Audience: Graduate

7. Communicate methodological procedures in archaeological science.
Audience: Graduate

ANTHRO/AMER IND 314 – INDIANS OF NORTH AMERICA
3 credits.

Description and analysis of native cultures, and the role of environmental and historical factors in North America.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2020

ANTHRO 321 – THE EMERGENCE OF HUMAN CULTURE
3 credits.

Worldwide archaeological evidence for the development of human culture and behavior from the earliest appearance of human groups to the threshold of the agricultural revolution.
Requisites: ANTHRO 102, 212, 322, or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ANTHRO 322 – THE ORIGINS OF CIVILIZATION
3 credits.

Global archaeological survey of the origins of pristine civilizations beginning with the development of food production and ending with the emergence of the world's first civilizations. Focus of attention: Near East, Egypt, the Indus Valley, North China, Mesoamerica, and Peru.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ANTHRO 330 – TOPICS IN ETHNOLOGY
3-4 credits.

Content varies. Some representative topics: peoples and cultures of the European part of the USSR, peoples and cultures of Soviet Asia, anthropology of space and time, anthropology and history, pastoralists and pastoral Nomads, American Indian folklore, etc.
Requisites: ANTHRO 100, 104, 300 or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ANTHRO 333 – PREHISTORY OF AFRICA
3 credits.

A survey of the archaeological record of human development in Africa, beginning over two million years ago and continuing through the transition to farming and metallurgy; greatest emphasis on the stone age portion of prehistory.
Requisites: ANTHRO 102, 212, 321, or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019

ANTHRO 337 – LITHICS AND ARCHAEOLOGY
3 credits.

Explores the ways in which humans have used of rocks and associated minerals, i.e. lithics and lapidary technology, to create utilitarian as well as ornamental objects in the past and the present. Explores gender roles in lithic technology and how specific technologies were used to create utilitarian as well as ornamental and symbolic objects. Gain a new perspective of the critical role of lithic technologies in long term human adaptive strategies as well as in ornament and symbolic art.
Requisites: ANTHRO 102, 212, 321, 322, or graduate/professional standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021

ANTHRO 339 – ARCHAEOLOGY OF WARFARE AND HUMAN NATURE
3 credits.

Introduction to the evidence, debates, and theories related to violence and warfare in the human past, and how related behaviors are linked to the evolution of our species and modern manifestations of war. Highlights archaeological methods that recognize past warfare practices. Using case studies from the Pleistocene to the present, explores variations of warfare from all over the world. Topics considered include 1) the highly variable nature of violence and warfare in different cultural settings; 2) the antiquity of warfare; 3) how violence has shaped human societies. Historical and cross-cultural ethnographic research will be juxtaposed against archaeological cases to provide contextualized and data-rich examinations. Learn to critically evaluate arguments, claims, and interpretations made about war, peace, and human nature.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Become familiar with available evidence and theories related to social violence, warfare, and associated practices in the human past, and how these are related to both the evolution of our species and modern manifestations of war
Audience: Both Grad & Undergrad

2. Through specialized anthropological research, gain understanding of different lines of evidence used to identify and interpret diverse practices of violence and warfare in the past
Audience: Both Grad & Undergrad

3. Obtain comparative global knowledge of human diversity, material culture, culture and history, and the evolution of people's relationships with the physical, cultural, and natural world
Audience: Both Grad & Undergrad

4. Become equipped to critically evaluate various arguments, theories, and speculative claims about humanity and war, distinguishing between speculative and empirical narratives about the past
Audience: Both Grad & Undergrad

5. Gain understanding of how to synthesize information relevant to archaeology across multiple disciplines
Audience: Both Grad & Undergrad

6. Gain experience in collaborative teamwork and public presentation
Audience: Both Grad & Undergrad

7. Acquire specialized archaeological and anthropological knowledge, becoming familiar with major research cases and authors from different world regions
Audience: Graduate

8. Improve skills in evaluating research theories, arguments, and the limits, potentials, and challenges in knowledge production
Audience: Graduate

9. Develop research agendas with testable hypotheses for specific research problems
Audience: Graduate

10. Gain experience presenting research and communicating complex ideas to a diverse audience

ANTHRO 340 – MUSIC, RACE, AND CULTURE IN BRAZIL
3 credits.

Focuses on music's significant role in the formation and maintenance of Brazilian national identity. Learn how a variety of Brazilian individuals, groups, and institutions have contributed to popular and scholarly debates about Brazilian culture, identity, and forms of belonging. These discussions will be anchored to important themes in Brazil's recent history, present, and imagined future, such as cultural cannibalism (antropofagia), and racial hybridity (mestiçagem). Gain insight into how Brazilian artists and their audiences have debated race and racism through expressive means by analyzing a variety of anthropological and ethnomusicological texts about Brazilian popular music, literature, and its most famous annual ritual, Carnival.
Requisites: ANTHRO 100, 104, or sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ANTHRO/RELIG ST 343 – ANTHROPOLOGY OF RELIGION
3-4 credits.

Anthropological approaches. Illustrated by critical considerations of outstanding contributions. Selected religious systems; areal and topical comparative studies; religion as an ethnographic problem.
Requisites: ANTHRO 104 or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021

ANTHRO 345 – FAMILY, KIN AND COMMUNITY IN ANTHROPOLOGICAL PERSPECTIVE
3 credits.

Comparison of the form and function of such social institutions as marriage and the family, age and sex groups, secret societies, task groups, and class in cross-cultural perspective.
Requisites: ANTHRO 104, 300, or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021

ANTHRO 348 – ECONOMIC ANTHROPOLOGY
3-4 credits.

Production, distribution and consumption in a broad range of societies; land tenure and personal property concepts, prestige systems, and incentives to labor.
Requisites: ANTHRO 104, 300, or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2020

ANTHRO 350 – POLITICAL ANTHROPOLOGY
3-4 credits.

Comparison and analysis of political structures, behavior and processes among selected peoples of the world; special emphasis on leadership, authority, power, and the origins of the states; the relevance of primitive political systems to anthropological theory and to the comparative study of politics.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

ANTHRO 352 – ANCIENT TECHNOLOGY AND INVENTION
3 credits.

The origins and development of early technologies. Impact of key prehistoric and pre-industrial inventions on the course of human evolution.
Requisites: ANTHRO 102, 212, 321, or graduate/professional standing
Course Designation: Gen Ed - Communication Part B
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

ANTHRO/AMER IND 354 – ARCHAEOLOGY OF WISCONSIN
3 credits.

Introduction to the archaeological evidence for the diverse Native American cultures of Wisconsin over the past 12,000 years.
Requisites: Junior standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Communicate fundamental knowledge of the Native American ancient past (and aspects of the present) in Wisconsin.
Audience: Undergraduate

2. Understand and appreciate the complexities of Wisconsin's deep history, the important and often invisible contributions of Native culture and peoples to our lives today, and the value of heritage preservation.
Audience: Undergraduate

3. Articulate an informed and individualized perspective on the full span of Native American history in Wisconsin and archaeology that might carry over into your professional life or influence your attitude toward historic preservation.
Audience: Undergraduate

4. More effectively participate in our multicultural society.
Audience: Undergraduate

5. Express a heightened awareness of history's impact on the present.
Audience: Undergraduate

6. Refine your critical thinking skills and ability to recognize and question myths, stereotypes, and assumptions about ancient Native Americans.
Audience: Undergraduate

7. Summarize the academic literature assigned for this course.
Audience: Graduate

ANTHRO/AMER IND 355 – ARCHAEOLOGY OF EASTERN NORTH AMERICA
3 credits.

Learn about the great diversity of Native American cultures in eastern North America, with an emphasis on those of the Midwest and Southeast. More than twelve thousand years of accommodations to diverse natural and social environments are covered, starting with archaeological evidence for and oral traditions describing the initial peopling of the Americas and ending with the European invasion and interactions with the Native Americans of the Eastern Woodlands.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Demonstrate a grasp of fundamental knowledge about the Native American ancient past (and aspects of the present) in eastern North America with a focus on the Southeast and Midwest, including the complexities of the deep history of Native Americans, the important and often invisible contributions of Native culture and peoples to our lives today, and the value of heritage preservation
Audience: Both Grad & Undergrad

2. Explain how archaeologists build empirical inferences about past human societies and use different theoretical perspectives to guide their interpretations
Audience: Both Grad & Undergrad

3. Build an informed and individualized perspective on the full span of Native American history in eastern North America and archaeology that might carry over into your professional life or influence your attitude toward historic preservation
Audience: Both Grad & Undergrad

4. Compare and contrast multiple perspectives on the past and present with reference to evidence
Audience: Undergraduate

5. Analyze, evaluate, and synthesize complex information learned in the class and through independent research
Audience: Graduate

6. Improve the effectiveness with which you participate in our multicultural society
Audience: Undergraduate

7. Recognize history's impact on the present
Audience: Undergraduate

8. Assess the myths, stereotypes, and assumptions about ancient and present-day Native Americans
Audience: Both Grad & Undergrad

ANTHRO 357 – INTRODUCTION TO THE ANTHROPOLOGY OF JAPAN
3-4 credits.

Japanese culture from anthropological perspectives. Emphasis on the order of meaning which serves both as model for and model of the day-to-day behavior and thought processes of the Japanese.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ANTHRO/LACIS 361 – ELEMENTARY QUECHUA
4 credits.

Phonology and morphology; concentration on the acquisition of conversational skills; reading of texts of graded difficulty.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

ANTHRO/LACIS 362 – ELEMENTARY QUECHUA
4 credits.

Continued introduction to phonology and morphology; concentration on the acquisition of conversational skills; reading of texts of graded difficulty.
Requisites: LACIS/ANTHRO 361
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ANTHRO/LACIS 363 – INTERMEDIATE QUECHUA
4 credits.

Advanced morphology and syntax; advanced conversation and composition; cultural background of Quechua speaking peoples through reading of myths, legends and folktales.
Requisites: LACIS/ANTHRO 362
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023

ANTHRO/LACIS 364 – ADVANCED QUECHUA
4 credits.

Continuation of advanced conversation and composition; cultural background of Quechua-speaking peoples through reading of myths, legends, folktales; problems in dialectology.
Requisites: LACIS/ANTHRO 363
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

ANTHRO 365 – MEDICAL ANTHROPOLOGY
3 credits.

The ecology of health and disease in human cultures; health-related social systems and behavior cross-culturally; practical implications of medical anthropology for improving the health of specific populations.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ANTHRO 370 – FIELD COURSE IN ARCHAEOLOGY
3-6 credits.

An introduction to the techniques of field archaeology, including site survey, mapping, and excavation by participation in an actual, off-campus archaeological field project. Also instruction in the description and analysis of artifacts. Includes full-time, off-campus, on-site excavation work, which typically takes place outside of Madison. Excavation sites vary.
Requisites: ANTHRO 102, 212, 321, 322, or graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2024

ANTHRO/LACIS 376 – FIRST SEMESTER YUCATEC MAYA
4 credits.

Introduction to Yucatec Maya language. Focus on acquiring vocabulary and grammar for basic conversational proficiency. Taught through in-class oral and aural exercises, language tapes, and primary texts. Learn about Maya culture, history, folklore, and language politics.
Requisites: None
Course Designation: Breadth - Humanities
Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

ANTHRO/LACIS 377 — SECOND SEMESTER YUCATEC MAYA
4 credits.

Continued introduction to Yucatec Maya language. Focus on acquiring vocabulary and grammar for basic conversational proficiency. Taught through in-class oral and aural exercises, language tapes, and primary texts. Learn about Maya culture, history, folklore, and language politics.
Requisites: LACIS/ANTHRO 376
Course Designation: Breadth - Humanities
Frgn Lang - 2nd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ANTHRO 391 — BONES FOR THE ARCHAEOLOGIST
3 credits.

An introduction to the principles and techniques in the identification and interpretation of animal bones. Includes analysis of an archaeological bone assemblage.
Requisites: ANTHRO 102, 212, 321, 322, or graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ANTHRO 405 — INTRODUCTION TO MUSEUM STUDIES IN ANTHROPOLOGY
3 credits.

Provides a comprehensive understanding of the policies, procedures, and ethics pertaining to the development, management, and exhibition of anthropology collections. This includes an overview of the establishment, history, and laws governing anthropology collections and collections management methods used specifically for archaeological artifacts, ethnographic objects, and bioanthropological specimens. Ideal for those interested in natural history museums, museum studies, or the museum profession.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Accelerated Honors (!)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe legal, ethical, and social issues that have guided the establishment and evolution of anthropology collections in the United States.
Audience: Undergraduate

2. Explore anthropological research and ethical policies and practices by demonstrating globally-accepted methods that form an effective collections management program.
Audience: Undergraduate

3. Speak and write critically about curation policies and collections care, including drawing from personal experiences outside of the classroom setting.
Audience: Undergraduate

4. Operationalize the knowledge and skills taught in this course in a real-life setting through completion of a community-based learning project.
Audience: Undergraduate

ANTHRO/BOTANY/ZOOLOGY 410 — EVOLUTIONARY BIOLOGY
3 credits.

Evolutionary biology, emphasizing how modern scientists study evolution. Topics include: nature and mechanisms of microevolution, macroevolution, adaptation, speciation; systematics and taxonomy; quantitative genetics and measurement of natural selection; phylogenetic analyses of behavior, physiology, morphology, biochemistry; current controversies in evolution.
Requisites: ZOOLOGY/BIOLOGY 101, BIOLOGY/BOTANY 130, ZOOLOGY/BIOLOGY/BOTANY 152, BIOCORE 381, (ANTHRO 105 and satisfied QR-A requirement), or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ANTHRO 411 – THE EVOLUTION OF THE GENUS, HOMO
3 credits.

Human evolution beginning with the Pliocene appearance of our genus, Homo, and ending with the worldwide spread of modern Homo sapiens throughout the world.
Requisites: ANTHRO 105, 302, or graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023

ANTHRO 415 – THE ANTHROPOLOGICAL STUDY OF CHILDREN & YOUTH
3 credits.

Uses the conceptual tools of cultural anthropology to explore the wide range of children's and youths' experiences outside of and beyond school.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2020

ANTHRO 420 – INTRODUCTION TO PRIMATOLOGICAL RESEARCH
3 credits.

Supervised research on topics selected by students. Independently design a research project, synthesize methods and empirical results, and report one's findings. Develop the skills necessary for independent research in Primatology.
Requisites: ANTHRO 100, 105, PSYCH 450, or graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2022

ANTHRO 424 – HISTORICAL ANTHROPOLOGY
3 credits.

An introduction to historical approaches in anthropology: topics covered include early theories, evolutionism, ethnohistory, culture change, ritual and symbolic transformation, indigenous/oral histories, conceptions of time and the analysis of texts and visual images.
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023

ANTHRO/LINGUIS 430 – LANGUAGE AND CULTURE
3-4 credits.

The relationship of language as a communication system to the culture transmitted by it. Principle problems in the interrelations of language and nonlinguistic human behavior.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022

ANTHRO/AMER IND/FOLKLORE/GEN&WS 437 – AMERICAN INDIAN WOMEN
3 credits.

Examines and interprets the roles of American Indian women in traditional societies, and in contemporary North America.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ANTHRO/GEN&WS 443 – ANTHROPOLOGY BY WOMEN
3 credits.

Contributions of women anthropologists to feminist and anthropological theories and research methods. Field research and gender. Current debates in women's studies and anthropology in light of recent research on women and gender in cross-cultural perspective.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ANTHRO 444 – PRIMATE NUTRITIONAL ECOLOGY
3 credits.

Comprehensive look at primate nutritional ecology. Topics include: nutrition in the context of animal foraging theory; anatomy and physiology of primate digestion; essential macronutrients, micronutrients, energy, and plant secondary compounds; field and laboratory methods used by primatologists to study primate nutrition; and how nutrition informs or intersects with primate reproduction, social behavior, disease and conservation. Discussion of the evolution of human nutrition and diet and how the study of nutrition in an evolutionary framework can inform the study of modern human health.
Requisites: ANTHRO 105, ZOOLOGY/BIOLOGY/BOTANY 152, ZOOLOGY/BIOLOGY 101, F&W ECOL/ENVIR ST/ZOOLOGY 360, BIOCORE 382, or ZOOLOGY/BOTANY/ENVIR ST 260, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Connect empirical data with theoretical models, and critically assess the theoretical frameworks and methods used in empirical studies of primate nutrition
Audience: Both Grad & Undergrad

2. Rely upon interdisciplinary research and methods, and discuss diverse and interdisciplinary research approaches used to study primate diet and nutrition
Audience: Both Grad & Undergrad

3. Define and describe essential macronutrients, micronutrients, and energy
Audience: Both Grad & Undergrad

4. Place nonhuman primate and human nutrition in an evolutionary context
Audience: Both Grad & Undergrad

5. Select, design and implement a project investigating a problem in or dimension of primate nutritional ecology that draws from multiple disciplines.
Audience: Graduate

6. Communicate about the results of research at a level suitable for interactions with professional researchers in nutritional ecology.
Audience: Graduate

ANTHRO 453 – STUDY ABROAD: TOPICS IN ARCHAEOLOGY
1-6 credits.

A course carried with a UW-Madison study abroad program which has no equivalent on this campus. Enrollment in a UW-Madison resident study abroad program
Requisites: None
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2001

ANTHRO 454 – STUDY ABROAD: TOPICS IN BIOLOGICAL ANTHROPOLOGY
1-6 credits.

A course carried with a UW-Madison study abroad program which has no equivalent on this campus. Enrollment in a UW-Madison resident study abroad program
Requisites: None
Course Designation: Breadth - Either Biological Science or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

ANTHRO 455 – STUDY ABROAD: TOPICS IN CULTURAL ANTHROPOLOGY
1-6 credits.

A course carried with a UW-Madison study abroad program which has no equivalent on this campus. Enrollment in a UW-Madison resident study abroad program
Requisites: None
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2001

ANTHRO 456 – SYMBOLIC ANTHROPOLOGY
3-4 credits.

The study of society through the analysis of symbolic systems. Myth, cosmology, ritual, political symbolism, the symbolic study of kinship, symbols and social change.
Requisites: ANTHRO 104 and junior standing, or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ANTHRO 458 – PRIMATE BEHAVIORAL ECOLOGY
3 credits.

Primate behavior examined from an evolutionary and ecological perspective, focusing on adaptations to the social and nonsocial environment. Topics include: nepotism, reciprocity, competition, cooperation, sex differences, the ecological role of primates in their communities, cognition, and conservation. Considers the major threats to primates today, and how behavioral adaptations and anthropogenic variables interact to affect the future survival of primates at local, regional, and global scales.
Requisites: ANTHRO 105, ZOOLOGY/BIOLOGY/BOTANY 152, ZOOLOGY/BIOLOGY 101, (BIOCORE 381 and 382), ZOOLOGY/BOTANY/ENVIR ST 260, ZOOLOGY/ENVIR ST/F&W ECOL 360, PSYCH 450, or graduate/professional standing
Course Designation: Breadth - Either Biological Science or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Demonstrate knowledge about primate behavior and ecology and the major threats to primate survival
Audience: Both Grad & Undergrad

2. Compare models of past and present diversity of primates as well as evolutionary and ecological models of primate behavioral and ecological adaptations, including primate cognition, life histories, and community ecology, and their conservation status
Audience: Both Grad & Undergrad

3. Critically evaluate theoretical predictions about primate behavioral and ecological adaptations using examples derived from empirical studies of primates
Audience: Both Grad & Undergrad

4. Apply informed perspectives about the potential and constraints on primates to adapt in a rapidly changing world
Audience: Both Grad & Undergrad

5. Demonstrate capacity to research and critically evaluate contemporary knowledge by producing a concise, synthetic written review of the importance of new empirical studies on a topic of choice
Audience: Graduate

6. Apply principles of primate adaptive flexibility to ethical methods of research in primate behavioral ecological, behavioral genetics, behavioral endoncrinology, microbiomes, and behavioral energetics
Audience: Both Grad & Undergrad

ANTHRO/AMER IND/BOTANY 474 – ETHNOBOTANY
3-4 credits.

Study of the interactions between human cultures and plants. Topics include: traditional resource management and agriculture; crop domestication, evolution, and conservation; archaeobotany; indigenous knowledge; folk taxonomy; plants in symbolism and religion; dietary patterns; phytochemistry; global movement of plants and peoples.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Biological Science or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

ANTHRO 477 – ANTHROPOLOGY, ENVIRONMENT, AND DEVELOPMENT
3 credits.

Identifies and examines cultural and environmental factors which should be taken into account in planning effective development. Case studies of development programs in less developed countries. Possible contributions of anthropologists and environmental scientists in planning, implementing, and evaluating development programs.
Requisites: ANTHRO 100, 104, or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021

ANTHRO 490 – UNDERGRADUATE SEMINAR
3 credits.

Discussion and preparation of reports on specific topics indicated by changing title of seminar.
Requisites: Junior standing and declared in the Anthropology undergraduate program or Archaeology undergraduate certificate
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ANTHRO 545 – PSYCHOLOGICAL ANTHROPOLOGY
3 credits.

Survey of psychologically oriented approaches in cultural anthropology: ethnopsychiatry, the ethnography of emotion, conceptions of the self, cognitive development, and culturally defined deviance and mental illness.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ANTHRO/ED POL 570 – ANTHROPOLOGY AND EDUCATION
3 credits.

An exploration of the foundational concepts and methods of educational anthropology. Examines anthropological inquiry on educational research with particular reference to cultural perspectives on education and educational systems, learning as cultural transmission, and application of anthropological knowledge to curriculum.
Requisites: Junior standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate an understanding of the social, cultural, and/or historical contexts of education policy.
Audience: Both Grad & Undergrad

2. Analyze education policy issues from diverse perspectives related to race, class, and/or gender, and other forms of social difference.
Audience: Both Grad & Undergrad

3. Write clearly and compellingly for diverse audiences about complex topics in educational policy.
Audience: Both Grad & Undergrad

4. Utilize social and cultural research theories and methodologies to articulate perspectives and viewpoints
Audience: Graduate

ANTHRO 603 – SEMINAR IN EVOLUTIONARY THEORY
3 credits.

Examination of theory relevant to the evolution of humans and nonhuman primates including morphological, behavioral, and genetic aspects.
Requisites: ANTHRO 105, ZOOLOGY/BIOLOGY/BOTANY 152, ZOOLOGY/BIOLOGY 101, F&W ECOL/ENVIR ST/ZOOLOGY 360, BIOCORE 382, ZOOLOGY/BOTANY/ENVIR ST 260, ZOOLOGY/ANTHRO/BOTANY 410, or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2021

ANTHRO 605 – SEMINAR-CURRENT PROBLEMS IN PALEOANTHROPOLOGY
3 credits.

Current research with attention to the evolutionary biology of humans and fossil human relatives.
Requisites: ANTHRO 105, ZOOLOGY/BIOLOGY/BOTANY 152, ZOOLOGY/BIOLOGY 101, F&W ECOL/ENVIR ST/ZOOLOGY 360, BIOCORE 382, ZOOLOGY/BOTANY/ENVIR ST 260, ZOOLOGY/ANTHRO/BOTANY 410, or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ANTHRO/PSYCH/ZOOLOGY 619 – BIOLOGY OF MIND
3 credits.

Origins and structures of mind, brain, and consciousness. Transitions from early mammalian through primate to hominid intelligence. Genetics and plasticity in brain development. Modern studies of human brain mechanisms and consciousness.
Requisites: Junior standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023

ANTHRO 659 – ANTHROPOLOGY FROM COLONIALISM TO DECOLONIALITY
3 credits.

Surveys both theoretical and ethnographic writing from the 1970s to the present in order to critically examine anthropology's ongoing efforts to decolonize. How have anthropologists confronted their discipline's colonial history? How have they integrated theories and insight from subaltern, postcolonial, and decolonial scholars? How can anthropologists ensure that they continue to decolonize their methods?
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Describe the epistemological and political consequences of anthropology's historical entanglements with European colonialism.
Audience: Graduate

2. Synthesize the contributions of subaltern, postcolonial, and decolonial studies scholars.
Audience: Graduate

3. Assess anthropologists' contributions to postcolonial and decolonial scholarship.
Audience: Graduate

4. Critically reflect on the current debates in anthropology and the calls to decolonize the discipline.
Audience: Graduate

5. Identify how your own position and upbringing influence how you learn, what you learn, and how you conduct research.
Audience: Graduate

6. Integrate decolonial ethnographic methods into your own research.
Audience: Graduate

ANTHRO 668 – PRIMATE CONSERVATION
3 credits.

Evaluates the conservation status of non-human primates, and considers why different species are vulnerable to different kinds of threats. The ways in which regional and global conservation policies are developed and implemented will also be discussed.
Requisites: ANTHRO 458, PSYCH 450, ZOOLOGY/ENVIR ST/F&W ECOL 360, ZOOLOGY/ANTHRO/BOTANY 410, ZOOLOGY/BOTANY/F&W ECOL 460, or graduate/professional standing
Course Designation: Breadth - Either Biological Science or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

ANTHRO 681 – SENIOR HONORS THESIS
3 credits.

Mentored individual research and study for students completing a thesis in an Honors program.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2023

ANTHRO 682 – SENIOR HONORS THESIS
3 credits.

Mentored individual research and study for students completing a thesis in an Honors program.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2023

ANTHRO 690 – PROBLEMS IN ANTHROPOLOGY
3-4 credits.

Independent research in specific problems in physical anthropology, archaeology, or cultural anthropology; under supervision.
Requisites: Junior standing and (declared in Anthropology undergraduate program or Archaeology undergraduate certificate), or graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ANTHRO 691 – SENIOR THESIS
2 credits.

Mentored individual research and study for students completing a senior thesis.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

ANTHRO 692 – SENIOR THESIS
2 credits.

Mentored individual research and study for students completing a senior thesis.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

ANTHRO 696 – ARCHAEOLOGICAL METHODS OF CURATION
1-3 credits.

Practicum in the curation of prehistoric stone, bone, and ceramics. Involves handling materials, identification of artifacts, conservation techinques, preparation of materials for storage or display.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ANTHRO 698 – DIRECTED STUDY
1-6 credits.

Advanced directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ANTHRO 699 – DIRECTED STUDY
1-6 credits.

Advanced directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ANTHRO/ART HIST/DS/HISTORY/LAND ARC 764 – DIMENSIONS OF MATERIAL CULTURE
4 credits.

This course introduces students to the interdisciplinary field of material culture studies. It is intended for students interested in any professional endeavor related to material culture, including careers in museums, galleries, historical societies, historic preservation organizations, and academic institutions. During the semester, students have varied opportunities to engage with and contemplate the material world to which people give meaning and which, in turn, influences their lives. Sessions combine in some way the following: presentations from faculty members and professionals who lecture on a phase of material culture related to his/her own scholarship or other professional work; discussion of foundational readings in the field; visits to collections and sites on campus and around Madison; discussion of readings assigned by visiting presenters or the professors; and exams and short papers that engage material culture topics.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ANTHRO 801 – PROFESSIONAL DEVELOPMENT IN ANTHROPOLOGY PROSEMINAR
1 credit.

Learn how to navigate graduate education and graduate-level research in anthropology while avoiding unnecessary pitfalls. Hone essential skills required for graduate school and careers.
Requisites: Declared in Anthropology MA, MS, PHD, or doctoral minor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the major elements of an academic CV, and leave with a plan for keeping yours updated.
Audience: Graduate

2. Describe the function of a dissertation committee, and have a list of possible committee members generated.
Audience: Graduate

3. Draft and revise a sample application for a pre-dissertation research grant, targeted for an actual possible funder.
Audience: Graduate

4. Give, receive, and use peer reviews
Audience: Graduate

5. Create a plan to develop, submit, and revise an academic article.
Audience: Graduate

6. Prepare for professional life during and after graduate school.
Audience: Graduate

ANTHRO 860 – HISTORY OF ANTHROPOLOGICAL THEORY
3 credits.

Intellectual history of the major theoretical debates and key figures in cultural anthropology up to the 1960's.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ANTHRO 900 – FUNDAMENTALS OF ANTHROPOLOGICAL THEORY
3 credits.

Fundamentals of anthropological thought using a cross-section of basic works in social science. Emphasizes discussion, critical analysis, and development of professional writing skills.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ANTHRO/PSYCH 906 – METHODS AND HYPOTHESIS-TESTING FOR BEHAVIORAL ECOLOGISTS
1-3 credits.

A detailed overview of field methods for behavioral ecologists, focusing specifically on behavioral and ecological sampling techniques. It addresses the challenging process of situating an empirical study within the context of theoretical paradigms.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2020

ANTHRO 909 – RESEARCH METHODS AND RESEARCH DESIGN IN CULTURAL ANTHROPOLOGY
3 credits.

Theoretical and practical aspects of ethnographic research; history of field research in anthropology; research design issues; writing proposals; the fieldwork experience; methods of field data collection; ethical issues; data interpretation and analysis; writing ethnography.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

ANTHRO 917 – GLOBALIZATION AND TRANSNATIONAL CULTURES
3 credits.

Reviewing the current state of anthropological studies of globalization and examining various approaches taken to the subject. Focusing on works that conceptualize and theorize the transnational culture and ethnographies that represent and explore its multiplicity and complexity.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021

ANTHRO/GEN&WS 920 – ANTHROPOLOGY OF GENDER
3 credits.

Theoretical and ethnographic approaches to the anthropology of gender, focusing on current works. Topics include sexual inequality, research methods, gender and history, gender and ethnographic writing, cultural constructions of masculinity, sexuality, and gender studies and anthropological theory.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

ANTHRO/C&E SOC/ECON/SOC 925 – SEMINAR: SOCIO-ECONOMIC CHANGE IN UNDERDEVELOPED AREAS
2-3 credits.

Social and economic factors relating to stability, growth, and change in the non-Western areas of the contemporary world.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ANTHRO 940 – SEMINAR-PROBLEMS IN CULTURAL ANTHROPOLOGY
3 credits.

Current anthropological literature and methods. Assigned problems.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ANTHRO 942 – SEMINAR-ARCHAEOLOGICAL PROBLEMS
3 credits.

Current literature and methods and work on assigned problems.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ANTHRO/ED POL 970 – SEMINAR IN ANTHROPOLOGY AND EDUCATION
3 credits.

Anthropological theory, methodology, and field techniques with specific reference to school ethnography and cross-cultural studies of socialization and education. Topics vary.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2021

ANTHRO/A A E/C&E SOC/GEOG/HISTORY/LACIS/POLI SCI/PORTUG/SOC/SPANISH 982 – INTERDEPARTMENTAL SEMINAR IN THE LATIN-AMERICAN AREA
1-3 credits.

Interdisciplinary inquiry in Latin American society and culture.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ANTHRO/AFRICAN/ECON/GEOG/HISTORY/POLI SCI 983 – INTERDEPARTMENTAL SEMINAR IN AFRICAN STUDIES TOPICS
3 credits.

Interdisciplinary inquiry in African societies and cultures.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Develop in-depth knowledge in a sub-field of specialization within African studies
Audience: Graduate

2. Acquire and demonstrate understanding of major theories, approaches, concepts, currently informing African studies
Audience: Graduate

3. Understand your process of learning and possess the capacity to intentionally seek, evaluate, and learn from information, and to recognize and reduce bias in thinking.
Audience: Graduate

4. Gain firm knowledge of existing research in African studies
Audience: Graduate

5. Develop and improve speaking, readings, listening, and writing skills
Audience: Graduate

6. Write and speak across disciplinary boundaries
Audience: Graduate

7. Analyze texts from various theoretical and critical perspectives
Audience: Graduate

ANTHRO 990 – RESEARCH AND THESIS
1-3 credits.

Advanced level mentored reading and research for students with dissertator status.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ANTHRO 999 – READING AND RESEARCH
1-9 credits.

Advanced level mentored reading and research for students with dissertator status.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

APPLIED BIOTECHNOLOGY (ABT)

ABT 700 – PRINCIPLES OF BIOTECHNOLOGY
3 credits.

Principles and techniques pertaining to biotechnology and its applications to our society. Survey of classical and emerging techniques.
Requisites: Declared in Applied Biotechnology program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Appraise the applications of biotechnology to various industrial settings.
Audience: Graduate

2. Demonstrate general understanding on the key concepts and assess the technologies that impact current biotechnology developments.
Audience: Graduate

3. Demonstrate understanding pertaining to genes, genomes and their organizations, gene expression, genetic variation and genetic engineering.
Audience: Graduate

4. Compare various biotechnologies approaches and recommend appropriate strategies for problem solving.
Audience: Graduate

5. Critique biotechnology-related journal articles and appraise the broader impacts of such studies.
Audience: Graduate

6. Demonstrate the ability to synthesize ideas to solve given problems and write scientific reports in the area of biotechnology.
Audience: Graduate

ABT 705 – ETHICS, SAFETY, AND REGULATORY ENVIRONMENTS IN BIOTECHNOLOGY
3 credits.

Ethical and safety concerns in development, production, funding, and application of biotechnology. Analysis of socioeconomic impacts. Understanding the importance of data integrity. Overview of risk assessment and management in a regulatory environment designed to ensure safety of workers, study subjects, and patients, and protect intellectual property, data, and the environment.
Requisites: Declared in Applied Biotechnology program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Critically assess workplace and research situations that may lead to ethical conflicts of interest and demonstrate appropriate responses.
Audience: Graduate

2. Identify regulatory agencies and recommendation bodies that inform and/or enforce areas of ethical oversight in both the US and abroad.
Audience: Graduate

3. Obtain and interpret primary documentation from regulatory bodies.
Audience: Graduate

4. Analyze and assess the costs and benefits of different regulatory frameworks.
Audience: Graduate

5. Communicate regulatory information to others in a professional capacity.
Audience: Graduate

ABT 710 – PROFESSIONAL AND TECHNICAL COMMUNICATION IN BIOTECHNOLOGY
3 credits.

Application and analysis of professional scientific communication, both written and oral. Focuses on designing documents that convey complex, data-rich technical and scientific content to audiences with diverse information needs using a variety of professional genres, including reports, proposals, presentations, and documentation.
Requisites: Declared in Applied Biotechnology program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Communicate technical and scientific information in biotechnology contexts
Audience: Graduate

2. Evaluate and select the most appropriate communication strategies (modalities, methods, tools, and practices) to convey complex ideas effectively to diverse audiences
Audience: Graduate

3. Demonstrate effective listening, written, verbal, and nonverbal communication skills
Audience: Graduate

4. Design and deliver effective professional presentations
Audience: Graduate

5. Analyze and integrate scientific literature into a variety of professional genres
Audience: Graduate

ABT 715 – TECHNIQUES IN BIOTECHNOLOGY
3 credits.

Application of biological and chemical methods to modern biotechnological product development. Overview of analysis techniques used to characterize products and evaluate quality and safety. Exploration of technological pipeline from conception to market, including proof-of-concept assessment, pre-clinical trials, clinical trials, and post-production testing.
Requisites: ABT 700
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Outline proper experimental design, experimental controls, and quality controls for proper quantitative experimental design
Audience: Graduate

2. Identify and interpret basic statistical methods and their outcomes in experimental data
Audience: Graduate

3. Summarize the phases of product development, testing, and commercialization
Audience: Graduate

4. Compare classical and emerging technologies for the identification and characterization of biotechnological products
Audience: Graduate

5. Analyze product safety and efficacy
Audience: Graduate

6. Employ knowledge of biotechnological safety and efficacy requirements to assess the commercialization potential of a product
Audience: Graduate

7. Critique existing product development processes using technological information on the safety and efficacy of the product
Audience: Graduate

8. Interpret data from product testing to assess viability of product for commercialization
Audience: Graduate

9. Apply appropriate technologies to analyze biotechnological products
Audience: Graduate

ABT 720 – EXPERIMENTAL DESIGN AND ANALYSIS IN BIOTECHNOLOGY
3 credits.

Principles of descriptive and inferential statistics with applications in biotechnology including experimental design, quantitative data analysis, and bioinformatic evaluation of complex molecular and biological data sets.
Requisites: Declared in MS Applied Biotechnology or Capstone Certificate in Applied Bioinformatics
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply statistical methods that are commonly used in experimental design in biotechnology research
Audience: Graduate

2. Explain the rationale behind statistical procedures as it relates to experimental design
Audience: Graduate

3. Select an appropriate statistical method and design experiments for a given experimental question
Audience: Graduate

4. Implement statistical procedures using software, especially R and RStudio
Audience: Graduate

5. Implement bioinformatic methods using a set of software tools
Audience: Graduate

6. Communicate statistical findings in biotech research to stakeholders
Audience: Graduate

ABT 725 – LEADERSHIP IN ORGANIZATIONS
3 credits.

Focuses on strategies and tools that managers use to maximize employee contribution and create organizational excellence. Basic business and leadership principles. Best practices to overcome biases that inhibit organizations and teams from communicating effectively. Examples will come from diverse biotechnology fields, including pharmaceutics, agriculture, and biotechnology services.
Requisites: Declared in Applied Biotechnology program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Evaluate technical, human and cultural factors contributing to an organization's readiness for significant change, and for success or failure of previous or current change processes.
Audience: Graduate

2. Create organizational change vision, mission, and objectives by creating dialogue among stakeholders and incorporating diverse perspectives and objectives
Audience: Graduate

3. Develop change process and strategy to achieve biotechnology organizational objectives and communicate the need for organizational change and a vision for change.
Audience: Graduate

4. Develop a systems perspective and identify the ways in which organizational behavior, structure and culture contribute to successful organizational change.
Audience: Graduate

5. Clarify why leaders lose their way and develop the self-awareness needed to avoid derailment.
Audience: Graduate

6. Gain clarity about their leadership principles, values, and ethical boundaries, and how they will respond under pressure when challenged.
Audience: Graduate

7. Implement their leadership and empower other leaders, while they are optimizing their leadership effectiveness.
Audience: Graduate

8. Create a Personal Leadership Development Plan.
Audience: Graduate

ABT 730 – PYTHON FOR BIOINFORMATICS
3 credits.

Introduce diverse strategies for computational analysis of macromolecular data using Python including sequence alignment, genome annotation, data retrieval from databases, phylogenetic analysis, and molecular evolution. Experiential learning is emphasized; confidence in practical skills is developed through persistent application of course content to projects focused on current problems in bioinformatic research.
Requisites: Declared in MS Applied Biotechnology or Capstone Certificate in Applied Bioinformatics
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Select appropriate computational strategies for the analysis of genomic, transcriptomic, proteomic, and metabolomic data.

Audience: Graduate

2. Implement analyses of large datasets and model relationships among elements of very complex systems.
Audience: Graduate

3. Use python programming strategies to solve problems in bioinformatics.
Audience: Graduate

4. Demonstrate the ability to integrate python programming strategies with complementary resources, especially UNIX, GitHub, and libraries.
Audience: Graduate

ABT 735 – QUALITY CONTROL AND VALIDATION
3 credits.

Focuses on the importance of quality control and validation in biotechnology product design, development, and manufacturing. Explores quality systems and documentation, global quality standards, and methods for assessing validation including installation, operational, and performance qualifications. Overviews biomanufacturing processes, automation, and ccGMP practices necessary to meet quality standards.
Requisites: ABT 700, 705, and 710
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe and contrast various quality systems and how Quality by Design is implemented in biotechnology
Audience: Graduate

2. Appraise the current quality standards that are used in the US and abroad
Audience: Graduate

3. Compare the Current Good Practices that are required in biotechnology product development (cGXPs) and assess how they are implemented
Audience: Graduate

4. Describe the key aspects of CMC (Chemistry, Manufacturing, and Controls) and how they impact biotechnology product development
Audience: Graduate

5. Design a biomanufacturing process including upstream and downstream processes
Audience: Graduate

6. Justify the importance of validation (IQ/OQ/PQ) and risk assessment and reduction in biotechnology
Audience: Graduate

7. Explain the importance of facilities, equipment, and utilities in biotechnology
Audience: Graduate

ABT 740 – REGULATORY PRACTICE AND COMPLIANCE
3 credits.

Identifies and examines the key regulatory agencies and practices that govern the highly regulated and diverse biotechnology industry, both domestically and internationally. Highlights current and emerging FDA and ICH regulations and guidance documents to successfully navigate meeting with the agencies and to submit required documentation for successful product development.
Requisites: ABT 700, 705, and 710
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe and contrast the FDA, ICH, EMA, and Japanese PMDA
Audience: Graduate

2. Justify the importance of regulatory affairs in biotechnology
Audience: Graduate

3. Develop a meeting and communication strategy for interacting with the FDA and submitting appropriate documentation
Audience: Graduate

4. Analyze the regulations that impact drug and biologics development, medical devices and diagnostics, agricultural biotechnology, and industrial biotechnology
Audience: Graduate

5. Analyze and compare nonclinical and clinical testing and the regulations that govern the use of animals and humans in research
Audience: Graduate

6. Describe genome editing and regulatory considerations that impact its applications in agriculture and humans
Audience: Graduate

ABT 745 – INDUSTRIAL APPLICATIONS IN REGULATORY AFFAIRS
3 credits.

Examines regulatory environments in risk-based assessment of biotechnological developments in industry, agriculture, and probiotics ensuring consumer and environmental protection. Addresses how validation is essential to the incorporation of emerging technologies into viable, accessible, and successful products. Highlights the stakeholders' role in regulatory oversight and policy through relevant industry case studies.
Requisites: ABT 700, 705, and 710
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the foundations and history of industrial, agricultural, and probiotic biotechnology.
Audience: Graduate

2. Identify and discuss historical and current participants, both national and global, in the development of agricultural biotechnology traits, probiotics, and industrial biotechnology products.
Audience: Graduate

3. Explain the national and global regulatory process and compliance issues for probiotic and industrial biotechnology products.
Audience: Graduate

4. Describe key aspects involved in development of an agricultural regulatory product development plan.
Audience: Graduate

5. Identify and describe emerging technologies and companies that may impact future regulations.
Audience: Graduate

ABT 750 – BIOTECHNOLOGY MARKETING AND ENTREPRENEURSHIP
3 credits.

Examines marketing case studies in diverse areas of biotechnology. Addresses marketing fundamentals and strategies, communicating value proposition strategy, ethical and regulatory concerns, startup strategies, pharmaceutical marketing, b2b marketing, salesforce development, branding, and promotion. Culminates with the creation of a marketing plan/analysis.
Requisites: Declared in Applied Biotechnology program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Categorize fundamental concepts of marketing management
Audience: Graduate

2. Compare and Contrast marketing segmentation, innovation, and positioning in the bio-technology industry and related marketing channels
Audience: Graduate

3. Understand channel systems of marketing and simulate personal selling and customer satisfaction service
Audience: Graduate

4. Integrate advertising elements, publicity marketing, and sales promotion in a Business to Business (B2B) model
Audience: Graduate

5. Evaluate decisions leading to successful and unsuccessful biotechnology products
Audience: Graduate

6. Synthesize marketing plan for biotechnology products
Audience: Graduate

7. Demonstrate team work aspects and leadership attributes in marketing elements
Audience: Graduate

8. Integrate Data into the Marketing decision making model
Audience: Graduate

ABT 755 – GLOBAL OPERATIONS AND SUPPLY CHAIN MANAGEMENT
3 credits.

Focuses on the strategic importance of operations and supply chain to overall performance relevant to a variety of business processes specific to biotechnology. Topics include production, transportation, distribution systems, sourcing, and purchasing.
Requisites: Declared in Applied Biotechnology program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize and use terminology commonly used in the management of general supply chains
Audience: Graduate

2. Apply concepts to manage suppliers, production and distribution in biotech firms/industry
Audience: Graduate

3. Select and use appropriate quantitative and/or qualitative techniques to manage suppliers, production and distribution in biotech firms/industry
Audience: Graduate

4. Demonstrate ability to use technology, communication skills, and teamwork
Audience: Graduate

ABT 760 – QUALITY AND PROJECT MANAGEMENT
3 credits.

Quality and project management issues and roles during different phases from RD to market. Introduction to Installation qualification, operation qualification and process qualification (PQ). Project management phases: conceptualizing, planning, executing and closing. Project schedule and time management tools and techniques. Project requirements including quality assurance.
Requisites: ABT 720 and 725
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Justify the importance of quality management in biotechnology.
Audience: Graduate

2. Understand the IQ/OQ/PQ validation process.
Audience: Graduate

3. Demonstrate the role of quality assurance in product development
Audience: Graduate

4. Demonstrate the design for manufacturing, design for reliability, design for safety and design for sustainability concept
Audience: Graduate

5. Practice the key components to project management
Audience: Graduate

6. Understand the relationship of leadership to effective management to maximize outcomes
Audience: Graduate

7. Explain the implementation of ISO and HACCP system in biotechnology organizations as well as how to conduct auditing activates to evaluate the system compliance
Audience: Graduate

8. Use project management tools to support project management practices
Audience: Graduate

ABT 765 – ASSESSING INNOVATION IN BIOTECHNOLOGY
3 credits.

A survey of biotechnology assessments in areas such as regenerative medicine, agricultural biotechnology, and bioremediation. Course links disciplines with the critical evaluative role played by scientific discovery, market valuation, intellectual property, freedom-to-operate (FTO), and licensing strategy by assessing the role each played in the commercialization of a specific technology.
Requisites: ABT 700
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate effective listening, written, verbal, and nonverbal communication skills
Audience: Graduate

2. Evaluate and describe systems of product research, development, and production
Audience: Graduate

3. Analyze the potential for commercialization of innovations within the biotechnology industry
Audience: Graduate

4. Identify and provide evidence-based solutions to problems in compliance, product development, personnel, and finance
Audience: Graduate

5. Demonstrate understanding of relevant domestic and global regulatory agencies, laws, policies, and guidance
Audience: Graduate

6. Assess intellectual property considerations in biotechnology
Audience: Graduate

ABT 770 – PRODUCT DEVELOPMENT
3 credits.

Explores strategies in evaluating and implementing new technologies or products in the context of different bioindustries. Identifies considerations in product valuation, feasibility of production, scalability, and supply chain management. Models the process of business growth and innovation through integration of emerging technologies.
Requisites: ABT 700 and 715
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Outline the factors that inform valuation of a new technology and potential for product development
Audience: Graduate

2. Discuss biotic and abiotic considerations in the process design of different bioindustry production platforms
Audience: Graduate

3. Describe the purpose of Good Practice (GMP, GCP, GLP, etc.) standards in production and different modes through which these standards can be achieved
Audience: Graduate

4. Evaluate the pertinent regulatory standard and appropriate product quality assessments in bioindustry production pipelines
Audience: Graduate

5. Propose and defend a process design for production of a new technology in an existing or startup bioindustry model
Audience: Graduate

ABT 775 – TOOLS FOR DATA ANALYSIS
3 credits.

Using a variety of existing and emerging bioinformatics tools and computational methods, emphasizes hands-on experiences analyzing and interpreting large data sets (e.g. genomic, proteomic, microbiomics, interactome, target discovery). Evaluate and adapt existing computational approaches for specific use in solving a problem in biotechnology.
Requisites: ABT 700 and 715
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the revolution in big data related to advances in science and the bottlenecks the corresponding data analytics
Audience: Graduate

2. Explain how several disciplines and specialties within biotechnology analyze and interpret various datasets to address a biological question
Audience: Graduate

3. Develop practical bioinformatics skills applicable to various data types and biological studies
Audience: Graduate

4. Utilize and discriminate between various bioinformatics and data visualization tools to answer research question
Audience: Graduate

5. Construct and deliver effective professional written and oral presentations incorporating scientifically relevant outcomes from various data analytics
Audience: Graduate

ABT 780 – BIOINFORMATIC INQUIRY
3 credits.

Advances the development of competencies promoting efficient analysis of biological data. Emphasizes matching a research problem with the most effective tools for its completion, balancing use of existing software and de novo software development. Advanced aspects of Python and R, algorithmics, machine learning, simulations, and effective communication of results are emphasized.
Requisites: ABT 720 and 730
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Implement successful solutions to tasks in bioinformatics using existing software and newly developed code.
Audience: Graduate

2. Write R scripts and packages, including formulation of new R classes.
Audience: Graduate

3. Create helpful, user-defined classes in Python.
Audience: Graduate

4. Implement knowledge of algorithmics to write elegant solutions to bioinformatics tasks.
Audience: Graduate

5. Interface with a MySQL database in Python.
Audience: Graduate

6. Simulate biological data to use as a null distribution for novel test statistics.
Audience: Graduate

7. Decide when machine learning methods are appropriate to a task in bioinformatics.
Audience: Graduate

8. Use GitHub to effectively share new software and manage version control.
Audience: Graduate

9. Communicate complicated methodology and results to a variety of stakeholders.
Audience: Graduate

ABT 785 – APPLICATION OF BIOINFORMATICS
3 credits.

Exploration and application of existing bioinformatic tools. Implementation of pre-coded solutions to data acquisition, wrangling, analysis, visualization, and structural modeling problems. Complete a project that generates a multi-system workflow to solve bioinformatic problems.
Requisites: ABT 720 and 730
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and demonstrate use of existing databases for genomic, transcriptomic, proteomic, and metabolomics analysis
Audience: Graduate

2. Describe construction and limitations for existing databases
Audience: Graduate

3. Identify and demonstrate existing tools for sequence analysis
Audience: Graduate

4. Identify and critique methods and tools for annotation of genomes and phylogentic analysis
Audience: Graduate

5. Identify and critique methods for assigning protein structure and function and metabolite profiles
Audience: Graduate

6. Describe and select best practices in adapting and editing existing tools

Audience: Graduate

7. Identify methods for developing multi-tool workflows; build, analyze, and critque functional workflows
Audience: Graduate

ABT 789 – PRE-CAPSTONE
1 credit.

Prepares the student for applied self-directed capstone experience. Addressing problem identification, research, and project formulation. Culminates in an oral and written proposal with project schedule.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify a problem the individual capstone project will address
Audience: Graduate

2. Integrate scientific knowledge and professional skill development accrued through research, didactic learning, and professional networking
Audience: Graduate

3. Develop a well-articulated, focused project
Audience: Graduate

4. Present a project proposal in a professional manner to one's peers
Audience: Graduate

ABT 790 – CAPSTONE
3 credits.

Complete a project (report, business plan, program, etc.) in an area of quality assurance and compliance, business and management, and/or research and development. Culminating in a substantive body of work, executive summary, and reflection. Networking and communication in a professional capacity is expected.
Requisites: ABT 789
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Integrate scientific knowledge and professional skill development accrued through research, didactic learning, and professional networking, to achieve fruition of a project
Audience: Graduate

2. Develop a well-articulated written paper and summation of the capstone
Audience: Graduate

3. Reflect upon the capstone experience
Audience: Graduate

ART DEPARTMENT (ART)

ART 100 – INTRODUCTION TO ART
3 credits.

Seek answers to the fundamental question "What is art?" from multiple perspectives such as historical, theoretical, critical, conceptual, formal, and experiential. Develop visual literacy, sophisticated observational skills and a formal language to assist in the interpretation of objects and experiences in the context of art. Through both theory and practice, develop an understanding of the ways artists arrive at the ideas that inform their creative processes. Includes a survey of developments in art media and looks broadly at art movements, trends and styles throughout history and in varied world cultures.
Requisites: Not open to students declared in Art BS, Art BFA, or Art Education BS
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify major functions, themes, and styles in the visual arts from pre-history to the present.
Audience: Undergraduate

2. Recognize the formal elements and design principles in works of art and analyze their effect on interpretation and meaning.
Audience: Undergraduate

3. Conduct technical exercises as well as open-ended experiments with art tools and media to determine how to articulate an idea visually and conceptually.
Audience: Undergraduate

4. Demonstrate habits for researching, analyzing and creating artworks.
Audience: Undergraduate

5. Communicate the role of art and artists to the larger society.
Audience: Undergraduate

6. See oneself as an active participant in the art world.
Audience: Undergraduate

ART 102 – 2D FOUNDATIONS
3 credits.

Application of 2D design principles for image creation and graphic arrangement, with both analog and digital skills. Provides skillsets for 2D-related content, such as photography, graphic design, drawing, painting, and printmaking.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Conduct research to generate multiple solutions to two-dimensional design problems and to inform artistic decisions.
Audience: Undergraduate

2. Gain competency with creative problem solving in digital formats such as Adobe Illustrator, InDesign, and Photoshop and in analog formats such as ink, pencil and collage.
Audience: Undergraduate

3. Analyze and critique two-dimensional work based on the relationship between subject matter, form, and content.
Audience: Undergraduate

4. Explore 2D design within its historical and contemporary contexts through readings, research, artist presentations and/or discussion.
Audience: Undergraduate

ART 104 – 3D FOUNDATIONS
3 credits.

Uses hands-on problem solving to develop an informed understanding of the creation of objects in three dimensions. Provides foundational skillsets for sculpture, ceramics, wood, glass, and metals.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define and apply the terminology, elements, and principles of three-dimensional design.
Audience: Undergraduate

2. Ideate, execute, and iterate three-dimensional objects with a variety of materials, tools, and techniques.
Audience: Undergraduate

3. Demonstrate an understanding of the relationship between form, subject matter and content as they relate to three-dimensional objects and the spaces they inhabit.
Audience: Undergraduate

4. Perform safe and effective studio practices with a variety of tactile materials, hand tools and basic construction techniques.
Audience: Undergraduate

5. Critically analyze one's work and the work of one's peers using appropriate three-dimensional design terminology.
Audience: Undergraduate

6. Successfully engage in collaborative learning through group activities, discussions, and critiques.
Audience: Undergraduate

ART 107 – INTRODUCTION TO DIGITAL FORMS
3 credits.

An introduction to a range of digital media techniques for artists and designers, including digital imaging, vector graphics, web design and 3D digital modeling. Emphasis on creative development along with technical skill building.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025

ART 108 – FOUNDATIONS OF CONTEMPORARY ART
3 credits.

Artists' formal, technical and expressive concerns; the principal ideas of movements which have significantly influenced the major tendencies in contemporary art.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ART 112 – DRAWING FOR NON-ART MAJORS
3 credits.

Introduction to basic drawing. Core elements of drawing such as the use of line, shape, composition, space, perspective, value, and texture. Provides foundational skillsets for drawing.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define and apply the elements of art and the principles of design in drawing construction.
Audience: Undergraduate

2. Demonstrate observational and perceptual skills, translating three-dimensional forms in space into two-dimensions using the formal elements of drawing.
Audience: Undergraduate

3. Explore historical and contemporary drawing media and techniques.
Audience: Undergraduate

4. Critically analyze their work and the work of classmates using appropriate terminology related to the elements and principles of drawing.

Audience: Undergraduate

5. Practice a variety of research methods to structure and contextualize drawing projects.
Audience: Undergraduate

ART 176 – DIGITAL PHOTOGRAPHY FOR NON-ART MAJORS
4 credits.

Introduction to the tools, techniques and concepts of digital photography. An emphasis will be placed on the digital photography workflow beginning with composition and image capture, to digital manipulation and enhancement, to the end goal of print or online publication. Develop a robust fundamental skill set in digital photography.
Requisites: Not open to students declared in Art BS or Art BFA
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the fundamentals of digital cameras and their applications (exposure, focus, white balance).
Audience: Undergraduate

2. Develop a proficiency in techniques for raw-file conversion, non-destructive imageadjustment & manipulation using Adobe Photoshop and Adobe Bridge software.
Audience: Undergraduate

3. Develop a working understanding of image file types, compression and resolution.
Audience: Undergraduate

4. Explore creative ideas and concepts through photography.
Audience: Undergraduate

5. Develop visual and critical thinking skills.
Audience: Undergraduate

6. Develop understanding of a range of issues in contemporary fine art photography.
Audience: Undergraduate

7. Learn to write about their creative work.
Audience: Undergraduate

8. Discuss and critique photographs and their content and technique in depth.
Audience: Undergraduate

ART 208 – CURRENT DIRECTIONS IN ART
3 credits.

Examination of current artists' motivations, intentions, and processes and their relationship to general developments in contemporary art.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025

ART 212 – DRAWING FOUNDATIONS
3 credits.

Apply the elements of drawing to more exploratory drawing methods and explore a wide variety of drawing concepts and applications in the context of Modern and Contemporary Art. Provides foundational skillsets for drawing and painting, printmaking and book art.
Requisites: ART 112, or declared in Art BS, Art BFA, or Art Education BS
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Utilize the knowledge and experience acquired in previous art courses to create drawings that demonstrate increasingly more sophisticated technical and conceptual proficiency.
Audience: Undergraduate

2. Demonstrate experimentation and investigation with a variety of drawing media.
Audience: Undergraduate

3. Develop an index of ideas and research references to support the creation of drawing-based work.
Audience: Undergraduate

4. Apply drawing skills and concepts more broadly as a vehicle for conveying ideas in other media such as printmaking and book art.
Audience: Undergraduate

5. Analyze and critique drawing-based artworks using relevant concepts and terminology.
Audience: Undergraduate

ART 214 – SCULPTURE I
4 credits.

Introduction to techniques and basic sculpture concepts to provide a survey of sculpture studio practices.
Requisites: ART 104
Repeatable for Credit: No
Last Taught: Fall 2025

ART 222 – INTRODUCTION TO PAINTING
3-4 credits.

Introduction to various technical processes and aspects of painting. Studio practice, lectures, discussions, and critiques.
Requisites: ART 102, 112, 212, or 302
Repeatable for Credit: No
Last Taught: Fall 2025

ART 224 – CERAMICS I
4 credits.

Properties of clay and fundamentals of forming; hand-building, throwing, slip-casting, press molding; with emphasis on individual form concepts. Glazing, decorating, firing techniques including reduction, oxidation and primitive methods.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025

ART/DS 226 – TEXTILE DESIGN: OFF-LOOM CONSTRUCTION
3 credits.

Studio design problems in two and three dimensional off-loom constructions; off-loom weaving, looping, and knotting; historical reference and contemporary application.
Requisites: DS 120 and 153
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2021

ART/DS 229 – TEXTILE DESIGN: WEAVING I
3 credits.

The relationship of hand weaving to textural surfaces and sculptural forms are examined through the study of problems including structure, pattern, composition, and additional conceptual technical possibilities. Content is explored in the development of individual direction and in relationship to the discussion of historical and contemporary textiles and other works of art. Pursue an advanced investigation of concept and technique of hand-woven cloth.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate understanding of theories, approaches, concepts, and current and historical textile/weaving practices in projects and presentations.
Audience: Undergraduate

2. Utilize the techniques, skills and modern tools/software necessary to create work in the field.
Audience: Undergraduate

3. Examine articles and conduct and present research to inform personal style and concept goals.
Audience: Undergraduate

4. Synthesize knowledge and use insight and creativity to better understand and improve their own design/art
Audience: Undergraduate

5. Communicate effectively through oral presentations, discussion and critiques.
Audience: Undergraduate

ART 232 – LIFE DRAWING I
4 credits.

Anatomical structure and intrinsic forms involved in drawing from different models. Development of technical control in a range of media.
Requisites: ART 212 and (ART 100, 108, or 208)
Repeatable for Credit: No
Last Taught: Fall 2025

ART 236 – BASCOM COURSE
3 credits.

A low-enrollment course developing skills in critical reading, logical thinking, use of evidence, and use of library resources. Emphasis on writing in the conventions of specific fields.
Requisites: Satisfied Communications A requirement
Course Designation: Gen Ed - Communication Part B
Repeatable for Credit: No
Last Taught: Fall 2025

ART 242 – WATERCOLOR I
3-4 credits.

Painting with watercolor and mixed media on paper. Experimental and traditional uses of the media will be explored, emphasizing drawing, composition, and imagination. Field trips.
Requisites: ART 112, 212, 222, 316, 326, or 336
Repeatable for Credit: No
Last Taught: Fall 2025

ART 244 – ART METAL I
3-4 credits.

Basic jewelry techniques; metal fabrication dealing with piercing, soldering, forming.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025

ART 302 – COLOR
4 credits.

Color phenomena and visual perception as applied in art problems. Lectures, readings in theory, philosophy, and history of design.
Requisites: ART 102, 107, 112, 212, 222, 232, 242, 306, 312, 316, 326, 336, or DS 120
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ART 306 – RELIEF PRINTMAKING
3-4 credits.

Woodcut, collage print, linoleum cut, and wood engraving; color printing. Studio practice, lectures, discussion, critiques.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ART 307 – MAKING COMICS 1
4 credits.

An introduction to making comics as both a subject and means of academic inquiry. This is a rigorous class and the workload is substantial. Students will learn a variety of ways of making pictures and stories using materials that will vary over the course of the semester. Final project will be an original, reproducible, handmade book of at least 32 pages, based on the stories or comics or characters created during the semester. No previous drawing experience necessary, but must be eager to draw seven days per week throughout the duration of the course.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Translate autobiographical stories, interviews and fictional stories into illustrative comics form.
Audience: Both Grad & Undergrad

2. Illustrate, label, and compose on a daily basis in journaling style.
Audience: Both Grad & Undergrad

3. Identify and apply methodologies for teaching others to create comics.
Audience: Both Grad & Undergrad

4. Read, analyze and discuss a wide variety of comics and comics related articles.
Audience: Both Grad & Undergrad

5. Develop technical facility with materials involved in making comics including basic ink pens, color pencils, watercolor, Chinese ink and brush, and different types of drawing papers.
Audience: Both Grad & Undergrad

6. Design, create and assemble a 32-page publication as a final project
Audience: Both Grad & Undergrad

7. Will use comics as a means of academic inquiry, along with active engagement with the latest research and scholarly activity of the use of comics in their field of study.
Audience: Graduate

ART 309 – DIGITAL ART AND CODE
4 credits.

An introduction to the principles of computer coding in a visual context. Course emphasizes the production of graphical and interactive output delivered on a screen.
Requisites: ART 107 or declared in an Art graduate program
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

ART 312 – INTERMEDIATE DRAWING I
3-4 credits.

The exploration of conceptual drawing in various media. Emphasis on conceptual/formal solutions.
Requisites: (ART 212, 232, 316, or 326), or declared in an Art graduate program
Repeatable for Credit: No
Last Taught: Fall 2025

ART 314 – SCULPTURE II
4 credits.

Continued investigation in sculpture studio practices with an emphasis on developing concepts and technique.
Requisites: ART 214 or declared in an Art graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ART 316 – LITHOGRAPHY
4 credits.

Direct drawing on stone with crayon and tusche, transfer techniques, color processes; studio practice, lectures, discussions, and critiques.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ART 318 – INTRODUCTION TO VIDEO, PERFORMANCE & INSTALLATION ART
4 credits.

An introduction to time-based art forms including video, installation, and visual art performance.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe art world practices in video, performance and installation at an introductory level
Audience: Undergraduate

2. Analyze art world practices in video, performance and installation at an advanced level
Audience: Graduate

ART 322 – INTERMEDIATE PAINTING I
4 credits.

Development of technical processes, concepts, historical continuity. Study and application of various media of oils, acrylics, collage materials.
Requisites: ART 222 or declared in an Art graduate program
Repeatable for Credit: No
Last Taught: Fall 2025

ART 324 – CERAMICS II
4 credits.

Continued investigation into forming; hand-building, throwing, slip-casting, press molding; with emphasis on individual form concepts. Glazing, decorating, firing techniques including reduction, oxidation and primitive methods.
Requisites: ART 224 or declared in an Art graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ART 326 – ETCHING
4 credits.

Introduction to intaglio printmaking techniques. Studio problems in platemaking and printing.
Requisites: (ART 102, 112, 212, 232, 306, 316, or 336) or declared in an Art graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ART 332 – LIFE DRAWING II
4 credits.

Further investigation into anatomical structure and intrinsic forms involved in drawing from different models. Development of concepts and technique.
Requisites: ART 232 or declared in an Art graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ART 333 – INTRO TO RESPONSIVE WEB DESIGN
4 credits.

Introduction to user-centered, responsive web design for mobile, tablet, and laptop. Write HTML, CSS, and Javascript directly to design and develop fully responsive websites.
Requisites: (ART 102 or 107), ART 346, and ART 438 or concurrent enrollment in ART 438, or declared in (MFA-Art or MS Design + Innovation)
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Critique and apply graphic design principles and functions in web composition.
Audience: Both Grad & Undergrad

2. Demonstrate the capabilities of web typography.
Audience: Both Grad & Undergrad

3. Demonstrate the capabilities of creating responsive web designs.
Audience: Both Grad & Undergrad

4. Enhance responsive web page presentation with HTML5 & CSS3.
Audience: Both Grad & Undergrad

5. Design responsive websites from scratch with HTML5 & CSS3.
Audience: Both Grad & Undergrad

6. Develop complex layouts and effects with advanced CSS.
Audience: Both Grad & Undergrad

7. Design and develop professional research documentation for the Web.
Audience: Graduate

ART 334 – WOOD WORKING
3-4 credits.

Exploration of wood as a medium for constructing creative and functional three-dimensional forms.
Requisites: (ART 104, 112, 212, 214, 224, 244, 354 or DS 220) or declared in an Art graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ART 336 – SERIGRAPHY
3-4 credits.

Materials and techniques of silk screen process; silk screen as a fine art form.
Requisites: (ART 102, 112, 212, 222, 232, 306, 316, or 326) or declared in an Art graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ART 338 – SERVICE LEARNING IN ART
2 credits.

Students discuss community-based practices in the field, and will work with a community partner in an art-related capacity.
Requisites: None
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ART/DANCE 341 – SOUND DESIGN FOR THE PERFORMING AND VISUAL ARTS
3 credits.

Production of audio soundtracks to complement the work of artists. The relationship of sound and music to dance, video, film, computer art, and other interdisciplinary forms.
Requisites: Declared in an Art, Dance, or Communication Arts program
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ART 342 – WATERCOLOR II
4 credits.

Continued investigations in watercolor and mixed media works on paper with goal of development of concepts and technical skill.
Requisites: ART 242 or declared in an Art graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ART 343 – METAL FABRICATION AND WELDING IN SCULPTURE
3-4 credits.

Reviews common welding and metal fabrication techniques available to artists, including various welding processes, brazing techniques, torch work, cutting devices, bending methods, and finishing techniques. Mild steel will be the primary material of exploration.
Requisites: (ART 214 or 244) or declared in an Art graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2020

ART 346 – BASIC GRAPHIC DESIGN
4 credits.

Introduces the basic principles of graphic design. Develop an initial understanding of formal, conceptual, and technical aspects of the field. Emphasis will be given to the importance of working process, presentation and craftsmanship.
Requisites: (ART 102 or 107) and declared in Art , Art Education, Certificate in Art Studio, or Certificate in Graphic Design; or declared in Art MFA or Design + Innovation MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand the role of design process in creative practice for designers.
Audience: Both Grad & Undergrad

2. Understand basic visual research methodologies used by graphic designers in the field.
Audience: Both Grad & Undergrad

3. Strengthen professional presentation skills.
Audience: Both Grad & Undergrad

4. Develop a body of work that displays your design skills in the best possible light.
Audience: Both Grad & Undergrad

5. Extend knowledge of software used in design practice.
Audience: Both Grad & Undergrad

6. Expand knowledge and use of design terminology and vocabulary.
Audience: Both Grad & Undergrad

7. Appraise these tools, methods, and processes, and learn how to strategically, creatively apply them to your own work and research.
Audience: Graduate

ART 348 – INTRODUCTION TO DIGITAL PRINTMAKING
4 credits.

Provides students with fundamental skills in combining had printed and digital output. Hybrid print integrates laser plate, monoprint, collograph, stencil, stamping, and embossment with inkjet output. Focuses on enhancement of digital output through integration of hand printed elements.
Requisites: (ART 102, 107, 176, 306, 316, 326, 336, 346, or 376) or declared in an Art graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ART 354 – GLASSWORKING
4 credits.

Glassworking toward a personal concept of material.
Requisites: (ART 104, 214, 224, 244, or 334) or declared in an Art graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ART 356 – CODING FOR GRAPHIC DESIGN
4 credits.

Explore the aesthetic of computational graphic design and typography with physical interaction, sound, data, and digital fabrication.
Requisites: (ART 102 or 107), ART 346, and ART 438 or concurrent enrollment in ART 438, or declared in (MFA-Art or MS Design + Innovation)
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Apply design and typography principles and functions in computational drawing.
Audience: Both Grad & Undergrad

2. Apply mathematic expressions, computer algorithms, and libraries to create computational illustrations.
Audience: Both Grad & Undergrad

3. Demonstrate image, text, video, sound, and data skills to create computational graphic design and typography.
Audience: Both Grad & Undergrad

4. Demonstrate ability to explore linear and non-linear visual storytelling using computer algorithms and physical interaction.
Audience: Both Grad & Undergrad

5. Demonstrate ability to develop ideas from conceptualization to implementation in computational graphic design and typography.
Audience: Both Grad & Undergrad

6. Demonstrate ability to extend visual output from cyberspace to physical space using digital fabrication.
Audience: Both Grad & Undergrad

7. Develop professional documentation for generative graphic design systems.
Audience: Both Grad & Undergrad

8. Cultivate and develop graphic design research and practices with various new mediums, including computation, sound, data, self-portraits, and digital fabrication.
Audience: Graduate

ART/THEATRE 366 – STAGE LIGHTING I
3 credits.

Application of lighting design to the stage and natural environment. Color principles, lighting instruments, and control equipment. Production participation and labs.
Requisites: THEATRE 130, ART 100, or DS 120
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Observe light in its natural, artistic, and theatrical environments, and discuss its controllable qualities and functions.
Audience: Undergraduate

2. Summarize the role of a lighting designer and the roles of other members of a production team.
Audience: Undergraduate

3. Understand theatrical lighting production planning and implementation methods, including: lighting hang and focus, lighting control, instrument design and selection.
Audience: Undergraduate

4. Develop the analytical skills needed to read a script, communicate ideas, and establish a design aesthetic and personal design process.
Audience: Undergraduate

5. Design the lighting for a play and produce al relevant paperwork and documentation, including drafting a full light plot.
Audience: Undergraduate

ART/THEATRE 372 – SET DESIGN I
3 credits.

Principles of composition, scale, perspective, and color applied to the stage; production of ground plans, elevations, sketches, and models.
Requisites: None
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ART 376 – DARKROOM PHOTOGRAPHY
3-4 credits.

Emphasizes the basic aesthetic grammar of photography while providing a historical and critical context for looking at and making photographs. Techniques, philosophies, and concepts in photography as an art form. Emphasis on personal expression and relationship to other media.
Requisites: ART 100, 102, 104, 107, 108, 176, 208 or declared in Art MFA
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the basic functions of a film camera.
Audience: Both Grad & Undergrad

2. Explain visual history and grammar of photography.
Audience: Both Grad & Undergrad

3. Demonstrate the ability to approach B&W film photography in a serious problem solving manner.
Audience: Both Grad & Undergrad

4. Demonstrate skill to edit and discuss both your own work as well as other visual artists in the field of contemporary photography.
Audience: Both Grad & Undergrad

5. Examine the technical, mechanical and history of photography for future instructional skills.
Audience: Graduate

ART 393 – INTERNSHIPS IN ART
1 credit.

This online course allows students who have found outside art-related internships to earn academic credit in connection with their work experience.
Requisites: None
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022

ART 409 – DIGITAL FABRICATION STUDIO
4 credits.

Introduction to the practice and application of digital fabrication technologies in an artistic context with an emphasis on extending and integrating with traditional material approaches to art production. Includes theoretical readings devoted to the implications of digital and machine technologies on art practice.
Requisites: ART 107 or declared in an Art graduate program
Repeatable for Credit: No
Last Taught: Fall 2025

ART 414 – ART FOUNDRY
3 credits.

Traditional and nontraditional methods of fine art foundry.
Requisites: (ART 104, 214, 224, 244, 314, 334, 343, or 354), or declared in an Art graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ART 428 – DIGITAL IMAGING STUDIO
4 credits.

Explore current and historical practices in the digital fine arts while refining conceptual and technical understanding of digital art forms as powerful tools for generating and communicating images and ideas. Students will create and manipulate both static and moving imagery, with implications for digital drawing, painting, print-making, video editing/post-production, and narrative or non-narrative 2D animation in a fine art context.
Requisites: (ART 107, 176, 318, 429, or 529) or declared in an Art graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ART 429 – 3D DIGITAL STUDIO I
4 credits.

Introduction to three-dimensional modeling in the computer, in particular the use of 3D digital models for the creation of images and objects.
Requisites: ART 107 or declared in an Art graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ART 438 – HISTORY OF GRAPHIC DESIGN AND TYPOGRAPHY
3 credits.

Examines the major developments in graphic design and typography as the fields slowly emerged and began to define themselves during the 19th, 20th, and 21st centuries.
Requisites: (ART 102 or 107), and ART 346 or concurrent enrollment; or declared in Art MFA or Design + Innovation MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Foster respect and appreciation for the achievements of graphic designers and typographers.
Audience: Both Grad & Undergrad

2. Identify the major designers and graphic works of each period covered.
Audience: Both Grad & Undergrad

3. Recognize the major aesthetic movements and ideas that have influenced graphic design and typography.
Audience: Both Grad & Undergrad

4. Understand the social, cultural, and political contexts that have shaped graphic design and typography.
Audience: Both Grad & Undergrad

5. Appraise these influences and learn how to strategically, creatively, apply them to your own work and research.
Audience: Graduate

ART 442 – ICONS, SYMBOLS, AND PICTOGRAMS
4 credits.

Addresses basic visual communication principles that include semiotics, gestalt, form, and context, and applies them to the design of icons, symbols, and pictograms. Cultural, psychological, social, and historical interpretations of these forms are analyzed through design projects, readings, discussion, and research.
Requisites: (ART 102 or 107), ART 346 and 438
Repeatable for Credit: No
Learning Outcomes: 1. Apply basic visual communication principles to the design process.
Audience: Undergraduate

2. Explore semiotics analysis in relation to forms and messages intended for diverse audiences.
Audience: Undergraduate

3. Identify the various contexts and functions for which icons, symbols, and pictograms can be designed.
Audience: Undergraduate

4. Practice the specific techniques and processes that are used in the construction of icons, symbols, and pictograms.
Audience: Undergraduate

5. Extend knowledge of software used in design practice.
Audience: Undergraduate

6. Strengthen collaboration and presentation skills.
Audience: Undergraduate

ART 443 – GRAPHIC DESIGN FOR EXHIBITIONS
4 credits.

Provides an introduction to exhibition design from spatial typography, posters, banners, and wayfinding to online exhibition design, including virtual reality for the Web.
Requisites: (ART 102 or 107), ART 346, and ART 438 or concurrent enrollment in ART 438, or declared in (MFA-Art or MS Design + Innovation)
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Define the fundamental elements of two and three-dimensional typography.
Audience: Both Grad & Undergrad

2. Apply those fundamental elements in developing a typographic system for environmental settings.
Audience: Both Grad & Undergrad

3. Analyze existing way-finding problems and apply design to the practice of exhibit design.
Audience: Both Grad & Undergrad

4. Explore environmental graphic venues, materials, and applications to produce visual components for exhibition design.
Audience: Both Grad & Undergrad

5. Demonstrate how innovative concepts, branding, and custom exhibition design can improve showroom design and function.
Audience: Both Grad & Undergrad

6. Practice exhibition design for the Web and virtual reality.
Audience: Both Grad & Undergrad

7. Develop the complete functional exhibition design for the Web and virtual reality.
Audience: Graduate

ART 446 – ARTISTS' BOOKS
4 credits.

The multiple and sequential visual imagery of the non-printed book, including its design and creation.
Requisites: (ART 306, 316, 326, 336, 346, or 376) or declared in an Art graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ART 448 – SPECIAL TOPICS
1-4 credits.

Various beginning-level special topics courses in Art.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ART 452 – INTERMEDIATE PAINTING: NEW FIGURATION I
4 credits.

The human figure as a source for creative and independent viewpoints in painting and other media. Students work together in the painting studio from a live model and from other figural sources.
Requisites: (ART 222, 232 or 322) or declared in an Art graduate program
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ART 454 – NEON: LIGHT AS SCULPTURE
4 credits.

Introduction to light as sculptural medium including techniques for creating art using luminous tubes.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ART 458 – GRAPHIC DESIGN FOR BRANDING AND IDENTITY
4 credits.

This is an advanced graphic design course with an emphasis on corporate brand identity development. Topics can include mark development, product packaging, marketing and advertising collateral, web branding, and broadcast advertising development. Special attention is given the application of semiotics and other forms of basic communication theory to the design process.
Requisites: (ART 102 or 107 or declared in an Art graduate program), ART 346, and 438
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ART 463 – INFORMATION GRAPHICS
4 credits.

This course examines the theory and practice of visual representation of information. Students will learn to create effective and illuminating graphical displays of data based on four basic formulations -- location, time, category, hierarchy, and index.
Requisites: (ART 102 or 107), ART 346 and 438
Repeatable for Credit: No
Last Taught: Fall 2025

ART 465 – GRAPHIC DESIGN FOR PACKAGING
4 credits.

Defines the role of packaging in product identification, presentation, and production. The unique challenges of adapting typography, illustration, design and materials to three-dimensional forms are explored. Research includes marketing objectives, structural integrity and display aesthetics.
Requisites: (ART 102 or 107), ART 346 and 438
Repeatable for Credit: No
Last Taught: Spring 2022

ART 466 – PAPERMAKING: HISTORY, ELEMENTS AND TECHNIQUES
4 credits.

Investigation and explanation of papermaking by hand as it relates to printmaking, drawing, and sculpture. History of papermaking stressing the last hundred years. Techniques of the craft, traditional sheet forming and use of paper pulp as pure plastic material with same educational goals as metal, ceramics, and wood.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ART 467 – GRAPHIC DESIGN FOR POSTERS
4 credits.

Examines the design of posters as a mode of communication. Students will learn to create effective combinations of words and images that mobilize principles of composition, perception, and rhetoric. Projects will encourage students to further explore graphic design as a means of communication, artistic expression, and information organization.
Requisites: (ART 102 or 107), ART 346 and 438
Repeatable for Credit: No
Last Taught: Spring 2025

ART 470 – SPECIAL TOPICS IN 4D ART
3-4 credits.

Topics courses exploring historical, theoretical and studio components surrounding time-based art forms including digital animation, video, installation, and visual art performance.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ART 476 – INTERMEDIATE PHOTOGRAPHY
4 credits.

Introduction to advanced digital printing techniques, critical analysis, and discussion of history of photography and current trends.
Requisites: ART 107, 176, or declared in Art MFA
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the visual history and grammar of digital photography.
Audience: Both Grad & Undergrad

2. Demonstrate the ability to approach photography in a serious problem-solving manner.
Audience: Both Grad & Undergrad

3. Demonstrate the skill to edit and discuss both your own work as well as other visual artists.
Audience: Both Grad & Undergrad

4. Demonstrate the ability to understand your own work in the context of contemporary photography.
Audience: Both Grad & Undergrad

5. Examine the technical, mechanical and history of photography for future instructional skills.
Audience: Graduate

ART 486 – LETTERPRESS PRINTING: BOOKS AND MULTIPLES
4 credits.

Covers materials and techniques used in contemporary letterpress printing of both text and image with a focus on letterpress printing as an art medium. Learn how to print using handset type, photopolymer plates and other printmaking techniques suitable for letterpress. Design and letterpress print broadsides and artist's books.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 3 number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Master a range of letterpress printing techniques to complete original artwork.
Audience: Both Grad & Undergrad

2. Engage in creative and design thinking in the development of creative projects that include text and image.
Audience: Both Grad & Undergrad

3. Develop ability to work both independently and collaboratively on creative projects.
Audience: Both Grad & Undergrad

4. Develop written and visual ideas that address issues in the world around them.
Audience: Both Grad & Undergrad

5. Apply problem-solving techniques needed to work with letterpress printing tools and equipment.
Audience: Both Grad & Undergrad

6. Develop oral and written communication skills and critical thinking during critique sessions of work and the work of peers.
Audience: Both Grad & Undergrad

7. Develop creative work that is directly connected to their wider creative practices
Audience: Graduate

8. Develop a familiarity and understanding of the artist's book collection at the Kohler Art Library through research for class that will influence their wider creative practices.
Audience: Graduate

ART 506 – ADVANCED RELIEF PRINTMAKING
4 credits.

Emphasis on color problems, surface qualities; studio practice, discussion, critiques.
Requisites: ART 306 or declared in an Art graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ART 507 – MAKING COMICS 2
4 credits.

Builds on the work begun in Making Comics 1. Students will already be comfortable working on deadline, with applying previous comics-making experience to a variety of story styles, both fictional and non-fictional, and with using a variety of materials. This class is just as rigorous and demanding as Art 307. You'll be required to write and draw in your journal every day. Homework is substantial. Students will finish a 3-4 page comic strip each week, even when feeling uninspired. Readings will include more long-form comics. Students will identify a theme present in their own work to be explored through drawing and writing. In the last part of the semester, students will create a 'zine with a focused narrative. It will be an original, reproducible, handmade book of at least 32 pages, comprised of both visual and written elements. Everything created will be drawn, painted and written by hand.
Requisites: ART 307
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 3 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Increase facility with using dip pens, manga ink and manga paper
Audience: Both Grad & Undergrad

2. Continue developing technical facility with materials involved in making comics including basic ink pens, color pencils, watercolor, Chinese ink and brush, and different types of drawing papers.
Audience: Both Grad & Undergrad

3. Translate academic articles, autobiographical stories, interviews with others, and works of fiction into longer form comics
Audience: Both Grad & Undergrad

4. Illustrate, label and compose in a journal on a daily basis.
Audience: Both Grad & Undergrad

5. Identify and apply methodologies for teaching others to create comics
Audience: Both Grad & Undergrad

6. Read, analyze and discuss a wide variety of long-form comics, graphic novels and comics-related articles
Audience: Both Grad & Undergrad

7. Design, create and assemble a 32-page book with a single theme as a final project.
Audience: Both Grad & Undergrad

8. Use comics as a means of academic inquiry, along with active engagement with the latest research and scholarly activity of the use of comics in their field of study.
Audience: Graduate

ART 508 – COLLOQUIUM IN ART
1 credit.

Prominent artists, curators critics present their work through lectures and visual presentations.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ART 511 – ART PERFORMANCE
3-4 credits.

An exploration of art genres that often incorporate a form of time-based performance, including but not limited to elements found in theater, dance, music, spoken word/poetry, etc.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ART 512 – ADVANCED DRAWING I
4 credits.

Advanced level drawing course taught in a structured format where students work on various problems/issues in drawing.
Requisites: ART 312 and (ART 100, 108 or 208) or declared in an Art graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ART 514 – ADVANCED SCULPTURE WORKSHOP 1
4 credits.

Instruction in the use of various materials as required by the individual in terms of the formal and conceptual basis of the work. Emphasis on independent research and development of studio projects.
Requisites: ART 314 or declared in an Art graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ART 516 – ADVANCED LITHOGRAPHY
2-3 credits.

Development of advanced concepts and techniques in lithography, to include drawing on stone with crayon and tusche, transfer techniques, color processes; studio practice, lectures, discussions, and critiques.
Requisites: ART 316 or declared in an Art graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ART 518 – ARTIST'S VIDEO
4 credits.

Principles and techniques in video art.
Requisites: (ART 208 and 318) or declared in an Art graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021

ART 521 – INSTALLATIONS AND ENVIRONMENTS
4 credits.

Studio projects in site-specific art making supplemented by readings and examples of relevant contemporary artists' work.
Requisites: ART 214 or declared in an Art graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ART 522 – ADVANCED PAINTING I
4 credits.

Technical processes; emphasis on personal expression, concepts, in various approaches to painting.
Requisites: (ART 322 or 452) or declared in an Art graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ART 524 – ADVANCED CERAMICS I
4 credits.

Thrown and hand-built forms, clay bodies, glazes, firing, general studio procedure; emphasis on development of personal concepts.
Requisites: ART 324 or declared in an Art graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ART 525 – ADVANCED TYPOGRAPHY
4 credits.

An advanced investigation of typography for visual communication and expression. Emphasis is placed on the analysis of meaning as conveyed through, materials, technology, and design. Projects are experimental and are designed to challenge you to expand your understanding of the function typography plays in design, art, and culture.
Requisites: (ART 102 or 107), ART 346 and 438
Repeatable for Credit: No
Last Taught: Fall 2024

ART 526 – ADVANCED ETCHING/INTAGLIO
4 credits.

Research in advanced intaglio techniques. Color printing.
Requisites: ART 326 or declared in an Art graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ART 529 – 3D DIGITAL STUDIO II
4 credits.

Intermediate/advanced class covering the theory and practice of 3D digital modeling and animation software as a tool for making art.
Requisites: ART 429
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Use keyframe animation, motion paths and "Set Driven" keys.
Audience: Both Grad & Undergrad

2. Use a variety of deformers.
Audience: Both Grad & Undergrad

3. Develop and create an effective animation from sketching and storyboarding through final video delivery.
Audience: Both Grad & Undergrad

4. Demonstrate knowledge about contemporary practice in the field, including the use of 3D digital technology in fine art, design and entertainment.
Audience: Both Grad & Undergrad

5. Incorporate techniques and information covered by the class into their own research.
Audience: Graduate

ART 531 – SCREEN PERFORMANCE
3-4 credits.

Focuses on performance made for the screen including first person narrative, spoken word, video dance, fictional cinema, experimental documentary and other forms of mediated performance practice.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023

ART 532 – ADVANCED LIFE DRAWING I
4 credits.

Further examination of the percepts of drawing with the human figure. Emphasis on formal elements. Problems of structure. Intense studio practice working from the model.
Requisites: ART 332 or declared in an Art graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ART 534 – ADVANCED WOOD WORKING
4 credits.

Development of advanced concepts and techniques in wood-based functional and/or fine art forms.
Requisites: ART 334 or declared in an Art graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ART 536 – ADVANCED SERIGRAPHY
4 credits.

Development of advanced concepts and techniques using silk screen processes to create fine art forms.
Requisites: ART 336 or declared in an Art graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ART 542 – ADVANCED WATERCOLOR I
4 credits.

Transparent and opaque watercolor media; studio practice, critiques, field trips.
Requisites: ART 342 or declared in an Art graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ART 544 – ADVANCED ART METAL I
4 credits.

Advanced techniques in creating functional and/or fine art metal objects.
Requisites: ART 244 or 344 or declared in an Art graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ART 546 – GRAPHIC DESIGN FOR PUBLICATIONS
4 credits.

Covers the theory and practice of designing newspapers, magazines, books, and other narrative forms. Emphasis will be placed on advanced typographic theory, and advanced digital and manual production skills.
Requisites: (ART 102 or 107 or declared in an Art graduate program), ART 346, and 438
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ART 548 – SPECIAL TOPICS: ADVANCED LEVEL
1-4 credits.

Topical courses in art at an advanced level.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ART 552 – ADVANCED PAINTING: NEW FIGURATION II
4 credits.

Advanced work in depicting the human figure as a source for creative and independent viewpoints in painting and other media.
Requisites: ART 452 or declared in an Art graduate program
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023

ART 554 – ADVANCED GLASSWORKING
4 credits.

Advanced concepts and techniques in fine art glass.
Requisites: ART 354 or declared in an Art graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ART 556 – GRAPHIC DESIGN FOR INTERACTIVE MEDIA
4 credits.

Explore creative visual interface and interactive storytelling for the Web.
Requisites: (ART 102 or 107), ART 346, 438, and one of: (ART 443, 458, 463, 465, 467, 546, 563, 565, 568 or 575); or declared in MFA Art or MS Design + Innovation.
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022
Learning Outcomes: 1. Critique and apply visual principles in the design of expressive/communicative digital interactions.
Audience: Both Grad & Undergrad

2. Analyze and apply relevant screen-based interaction theories, processes, and methodologies.
Audience: Both Grad & Undergrad

3. Apply appropriate software and coding skills to create and publish a fully functional website.
Audience: Both Grad & Undergrad

4. Apply dynamic web design skills using user interaction, sound, and video.
Audience: Both Grad & Undergrad

5. Interact, critique, and collaborate through group critiques, discussions, writing, and visual works.
Audience: Both Grad & Undergrad

6. Design and develop spatial web design including virtual reality or augmented reality.
Audience: Graduate

ART 558 – PRODUCT DEVELOPMENT FOR GRAPHIC DESIGN
4 credits.

Focuses on developing an understanding of design processes through the utilization of specific fabrication materials and methods. Experience is gained in giving form to objects and products. Prototyping techniques and digital design tools will be explored. In addition, investigates the movements in the history of product design and the development of materials, production, technologies, consumption and other social and cultural concerns that impact the field. A special focus on the identification and use of sustainable materials and processes.
Requisites: (ART 102 or 107), ART 346 and 438
Repeatable for Credit: No
Learning Outcomes: 1. Apply creativity, design thinking, and design process to bring new ideas, products, and value to companies, communities, and people.
Audience: Undergraduate

2. Integrate the notion of sustainability into a more holistic understanding of the interdependency of people, functional disciplines, socio-cultural systems and physical resources.
Audience: Undergraduate

3. Demonstrate comfort with complex, ambiguous problems and the uncertain path towards specific, viable solutions
Audience: Undergraduate

4. Understand the importance of the design process to guide your thinking without constraining it.
Audience: Undergraduate

5. View graphic design as an entrepreneurial practice.
Audience: Undergraduate

ART 560 – GRAPHIC DESIGN SENIOR THESIS PROJECT AND EXHIBITION
4 credits.

A capstone experience for seniors in the Graphic Design Program. A hybrid of studio and seminar, course work will combine inquiry, research, creative problem-solving, and design prototyping. Students will use research to launch a comprehensive graphic design thesis project which will be exhibited at the end of the term.
Requisites: (ART 102 or 107), ART 346, 438, and two of: ART 458, 463, 465, 467, 546, 556, 565, 568
Repeatable for Credit: No
Last Taught: Spring 2025

ART 563 – GRAPHIC DESIGN FOR GAMES
4 credits.

Game design is a subdiscipline in which graphic designers create meaningful play and interactive experience through words, images, structure, process, and the study of user experience. This course, which explores both digital and non-digital games, aims to provide you with a critical vocabulary and historical context for analyzing games, as well as the skills and techniques necessary to incorporate game design into your ongoing design practice.
Requisites: (ART 102 or 107), ART 346 and 438
Repeatable for Credit: No
Last Taught: Fall 2025

ART 564 – GRAPHIC DESIGN FOR ACCESSIBILITY
4 credits.

An introduction to designing for accessibility and inclusion including visual design research, design thinking, and digital fabrication.
Requisites: (ART 102 or 107), ART 346, and (ART 458, 463, 465, 467, 546, 565 or 568), or declared in Art MFA or Design + Innovation MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Gather meaningful information about users and their experiences by asking, observing, learning, and surveying
Audience: Both Grad & Undergrad

2. Understand the importance and the impact of designing for accessibility and inclusion
Audience: Both Grad & Undergrad

3. Analyze design problems and propose design interventions based on the user-centered process
Audience: Both Grad & Undergrad

4. Apply an iterative design process, including prototyping skills with various analog and digital methods and testing for user experience design
Audience: Both Grad & Undergrad

5. Prepare high-quality professional documentation of the design process and presentation for a professional portfolio
Audience: Both Grad & Undergrad

6. Develop an abstract for conference presentations and a gallery plan for an exhibition using the final projects
Audience: Graduate

ART 565 – TYPEFACE DESIGN
4 credits.

Examine conceptual and technical processes used for designing fonts and typefaces in a digital environment.
Requisites: (ART 102 or 107), ART 346 and 438
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023

ART 568 – MOTION TYPOGRAPHY
4 credits.

Examines conceptual and technical processes used setting type in motion in a digital environment using digital video, computer graphic, and digital photo technologies. Students must take ART 107 and ART 346 prior to enrolling in this course.
Requisites: (ART 102 or 107), ART 346 and 438
Repeatable for Credit: No
Last Taught: Fall 2019

ART 570 – ADVANCED TOPICS IN 4D ART
3-4 credits.

Topics courses exploring advanced concepts in historical, theoretical and studio practices in the discipline of time-based art forms, including but not limited to: digital animation, video, installation, and visual art performance.
Requisites: ART 470 or declared in an Art graduate program
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2019

ART/THEATRE 572 – SET DESIGN II
3 credits.

Historical survey of visual theatre, painting, and architectural styles adapted to various dramatic forms. Application of design elements and styles to contemporary theatre productions.
Requisites: THEATRE/ART 372
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2019

ART 575 – USER EXPERIENCE FOR GRAPHIC DESIGN
4 credits.

A project-based introduction to the examination of user experience, and is oriented toward practical methods for approaching a design problem. The focus of the course is to develop conceptual design based on the needs of users. Students will receive grounding in user research methods, design sketching, and design validation.
Requisites: (ART 102 or 107), ART 346 and 438
Repeatable for Credit: No
Last Taught: Fall 2025

ART 576 – ADVANCED PHOTOGRAPHY
4 credits.

Emphasis on advanced techniques, color, personal concepts and expression, criticism, communicative potential of photography.
Requisites: ART 476 or declared in an Art graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ART 608 – INTERDISCIPLINARY CRITIQUE IN THE VISUAL ARTS
3 credits.

Group critique for advanced students working in the various disciplines of the visual arts.
Requisites: Senior standing and declared in BS-Art, BFA-Art or BS-Art Ed degree program or declared in an Art graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2023

ART 612 – ADVANCED DRAWING II
3-4 credits.

Continuation of advanced level drawing. Focus on advanced techniques and conceptual development in conversation with contemporary drawing practices.
Requisites: ART 512 or declared in an Art graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ART 614 – ADVANCED SCULPTURE WORKSHOP 2
3-4 credits.

Continuing instruction in the use of various materials as required by each student in terms of the formal and conceptual basis of their work. Emphasis on the development of individually directed studio projects, professional art practices, and preparing work for exhibition.
Requisites: ART 514 or declared in an Art graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ART 622 – ADVANCED UNDERGRADUATE PAINTING WORKSHOP
3 credits.

Continuation of 522. Entrance is by consent through competitive portfolio review, held in the final week of the fall and spring semesters. Qualified applicants will have completed Art 222, 322, and at least one of the following: Art 312, 332, 342, 452, 512, 522, 542; or have transferred equivalent coursework. Not open to graduate students.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ART 624 – ADVANCED CERAMICS II
4 credits.

Advanced concepts and practices using clay/ceramics to create fine art objects.
Requisites: ART 524 or declared in an Art graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ART 629 – 3D DIGITAL STUDIO III
4 credits.

An advanced project based class in 3D Digital Animation. Students will complete a single major animation project based on their own proposal as approved by the instructor.
Requisites: ART 429 or 529
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ART 632 – ADVANCED LIFE DRAWING II
3-4 credits.

Advanced work and examination of the percepts of drawing with the human figure. Emphasis on conceptual development in conversation with contemporary life drawing practices.
Requisites: ART 532 or declared in an Art graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2019

ART 636 – COMPUTER AUGMENTED PRINTMAKING
4 credits.

Advanced computer imaging for printmaking. Emphasis is on self-initiated projects that combine printmaking or photographic techniques with digital output.
Requisites: (ART 306, 316, 326, 336, or 348) or declared in an Art graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ART 642 – ADVANCED WATERCOLOR II
4 credits.

Advanced concepts and processes in transparent and opaque watercolor media.
Requisites: ART 542 or declared in an Art graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2020

ART 644 – ADVANCED ART METAL II
4 credits.

Further advanced study in the art of metalsmithing.
Requisites: ART 544 or declared in an Art graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ART 656 – DESIGN PORTFOLIO AND PROFESSIONAL PRACTICE
4 credits.

Advanced level graphic course designed to prepare senior level students for entrance into the design profession. Portfolio and resume preparation will be the primary emphasis. Legal and professional practice topics also will be addressed.
Requisites: (ART 102 or 107), ART 346, 438, and two of: ART 458, 463, 465, 467, 546, 556, 565, 568
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022

ART 663 – GRAPHIC DESIGN PRACTICUM
2 credits.

Gives students direct experience in the field of graphic design by working on actual client-based projects. Projects vary each term, and include both on and off campus clients. The course operates as professional design studio doing work for university, local and regional clients.
Requisites: (ART 102 or 107), ART 346 and 438
Repeatable for Credit: Yes, unlimited number of completions

ART 699 – INDEPENDENT STUDY
1-3 credits.

Independent undergraduate work in advanced area of study under direction of art faculty.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ART 700 – INTRODUCTION TO GRADUATE STUDIES IN ART
3 credits.

Introduction to graduate study in art. Will explore the relationships between the contemporary art world, research and studio practice, theoretical issues, and education in the arts. Also addresses building and sustaining a career in the arts.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ART 706 – TEACHING FOUNDATIONS OF COLLEGE ART
1 credit.

Practical tools and techniques for teaching the foundations of college art and effectively managing the classroom.
Requisites: Declared in Art MFA
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 2 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and apply key teaching methods in college-level art instruction.
Audience: Graduate

2. Examine key issues in teaching of college-level art foundations.
Audience: Graduate

3. Reflect and collaborate on challenges that arise in the teaching and learning of college-level art.
Audience: Graduate

4. Develop resources and support peers in the teaching and learning of college-level art.
Audience: Graduate

ART 722 – GRADUATE PAINTING I
2-3 credits.

Graduate level instruction in all painting media.
Requisites: Declared in an Art graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2021

ART 726 – GRADUATE INTAGLIO PRINTMAKING I
2-3 credits.

Graduate level investigations of advanced intaglio methods; exploration toward an individual and mature imagery in graphics materials.
Requisites: Declared in an Art graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ART 736 – GRADUATE GRAPHICS WORKSHOP I
2-6 credits.

Graduate level study in advanced graphics media. Emphasis on development of personal concepts.
Requisites: Declared in an Art graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

ART 740 – INTERDISCIPLINARY GRADUATE CRITIQUE
1 credit.

Present studio research to peers and faculty and engage with collaborative audience representing multiple artistic disciplines. Provides a holistic understanding of the creative process as it relates to practice and research. Diverse array of skills-sets and the opportunity to influence and enhance the creative process strengthening abilities in performing analysis and critical inquiry into practice and research.
Requisites: Declared in Art MFA
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 3 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Position the student's artistic research within contemporary landscape of visual art
Audience: Graduate

2. Demonstrate understanding of research as it relates to a pluralistic approach outside a singular medium
Audience: Graduate

3. Present the complexities of their work to professionals in the field
Audience: Graduate

ART 908 – SEMINAR-ART
3 credits.

Special topics in grad-level seminars.
Requisites: Declared in an Art graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ART 912 – ADVANCED RESEARCH-DRAWING
1-4 credits.

Graduate level instruction in all drawing media processes.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2020

ART 914 – ADVANCED RESEARCH-SCULPTURE
1-4 credits.

Graduate level instruction in all sculpture processes.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ART 922 – ADVANCED RESEARCH-PAINTING
1-4 credits.

Graduate level instruction in all painting processes.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022

ART 924 – ADVANCED RESEARCH-CERAMICS
1-4 credits.

Graduate level instruction in all ceramics processes.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ART 944 – ADVANCED RESEARCH-ART METAL
1-4 credits.

Graduate level instruction in metalsmithing.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2021

ART 996 – ADVANCED RESEARCH-GRAPHICS
1-4 credits.

Graduate level instruction in all printmaking and photography processes.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ART 999 – INDEPENDENT STUDY
1-4 credits.

Independent graduate work in advanced area of study under direction of art faculty.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ART EDUCATION (DEPARTMENT OF ART) (ART ED)

ART ED 321 – INTRODUCTION TO TEACHING ART
2 credits.

Explore art education careers, develop art and art-integrated curriculum, practice instructional strategies, and conduct fieldwork in community and school-based settings.
Requisites: None
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explore art education careers through observing and interviewing art educators, reflecting on their own developing teacher identities, and identifying art and education internship, job, and volunteer opportunities in the community.
Audience: Undergraduate

2. Experiment with a range of 2D and 3D media techniques and processes, and identify associated concepts and vocabulary to inform the development of art and art-integrated curriculum appropriate for k-8 populations.
Audience: Undergraduate

3. Create developmentally and culturally appropriate art curriculum for k-8 afterschool programs in Madison (i.e. basic lesson planning, including writing learning objectives, lesson sequencing, and structuring effective demonstrations, material management and clean up).
Audience: Undergraduate

4. Employ a variety of instructional strategies to engage students in conversations about art and relevant art making experiences and implement simple pre and post-instruction assessments to gather data on student learning.
Audience: Undergraduate

ART ED 323 – FOUNDATIONS IN ART EDUCATION
3 credits.

Examination of foundational principles of art education and art curriculum planning, instruction and assessment for kindergarten through twelfth-grade students.
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define the components of Discipline-Based Art Education and Culturally Relevant Pedagogy and use them to guide decisions related to art curriculum, instruction and assessment.
Audience: Undergraduate

2. Explain choice-based models of art education, prominent theories of creativity, and methods for facilitating creative processes and use them to inform curricular and instructional decisions.
Audience: Undergraduate

3. Demonstrate the fundamental skills of lesson planning through the design of standards-based, culturally relevant, developmentally appropriate art curriculum inspired by the pedagogical models studied during the semester.
Audience: Undergraduate

4. Apply a variety of effective instructional strategies for engaging art learners in community-based settings, such as art centers, after-school programs and art clubs.
Audience: Undergraduate

ART ED 324 – METHODS IN ART EDUCATION
3 credits.

Study of principles in art curriculum planning, instruction and assessment, classroom management and learner diversity in elementary and secondary schools.
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use considerations of learner diversity (gender, culture, special needs, etc.) to inform the creation of developmentally-appropriate, culturally relevant, differentiated curriculum and instruction
Audience: Undergraduate

2. Design and facilitate standards-based units of instruction (unit planning), using contemporary approaches to art curriculum development
Audience: Undergraduate

3. Explain purposes for art in education, analyzing the benefits and limitations of various models of art education and use them as frameworks for their teaching practice
Audience: Undergraduate

4. Define facets of classroom management and practice effective classroom management strategies in fieldwork placements
Audience: Undergraduate

ART ED 327 – PRACTICUM IN ART EDUCATION
6 credits.

Observation and instruction of learners in elementary and secondary school settings. Study of art curriculum, instruction, assessment, learner diversity and class management.
Requisites: Consent of instructor
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze classroom art teaching to develop a realistic awareness of challenges, diverse student needs, and strategies to meaningfully engage students in creating, responding to, connecting with, and presenting art
Audience: Undergraduate

2. Effectively collaborate with cooperating teachers to provide one-to-one, small group and whole class instruction, material and lesson preparation, and other related professional tasks
Audience: Undergraduate

3. Teach art lessons to elementary and secondary students and implement a range of class management strategies to facilitate visual arts learning and assessment
Audience: Undergraduate

ART ED 423 – STUDENT TEACHING IN ELEMENTARY ART
5 credits.

Supervised student teaching in elementary art classrooms.
Requisites: ART ED 324
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate proficient pedagogical skills and knowledge regarding art curriculum, instruction, assessment, classroom management, and professionalism through work experience as student teaching in elementary school settings
Audience: Undergraduate

2. Effectively communicate and collaborate with cooperating teaching and other school staff to create inclusive, supportive, safe and culturally responsive learning environments to meet the needs of diverse learners in elementary art classrooms
Audience: Undergraduate

3. Document and reflect on evidence addressing professional growth and School of Education performance standards for degree completion and licensure
Audience: Undergraduate

ART ED 424 – STUDENT TEACHING IN SECONDARY ART
5 credits.

Supervised student teaching in middle or high school art classrooms.
Requisites: ART ED 324
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate proficient pedagogical skills and knowledge regarding art curriculum, instruction, assessment, classroom management, and professionalism through work experience as student teachers in secondary school settings
Audience: Undergraduate

2. Effectively communicate and collaborate with cooperating teachers and other school staff to create inclusive, supportive, safe and culturally responsive learning environments to meet the needs of diverse learners in secondary art classrooms
Audience: Undergraduate

3. Document and reflect on evidence addressing professional growth and School of Education performance standards for degree completion and licensure
Audience: Undergraduate

ART ED 425 – SEMINAR IN ART EDUCATION
2 credits.

Advanced study of current topics in elementary, middle and high school visual arts education.
Requisites: ART ED 324
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Provide professional and moral support to your peers by reflecting on, discussing and collectively responding to issues and challenges that emerge in student teaching placements.
Audience: Undergraduate

2. Develop strategies for writing curriculum for an entire secondary course or an entire year of elementary instruction, plus create an assessment system for summative evaluation.
Audience: Undergraduate

3. Analyze the relationship of curriculum and instruction to assessment, and use assessment data to inform next steps for student learning.
Audience: Undergraduate

4. Produce artifacts and reflect on evidence addressing your professional growth in relation to the School of Education teaching standards.
Audience: Undergraduate

5. Prepare application materials for entering the job market and apply for a PK-12 art teaching license with Wisconsin's Department of Public Instruction.
Audience: Undergraduate

ART ED/CURRIC 493 – PRACTICUM IN SECONDARY SCHOOL ART
3 credits.

Observation and instruction of elementary and secondary pupils in a laboratory setting. Lecture and discussion of topics related to art instruction.
Requisites: Declared in Art Education BSE
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: No
Last Taught: Fall 2022

ART ED 699 – INDEPENDENT READING AND RESEARCH
1-3 credits.

Student-designed project and activities to explore a topic in depth.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

ART ED 999 – ADVANCED INDEPENDENT READING
1-3 credits.

Student-designed project and activities to explore a topic in depth.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2015

ART HISTORY (ART HIST)

ART HIST 102 – SEEING THROUGH CONSPIRACY THEORIES
3 credits.

Fake news is not a new problem. In taking on this ongoing issue, we begin before living memory (to avoid the deadening effect of feedback loops within today's media world), with a focus on the visual and built environment. How do conspiracy theories work? Do they fall into patterns? How can we recognize them? If they are empowering, how should we think about that? Visual material plays a special role in the reinforcement of conspiracy theories. Case studies around the world, from the Egyptian pyramids to the birth of "modern" art in the twentieth century, center on ways in which an evidence-based account of the making of an artwork or architectural site has been replaced by a (usually more interesting) story about its true, hidden nature. This story usually purports to reveal the "conspiracy" of an empowered institution or group to keep the truth away from average people. Of course, the reality is often much simpler and the dynamics of power more complex.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Research: Accurately research the history of images, objects, performances, and sites.
Audience: Undergraduate

2. Critical Thinking: Identify the structure of a conspiracy theory and differentiate art historical research therefrom; Differentiate sources at a field-specific level (museum catalogues v. museum websites; blogs vs. academic journals; popular books vs. peer-reviewed academic monographs; etc.) and evaluate each source's appropriate use in building evidence.
Audience: Undergraduate

3. Original Argumentation: Build convincing and original interpretations of images, objects, performances, and sites.
Audience: Undergraduate

4. Visual Analysis: Acquire skills of close looking and formal analysis.
Audience: Undergraduate

5. Oral Communication: Execute the typical methods of presenting art historical research at a beginning level
Audience: Undergraduate

6. Writing: Compose short art history essays. Give useful, concise feedback to peers relevant to art historical best practices. Incorporate feedback and reflect on how feedback alters a previous approach.
Audience: Undergraduate

ART HIST 103 – TOPICS IN ART HISTORY
3-4 credits.

Offers an introduction to world art by taking a thematic approach. Topics will center around art and architecture produced in a variety of media, from a wide time span, and a range of cultural and geographic points of origin.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

ART HIST 104 – THE ART OF DIVERSITY: RACE AND REPRESENTATION IN THE ART AND VISUAL CULTURE OF THE UNITED STATES
3-4 credits.

The history of art and visual culture in the United States from the period of colonization until the present from the perspective of how that imagery produced ideas of race and operated to define, exclude, and include various groups over time. Three basic aims: 1. To introduce art history of the United States from c. 1600-2018; 2.To provide skills in visual analysis and critical thinking; and 3. To encourage the understanding of ethnic and cultural minorities in the United States with an emphasis on the visual arts related to marginalization or minority status in the twentieth-and twenty-first century.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ART HIST 105 – INTRODUCTORY TOPICS IN ART HISTORY
3 credits.

Introductory topics in Art History.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2022

ART HIST 106 – HAVE BRUSH, WILL TRAVEL: THE ITALIAN RENAISSANCE FROM FLORENCE TO ROME
3 credits.

Examines artistic developments that took place in Florence in the 15th century, and how the Florentine Renaissance paved the way to the achievements by painters, sculptors, and architects in Rome in the 16th century, many of whom traveled from Florence to Rome in pursuit of economic opportunity. Introduces the numerous important artistic works produced in Florence, Rome, and other artistic centers, and provides a basic understanding of the purposes, methodology, and terminology of art historical study.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Understand the Italian Renaissance as a historical phenomenon and concept
Audience: Undergraduate

2. Understand and articulate economic structures and artist-patron-viewer relationships
Audience: Undergraduate

3. Evaluate material evidence in its cultural and historical context as a general, transferable skill
Audience: Undergraduate

4. Comprehend art's fundamental relation to ethics, ideology and politics
Audience: Undergraduate

5. Improve analytical reading, writing and oral communication skills
Audience: Undergraduate

6. Recognize and track stylistic changes in Western art
Audience: Undergraduate

ART HIST 107 – THE BODY, SEX, & HEALTH IN ART
3 credits.

Considers the many fascinating ways in which cultures represented ideas of health, sex, disease, medicine, and death, focusing on the ways different art forms (painting, sculpture, architecture, prints, photography, textiles, decorative arts, hair, costume, music and dance, food) conveyed historically and culturally distinctive ideas about bodies. Linking the topics will be an attention to how notions of race, gender, and disability determine representations of the body. Enjoy an introduction to basic skills in visual interpretation that are widely applicable in today's world, while covering health and body-related topics chosen from the arts of Europe, China, Japan, Africa, the Islamic World, and the United States. Our objects of study range from ancient Greece and Rome to the present, with an emphasis on nineteenth- to twenty-first century art.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Visual Analysis: Understand and apply formal analysis method of interpreting artwork, based on visually analyzing medium, form, color, and other material elements
Audience: Undergraduate

2. Communication, oral: Contribute in informed and supportive ways to group discussion about artworks and articles
Audience: Undergraduate

3. Communication, written: Compose short essays in proper expository prose style supporting an original thesis
Audience: Undergraduate

4. Critical Thinking: Analyze essays in art history to identify the argument, defend or disagree with it, then apply it
Audience: Undergraduate

5. Historical and Cultural Understanding: Identify and explain socio-historical reasons for different cultures' arts
Audience: Undergraduate

ART HIST/RELIG ST 115 – RELIGION AND ART
3 credits.

Fundamental to all religions are shared beliefs about human beings' relation to that which they regard as holy, sacred, spiritual, divine, or worthy of reverence. Focuses on how religions around the world, from antiquity to the present, mediate sacred and divine presence through material means, aimed to stimulate the human senses. Considers the questions: What makes particular places sacred? How do architecture and ritual contribute to the fashioning sacred worship spaces or places of pilgrimage and healing in diverse religious traditions? How do some religions use icons/images, painted or sculpted, to mediate divine presence, while others consider figural images to be idols? How do art, architecture, and even landscapes serve as places of memory and convey fundamental beliefs about the afterlife?
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Analyze, compare, and evaluate theories about the material manifestations of religion
Audience: Undergraduate

2. Recognize, describe, compare and differentiate visual images, architecture, landscapes and religious material culture of different religious traditions
Audience: Undergraduate

3. Demonstrate collaborative skills by working in small groups to critically respond to questions about readings prepared in advance or works of art in the museum
Audience: Undergraduate

4. Develop written and oral arguments based on visual and material evidence.
Audience: Undergraduate

5. Employ research skills to interpret religious images and architecture
Audience: Undergraduate

ART HIST 130 – SEEING RACE: ANTI-RACISM AND VISUAL CULTURE
3 credits.

Confronting how images work to shape ways of seeing race, this introduction to visual cultures tracks how power works through the visual - from visual surveillance and racial profiling to anti-racist visual activism. Trains critical understanding of the role of imaging in producing ways of seeing race in its intersections with gender, sexuality, and ability. Through critical consideration of the spectacle of racialized violence and the everyday micro-aggressions of the stereotype, addresses the ways that images harm. Also considers how just representation may offer restitution and repair. Explores forms of anti-racist visual activism that seize the power to look back. And questions the ethics of an assumed right to look and to take an image. In asking these imperative ethical and political questions about what images do, trains the critical capacity to harness and intervene in the powers of imaging.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Develop working understanding of what images do and how they operate to shape how we see race, our assumptions about race, and our ideas about self and other.
Audience: Undergraduate

2. Develop skill in critical analysis of images, especially in terms of racialization and its shaping intersections with gender, sexuality, and ability.

Audience: Undergraduate

3. Develop knowledge of de-colonial and anti-racist images and visual culture that shows awareness of history's impact on the present, ability to recognize and question assumptions, and a consciousness of self and other.
Audience: Undergraduate

4. Develop ability to apply skills in critical analysis and knowledge of de-colonial and anti-racist images and visual culture to produce critical and creative interventions in visual media that shows awareness of history's impact on the present, ability to recognize and question assumptions, and a consciousness of self and other.
Audience: Undergraduate

ART HIST/ASIAN 179 – PASSAGE THROUGH INDIA: SOUTH ASIA'S GLOBAL ARCHITECTURAL HISTORIES
3 credits.

Historical overview of India and South Asia's global architectural histories from the ancient to the modern periods. While focusing predominantly on architectural sites in India, examine architecture at multiple sites across the globe which share connected histories with South Asia. We live in a world of nation states and are shaped by national histories. However, in the arc of human history, nation states are of recent vintage. Examine India's global architectural histories not only through comparison but, in the words of historian Sanjay Subrahmanyam, "by seeking out the at times fragile threads that connected" India to "the globe." Capturing the mobility of populations, traders, conquerors, missionaries, pilgrims, tourists, colonists, architects, artists, scholars, religion, merchandise, art, architecture, and ideas, we show that South Asia's global architectural histories are themselves the complex products of varied histories of cultural encounters.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe, appraise and analyze the connected histories of India with other parts of the globe through its art, and architecture.
Audience: Undergraduate

2. Discuss texts from various critical perspectives, formulate ideas and make connections between visual/spatial/cultural concepts and themes.
Audience: Undergraduate

3. Recognize and visually analyze architectural sites and buildings in India and across the globe that share connected histories with South Asia.
Audience: Undergraduate

ART HIST 201 – HISTORY OF WESTERN ART I: FROM PYRAMIDS TO CATHEDRALS
4 credits.

Examines the arts and cultures of Europe and the Mediterranean basin before the Renaissance. Explores canonical works such as the pyramids at Giza, the Parthenon in Athens, the Venus di Milo, Hagia Sophia in Constantinople, the Book of Kells, the Great Mosque at Córdoba, Chartres cathedral, and Giotto's Arena Chapel. Define art broadly, to encompass the material culture of everyday life, including jewelry, ceramics, and textiles. Considers the social and historical contexts of art and artistic production - art and imperialism, ethnicity, technology, religious ritual and belief, and myth and storytelling, and its relationships to basic human concerns: death and the afterlife, desire and the body, self-definition and portraiture, power and propaganda, monstrosity and the supernatural, the divine and the sacred. Develops crucial skill sets: critical visual analysis, contextual interpretation, research methods and resources, historiography, and oral, written and digital communication.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025

ART HIST 202 – HISTORY OF WESTERN ART II: FROM RENAISSANCE TO CONTEMPORARY
4 credits.

Examine the arts and culture of Europe and North America from the Renaissance through the present. Explore important fine art, architecture, decorative arts, and photographic masterpieces by artists like Leonardo da Vinci, Rembrandt van Rijn, Claude Monet, Paul Cézanne, Pablo Picasso, Frida Kahlo, and Frank Lloyd Wright. Learn how works of art were valued from the moment of their making, fought over by different nations, bought, sold, stolen, or ignored for centuries and revived only recently for study through the political, historical, social and cultural contexts of their making. Critically examine the concept of artistic genius; the influence of colonialism and imperialism on artistic production and consumption; the role of the patron and the art market in art's production and circulation; the relationship of fine art and popular culture; and the idea of globalization as it relates to "western" artistic traditions. Develop skills in visual analysis to understand artistic production.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ART HIST 205 – GLOBAL ARTS
3-4 credits.

ART IS GLOBAL (and always has been). Today, we find Egyptian protest artists inspiring activists around the globe via the internet, but in earlier times, Roman glass and Buddhist icons moved along the ancient Silk Route, networks of exchange flourished in the medieval Mediterranean region, and colonial empires brought visual cultures into volatile contact. Learn how to analyze images and objects produced through such exchanges that occurred around the world from ancient times through the contemporary. Develop skills needed to live fully in a world in which borders are no barriers to the movement of images, objects, and ideas and to deepen understanding of cultural differences and interactions. By exploring works in a range of media and tracing processes of cross-cultural exchange, develop sensitivity to visual and material form and a solid foundation in the practice of visual and material analysis.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2020
Learning Outcomes: 1. Increased knowledge, understanding, and appreciation of cultural diversity across time and space
Audience: Undergraduate

2. Ability to analyze images and objects in various cultural contexts, linking their visual forms to cultural practices
Audience: Undergraduate

3. Increased skill in observing and describing the visual environment around us
Audience: Undergraduate

4. Increased skills in written and verbal expression of complex ideas
Audience: Undergraduate

ART HIST 206 – SURVEY OF PHOTOGRAPHY: 1839 TO 1989
3-4 credits.

Survey of 150 years of photography's processes, practitioners, and genres. Emphasis on tensions between its commercial, vernacular, and artistic forms.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2019

ART HIST 210 – A HISTORY OF THE WORLD IN 20 BUILDINGS
3 credits.

Why were the ancient Egyptians obsessed with building elaborate tombs? Was the Taj Mahal really a monument to love? Why do the Greeks want the Parthenon marbles returned? Was Frank Lloyd Wright "modern?" How have buildings reflected and shaped the historical forces of the modern age, from colonialism, to industrialization, to globalization? Take a journey through space and time and explore the history of the world through its great buildings. Learn to recognize, analyze, and question the dynamic interaction between culture, politics, religion, and architectural form. Perhaps more than any other visual art, architecture is alive. Buildings shapeshift over decades, centuries, millennia. They stand as both witnesses to and agents of historical change. Unpack our buildings' histories to reveal their role in our shared human story.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Interpret architecture in its cultural context.
Audience: Undergraduate

2. Analyze the relationship between architectural form and historical change.
Audience: Undergraduate

3. Observe, describe, and appreciate the buildings around them.
Audience: Undergraduate

4. Argue for what makes a “great building” in its historical context.
Audience: Undergraduate

ART HIST 227 – THE MODERNIST REVOLUTION
4 credits.

Overview of the emergence and development of modernism in the visual arts between approximately 1880 and 1970, begining with the origins of modernist visual art in the late 19th century, then moving on to the proliferation of avant-garde movements in the first half of the 20th century before concluding with the crisis and collapse of modernism in the post-World War II period. Movements covered include Cubism, Futurism, Dadaism, Surrealism, and Abstract Expressionism. Major topics: the breakdown of traditional pre-modernist artistic styles and genres; invention of radical new techniques such as abstraction and collage; impacts of the political, social, and technological upheavals of the modern era; relations between modernist art, racialization, and colonialism; the transition between modernism and contemporary (or post-modernist) art.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate an understanding of key issues in the field of 20th century art history through exams, writing assignments, and discussion section participation.
Audience: Undergraduate

2. Relate modern art movements to their social, economic, political, and cultural contexts.
Audience: Undergraduate

3. Develop techniques of written and oral communication in an academic setting.
Audience: Undergraduate

ART HIST/ENVIR ST/GEOG/HISTORY/LAND ARC 239 – MAKING THE AMERICAN LANDSCAPE
3-4 credits.

Traces the history and evolution of the American cultural landscape from precolonial times to present. Explores how class, ethnic, and racial inequality have shaped the appearance of the American landscape over time, and how that landscape in turn has affected relationships between people and groups through the present day. Examines extraordinary things (civic structures (like our State Capitol), National Parks, War Memorials) and more ordinary kinds of places (mining towns, cotton plantations, sites of recreation and leisure, and suburban tract housing) to stimulate critical thinking about how these places have served people and groups unequally and disproportionately over time and across space. Considers complex meanings of American spaces and places to different people and groups, stimulating empathy and encouraging participation in a multicultural society.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe and interpret the American landscape as a richly layered historical document mediated by complex relationships between people and groups
Audience: Undergraduate

2. Explain how the American cultural landscape has affected present day circumstances regarding ethnicity and race as well as racial and ethnic inequalities
Audience: Undergraduate

3. Articulate ways in which historical change manifest in buildings, enclosed spaces, and other elements of the American landscape reveal racial, ethnic, class and gender dynamics between and among people and groups over time
Audience: Undergraduate

4. Enlist forms of historical evidence – maps (current and historic), photographs (aerial and otherwise), historical newspapers, census records, deeds and land records – to interpret landscapes and landscape change
Audience: Undergraduate

5. Explain the American landscape as a product of competing interests, which will demonstrate self-awareness and empathy toward the cultural perspectives and worldviews of others
Audience: Undergraduate

ART HIST/AFROAMER 241 – INTRODUCTION TO AFRICAN ART AND ARCHITECTURE
3 credits.

Examines the rich heritage of African arts and architecture as they shape and have been shaped by the histories and cultural values (social, political, religious, philosophical, and aesthetic) of African peoples, both past and present, on the continent where humanity began. It includes an historical overview of selected artistic traditions from different parts of the continent from 26,000 BCE to the 21st century and thematic/cultural case studies: artists and aesthetics; textiles, decorative, and personal/body arts; architecture; and individual artists.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ART HIST/AFROAMER 242 – INTRODUCTION TO AFRO-AMERICAN ART
3 credits.

Historical survey of African American art. Beginning with the African heritage and concluding with creativity of the 1970's, examine the evolution of African American art. Attention to the aesthetic sensibilities of diverse styles as well as the social significance of Black art within the art arena.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ART HIST/ANTHRO/DS/HISTORY/LAND ARC 264 – DIMENSIONS OF MATERIAL CULTURE
4 credits.

This course introduces students to the interdisciplinary field of material culture studies. It is intended for students interested in any professional endeavor related to material culture, including careers in museums, galleries, historical societies, historic preservation organizations, and academic institutions. During the semester, students have varied opportunities to engage with and contemplate the material world to which people give meaning and which, in turn, influences their lives. Sessions combine in some way the following: presentations from faculty members and professionals who lecture on a phase of material culture related to his/her own scholarship or other professional work; discussion of foundational readings in the field; visits to collections and sites on campus and around Madison; discussion of readings assigned by visiting presenters or the professors; and exams and short papers that engage material culture topics.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ART HIST/CLASSICS 300 – THE ART AND ARCHAEOLOGY OF ANCIENT GREECE
3-4 credits.

Explores the art and archaeology of ancient Greece from the Bronze Age through the Hellenistic period.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge of ancient Greek society and culture.
Audience: Undergraduate

2. Examine, analyze, and interpret material culture.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

4. Understand and evaluate the art and archaeology of ancient Greece, current archaeological methods, the ethics of collecting antiquities, and the legacy of ancient Greek material culture and technologies.
Audience: Undergraduate

ART HIST 301 – MYTHS, LOVES, AND LIVES IN GREEK VASES
3-4 credits.

Explore the world of the ancient Greeks through their painted pottery. Greek pottery offers a uniquely rich imagery of mythology, athletics, domestic scenes, fabulous monsters, drinking parties, and other aspects of Greek life and imagination. They were used by ordinary people, and their use offers insights into their everyday lives and concerns, and a counterbalance to the elite accounts preserved in literature and poetry. Consider the long history of Greek vases from about 800 BC until about 350 BC, and focus on themes such as relationships with the East, myth and epic poetry, narrative, and everyday subjects such as women's lives, death and the afterlife, and the symposium. Make use of the excellent collection of Greek vases in the Chazen Museum, and write research papers using that collection.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

ART HIST 302 – GREEK SCULPTURE
3-4 credits.

Problems in style, techniques and reconstruction of glyptic sculpture, koroplastics and bronzes from the Late Bronze Age through fifth century B.C.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

ART HIST 303 – TOPICS IN ART HISTORY
3 credits.

Surveys the arts or visual culture of varying geographical regions, time periods, or cultures depending on selected topic.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Ability to analyze images and objects in various cultural contexts, linking their visual forms to cultural practices
Audience: Undergraduate

2. Increased skill in observing, describing, and analyzing visual evidence
Audience: Undergraduate

3. Increased skill in weighing and coordinating visual and textual evidence in making arguments
Audience: Undergraduate

4. Increased skills in written and verbal expression of complex ideas
Audience: Undergraduate

5. Increased knowledge of the art and artists and their place in socio-cultural contexts.
Audience: Undergraduate

ART HIST/CLASSICS 304 – THE ART AND ARCHAEOLOGY OF ANCIENT ROME
3-4 credits.

Explores the art and archaeology of ancient Italy, the Roman Republic, and the Roman Empire from the Iron Age to Late Antiquity.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate knowledge of ancient Roman society and culture.
Audience: Undergraduate

2. Examine, analyze, and interpret material culture.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

4. Understand and evaluate the art and archaeology of ancient Rome, current archaeological methods, the ethics of collecting antiquities, and the legacy of ancient Roman material culture and technologies.
Audience: Undergraduate

ART HIST 305 – HISTORY OF ISLAMIC ART AND ARCHITECTURE
3 credits.

Surveys the architecture, landscape, book arts, and luxury objects produced in Islamic contexts from Spain to India from the 7th through the 21st centuries. Attention will be focused upon the relationships between Islamic visual idioms and localized religious, political, and socioeconomic circumstances. In particular, examine the vital roles played by theology, royal patronage, ceremonies, gift exchange, trade, and workshop practices in the formulation of visual traditions.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ART HIST 307 – FROM TOMB TO TEMPLE: ANCIENT CHINESE ART AND RELIGION IN TRANSITION
3 credits.

How did ancient Chinese create an underground space for the afterlife? Why was jade used as a medium to prolong human life or transcend the finite world? How was Buddhist art reappropriated in China? Why did calligraphy emerge as the highest artistic form of self-expression? What is the art of the silk-road? Learn about art forms and concepts that developed in China from remote antiquity to the mid-10th century. The artworks that survive from this long period were created primarily in the contexts of funerary culture and religion, while knowledge of art made for other purposes is based on texts. Organized chronologically, examine the materials, techniques, and functions of the most important artistic media in each period. These media will include jade-carving, metalwork, sculpture, ceramics, calligraphy, painting, textile and architecture. Consider the aesthetic concepts and social groups associated with the various art forms.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Critically read art historical texts critically to interrogate authors for their argument, evidence, and content.
Audience: Undergraduate

2. Analyze how an artwork's format, materials, and visual properties convey meaning, content, and social function.
Audience: Undergraduate

3. Discuss how an artwork relates to its socio-historical context, and—in turn—how its socio-historical context informs our reading of the artwork.
Audience: Undergraduate

ART HIST 308 – THE TASTES OF SCHOLARS AND EMPERORS: CHINESE ART IN THE LATER PERIODS
3 credits.

In what ways were Chinese arts special and noteworthy within the broad history of world art? Why is Chinese landscape painting regarded as the "highest form" of Chinese painting? How did scholars' taste influence garden, furniture and other craft-making? Why did each emperor have his own porcelains made as a way to claim his sovereignty? How did the booming of print culture influence Chinese religious practice in the early modern period? Why did dreams become a popular subject in Chinese art? Learn about art forms and concepts that developed in China from the mid-10th century to the early 20th century. Chronologically, examine the development of painting, calligraphy, woodblock printing, ceramics, lacquer wares, textile, architecture, and photography. In addition to material, technique, subject and function, consider the aesthetic concepts and social groups associated with various art forms.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Critically read art historical texts to interrogate authors for their argument, evidence, and content.
Audience: Undergraduate

2. Analyze how an artwork's format, materials, and visual properties convey meaning, content, and social function.
Audience: Undergraduate

3. Understand how an artwork relates to its socio-historical context, and—in turn—how its socio-historical context informs our reading of the artwork.

Audience: Undergraduate

ART HIST 310 – ICONS, RELIGION, AND EMPIRE: EARLY CHRISTIAN AND BYZANTINE ART, CA. 200-1453
3 credits.

Why did early Christians consider art necessary, if potentially dangerous? How did they adapt and compete with Roman and Jewish traditions? How were the visual propaganda and monumental architecture of the Roman Empire transformed during a millennium of Byzantine (East Roman) rule? These are key questions addressed as we explore the role of architecture and images in religion and imperial politics of the Mediterranean basin between the 3rd and 15th centuries. Other broader topics include the cult of the saints; theories and functions of icons and iconoclasm in Orthodox Christianity; text and image in illuminated manuscripts; multi-sensory aspects of sacred space and ritual; Byzantium's role in global cultural exchange.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Ability to "read" visual images (iconography)
Audience: Undergraduate

2. Critical reading and discussion skills with particular attention methodology
Audience: Undergraduate

3. Respect and value different points of view
Audience: Undergraduate

4. Develop written and oral communication skills with emphasis on articulating arguments based on visual and material evidence of the objects of study
Audience: Undergraduate

5. Develop bibliographic and research methods
Audience: Undergraduate

6. Competence using digital image databases
Audience: Undergraduate

ART HIST 318 – ROMANESQUE AND GOTHIC ART AND ARCHITECTURE
3-4 credits.

Art and architecture of Western Europe, ca. 1000 to ca. 1350. Particular emphasis on the relaionship of the arts to theology, ritual, concepts of the body, rulership and courtliness.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023

ART HIST 320 – ITALIAN RENAISSANCE ART
3-4 credits.

Painting, sculpture, and architecture.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

ART HIST 323 – FROM MICHELANGELO & RAPHAEL TO TITIAN: THE ARTS IN 16TH CENTURY ITALY
3-4 credits.

Examines art from 1500-1570, or the High Renaissance to Mannerism, and concludes at the beginning of the Church Reform period. Emphasis is on painting, sculpture and architecture, but the graphic and decorative arts as well as patronage and the impact of global discoveries also are included.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2020

ART HIST 335 – STUDY ABROAD IN ANCIENT/MEDIEVAL ART
1-6 credits.

Treatment of an art historical topic in a course offered at a university outside the United States. Enrollment in a UW-Madison resident study abroad program.
Requisites: None
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2001

ART HIST 336 – STUDY ABROAD IN RENAISSANCE/BAROQUE/ NORTHERN ART
1-6 credits.

Treatment of an art historical topic in a course offered at a university outside the United States. Enrollment in a UW-Madison resident study abroad program.
Requisites: None
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2002

ART HIST 337 – STUDY ABROAD IN 18TH-20TH CENTURY ART
1-6 credits.

Treatment of an art historical topic in a course offered at a university outside the United States. Enrollment in a UW-Madison resident study abroad program.
Requisites: None
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2001

ART HIST 338 – STUDY ABROAD IN AFRICAN/ASIAN ART
1-6 credits.

Treatment of an art historical topic in a course offered at a university outside the United States. Enrollment in a UW-Madison resident study abroad program.
Requisites: None
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 1998

ART HIST 346 – BRITISH ART AND SOCIETY FROM THE EIGHTEENTH CENTURY TO THE PRESENT
3-4 credits.

Major movements covered include: eighteenth century art of the public sphere (Hogarth, Wright of Derby), Neo-Classicism (Reynolds), Romanticism (Blake, Turner), landscape, Pre-Raphaelites, modern movements and the postmodern revival of British art.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ART HIST 350 – 19TH CENTURY PAINTING IN EUROPE
3-4 credits.

History of European painting from 1800 to 1900.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

ART HIST 354 – CROSS-CULTURAL ARTS AROUND THE ATLANTIC RIM: 1800 TO THE PRESENT
3-4 credits.

Interdisciplinary study of cross-cultural exchange and conflict, focusing on the visual arts, with sections on literature, film and music from the Americas, Africa and Europe.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2022

ART HIST 355 – HISTORY OF PHOTOGRAPHY
3 credits.

European and American photography from its invention to the challenge of electronic media, emphasizing the student's development of a critical approach to the medium.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025

ART HIST 357 – HISTORY OF WISCONSIN ARCHITECTURE, 1800-PRESENT
3 credits.

Introduces methods of studying historical architecture through a focused examination of buildings across the state of Wisconsin. Learn about particular building features, building types, and methods of approaching buildings through a tight focus on a bounded geographical realm. This geographical focus allows for in-depth analysis and research of buildings.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2023
Learning Outcomes: 1. Recognize and identify features and traits of Wisconsin's architecture from the nineteenth century to the present
Audience: Undergraduate

2. Describe these features, components, and traits and buildings and cultural landscapes more broadly using vocabulary and methods of architectural history that are applicable to Wisconsin buildings (and beyond)
Audience: Undergraduate

3. Interpret examples of Wisconsin's buildings using tools, methods, and scholarship from anthropology, history, American studies, cultural geography, landscape architecture, folklore, and material culture, among others, that helps give them meaning and significance to buildings
Audience: Undergraduate

4. Produce an original digital project focused on describing, analyzing, and researching a building around them that enlists skills acquired over the course
Audience: Undergraduate

ART HIST 360 – GORE LUXURY IDENTITY MIMESIS: NORTHERN RENAISSANCE
3 credits.

Why do Netherlandish Lamentations feature bloody, putrefying wounds? Why is a skull distorted across Holbein's Ambassadors? Is there interracial love in Bosch's Garden of Earthly Delights? Featuring the cultural production of Jan van Eyck, Tilman Riemenschneider, Albrecht Dürer, Hieronymus Bosch, Hans Holbein the Younger, Pieter Bruegel the Elder, and others, surveys both visual culture and canonical monuments of art in Northern Europe c. 1400-1570. Engage with media ranging from mass-producible prints to the pseudo-antique format of medals, emphasizing the canonical formats of painting and sculpture. How did this visual output emerge in the context of cultural changes in the spheres of naturalism, technology, humanism, theology, and European "expansion," among others? Informed by readings of primary and secondary textual sources, develop strong skills in visual analysis, a deep sense of historical context, and experience with traditional methodologies.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Know plenty about Northern Renaissance art.
Audience: Undergraduate

2. Feel confident building shared critical discourse in any context.
Audience: Undergraduate

3. Gain familiarity with various approaches to visual content of any time and place.
Audience: Undergraduate

4. Think beyond inappropriate corporate/quantified frameworks for humanistic learning.
Audience: Undergraduate

ART HIST 364 – HISTORY OF AMERICAN ART: ART, MATERIAL CULTURE, AND CONSTRUCTIONS OF IDENTITY, 1607-PRESENT
3-4 credits.

Examines the history of American Art from the period of permanent European settlement through the present. Works of art and other forms of material culture will be explored and discussed within the context of philosophical, historical, social, and cultural developments in the United States and across the globe.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2021

ART HIST 365 – THE CONCEPT OF CONTEMPORARY ART
3-4 credits.

Traces out some of the radical changes in art produced after roughly 1950, or what might be called contemporary art. focuses on American and European art after the "decline" of Modernism. That entails becoming familiar with movements ranging from color field painting, to postmodern production, to performance, video, and installation. Additionally, attention will be paid to artists and artwork that are not adequately represented by the traditional categories of art history.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2020

ART HIST/RELIG ST 373 – MECCA, CAIRO, ISTANBUL, DELHI: GREAT CITIES OF ISLAM
3 credits.

Have you always wanted to visit the Taj Mahal? Are you intrigued by the annual pilgrimage of millions of Muslims to Mecca in Saudi Arabia? Do you wonder how ancient cities like Cairo or Istanbul preserve their history while operating as modern, global megacities? Explore the development of some of the world's most fascinating cities - Mecca (Saudi Arabia), Cairo (Egypt), Istanbul (Turkey), and Delhi (India). Through images, texts, films, sounds, and even food, examine the development of architectural wonders and the urban fabric from the time of their foundation to the present day.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Interpret architecture and urban development in ways that take into account the historical contexts in which they were produced and received.
Audience: Undergraduate

2. Recognize distinct architectural languages in various Islamic cities over time.
Audience: Undergraduate

3. Understand the role of architecture in articulating urban/national narratives about the past and the present.
Audience: Undergraduate

4. Improve in ability to understand complex scholarly arguments, beginning to judge the strength of the visual and textual evidence presented.
Audience: Undergraduate

5. Communicate about architecture and urban history in written and oral form.
Audience: Undergraduate

6. Locate, assess, and use research resources in both print and digital form.
Audience: Undergraduate

ART HIST/ASIAN 379 – CITIES OF ASIA
3 credits.

Historical overview of the built environment of cities of Asia from antiquity to the present; architectural and urban legacy in its social and historical context; exploration of common themes that thread through the diverse geographical regions and cultures of Asia. Not open to students with credit for LCA 379 prior to Fall 2019.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ART HIST 403 – TOPICS IN ART HISTORY
3 credits.

Topics will vary as to media, geography, culture, and time frame.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025
Learning Outcomes: 1. Ability to analyze images and objects in various cultural contexts, linking their visual forms to cultural practices
Audience: Undergraduate

2. Increased skill in observing, describing, and analyzing visual evidence
Audience: Undergraduate

3. Increased skill in weighing and coordinating visual and textual evidence in making arguments
Audience: Undergraduate

4. Increased skills in written and verbal expression of complex ideas
Audience: Undergraduate

ART HIST 405 – CITIES AND SANCTUARIES OF ANCIENT GREECE
3 credits.

Topics include urbanism in ancient Greece in theory and practice; the forms, technologies, patronage and use of buildings; the creation and conception of urban space; and the organization of religious sites, dedications, and rituals.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ART HIST 407 – TOPICS IN NINETEENTH CENTURY ART
3-4 credits.

Nineteenth century visual culture. Topics include: representations of race and gender; the history of photography; popular imagery and aspects of Modernism.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

ART HIST 408 – TOPICS IN TWENTIETH-CENTURY ART
3-4 credits.

Special topics of 20th-century art that focuses variously on Europe, England, America, or their international interaction. Emphasis on art in its historical and social context.
Requisites: Sophomore standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023

ART HIST 409 – TOPICS IN CONTEMPORARY ART
3 credits.

Topics offered concern the rigorous study of the history and theory of contemporary art.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2022

ART HIST 411 – TOPICS IN ASIAN ART
3-4 credits.

In-depth examination of special topics related to Asian art, including South Asia, East Asia, Southeast Asia, and Central Asia.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ART HIST 412 – TOPICS IN AFRICAN AND AFRICAN DIASPORA ART HISTORY
3-4 credits.

Cultural and historical forces that have shaped the arts of either a specific people or a specific site in Africa or the African Americas.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ART HIST 413 – ART AND ARCHITECTURE IN THE AGE OF THE CALIPHS
3 credits.

The tenth century CE marked a period of drastic change in the Islamic world, as the unified Islamic caliphate splintered into three rival dynasties: the Sunni Iraqi Abbasids, Spanish Umayyads, and the Shi'ite Fatimids in Egypt. Consider this turning point in the history of Islamic culture through the lens of art and architectural patronage. Explore the architectural and urban projects of the three dynasties to examine competing visions of power, sources of legitimacy and the development of Cairo, Baghdad/ Samarra and Cordoba as capital cities. Also consider the role of portable arts, addressing the role of exchange and gift-giving in the Mediterranean context and the problems of attribution in this highly mobile environment. Themes include the role of sectarian identity (Shi'ite vs Sunni); the incorporation of Christian and Jewish culture; the relation between the court and urban populations; and the meaning of ornament and style in Islamic art.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ART HIST/MEDIEVAL 415 – TOPICS IN MEDIEVAL ART
3 credits.

Advanced topics in Medieval art. Topics may include: "Death and the Afterlife in Medieval Art"; "Civic Art and Architecture and Public Space in Medieval Italy"; "Rome in the Middle Ages"; "Pilgrimage the Cult of the Saints in Medieval Byzantine Art."
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ART HIST 420 – TOPICS IN ITALIAN RENAISSANCE ART
3 credits.

Advanced topics in Italian Renaissance art.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2022

ART HIST/ASIAN 428 – VISUAL CULTURES OF INDIA
3 credits.

Concentrates on image complexes (art, photography, and cinema) and visual environments (architecture, urban planning, and public rituals) of India; examination of visual culture through thematic issues such as, sexuality, patronage, cultural encounter, transculturation, ways of viewing, modernism, and nationalism. Not open to students with credit for LCA 428 prior to Fall 2019.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ART HIST 430 – TOPICS IN VISUAL CULTURE
3 credits.

Introduces key issues, theories, and methods in visual cultures studies, emphasizing aspects that affect the practices of art history and providing a changing topical focus that addresses new research in this developing interdisciplinary area.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ART HIST 431 – TOPICS IN THEORY
3 credits.

Introduces philosophy and theory relevant to the study of art history and visual cultures with a focus on a particular body of theoretical work and an organization in terms of key questions and concepts.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2023

ART HIST 435 – STUDY ABROAD IN ANCIENT/MEDIEVAL ART
1-6 credits.

Treatment of an art historical topic in a course offered at a university outside the United States. Enrollment in a UW-Madison resident study abroad program.
Requisites: None
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

ART HIST 436 – STUDY ABROAD IN RENAISSANCE/BAROQUE/NORTHERN ART
1-6 credits.

Treatment of an art historical topic in a course offered at a university outside the United States. Enrollment in a UW-Madison resident study abroad program.
Requisites: None
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

ART HIST 437 – STUDY ABROAD IN 18TH-20TH CENTURY ART
1-6 credits.

Treatment of an art historical topic in a course offered at a university outside the United States. Enrollment in a UW-Madison resident study abroad program.
Requisites: None
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

ART HIST 438 – STUDY ABROAD IN AFRICAN/ASIAN ART
1-6 credits.

Treatment of an art historical topic in a course offered at a university outside the United States. Enrollment in a UW-Madison resident study abroad program.
Requisites: None
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

ART HIST 440 – ART AND POWER IN THE ARAB WORLD
3 credits.

Considers the use of art and architecture as an expression of power in the Arab world, from the seventh century to the present. Beginning with the establishment of the caliphate and ending with the arts of revolution following the Arab Spring, investigates the shifting role of art and architecture in the quest for political dominance. With a particular focus on the arts of Cairo, Baghdad, Cordoba, Mecca, Jerusalem, Damascus, and the modern Arabian Gulf, explore competing visions of power and sources of legitimacy, through the lens of artistic production.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

ART HIST 457 – HISTORY OF AMERICAN VERNACULAR ARCHITECTURE AND LANDSCAPES
3 credits.

Survey of American vernacular buildings and landscapes from the colonial period to the present. Emphasis is on acquiring descriptive tools and developing interpretive frameworks to explore the significance that these vernacular environments have had for their makers and users.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ART HIST 468 – FRANK LLOYD WRIGHT
3-4 credits.

An analysis of Frank Lloyd Wright's architecture and writings.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ART HIST 480 – GLOBAL MODERNISMS
3 credits.

Considers modernist art movements in Africa, the Middle East, Asia, the Americas, and Europe between approximately 1900 and 1975, with an emphasis on practices in what has more recently been called the Global South. Key issues include: interactions between Indigenous, diasporic, and cosmopolitan practices; the phenomenon of modernist "primitivism"; modernism's involvement in the revolutions of the 20th century (e.g., the Mexican Revolution; Russian Revolution; decolonization movements in Asia and Africa); nationalism, developmentalist ideologies, and state support for the arts; Blackness as a transnational paradigm; and the emergence of global contemporary art from the coalescence of various local art worlds.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Identify and differentiate major tendencies in global modernist art between approximately 1900 and 1975.
Audience: Undergraduate

2. Compare related issues in modernist art across geographical, cultural, and historical boundaries.
Audience: Undergraduate

3. Interpret works of global modernist art in written and spoken form using concepts derived from readings, lectures, and group discussions.
Audience: Undergraduate

4. Critically evaluate advanced secondary literature and primary sources in the field of art history.
Audience: Undergraduate

ART HIST 481 – THE ART OF OUR TIME
3 credits.

Outline of major developments in global visual art from the 1960s to the present, with an emphasis on influential recent theorizations of contemporary art that have been developed by critics, art historians, and artists themselves. Topics include: the globalization of the art world, re-definitions of art after modernism, politics of contemporary art, issues of identity (race, gender, sexuality), technology and new media, the art market, and theoretical approaches to contemporary art.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify trends in global contemporary art from the 1960s to the present.
Audience: Undergraduate

2. Assess important concepts and debates in the fields of contemporary art history and art criticism.
Audience: Undergraduate

3. Combine knowledge of these topics in critical writing and in-class discussion.
Audience: Undergraduate

4. Apply theoretical "tools" to produce a deeper appreciation of artworks.
Audience: Undergraduate

5. Demonstrate research, writing, and oral presentation skills.
Audience: Undergraduate

ART HIST 500 – PROSEMINAR: SPECIAL TOPICS IN ART HISTORY
3 credits.

Advanced topics in Art History taught in a seminar-style format. Topics will vary as to media, geography, culture, and time frame.
Requisites: Consent of instructor
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ART HIST 505 – PROSEMINAR IN ANCIENT ART
3 credits.

Advanced topics in Ancient Art History taught in a seminar-style format.
Requisites: Consent of instructor
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

ART HIST 506 – CURATORIAL STUDIES EXHIBITION PRACTICE
3 credits.

Preparation of an exhibition for the Chazen Museum of Art or other exhibition spaces on campus. Help conceptualize the exhibition and its layout, research and interpret individual objects, prepare wall texts for the display and other materials published in print or online in conjunction with the exhibition. The specific focus will be different each time the course is taught.
Requisites: Consent of instructor
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023

ART HIST 510 – PROSEMINAR IN ISLAMIC ART AND ARCHITECTURE
3 credits.

A rotating topic in Islamic Art and Architectural History
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Develop advanced skills in reading academic texts in Islamic art history
Audience: Undergraduate

2. Carry out sustained research in Islamic art history.
Audience: Undergraduate

3. Develop skills in oral communication.
Audience: Undergraduate

4. Develop collaborative approaches to Islamic art history.
Audience: Undergraduate

ART HIST 515 – PROSEMINAR IN MEDIEVAL ART
3 credits.

Advanced topics in Medieval Art History taught in a seminar-style format.
Requisites: Consent of instructor
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ART HIST 555 – PROSEMINAR IN 19TH CENTURY EUROPEAN ART
3 credits.

Advanced topics in 19th Century European Art History taught in a seminar-style format.
Requisites: Consent of instructor
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ART HIST 556 – PROSEMINAR IN 20TH CENTURY EUROPEAN ART
3 credits.

Advanced topics in 20th Century European Art History taught in a seminar-style format.
Requisites: Consent of instructor
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

ART HIST 563 – PROSEMINAR IN MATERIAL CULTURE
3 credits.

Interdisciplinary study of the way people use objects and environments to express identities and relationships in households, communities, and larger social/economic systems.
Requisites: Consent of instructor
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ART HIST 567 – PROSEMINAR IN AMERICAN ARCHITECTURE
3 credits.

Advanced topics in Art History focusing on American Architecture taught in a seminar-style format.
Requisites: Consent of instructor
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2021

ART HIST 575 – PROSEMINAR IN JAPANESE ART
3 credits.

Advanced topics in Japanese Art History taught in a seminar-style format.
Requisites: Consent of instructor
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ART HIST 576 – PROSEMINAR IN CHINESE ART
3 credits.

Advanced topics in Chinese Art History taught in a seminar-style format.
Requisites: Consent of instructor
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

ART HIST 600 – SPECIAL TOPICS IN ART HISTORY
3 credits.

Topics will vary as to media, geography, culture, and time frame.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ART HIST 601 – INTRODUCTION TO MUSEUM STUDIES I
3 credits.

Introduces the history of museums and collecting; studies and practices in museology and connoisseurship; exhibition planning, research, cataloging, and installation.
Requisites: Consent of instructor
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022

ART HIST 602 – INTRODUCTION TO MUSEUM STUDIES II
3 credits.

Implementation of an exhibition, permanent collection installation or another museum-based project. Builds on projects from ART HIST 601.
Requisites: Consent of instructor
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023

ART HIST 603 – CURATORIAL STUDIES COLLOQUIUM
3 credits.

Engage in a broad range of questions, both theoretical and practical, related to curatorial practice through a series of sessions on curatorial strategies. Particular emphasis will be placed on integrative and collaborative approaches to curating a wide variety of material: art, film, music, books, anthropology/culture, archeology, history, geology, zoology, dance, etc. Engage with experts on the theories, objectives, and processes of conceiving, designing, and mounting exhibitions, as well as reaching different audiences with both physical and virtual exhibitions. Also introduces the distinctive collections and resources on campus and in the region.
Requisites: Consent of instructor
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2019

ART HIST/ASIAN 621 – MAPPING, MAKING, AND REPRESENTING COLONIAL SPACES
3 credits.

Spatial lagacy of colonialism; explores important ways in which the population, landscape, architecture, and urban environment of colonies were mapped, made, and represented, particularly in the 19th and 20th centuries; theoretical and empirical analyses from diverse disciplines and spatial terrain. Not open to students with credit for LCA 621 prior to Fall 2019.
Requisites: Senior standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

ART HIST/HISTORY/JOURN/L I S 650 – HISTORY OF BOOKS AND PRINT CULTURE IN EUROPE AND NORTH AMERICA
3 credits.

History of books and print culture in the West from ancient times to the present. Focus on the influence of reading and writing on social, cultural, and intellectual life. Methodologies, theories, and sources for study of book and print culture history.
Requisites: Graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ART HIST 681 – SENIOR HONORS THESIS
3 credits.

Mentored individual research and study for students completing a thesis in an Honors program.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025

ART HIST 682 – SENIOR HONORS THESIS
3 credits.

Mentored individual research and study for students completing a thesis in an Honors program.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2025

ART HIST 691 – SENIOR THESIS
3-6 credits.

Mentored individual research and study for students completing a senior thesis.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023

ART HIST 692 – SENIOR THESIS
3-6 credits.

Mentored individual research and study for students completing a senior thesis.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

ART HIST 697 – UNDERGRADUATE CURATORIAL STUDIES INTERNSHIP (DIRECTED STUDY)
1-3 credits.

Internship study in applied learning experiences in museums and other curatorial settings. Students must identify internship possibilities with substantial research components. and have them approved by the instructor.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2024

ART HIST 698 – DIRECTED STUDY
2-3 credits.

Advanced directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2010

ART HIST 699 – DIRECTED STUDY
1-3 credits.

Advanced directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ART HIST/CLASSICS 700 – THE ART AND ARCHAEOLOGY OF ANCIENT GREECE
3 credits.

Explores the art and archaeology of ancient Greece from the Bronze Age through the Hellenistic period.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

ART HIST 701 – PRACTICUM IN ART HISTORY: BIBLIOGRAPHY, HISTORIOGRAPHY, METHODS
3 credits.

Intensive work in critical analysis and research methods; introduction to the methods and historiography of art history; orientation to source work in the Elvehjem collection and in University libraries.
Requisites: Declared in Art History graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ART HIST 703 – CURATORIAL STUDIES COLLOQUIUM
3 credits.

Engage in a broad range of questions, both theoretical and practical, related to curatorial practice through a series of sessions on curatorial strategies. Particular emphasis will be placed on integrative and collaborative approaches to curating a wide variety of material: art, film, music, books, anthropology/culture, archeology, history, geology, zoology, dance, etc. Engage with experts on the theories, objectives, and processes of conceiving, designing, and mounting exhibitions, as well as reaching different audiences with both physical and virtual exhibitions. Also introduces the distinctive collections and resources on campus and in the region.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2019

ART HIST/CLASSICS 704 – THE ART AND ARCHAEOLOGY OF ANCIENT ROME
3 credits.

Explores the art and archaeology of ancient Italy, the Roman Republic, and the Roman Empire from the Iron Age to Late Antiquity.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021

ART HIST 706 – TOPICS IN AMERICAN ART HISTORY
3 credits.

Varied topics on American Art History.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ART HIST 707 – TOPICS IN NINETEENTH-CENTURY EUROPEAN ART
3 credits.

Topics in specific aspects of 19-century visual culture.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ART HIST 715 – TOPICS IN MEDIEVAL ART
3 credits.

Various themes of current interest in the art, architecture and visual culture of medieval Europe and the Mediterranean (including the Byzantine Empire and Islamic states of the Mediterranean rim).
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ART HIST 731 – TOPICS IN EARLY MODERN ART
3 credits.

Topics in Early Modern Art.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

ART HIST/ANTHRO/DS/HISTORY/LAND ARC 764 – DIMENSIONS OF MATERIAL CULTURE
4 credits.

This course introduces students to the interdisciplinary field of material culture studies. It is intended for students interested in any professional endeavor related to material culture, including careers in museums, galleries, historical societies, historic preservation organizations, and academic institutions. During the semester, students have varied opportunities to engage with and contemplate the material world to which people give meaning and which, in turn, influences their lives. Sessions combine in some way the following: presentations from faculty members and professionals who lecture on a phase of material culture related to his/her own scholarship or other professional work; discussion of foundational readings in the field; visits to collections and sites on campus and around Madison; discussion of readings assigned by visiting presenters or the professors; and exams and short papers that engage material culture topics.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ART HIST 775 – TOPICS IN JAPANESE ART HISTORY
3 credits.

Topics in Japanese Art History.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ART HIST 776 – TOPICS IN CHINESE ART HISTORY
3 credits.

Topics in Chinese Art History.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ART HIST 779 – TOPICS IN ARCHITECTURE & URBANISM OF ASIA
3 credits.

Topics in Architecture and Urbanism of Asia.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ART HIST 797 – CURATORIAL STUDIES INTERNSHIPS (DIRECTED STUDY)
3 credits.

Internship study in applied learning experiences in museums and other curatorial settings. Students must identify internship possibilities with substantial research components and have them approved by the instructor.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ART HIST 799 – INDEPENDENT STUDY
1-6 credits.

Directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ART HIST 800 – SEMINAR: SPECIAL TOPICS IN ART HISTORY
3 credits.

Topics will vary as to media, geography, culture, and time frame.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ART HIST/AFROAMER 801 – HISTORIOGRAPHY, THEORY AND METHODS IN VISUAL CULTURE
3 credits.

Focuses on the knowledge, theories, and methods that are fundamental to the transdisciplinary discipline of Visual Cultures. Develops skills in critical reading, research, analysis, writing, and oral presentation.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Show comprehension of the history, theories, and methods of Visual Culture as a field of study as they are practiced in the field of Visual Cultures.
Audience: Graduate

2. Demonstrate critical ability to work with and develop Visual Culture theories and methods.
Audience: Graduate

3. Develop capacity to conduct original research in Visual Culture.
Audience: Graduate

4. Show ability to work with Visual Culture theories and methods in the analysis and presentation of original research which may take oral, written, and visual forms.
Audience: Graduate

5. Develop the critical analytic, rhetorical, and technical skills necessary to effectively communicate original research in Visual Culture.
Audience: Graduate

ART HIST/AFROAMER 802 – VISUAL CULTURES: TOPICS IN VISUAL CULTURES
3 credits.

Content will vary to facilitate in-depth engagement with a particular topic in Visual Culture. Topics will be pursued with analytic attention to gender, sexuality and race.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Develop ability to work with Visual Culture theories and methods
Audience: Graduate

2. Develop ability to critique, extend and even revise visual culture theories
Audience: Graduate

3. Demonstrate a practice-based, working knowledge of visual culture theories and methods in producing original research which may take written or visual form
Audience: Graduate

4. Develop the critical analytic, rhetorical, and technical skills necessary to effectively communicate original research in Visual Culture.
Audience: Graduate

ART HIST 805 – SEMINAR-ANCIENT ART AND ARCHITECTURE
3 credits.

Rotating topics in Ancient Art.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

ART HIST 810 – SEMINAR IN ISLAMIC ART AND ARCHITECTURE
3 credits.

Rotating topics in Islamic art and architectural history.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Develop advanced skills in reading academic texts in Islamic art history
Audience: Graduate

2. Carry out sustained research in Islamic art history.
Audience: Graduate

3. Develop skills in oral communication.
Audience: Graduate

4. Develop collaborative approaches to Islamic art history.
Audience: Graduate

ART HIST 815 – SEMINAR-MEDIEVAL ART
3 credits.

Rotating topics in Medieval Art.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ART HIST 855 – SEMINAR-19TH CENTURY EUROPEAN ART
3 credits.

Rotating topics in 19th Century European Art.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ART HIST 856 – GRADUATE SEMINAR IN TWENTIETH CENTURY EUROPEAN ART
3 credits.

Rotating topics in 20th Century European Art.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

ART HIST 863 – SEMINAR IN MATERIAL CULTURE
3 credits.

Interdisciplinary study focusing on the way people use objects and environments to express identities and relationships in households, communities, and larger social/economic systems.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ART HIST 867 – SEMINAR-AMERICAN ARCHITECTURE
3 credits.

Rotating topics in American Architecture.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022

ART HIST 875 – SEMINAR IN JAPANESE ART
3 credits.

Rotating topics in Japanese Art.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ART HIST 876 – SEMINAR IN CHINESE ART
3 credits.

Rotating topics in Chinese Art.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

ART HIST 990 – RESEARCH AND THESIS
3 credits.

Advanced level mentored reading and research for students with dissertator status.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ASIAN AMERICAN STUDIES (ASIAN AM)

ASIAN AM 101 – INTRODUCTION TO ASIAN AMERICAN STUDIES
3 credits.

Introduction to the historical, sociological, anthropological, political, and cultural study of Americans of Asian ancestry.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ASIAN AM/AFROAMER/AMER IND/CHICLA/FOLKLORE 102 – INTRODUCTION TO COMPARATIVE US ETHNIC AND AMERICAN INDIAN STUDIES
3 credits.

Introduction to comparative ethnic studies, examining race, ethnicity, and indigeneity within the United States. Includes perspectives from African American, American Indian, Asian American, and Chican@ and Latin@ studies.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize the multicultural history of the United States of America and the essential role of Indigenous, African, Asian and Chicanx/e & Latinx/e peoples in the American story.
Audience: Undergraduate

2. Identify the creation, development and legacies of race-based discrimination in the United States.
Audience: Undergraduate

3. Explain the role of race in the creation of value systems in American society.
Audience: Undergraduate

4. Explore the heterogeneity and complexity within persistently marginalized groups as well as their relations to each other.
Audience: Undergraduate

5. Reflect on their learning experience so that they may develop as well-rounded, informed, and educated members of society who can effectively and successfully participate in a multicultural society.
Audience: Undergraduate

ASIAN AM/DANCE 121 – ASIAN AMERICAN MOVEMENT
3 credits.

Techniques of exercises and movement forms derived from several Asian cultures as taught in the United States. Studied in the context of the construction and expression of ethnic and cultural identity.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ASIAN AM/ENGL 150 – LITERATURE & CULTURE OF ASIAN AMERICA
3 credits.

Since the 19th century, "America" has often been defined by its relationship with "Asia," through cultural influence, immigration, imperialism, and war. Traces the role of Asia and Asians in American literature and culture, from the Chinese and Japanese cultural influences that helped shape literary modernism to the rise of a distinctive culture produced by Asian immigrants to America and their descendants.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ASIAN AM 152 – ASIAN AMERICAN LITERARY AND POPULAR CULTURE: RACE, FANTASY, FUTURES
3 credits.

Explores fantasy as a conduit of political meaning in Asian American fiction, graphic novels, anime, and art. Analyzes race as it circulates in visual mediums and literary texts. Engages issues such as stereotyping, caricature, and microaggressions; whitewashing, yellowface, and passing; race fetishism; cultural appropriation; multiracialism; kawaii or cute style; techno- orientalism and virtual Asians. Foregrounding fantasies of bodilessness, examine race as it is grafted onto nonhuman forms-objects, digital avatars, robots-at the borders of science and fiction. Examines how projections of the future reflect cultural anxieties about race, immigration, and Asian Americans.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ASIAN AM/HISTORY 160 – ASIAN AMERICAN HISTORY: MOVEMENT AND DISLOCATION
3-4 credits.

Examines the impact of colonialism, war, and capitalism on the movement of Asians to the U.S. Considers how racial, gendered, class, sexual, and national formations within the U.S. structured Asian immigration to North America.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ASIAN AM/HISTORY 161 – ASIAN AMERICAN HISTORY: SETTLEMENT AND NATIONAL BELONGING
3-4 credits.

Examines the social, cultural, and political citizenship of Asians in the U.S. with particular emphasis on diaspora, transnationality, and place.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ASIAN AM 170 – HMONG AMERICAN EXPERIENCES IN THE UNITED STATES
3 credits.

Explores how Hmong's participation in the Secret War that the U.S. waged in Laos shaped their experiences in the U.S., heightening the importance of Hmong Americans' social, cultural, and political self-definition and in making known their contributions to the advancement of U.S. society.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Increase awareness of how historical circumstances such as the U.S. Secret War in Laos impacted the lives of Hmong Americans.
Audience: Undergraduate

2. Understand how racial privilege and dominance works to marginalize Hmong American experiences and to generate one-dimensional accounts of the Hmong in the U.S.
Audience: Undergraduate

3. Understand how racial incorporation and political mobilization have contributed to empowering Hmong Americans to contest their marginalization and to develop nuanced representations of their experiences in the U.S.
Audience: Undergraduate

ASIAN AM/SOC 220 – ETHNIC MOVEMENTS IN THE UNITED STATES
3-4 credits.

Sociological analysis of historical and recent ethnic/racial conflict and movements in the U.S., including the relations between European Americans, African Americans, Mexican Americans, Native Americans, and Asian Americans, with additional material on other groups and relations.
Requisites: Satisfied Communications A requirement
Course Designation: Gen Ed - Communication Part B
Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ASIAN AM 240 – TOPICS IN ASIAN AMERICAN STUDIES
3 credits.

An examination of specific themes in Asian American life and culture. Topics may include comparative analyses of Asian American communities, Asian American experience and history, and the specific concerns and histories of Asian groups in the U.S., such as Korean, Hmong, South Asian, Southeast Asian, Chinese, and Japanese.
Requisites: Satisfied Communications A requirement
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Understand how Hmong-U.S. relations during the American War in Southeast Asia resulted in the creation of a global Hmong diaspora in the U.S.
Audience: Undergraduate

2. Learn about the global politics, particularly, the relationship between the Soviet Union, China, and the United States, over the control of Southeast Asia during the Cold War
Audience: Undergraduate

3. Analyze how empire and war cause massive devastation and disruption in the form of trauma, displacement, and transnational migration and how these processes have dramatically affected family and community life
Audience: Undergraduate

4. Broaden their knowledge of the diversity of immigrant experiences to include refugees by learning about the history of Hmong refugees and how the U.S. war in Vietnam changed U.S. refugee policy
Audience: Undergraduate

ASIAN AM/ASIAN/HISTORY 246 – SOUTHEAST ASIAN REFUGEES OF THE "COLD" WAR
4 credits.

In-depth study of the peoples, conflicts, and wars in Cambodia, Laos, and Vietnam, with emphasis on the Cold War era (1945-1990) and on the resulting migration and resettlement of over one million Hmong, Khmer, Lao, and Vietnamese in the United States. Not open to students with credit for LCA 246 prior to Fall 2019.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

ASIAN AM 250 – EATING ASIAN AMERICA
3 credits.

Examines the diverse food cultures of Asian America as an entryway to questions about Asian American politics, identities, and histories. Considers Asian American food consumption, labor, and discourses in relation to challenging racism and fighting for belonging in the U.S.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze food cultures in relation to intersectional understandings of race, gender, and class in Asian America
Audience: Undergraduate

2. Examine Asian American food as expressions of community, politics, and identity
Audience: Undergraduate

3. Connect histories of anti-Asian racism and xenophobia to contemporary discourse surrounding Asian American food
Audience: Undergraduate

4. Critically examine how race can be constructed through cultural mediums like food
Audience: Undergraduate

5. Collaborate with peers in developing empathy toward other worldviews and reflecting on personal relationships to race and food
Audience: Undergraduate

ASIAN AM 251 – CONTEMPORARY ASIAN AMERICAN IDENTITIES
3 credits.

Focuses on recently arrived Asian immigrant groups and historically excluded groups to highlight their exclusion from mainstream Asian America. Covers how Asian American-based identity politics has reduced the experiences of these groups to categorical understandings of race, citizenship, nationality, class, immigration, and others. Uses intersectional lens to analyze their experiences with the goal of expanding what it means to be "Asian American." Lastly, examines how Asian American-based identity politics has influenced conversations around higher education, politics, and race relations.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Analyze how recent waves of Asian immigration and the inclusion of historically excluded groups has confronted Asian American-based identity politics and the racialization that Asian Americans face.
Audience: Undergraduate

2. Examine how the demographic changes in Asian America have shifted its socioeconomic landscape and consequently impacted issues around higher education, political engagement and race relations with other populations of color.
Audience: Undergraduate

3. Identify how the changing demographics of Asian America creates significant nuances in how we understand the larger Asian American experience.
Audience: Undergraduate

4. Collaborate with peers about how the diversity of Asian America is connected to the histories of other communities of color and their treatment in the United States through group work and activities.
Audience: Undergraduate

ASIAN AM 253 – CRITICAL REFUGEE STUDIES
3 credits.

The United Nations High Commissioner for Refugees (UNHCR) defines refugee "as someone who has been forced to flee his or her country because of persecution, war, or violence." This definition represents the refugee as a victim, whose statelessness compels the need for resettlement within the nation-state. In the context of Asian America, this narrow construct of the refugee has overlapped with how Asians/Asian Americans have been racialized, gendered, and sexualized in the United States. Consider how newly arrive Asian refugee groups and their experiences have challenged their perceived victimization to challenge how the United States has positioned itself as a benevolent, humanitarian force.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Define and utilize the framework of critical refugee studies to demonstrate a nuanced understanding of the refugee that considers the larger conditions and violence of colonization, imperialism, and displacement.
Audience: Undergraduate

2. Identify how the racialization of the Asian refugees has intersected with the racialization of Asian Americans and shaped the larger landscape of the Asian American experience.
Audience: Undergraduate

3. Compare the displacement of Asian refugees in the United States to other displaced communities of color to highlight the larger patterns of displacement, imperialism, and colonialism.
Audience: Undergraduate

4. Collaborate with peers in reflecting on the importance of refugee epistemologies and how this knowledge can reshape how we understand refugees in our increasingly diverse society.
Audience: Undergraduate

ASIAN AM/ENGL 270 – A SURVEY OF ASIAN AMERICAN LITERATURE
3 credits.

Survey of Asian American literature from 1880 to present.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2022

ASIAN AM/AFROAMER/DANCE/FOLKLORE 319 – AFRO ASIAN IMPROV: FROM HIP HOP TO MARTIAL ARTS FUSION
3 credits.

An Afro Asian perspective provides a lens through which intersections between Asian American and African American dance and martial arts are studied and practiced. Asian American and African American movement genres provide tools to explore dance fusion, choreography, and improvisation, to create dances informed by African American and Asian American legacies of struggle, innovation and transformation, while cognizant of historical forces of oppression and racism. Building connections through respectful communication with others are learned through dance practice, discussion and writing about concepts learned through readings, videos, and guest artist visits. Engagement with dance as a cultural vehicle for creative problem-solving and risk-taking occurs through guided class or smaller group activities.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Articulate perspectives on the diversity of the human condition through critical andinterpretive skills to analyze the past, present, and future of human movement in a complex world
Audience: Undergraduate

2. Prepare for participation in a multicultural society through developing a consciousness of self and other and building empathy towards others' perspective, thinking critically and questioning assumptions of certain valued or devalued histories, and analyzing how these differences have promulgated disparities in contemporary American society
Audience: Undergraduate

3. Demonstrate skills in writing and speaking about dance in its historical, contemporary and cultural contexts
Audience: Undergraduate

4. Articulate Afro Asian perspectives on the intersections of Asian American and African American cultural, social and historical knowledge, and communicate important ideas through dance and story-telling performance
Audience: Undergraduate

5. Practice Asian American and African American foundational movement toolboxes as a basis for improvisation and dance choreography supported by concepts of theater and culturally-based learning traditions
Audience: Undergraduate

6. Engage in imagination-led and creative problem-solving movement activities
Audience: Undergraduate

7. Build connections with others through class practice, discussions, working groups within and outside of class
Audience: Undergraduate

8. Use the skills you learn to lead a calmer, more focused, responsible and productive life
Audience: Undergraduate

ASIAN AM/GEN&WS 321 – ASIAN AMERICAN FEMINIST & QUEER CULTURAL PRODUCTIONS
3 credits.

Examines the different ways feminist and queer Asian Americans have used cultural production to speak up about issues of race, class, gender, sexuality, identity, diaspora, nation, justice, art, and activism. Asian American feminist and queer critiques can bring to light the ways that structures of domination uphold and further perpetuate Asian American marginalization within the U.S. Examines Asian American racialized, gendered, and sexualized images and stereotypes, as well as the daily lives and experiences of Asian American women and queer folks. Engages with scholarly articles, novels, memoirs, documentaries, and narrative films authored by and/or focusing on feminist and queer Asian Americans. Explores how systemic ideologies are reflected, challenged, and deconstructed in Asian American feminist and queer cultural productions.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Explain the historical, political, social, and cultural implications of Asian American feminist and queer cultural productions and formations as they relate to larger social issues.
Audience: Undergraduate

2. Recognize how critical race theory, feminist theory, and queer theory can help with deconstructing taken-for-granted assumptions about race, class, gender, sexuality, identity, injustice, art, and activism.
Audience: Undergraduate

3. Articulate how feminist and queer politics have changed the terrains of Asian American identities and culture.
Audience: Undergraduate

4. Explain how historical forces such as war, colonialism, and immigration policies have shaped contemporary Asian American experiences of sexuality and gender.
Audience: Undergraduate

5. Foster self-awareness and empathy toward the experiences of Asian Americans of all gender and sexual identities.
Audience: Undergraduate

ASIAN AM/COM ARTS 420 – ASIAN AMERICANS AND MEDIA
3 credits.

Examines representations of Asian American in American media using historical, analytical, and critical approaches. Issues of cultural production, identity, race, politics, and gender are linked to examinations of specific media forms.
Requisites: CHICLA/COM ARTS 347, ASIAN AM 101, or sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Connect the way that Asian Americans have historically been represented in mainstream media to the way that they are represented in contemporary media and to their treatment in contemporary society more broadly
Audience: Both Grad & Undergrad

2. Define anti-Asian racism and its connections to other forms of oppression, including sexism, heteronormativity, classism, colonization, and ableism
Audience: Both Grad & Undergrad

3. Analyze the different constraints and possibilities for how Asian Americans produce and consume media texts
Audience: Both Grad & Undergrad

4. Respectfully engage in nuanced discussions about race and reflect on the cultural perspectives and worldviews of others
Audience: Both Grad & Undergrad

5. Demonstrate advanced analysis of Asian American media texts that rigorously engages with scholarship in Asian American media studies
Audience: Graduate

ASIAN AM 441 – HMONG AMERICAN SOCIAL MOVEMENTS IN THE 20TH AND 21ST CENTURIES
3 credits.

Explores the history and circumstances whereby Hmong Americans came together as a political unit to address the domestic and international concerns of the Hmong American community.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Understand major sociological theories about social movements.
Audience: Undergraduate

2. Increase the awareness of the historical context from which Hmong immigrated to the U.S. and how this history shapes the domestic and international concerns of Hmong Americans.
Audience: Undergraduate

3. Explore how and why Hmong Americans came together as a political unit to address the domestic and international concerns of Hmong Americans.
Audience: Undergraduate

4. Advance the importance of Hmong political incorporation within the U.S., whereby Hmong are themselves active participants in advocating for and shaping social justice concerns in the U.S.
Audience: Undergraduate

ASIAN AM/ENGL 462 – TOPIC IN ASIAN AMERICAN LITERATURE
3 credits.

Topics will vary. All topics will emphasize the following learning outcomes: awareness of history's impact on the present, ability to recognize and question assumptions, development of critical thinking skills, awareness of relations between self and others, and effective participation in a multicultural society.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ASIAN AM/ENGL/GEN&WS 463 – RACE AND SEXUALITY IN AMERICAN LITERATURE
3 credits.

Explores the intersection between race and sexuality in American literature with an emphasis on sex/gender difference, feminism, transgenderism, and nationalism. Focuses on the nature of literature as advocacy, with an emphasis on Asian-American issues.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

ASIAN AM/ENGL/GEN&WS 464 – ASIAN AMERICAN WOMEN WRITERS
3 credits.

Major texts by Asian American women writers.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ASIAN AM/ENGL 465 – ASIAN AMERICAN POETRY
3 credits.

Throughout the history of Asian America, poetry has been a vehicle for the creation and exploration of an Asian American voice; in poetry we can see the continuing struggle over what form Asian American expression will take. Will it follow Asian or European models? Will it employ traditional forms, or experiment in search of new styles? Will it be individual or collective, introspective or political? We will explore these questions through a study of a wide range of Asian American poets from a variety of historical periods and ethnicities, including Janice Mirikitani, Lawson Fusao Inada, Li-Young Lee, John Yau, Myung Mi Kim, and Linh Dinh.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023

ASIAN AM 540 – SPECIAL TOPICS
3 credits.

Themes in Asian American Studies. Topics may include activism, public policy, history, poverty, family, law, immigration, diaspora, refugeeism, gender, sexuality.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ASIAN AM 560 – HUMANITIES TOPICS
3 credits.

Topics in the arts and humanities that illuminate the Asian American experience.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022

ASIAN AM/JOURN 662 – MASS MEDIA AND MINORITIES
4 credits.

Representations of minority groups in U.S. news and entertainment mass media. Historical, social, political, economic, and other factors influencing the mass mediated depictions of minorities.
Requisites: Junior standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022

ASIAN AM 699 – INDEPENDENT STUDY: DIRECTED READINGS IN ASIAN AMERICAN STUDIES
1-4 credits.

Advanced directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ASIAN LANGUAGES AND CULTURES (ASIAN)

ASIAN 100 – GATEWAY TO ASIA: SPECIAL TOPICS
3-4 credits.

Offers a comparative and interdisciplinary introduction to multiple cultures of Asia. Possible topics include but are not limited to: travelogues; the languages of Asia; food cultures of Asia.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ASIAN/HISTORY 103 – INTRODUCTION TO EAST ASIAN HISTORY: CHINA
3-4 credits.

Survey of major developments in Chinese history from 1500 B.C. to the founding of the Communist state in 1949. Emphasis on patterns and themes; equal time devoted to the classical and traditional period and the modern era.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ASIAN/HISTORY 104 – INTRODUCTION TO EAST ASIAN HISTORY: JAPAN
3-4 credits.

Survey of major cultural, social, political and economic developments in Japanese history from ancient to recent times.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

ASIAN/HISTORY 108 – INTRODUCTION TO EAST ASIAN HISTORY - KOREA
3-4 credits.

Survey of major cultural, social, political, and intellectual developments in Korea from the 10th century to the 21st century.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

ASIAN/COUN PSY/ED PSYCH/PSYCH 120 – THE ART AND SCIENCE OF HUMAN FLOURISHING
3 credits.

Explore perspectives related to human flourishing from the sciences and humanities; investigate themes such as transformation, resilience, compassion, diversity, gratitude, community; expand self-awareness, enhanced social connectivity, and ability to change; formulate a sense of what it means to lead a flourishing life that sustains meaningful and fulfilling engagement with studies, relationships, community, and career.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze and describe the relevant concepts and theories on the nature and cultivation of human flourishing from multiple intellectual fields including psychology, neuroscience, anthropology, philosophy, and religious studies.
Audience: Undergraduate

2. Describe and engage with the many dimensions of flourishing, and the various extrinsic and intrinsic factors influencing them.
Audience: Undergraduate

3. Formulate an account of human flourishing.
Audience: Undergraduate

4. Employ contemplative practices in an inquiry that cultivates qualities of human flourishing from within.
Audience: Undergraduate

5. Integrate contemplative practice and knowledge of course materials in order to establish a foundation for flourishing in your life and the communities in which you live.
Audience: Undergraduate

ASIAN/ART HIST 179 – PASSAGE THROUGH INDIA: SOUTH ASIA'S GLOBAL ARCHITECTURAL HISTORIES
3 credits.

Historical overview of India and South Asia's global architectural histories from the ancient to the modern periods. While focusing predominantly on architectural sites in India, examine architecture at multiple sites across the globe which share connected histories with South Asia. We live in a world of nation states and are shaped by national histories. However, in the arc of human history, nation states are of recent vintage. Examine India's global architectural histories not only through comparison but, in the words of historian Sanjay Subrahmanyam, "by seeking out the at times fragile threads that connected" India to "the globe." Capturing the mobility of populations, traders, conquerors, missionaries, pilgrims, tourists, colonists, architects, artists, scholars, religion, merchandise, art, architecture, and ideas, we show that South Asia's global architectural histories are themselves the complex products of varied histories of cultural encounters.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe, appraise and analyze the connected histories of India with other parts of the globe through its art, and architecture.
Audience: Undergraduate

2. Discuss texts from various critical perspectives, formulate ideas and make connections between visual/spatial/cultural concepts and themes.
Audience: Undergraduate

3. Recognize and visually analyze architectural sites and buildings in India and across the globe that share connected histories with South Asia.
Audience: Undergraduate

ASIAN 205 – ANIMAL ETHICS IN ASIA
3 credits.

Examines the relationships between humans and animals across Asia, exploring cosmological and cultural frameworks as well as modern debates. Examines perspectives from myth, literature, and religion, where ideas about animal symbolism emerge along with concepts of morality, violence, and spiritual kinship with animals. Discusses moral philosophy and critical animal studies, using these perspectives to ethically evaluate issues like animal sacrifice, wildlife trade, animal biotechnologies, zoonotic disease, companion animals, and the ethics of keeping pets and other forms of interspecies intimacy. Considers the impacts of urban expansion, conservation challenges, and the formation of emerging animal rights and justice movements across Asia. How do cultural practices, metaphors, and traditions shape attitudes towards animals? How do people balance economic and ethical responsibilities when it comes to labor, farming, breeding, public health, and environmental challenges?
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Analyze ethical frameworks and cultural beliefs that shape human-animal relationships across Asia, drawing on religious, philosophical, and anthropological perspectives.
Audience: Undergraduate

2. Evaluate contemporary debates on animal welfare, conservation, and public health, considering the intersection of local traditions, national policies, and global movements.
Audience: Undergraduate

3. Apply interdisciplinary approaches to assess ethical dilemmas related to animal labor, food production, medicine, and conservation.
Audience: Undergraduate

4. Develop critical, evidence-based arguments in both written and verbal formats, synthesizing diverse sources to engage with ethical and political questions surrounding non-human animals.
Audience: Undergraduate

ASIAN/RELIG ST 206 – THE QUR'AN: RELIGIOUS SCRIPTURE & LITERATURE
3 credits.

An introduction to the Qur'an, the sacred scripture of the Islamic religious tradition, focused on Muslim approaches to reading the text, its themes and history, and its use as a source of law, theology, aesthetics, politics, and practices of piety.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2018
Learning Outcomes: 1. Demonstrate knowledge of the content of the complete Qur'an through reading English-language interpretation ("translation"), focused writing assignments, and close listening exercises
Audience: Undergraduate

2. Identify parameters of Qur'an's study in Muslim and other academic contexts
Audience: Undergraduate

3. Demonstrate an appreciation of the complexities of the interpretative process within multiple historical contexts, such as key issues and debates
Audience: Undergraduate

4. Demonstrate knowledge of major movements, trends, or events in the development of Muslim cultures with respect to the Qur'an and Islamic global experience, early period to contemporary expression
Audience: Undergraduate

5. Apply critical approaches to the "texts"/works and alternative ways of considering them, as per the approach of the academic study of religion
Audience: Undergraduate

6. Critically and constructively examine "culture," hybridity, and global community in a comparative sense
Audience: Undergraduate

ASIAN/LITTRANS 212 – CLASSICAL SOUTH ASIAN LITERATURES
3 credits.

Surveys the classical literatures of South Asia, from ancient origins to adaptations in the modern world. Includes poetry, prose, and drama translated into English from Persian, Prakrit, Sanskrit, Tamil, Telugu, Hindi/Urdu, and other languages. Examines the relationship between literature in theory, in practice, and politics.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Identify major and minor works of classical South Asian literature
Audience: Undergraduate

2. Analyze works of classical South Asian literature in their historical contexts
Audience: Undergraduate

3. Interpret works of classical South Asian literature using classical and contemporary aesthetic theories
Audience: Undergraduate

4. Articulate the significance of classical literatures to contemporary literary cultures
Audience: Undergraduate

5. Conduct and present original writing and research on classical South Asian literature
Audience: Undergraduate

ASIAN/RELIG ST 218 – HEALTH AND HEALING IN SOUTH ASIA
3-4 credits.

Study primary and secondary sources to explore how South Asian societies have understood the ideas of health and well-being throughout history. We will consider a number of cases that illustrate uniquely South Asian conceptions of illness and physical dysfunction and the ways in which people in South Asia have attempted (and continue to attempt today) to heal bodies. Students will learn about the traditional healing systems of South Asia, including Ayurveda, Siddha, and Unani, the basic components of each systems' ideas about disease pathology and treatment that have been used for centuries to heal illness, maintain good health, and, in some instances, aspire to a state of super-health that transcends the limitations of bodily existence altogether.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

ASIAN/RELIG ST 236 – ASIA ENCHANTED: GHOSTS, GODS, AND MONSTERS
3 credits.

Explores how different cultures in Asia conceive of and relate to the monstrous, ghostly, and divine, both in the past and in the contemporary world. These themes are approached from a range of different disciplinary perspectives, including religious studies, literature, anthropology, and history.
Requisites: None
Course Designation: Gen Ed - Communication Part B
Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Consider the cultural and personal functions of depictions of gods, ghosts, and monsters, both in the past and the present day.
Audience: Undergraduate

2. Practice writing and oral presentations in a variety of forms for a variety of purposes, including critical use and proper citation of primary and secondary sources.
Audience: Undergraduate

3. Practice research skills on previously unfamiliar topics, gaining skills in using both on-campus and online resources.
Audience: Undergraduate

4. Be introduced to different approaches a variety of humanities disciplines (including anthropology, art history, history, film studies, folklore studies, literature, and religious studies) take to the course subject matter.
Audience: Undergraduate

5. Use the course subject matter to improve their knowledge of the cultural geography of Asia.
Audience: Undergraduate

ASIAN/GEOG/HISTORY/POLI SCI/SOC 244 – INTRODUCTION TO SOUTHEAST ASIA: VIETNAM TO THE PHILIPPINES
4 credits.

As an introduction to Southeast Asia, covers the ethnic, cultural, religious, and political histories of the region from the classical states period to the present, with an emphasis on colonialism, nationalism, decolonization, and the emergence of modern political and social systems into the 21st century, including an exposure to region's contemporary literature. Not open to students who completed LCA 244 prior to Fall 2019.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Examine the ethnic, cultural, religious, and political histories of Southeast Asia from the classical states period to the present.
Audience: Undergraduate

2. Analyze colonialism, nationalism, decolonization, and the emergence of modern political and social systems into the 21st century in Southeast Asia.

Audience: Undergraduate

3. Explore contemporary literature in Southeast Asia.
Audience: Undergraduate

ASIAN/ASIAN AM/HISTORY 246 – SOUTHEAST ASIAN REFUGEES OF THE "COLD" WAR
4 credits.

In-depth study of the peoples, conflicts, and wars in Cambodia, Laos, and Vietnam, with emphasis on the Cold War era (1945-1990) and on the resulting migration and resettlement of over one million Hmong, Khmer, Lao, and Vietnamese in the United States. Not open to students with credit for LCA 246 prior to Fall 2019.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

ASIAN 252 – CONTEMPORARY INDIAN SOCIETY
3 credits.

An interdisciplinary exploration of contemporary Indian society, politics, and culture. Consider the diverse, complex, and often contradictory fabric of modern India through the lens of several conceptual themes which consider emergent discourses and dynamics of change as the joint product of India's classical heritage and its transformation into a post-colonial nation-state since 1947. Explores tensions and continuities between the pre-modern and modern.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Prepare and present well-researched and persuasive arguments.
Audience: Undergraduate

2. Demonstrate knowledge about modern India and its recent history in their final projects.
Audience: Undergraduate

3. Show evidence of critical thinking by writing balanced responses to readings that challenge their existing world views.
Audience: Undergraduate

4. Integrate academic knowledge gleaned from scholarly readings with popular viewpoints presented in the media.
Audience: Undergraduate

ASIAN 253 – JAPANESE POPULAR CULTURE
3 credits.

An introduction to the culture, life-styles and thought of the Japanese people, with frequent reference to their history, literature and art. Not open to students with credit for E ASIAN 253 prior to Fall 2018
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

ASIAN 254 – KOREAN POPULAR CULTURE
3 credits.

Critically engages with Korean popular culture in order to explore how an arena often dismissed as "mere entertainment" can act as an indicator of cultural values and a producer of cultural meaning. Treats works of popular culture as important economic, political, and social texts and asks us to reflect on how the production and consumption of popular culture shapes, and is shaped by, our lived experiences. Explores what popular culture says about society and, conversely, what society says about popular culture.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Use theoretical and methodological frameworks to engage with popular culture and develop students' own ideas about popular culture texts.
Audience: Undergraduate

2. Analyze Korean media within the context of Korean culture and social issues, including understanding shifts in culture over time.
Audience: Undergraduate

3. Assess various cultural texts through analytic and creative expressions
Audience: Undergraduate

ASIAN/HISTORY/POLI SCI 255 – INTRODUCTION TO EAST ASIAN CIVILIZATIONS
3-4 credits.

Multidisciplinary and historical perspectives on the East Asian civilizations of China, Japan, Korea, Tibet and Mongolia from prehistory to the present, including developments in philosophy, economy, governance, social structure, kinship, geography, etc.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ASIAN 268 – TIBETAN CULTURES AND TRADITIONS
3 credits.

Introduction to a wide variety of ancient Tibetan cultural beliefs, practices and motifs that are practiced to this day. Examines topics such as: gender roles and stereotypes in Tibetan society; folk beliefs and practices; astrology, divination, dream interpretation and related issues; art, music and theater; traditional Tibetan medicine and healing practices; and finally, the varied and extensive religious traditions of Tibet in their cultural manifestations. Examines central themes and inquires into the ways it contributes to-or contests-a cultural universe that has direct impact on Tibetan lives.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ASIAN/RELIG ST 274 – RELIGION IN SOUTH ASIA
3 credits.

Introductory survey of Hinduism, Buddhism, Islam, Sikhism, etc., and an examination of the cultural, historical, ritual, and philosophical foundations of South Asian religion. Not open to students with credit for LCA 274 prior to Fall 2019.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ASIAN 277 – KENDO: INTEGRATION OF MARTIAL ARTS AND LIBERAL ARTS
2 credits.

Kendo practice (martial art) supplemented by lecture describing its historical roots and philosophical background. Not open to students with credit for E ASIAN 277 prior to Fall 2019.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2019
Learning Outcomes: 1. Identify and describe the history of Kendo and the diverse cultural and ideological backgrounds for modern Kendo.
Audience: Undergraduate

2. Learn Japanese terms associated with kendo practice and the philosophical background for kendo practice
Audience: Undergraduate

3. Execute and demonstrate basic physical Kendo actions in a safe and practical manner
Audience: Undergraduate

4. Understand and follow cultural norms and disciplines associated with Japanese and other Asian martial arts traditions.
Audience: Undergraduate

ASIAN 299 – DIRECTED STUDY
1-3 credits.

Directed study projects for undergraduate students as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ASIAN 300 – TOPICS IN ASIAN STUDIES
3 credits.

Selected topics in the study of Asian Languages and Cultures.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ASIAN 301 – SOCIAL SCIENCE TOPICS IN ASIAN STUDIES
3 credits.

Interdisciplinary approaches to specific social sciences topics in Asian studies. Topics may include comparative analysis of a theme across the countries in Asia or focus on a theme within a single country.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Prepare and present well-researched and persuasive arguments.
Audience: Undergraduate

2. Show evidence of critical thinking by writing balanced responses to readings that challenge their existing world views.
Audience: Undergraduate

3. Create your own viewpoint on social issues, with the capability to support your arguments.
Audience: Undergraduate

4. Understand key social science concepts, theories, and methodologies discussed in academic articles and apply them to examine a variety of examples of the social and cultural ties within Asia as well as between Asia and the rest of the globe.
Audience: Undergraduate

5. Critically examine taken-for-granted notions and stereotypes and to inquire into the process of their construction.
Audience: Undergraduate

ASIAN/RELIG ST 303 – JAINISM: RELIGION AND CULTURE OF NONVIOLENCE
3 credits.

Introduction to the Jain tradition. Despite being a small minority religion, core Jain ethical and philosophical concepts of ahimsa (non-violence) and anekantavada (non-absolutism) have influenced all other major traditions in India and secular Indian society. Examines how Jain philosophy, ritual, social relations, and politics are informed by a commitment to ascetic ethics that uphold ahimsa as the greatest virtue for renouncers (monks and nuns) and lay practitioners, tracing the evolution of Jain ethical engagements with modern social and political issues including environmental and animal rights activism, business and finance, and medicine and bioethics. Course covers canonical texts and scholarly literature on Jainism to understand how ahimsa has been historically articulated within Jain philosophy and doctrine, re-articulated in modern social movements, and how it has been constructed in academic studies of Jainism.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Identify and explain basic concepts, ideas, and terminology relating to Jainism from both the monastic and lay perspectives
Audience: Undergraduate

2. Compare and differentiate between the basic tenets of Jainism, Hinduism, and Buddhism.
Audience: Undergraduate

3. Apply anthropological and religious studies concepts and theories to the relationship of Jain rituals, theology, and experience as well as the larger world of South Asian religions
Audience: Undergraduate

4. Make connections between historical and current practice of Jainism in both living and historical situations
Audience: Undergraduate

5. Analyze a social, cultural, historical, visual, or textual aspect of Jain philosophy in a research project to support their interpretations of course material and apply them to the student's own local and global context
Audience: Undergraduate

ASIAN/ANTHRO 305 – ANTHROPOLOGY OF SOUTH ASIA
3 credits.

South Asia has long been a region of significance in anthropology, offering rich and varied contexts for exploring questions about social organization, cultural practices, and religious diversity. Engage with evolving anthropological perspectives on the region, drawing from foundational theorizations of caste, kinship, and the state while attending to contemporary ethnographic insights on care, poverty, health, medicine, and gender. Address questions like: How does the ethnographic method reveal the complexities of social worlds and cultural life in South Asia? What insights and limitations does this approach offer? How might it be enriched with other analytical tools? Engage critically with anthropological theory and recent ethnographies to explore the structures, relationships, and beliefs that shape everyday experiences and broader social patterns in India and the region in local and global frameworks.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Discuss key anthropological frameworks used to study South Asia, including theories of caste, kinship, the state, and contemporary issues related to care, poverty, gender, and medicine.
Audience: Undergraduate

2. Evaluate the ways in which anthropology has shaped, and been shaped by, colonial and postcolonial knowledge production, particularly in relation to South Asia.
Audience: Undergraduate

3. Engage with scholarly and popular narratives about South Asia, synthesizing diverse perspectives to challenge simplistic or essentialist representations of the region.
Audience: Undergraduate

4. Apply anthropological concepts to case studies and contemporary debates using effective written and oral communication skills.
Audience: Graduate

5. Critically analyze ethnographic methods and their role in revealing the complexities of social life in South Asia, while recognizing their limitations and potential for theoretical innovation.
Audience: Graduate

6. Analyze primary and secondary sources and produce a research-based paper suitable for publication or presentation at an academic conference.
Audience: Graduate

ASIAN/RELIG ST 306 – HINDUISM
3 credits.

A historical survey of Hindu scriptures, rituals, philosophies, and ethics from the ancient to the contemporary world. Concepts such as karma, yoga, and reincarnation will be put in the broader contexts of Hindu theism, worship, and law. Not open to students who completed RELIG ST 355 prior to Fall 2019.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Recognize and understand the fundamental rituals, social systems, philosophical schools, and devotional traditions that make up the many forms of the Hindu religion.
Audience: Undergraduate

2. Explore important conceptual categories in Hinduism and significant sociohistorical developments in India.
Audience: Undergraduate

3. Consider, through close readings and discussions of philosophical texts, law books, devotional literature, and mythologies the ways in which Hinduism influences the everyday lives of Hindu women and men, Hindus of different classes and castes, and Hindus in different locations in India and throughout the world.
Audience: Undergraduate

ASIAN/RELIG ST 307 – A SURVEY OF TIBETAN BUDDHISM
3 credits.

By studying the distinctively Tibetan forms of Buddhism, we also examine more general issues, such as the relationship between theory and practice, ancient meditation and mind training, the politics of "world making", and the connection between identity and experience. Not open to students with credit for LCA 421 prior to Fall 2019.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the core practical and theoretical aspects of Tibetan Buddhism and Buddhism in general.
Audience: Undergraduate

2. Apply multiple variations of meditation for personal use and demonstrate for others.
Audience: Undergraduate

3. Summarize and explain Buddhist perspectives of true mode of existence of internal and external phenomena, the environment and its habitants, mental factors and external physical matter.
Audience: Undergraduate

ASIAN/HISTORY/RELIG ST 308 – INTRODUCTION TO BUDDHISM
3-4 credits.

The basic thought, practices and history of Buddhism, including selflessness and relativity, practices of meditation, merit- making and compassion from both local and translocal perspectives. Includes a discussion of Buddhism as a contemporary, North American religion. Not open to students with credit for E ASIAN or LCA 308 prior to Fall 2019.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ASIAN 310 – INTRODUCTION TO COMICS AND GRAPHIC NOVELS: THEORY, HISTORY, METHOD
3 credits.

Explores the theory and history of comics, graphic novels, and other media with a comics-like quality from around the world. Our goal is to develop a deeper understanding of comics as a major mode of human communication.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Demonstrate knowledge of the history of comics as a major mode of human communication in a comparative context
Audience: Undergraduate

2. Develop cultural awareness across historical periods and national boundaries
Audience: Undergraduate

3. Understand and critically rethink the theory of comics as strip-based sequential narrative
Audience: Undergraduate

4. Apply different theoretical models to the reading of comics; synthesize and critically evaluate source materials
Audience: Undergraduate

ASIAN/HISTORY 319 – THE VIETNAM WARS
3-4 credits.

Explores the prolonged cycle of wars in Vietnam and its neighbors, 1940 to date, with due regard for both local and U.S. perspectives.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ASIAN/SOC 334 – GENDER, WORK, AND FAMILY IN EAST ASIA
3 credits.

An examination of contemporary East Asia (mainly South Korea, Japan, Taiwan, and China) by using concepts and frameworks from history, anthropology, sociology, political science, economics, and law. An emphasis will be on the intersection of multiple structures of inequality such as gender, race/ethnicity, citizenship, class, and sexuality.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain how institutional processes, including the labor market, family, and education generate, maintain, and change the cultural understandings of gender.
Audience: Undergraduate

2. List past and current studies on how and why female labor force participation and gender wage gap are different across Korea, Japan, Taiwan, and China.
Audience: Undergraduate

3. Answer the question of "Can women in East Asia have it all?" and of how social development influence women's aspirations and choices, producing the patterned behaviors that we observe.
Audience: Undergraduate

4. Develop a comparative lens in constructing your own argument on whether – if so, how - different speeds of social change and development influence institutions and cultures of a society.
Audience: Undergraduate

5. Draw a conceptual map of cultural and structural foundations of gender inequality in the context of East Asia.
Audience: Undergraduate

ASIAN/HISTORY 335 – THE KOREAS: KOREAN WAR TO THE 21ST CENTURY
3-4 credits.

A historical examination of the Korean War and the politics and society of North Korea and South Korea.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021

ASIAN/SOC 336 – SOCIAL CHANGE IN CONTEMPORARY SOUTH KOREA
3 credits.

An exploration of social continuity and change of contemporary South Korea. Covers different institutions of a society - political, economic, and societal/cultural spheres. Incorporates material from anthropology, sociology, political science, economics, and law. Focus on South Korea after the division of the 'two Koreas'.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Through a critique of the status quo in class, gender, and racial/ethnic dynamics of contemporary Korean society, an intermediate to advanced level of understanding of modern Korean society and its location in the modern world will be achieved.
Audience: Undergraduate

2. Discern the patterns, rules, and logic that undergird a social system and the consequences of these for social change and continuity within the Korean context.
Audience: Undergraduate

3. Be able to explain in your own language, how individuals' lives are shaped by social institutions such as the family, education, and work.
Audience: Undergraduate

4. Increase the social science literacy of contemporary Korea.
Audience: Undergraduate

5. Create your own viewpoint on social issues, with the capability to support your arguments.
Audience: Undergraduate

ASIAN/HISTORY 337 – SOCIAL AND INTELLECTUAL HISTORY OF CHINA, 589 AD-1919
3-4 credits.

The culture of the literati in the T'ang; major trends of Neo-Confucianism during the Sung and Ming; the Confucian response to the West in the nineteenth century; the emergence of the modern Chinese intelligentsia and iconoclasm in the early May Fourth period.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

ASIAN 340 – STUDY ABROAD: TOPICS IN KOREAN
1-6 credits.

A course carried with a UW-Madison study abroad program which has no equivalent on this campus. Current enrollment in a UW-Madison study abroad program.
Requisites: None
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. demonstrate an appreciation of the complexities of the interpretative process within Korean historical and cultural contexts
Audience: Undergraduate

2. demonstrate knowledge of major movements, trends, or events in the development of Korean cultures
Audience: Undergraduate

3. think critically about and appreciate the complexities of one's own culture and larger global communities
Audience: Undergraduate

ASIAN/HISTORY 341 – HISTORY OF MODERN CHINA, 1800-1949
3-4 credits.

The disintegration of traditional Chinese society under the impact of Western imperialism, the rise of modern Chinese nationalism, and the emergence of modern revolutionary movements and ideologies.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022

ASIAN/HISTORY 342 – HISTORY OF THE PEOPLES REPUBLIC OF CHINA, 1949 TO THE PRESENT
3-4 credits.

The social, economic and political transformation of China under Communism; the role of ideology in contemporary Chinese historical development; the nature of that historical development in the comparative perspective of other post-revolutionary histories.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023

ASIAN 351 – SURVEY OF CLASSICAL CHINESE LITERATURE
3 credits.

A critical introduction to the literature of China from early texts through the late imperial period. Works include poetry, prose, fiction and drama. Not open to students who completed E ASIAN 351 prior to Fall 2019.
Requisites: ASIALANG 102 (or E ASIAN 102 prior to Fall 2019), placement into ASIALANG 201, or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ASIAN 352 – SURVEY OF MODERN CHINESE LITERATURE
3 credits.

A critical introduction to Chinese-language prose fiction and poetry from the late 19th century through today.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and describe representative works and topics of modern Chinese literature.
Audience: Undergraduate

2. Recognize and evaluate how these works respond to and are shaped by their social, cultural, historical, and political contexts both in China and globally.
Audience: Undergraduate

3. Acquire skills of close reading by considering the importance of language, translation, literary form, narrative structure, and ideology.
Audience: Undergraduate

4. Develop critical and creative thinking, supported by question-centered inquiry and discussion.
Audience: Undergraduate

5. Improve written and oral communication.
Audience: Undergraduate

ASIAN 353 – LOVERS, WARRIORS AND MONKS: SURVEY OF JAPANESE LITERATURE
3 credits.

Historical introduction to the important literary works of Japan, generally about courtly romance, idealized warriors, and the Buddhist search for enlightenment. This course will cover the classical period, from the eighth through the mid-nineteenth century; most material comes from the particularly wonderful tenth through sixteenth centuries. Not open to students with credit for E ASIAN 353 prior to Fall 2019.
Requisites: ASIALANG 104 or 356 (or E ASIAN 104 or 312 prior to Fall 2019) or placement into ASIALANG 203. Not open to students with credit for LITTRANS 263
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022

ASIAN 354 – EARLY MODERN JAPANESE LITERATURE
3 credits.

An extensive overview of the literature during Japan's early modern or Edo period (1600-1868). Introduction to one of the world's great cultures through its literature during a period that many people consider to be the culmination of a millennium of cultural development prior to Japan's forced opening to the West in the second half of the nineteenth century. Covers snippets from vastly popular works in the major genres of comic books, novellas, essays, poetry, kabuki and puppet plays and so on, concentrating on the eighteenth and nineteenth centuries. Some key questions in this course include: What is early modernity? What is literature? What is Japanese about these materials?
Requisites: ASIALANG 104
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Describe cultural awareness across historical epochs;
Audience: Undergraduate

2. Synthesize and critically evaluate source materials in English with reference to Japanese;
Audience: Undergraduate

3. Read, analyze, and explain the significance of major Japanese texts during the early modern historical epoch.
Audience: Undergraduate

ASIAN 355 – MODERN JAPANESE LITERATURE
3 credits.

Covers Japanese literature from the late nineteenth through the present century. Not open to students with credit for E ASIAN 354 prior to Fall 2019.
Requisites: ASIALANG 104 or 356 (E ASIAN 104 or 320 prior to Summer 2019) or placement into ASIALANG 203
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2022

ASIAN 357 – JAPANESE GHOST STORIES
3 credits.

Surveys Japanese ghost stories in translation from a range of eras and media, including theater and film. Considers historical origins and reception, with particular emphasis on storytelling and adaptation across formats.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Identify tropes in Japanese ghost stories across time and media.
Audience: Undergraduate

2. Analyze textual/ AV details to identify how tropes function in distinct genres and narratives.
Audience: Undergraduate

3. Produce credible and accessible arguments about Japanese ghost stories in English.
Audience: Undergraduate

4. Demonstrate knowledge of genre-specific nuances by translating/ subtitling a related text or by adapting a related text to a new genre/ medium.
Audience: Undergraduate

ASIAN 358 — LANGUAGE IN JAPANESE SOCIETY
3 credits.

Enhances knowledge of and sensitivity towards social factors that influence how Japanese language is used in different contexts. Topics include language standardization and policies, dialects, gender differences, multilingualism, translation, and impact of technology on language. In addition to discussing books and articles on these subject matters, engage in the collaborative analysis of actual examples of Japanese language use taken from everyday interactions, interviews, traditional and social media discourse, popular culture, and public signage, among others. Through this process, evaluate critically taken-for-granted beliefs and assumptions about the Japanese language and its users; examine how particular beliefs and assumptions have been established, maintained, and challenged; and make informed choices in adopting different styles of language and in positioning themselves in a Japanese speech community. Not open to students with credit for E ASIAN 358 prior to Fall 2019.
Requisites: ASIALANG 104 or 356 (E ASIAN 104 or 320 prior to Summer 2019) or placement into ASIALANG 203
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. think critically about sociocultural and sociolinguistic factors that contribute to the construction of various genres of spoken and written language
Audience: Both Grad & Undergrad

2. think critically about taken-for-granted beliefs and assumptions about the Japanese language and its users and inquire into the process of their construction
Audience: Both Grad & Undergrad

3. make informed choices in adopting different styles of language and in positioning themselves in a Japanese speech community
Audience: Both Grad & Undergrad

4. state and support their perspectives on sociolinguistic matters while acknowledging diverse viewpoints
Audience: Both Grad & Undergrad

5. understand key sociolinguistic concepts, theories, and methodologies discussed in academic articles and apply them to examine a variety of examples of language use
Audience: Both Grad & Undergrad

6. evaluate strengths and weaknesses of published research and develop ideas for future research
Audience: Graduate

7. evaluate how sociolinguistic matters are treated in language textbooks and classroom instruction and make suggestions for improvement
Audience: Graduate

ASIAN 360 — TOPICS IN ASIAN LITERATURE
3 credits.

Literary or cultural study of a particular theme, work, period, or genre in regions across Asia. Translations serve as the principal texts.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify literary techniques and creative uses of language in literary texts
Audience: Undergraduate

2. Articulate a thesis and present evidence to support it
Audience: Undergraduate

3. Explain the relevance of themes found in literary texts to contemporary, personal, and cultural values
Audience: Undergraduate

4. Identify genres, conventions, and period-specific discourses and their relevance to broader historical force
Audience: Undergraduate

5. Apply relevant theoretical concepts to literary or other texts and practices
Audience: Undergraduate

ASIAN 361 — LOVE AND POLITICS: THE TALE OF GENJI
3 credits.

Explores the themes, structure, and reception history of Japan's The Tale of Genji (ca. 1008). Not open to students with credit for E ASIAN 361 prior to Fall 2019.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

ASIAN/HISTORY 363 – CHINA AND WORLD WAR II IN ASIA
3-4 credits.

This course is intended to help students understand World War II from the perspective of Asia. The focus is not only on the American and Japanese roles in the war but also on lesser, often overlooked participants such as China, Korea, and Southeast Asia. The course will focus not only on the diplomatic, political, and military situation of wartime Asia, but also on perceptions and experiences of the war from those most heavily affected by it: those experiencing it on the ground. Understanding this war is critical for helping us understand contemporary Asia. The foundations of the Cold War and the post-Cold War world that we live in today were forged on battlefields in mainland China, Burma, small islands in the Pacific, and in the skies over the archipelago of Japan. In order to provide the background and understand the legacies, this course covers an extended time frame, beginning in the 19th century with the arrival of the West in Asia and continues into the 1950s.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2022

ASIAN 367 – HAIKU
3 credits.

Introduction to the haiku, one of the world's great verseforms, in its original Japanese context. Debunks the notion of the haiku as a traditional form of Zen Japanese micropoetry, instead arguing that it was an "invented tradition," a late nineteenth-century Japanese response to modernization and westernization. Not open to students with credit for E ASIAN 367 prior to Fall 2018
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

ASIAN/AFRICAN/RELIG ST 370 – ISLAM: RELIGION AND CULTURE
3-4 credits.

The emergence and development of Islam; schism; theology; asceticism; speculative and popular mysticism; literatures in diverse Islamic languages. Not open to students with credit for LCA 370 prior to Fall 2019.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023

ASIAN 371 – TOPICS IN CHINESE LITERATURE
2-3 credits.

Literary or cultural study of a particular theme, work, period, or genre in Chinese literature. Possible topics include: Confucian Analects, The Dream of the Red Chamber, Journey to the West, or Traditional Chinese Drama. Translations serve as the principal texts, but students of Chinese are required to do some reading in the original.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

ASIAN 372 – TOPICS IN CHINESE: STUDY ABROAD
1-6 credits.

A course carried with a UW-Madison study abroad program which has no equivalent on this campus. Current enrollment in a UW-Madison study abroad program
Requisites: None
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

ASIAN 373 – TOPICS IN JAPANESE: STUDY ABROAD
1-6 credits.

A course carried with a UW-Madison study abroad program which has no equivalent on this campus. Current enrollment in a UW-Madison study abroad program
Requisites: None
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

ASIAN 374 – KOREAN CINEMA
3 credits.

Survey of Korean cinema from the Golden Age classics of the 1950s and 1960s to new blockbuster hits and art-house films throughout the contemporary period; investigate not only the major genres of Korean cinema, but also the increased recognition throughout the world of such renowned Korean auteurs as Park Chan-wook and Bong Joon-ho; discusses the issues of colonialism, national division, civil war, military dictatorships, the democratic movement, and globalization.
Requisites: Satisfied Communications A requirement
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze how films shape and are shaped by South Korean politics, economy, and culture.
Audience: Undergraduate

2. Understand the history of Korean cinema with a set of key film texts from the classical to the contemporary era
Audience: Undergraduate

3. Interpret cinema as a medium in analytical and creative ways
Audience: Undergraduate

ASIAN 375 – SURVEY OF CHINESE FILM
3 credits.

A historical narrative of Chinese-language film from the turn of the century to contemporary China, Taiwan, and Hong Kong. All films include English subtitles. No knowledge of Chinese language is required. Not open to students with credit for E ASIAN 520 prior to Fall 2019.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and describe major works, genres, and trends of Chinese-language film
Audience: Undergraduate

2. Interpret and evaluate how these films respond to and are shaped by the social, cultural, and political histories of modern China, Taiwan, and Hong Kong
Audience: Undergraduate

3. Develop skills of film analysis and close reading, including interrelated issues of form (e.g. visual language, narrative structure), politics and ideology, and film's capacity to enchant and disenchant
Audience: Undergraduate

4. Sharpen ability to think critically and creatively, supported by question-centered inquiry and discussion
Audience: Undergraduate

5. Improve written and oral communication in the form of a 1) concise, well-organized, and original paper; and 2) concise, well-organized oral presentation.
Audience: Undergraduate

ASIAN 376 – MANGA
3 credits.

Surveys the manga (Japanese comicbook) from its precursors in premodern woodblock-printed booklets to its contemporary manifestations in subgenres like shonen, gekiga, mecha, and shojo. Draws upon critical writings on visual culture, literature, and visual-verbal narrative. Not open to students with credit for E ASIAN 376 prior to Fall 2019
Requisites: ASIALANG 104 (or E ASIAN 104 prior to Summer 2019) or placement into ASIALANG 203
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

ASIAN 378 – ANIME
3 credits.

Surveys anime (Japanese animation) from 1930s shorts through contemporary feature-length, experimental, and televised serial-form productions. Draws on critical writings on postmodernism, digital cinema, and visual culture. Some Japanese language ability is required. Not open to students with credit for E ASIAN 378 prior to Fall 2019.
Requisites: ASIALANG 104 (or E ASIAN 104 prior to Fall 2019) or placement into ASIALANG 203
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023

ASIAN/ART HIST 379 – CITIES OF ASIA
3 credits.

Historical overview of the built environment of cities of Asia from antiquity to the present; architectural and urban legacy in its social and historical context; exploration of common themes that thread through the diverse geographical regions and cultures of Asia. Not open to students with credit for LCA 379 prior to Fall 2019.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ASIAN 403 – SOUTHEAST ASIAN LITERATURE
3 credits.

An introduction to the societies, politics and cultures of Southeast Asia through modern literature. Fiction, testimony, poetry and ephemeral materials will be read alongside literary analysis to understand the roles of writing and art in social and political transformation. Topics will include revolution and uprising; violence and war; environment, migration and displacement; gender and sexuality; censorship and what cannot be written; and cities, the countryside and the spaces between them. Not open to students with credit for LCA 403 prior to Fall 2018
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ASIAN/RELIG ST 405 – GODS AND GODDESSES OF SOUTH ASIA
3 credits.

Introduces some of the most important deities of South Asia through visual representation, mythical narratives and rituals of worship. Topics include the development of iconographic forms and concepts, masculine and feminine aspects of the divine, the belief in human embodiments of divinities, the phenomenon of possession, modes of domestic and public worship and the symbolism of the temple structure.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand ways of conceiving of divinity and its presence in the world and in the life of the practitioner
Audience: Both Grad & Undergrad

2. Interpret forms of religious expression, representations of deities and their function in ritual
Audience: Both Grad & Undergrad

3. Critically examine taken-for-granted notions and stereotypes pertaining to image worship and to inquire into the process of their construction
Audience: Both Grad & Undergrad

4. Articulate in writing a critical perspective on image worship and devotional practices
Audience: Both Grad & Undergrad

5. Learn critical analysis and research skills
Audience: Both Grad & Undergrad

6. Improve skills in delivering oral presentations
Audience: Both Grad & Undergrad

7. Refine writing skills
Audience: Both Grad & Undergrad

8. Become familiar with multiple perspectives scholars use to study gods and goddesses of South Asia and use these perspectives in self-reflective thinking
Audience: Graduate

9. Refine critical analysis and research skills
Audience: Graduate

ASIAN/ART HIST 428 – VISUAL CULTURES OF INDIA
3 credits.

Concentrates on image complexes (art, photography, and cinema) and visual environments (architecture, urban planning, and public rituals) of India; examination of visual culture through thematic issues such as, sexuality, patronage, cultural encounter, transculturation, ways of viewing, modernism, and nationalism. Not open to students with credit for LCA 428 prior to Fall 2019.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ASIAN/RELIG ST 430 – INDIAN TRADITIONS IN THE MODERN AGE
3 credits.

Explores how ancient Indian traditions have been reframed for the modern age. Topics include the Ramayama in popular media, negotiations over sacred spaces, and popular Tantra. We will also examine recent controversies, such as the one surrounding the ancient Jain practice of fasting until death (sallekhana) in the modern age.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020

ASIAN 432 – INTRODUCTION TO CHINESE LINGUISTICS
3 credits.

Provides an introductory overview of the Chinese language from a contemporary perspective. Covers various topics including phonetics, phonology, dialects, morphology, syntax, orthography, semantics, and pragmatics. Not open to students with credit for E ASIAN 432 prior to Fall 2019.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Differentiate Chinese sounds
Audience: Undergraduate

2. understand the development of the Chinese writing system
Audience: Undergraduate

3. figure out word formation in Chinese
Audience: Undergraduate

4. understand sentence structure in Chinese
Audience: Undergraduate

5. interpret different semantic dimensions of Chinese
Audience: Undergraduate

6. work out the underlying rules of Chinese sounds
Audience: Graduate

7. know the differences in Chinese dialects
Audience: Graduate

8. analyze sentence structure in Chinese
Audience: Graduate

9. discuss pragmatic functions and contexts
Audience: Graduate

10. synthesize research materials related to pragmatics
Audience: Graduate

11. improve critical and analytical thinking skills
Audience: Graduate

ASIAN 433 – TOPICS IN EAST ASIAN VISUAL CULTURES
3 credits.

Topics in the study of the visual cultures of East Asia from antiquity to the present. Focuses on illustrative texts and genres, major historiographic, theoretical, and methodological issues, and the technologies of vision and visuality in China, Japan, and Korea.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

ASIAN 434 – INTRODUCTION TO JAPANESE LINGUISTICS
3 credits.

Phonology, morphology and syntax of the modern standard colloquial Japanese, including historical and dialectal aspects. Not open to students with credit for E ASIAN 434 prior to Fall 2019.
Requisites: ASIALANG 104 or 356 (E ASIAN 104 or 320 prior to Summer 2019) or placement into ASIALANG 203
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ASIAN 435 – TEACHING OF JAPANESE
3 credits.

Methods of language teaching in general and Japanese language teaching in particular; with emphasis on special problems in teaching Japanese in the US context.
Requisites: ASIALANG 204 (or E ASIAN 204 prior to Summer 2019), placement into ASIALANG 303, or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Theory: Discuss theories, approaches, and issues of foreign language education in the United States (both UGS and GS);
Audience: Both Grad & Undergrad

2. Design: Design curriculum and teaching plans for elementary Japanese language classes
Audience: Graduate

3. Design: Design teaching plans, following the instructor's guidance, for a teaching demonstration
Audience: Undergraduate

4. Teaching: Utilize a broad repertoire of instructional strategies and reflect on their own teaching performance
Audience: Graduate

5. Teaching: Utilize some instructional strategies in their teaching demonstration and reflect on their own learning experience
Audience: Undergraduate

6. Assessment: Discuss theories of assessment
Audience: Graduate

7. Assessment: Develop appropriate assessment instruments
Audience: Both Grad & Undergrad

8. Professionalism: Articulate the importance of life-long professional development for teachers
Audience: Graduate

ASIAN/COM ARTS 443 – INDIAN CINEMA IN THE U.S. AND BEYOND
3 credits.

India is home to one of the largest film industries in the world, Bollywood. Beyond Bollywood, India has a thriving film culture that caters to its many regional languages. Explore India's diverse, yet interconnected film and media cultures as well as the global resonances of Indian- and South-Asian-inflected media elsewhere. Examine questions of diasporic identity through media produced by the South Asian American community. Consider questions of genre, style and auteurship, ethnicity, decolonization, gender non-conformity, caste, settler colonialism, censorship and linguistic nationalism that shape cinematic discourses in the country and its intersection with South Asian diaspora in the United States.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Critically examine the representational nuances, ideological underpinnings and political rhetoric underlying South Asian Diaspora media texts.
Audience: Both Grad & Undergrad

2. Examine the aesthetic, contextual and historical framings of media artifacts to understand how it shapes conversations on ethnicity, race and diversity.
Audience: Both Grad & Undergrad

3. Analyze the varying patterns of desire, labor and agential assertions that mark film and media forms and practices to understand how it hinders production and positionality.
Audience: Both Grad & Undergrad

4. Demonstrate how film and media can provide us with conceptual grounds to understand the larger social realities that govern representational politics and media production practices.
Audience: Both Grad & Undergrad

5. Critically examine how postcoloniality has been used as a frame of reference in film and media studies.
Audience: Graduate

6. Examine how power, identity and representations shape diasporic media and its pursuit of an audience.
Audience: Both Grad & Undergrad

7. Encourage participation in the multi-cultural context by offering ways to engage with media material to understand how past the has shaped present day circumstances, perceptions of, and disparities in race in the U.S.
Audience: Both Grad & Undergrad

8. Recognize and question cultural assumptions, rules, biases, and knowledge claims as they relate to race and ethnicity.
Audience: Both Grad & Undergrad

9. Apply course concepts to their lives outside classroom by demonstrating self-awareness and empathy towards the cultural perspectives and worldviews of others.
Audience: Both Grad & Undergrad

ASIAN/RELIG ST 444 – INTRODUCTION TO SUFISM (ISLAMIC MYSTICISM)
3 credits.

The rise and development of mysticism in Islam; basic Sufi doctrines, values and practices; life and works of important speculative and popular Sufi saints; Sufi brotherhoods in the Middle East, South Asia and North Africa.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss shared Muslim traditions, such as "classical" religious sources and sciences (Qur'an and Hadith, Sufism, law); recognize how this authority persists in the present
Audience: Undergraduate

2. Explain patterns in the diversity of Muslim religious systems across global regions including Asia, Africa and the Americas
Audience: Undergraduate

3. Report on contemporary approaches in the academic fields of Islamic Studies, relating to both historical and modern material
Audience: Undergraduate

4. Express understanding of comparative method in the academic study of religion, especially through writing assignments
Audience: Undergraduate

ASIAN/HISTORY 454 – SAMURAI: HISTORY AND IMAGE
3-4 credits.

Japanese warriors, their ideals, and their images from the tenth century to the present.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ASIAN/HISTORY 456 – PEARL HARBOR & HIROSHIMA: JAPAN, THE US & THE CRISIS IN ASIA
3-4 credits.

Events leading to the Pearl Harbor attack, the conduct of World War II in the Pacific, the nature of the wartime Japanese state and effects of the war on Japanese society, the dropping of the atomic bombs, and Japan's decision to surrender. The war as an epoch in Japanese history.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2020

ASIAN/HISTORY 458 – HISTORY OF SOUTHEAST ASIA SINCE 1800
3-4 credits.

Effects of the modern Western revolution on the established societies of Southeast Asia through colonial rule and economic and cultural change. Not open to students with credit for LCA 458 prior to Fall 2018.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ASIAN/RELIG ST 460 – THE HISTORY OF YOGA
3 credits.

Explores the history of Yoga techniques from the ancient to the modern period. Not open to students with credit for RELIG ST 623 prior to Spring 2019.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1.
Audience: Undergraduate

2.
Audience: Graduate

ASIAN/HISTORY 463 – TOPICS IN SOUTH ASIAN HISTORY
3 credits.

Topics vary related to the History of South Asia, Eurasia, and the Indian Ocean.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2018

ASIAN/RELIG ST 466 – BUDDHIST THOUGHT
3 credits.

Survey of the fundamental trends in Buddhist thought through the works of major philosophers. Themes include the concept of "selflessness" and concomitant theories of essencelessness, perception, language and rationality. Not open to students with credit for E ASIAN or LCA 466 prior to Fall 2019.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020

ASIAN/RELIG ST 473 – MEDITATION IN INDIAN BUDDHISM AND HINDUISM
3 credits.

Examines contemplative practices in the two major Indian religions, Buddhism and Hinduism. Covers practices described in ancient texts but also provides an overview of selected modern practices.
Requisites: Sophomore standing (not open to students with credit for LCA 624 prior to Fall 2019)
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Ability to understand the historical context of meditation practices;
Audience: Undergraduate

2. Explain the complex nature and interdependence of contemporary meditation practices;
Audience: Undergraduate

3. Articulate in writing a critical perspective on practices using evidence as support.
Audience: Undergraduate

ASIAN/ENGL 478 – INDIAN WRITERS ABROAD: LITERATURE, DIASPORA AND GLOBALIZATION
3 credits.

Study of literature, drama, and film produced by authors of South Asian origin in Europe, North America, and the Caribbean. Course considers theories of diaspora, changing patterns of subcontinental migration, and relation of diasporic forms to the cultures of origin and adoption. Not open to students with credit for LCA 478 prior to Fall 2019.
Requisites: Junior standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2018

ASIAN/RELIG ST 505 – THE PERFECTIBLE BODY IN RELIGIONS, MEDICINES, AND POLITICS
3 credits.

Looking at the cultural institutions of politics, medicine, and religion in multiple cultures and historical times, students will explore ideas about what constitutes a perfect body, how and why different parts of the body are privileged over others, and how and why the notion of bodily perfectibility differs for men and women, children and adults, and humans and gods. Readings encourage such questions as: Is the perfect body attainable and, if so, how? And, who benefits from bodily perfection (or the rhetoric of the bodily perfection)? We will ask these questions with comparative intent: we want both to learn about cultures other than our own and, in the process of understanding the other, we will ask how this new knowledge might empower us to be more observant and critical of the role(s) and treatment of the body in our own society historically and today.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ASIAN 533 – READINGS IN EARLY MODERN JAPANESE LITERATURE
3 credits.

Provides an extensive overview of the literature during Japan's early modern or Edo period (1600-1868). The main goal of the course is to introduce students to the literature of this period through readings in the original early modern Japanese language.
Requisites: ASIALANG 404 and 313 or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Develop cultural awareness across historical epochs
Audience: Both Grad & Undergrad

2. Synthesize and critically evaluate source materials in both English and Japanese
Audience: Both Grad & Undergrad

3. Read Japanese literature in the original language
Audience: Undergraduate

4. Produce academic Japanese in line with standards in the field (as embodied in the Monumenta Nipponica Style Sheet)
Audience: Graduate

ASIAN 563 – READINGS IN MODERN JAPANESE LITERATURE
3 credits.

Extensive readings in modern Japanese literature and discussion of literary content.
Requisites: ASIALANG 303 (or E ASIAN 303 prior to Fall 2019) or placement into ASIALANG 304
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Improve one's ability to translate from Japanese to English throughreading translation theory and practice.
Audience: Undergraduate

ASIAN 573 – READINGS IN CLASSICAL JAPANESE LITERATURE
3 credits.

Extensive readings in early Modern or Classical Japanese literature, and discussion of visual-verbal content. Students may repeat this course if the topic is different.
Requisites: ASIALANG 303 (or E ASIAN 303 prior to Fall 2019) or placement into ASIALANG 304
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023
Learning Outcomes: 1. Identify narrative patterns and poetic themes.
Audience: Undergraduate

2. Analyze competing influences and adaptations.
Audience: Both Grad & Undergrad

3. Evaluate recent secondary scholarship.
Audience: Graduate

4. Construct literary and historicist arguments.
Audience: Both Grad & Undergrad

ASIAN 600 – CAPSTONE SEMINAR IN ASIAN HUMANITIES
3 credits.

An examination of methodological and theoretical issues in Asian humanities, with emphasis on literary, religious, and cultural studies.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2021

ASIAN/ART HIST 621 – MAPPING, MAKING, AND REPRESENTING COLONIAL SPACES
3 credits.

Spatial lagacy of colonialism; explores important ways in which the population, landscape, architecture, and urban environment of colonies were mapped, made, and represented, particularly in the 19th and 20th centuries; theoretical and empirical analyses from diverse disciplines and spatial terrain. Not open to students with credit for LCA 621 prior to Fall 2019.
Requisites: Senior standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

ASIAN 630 – PROSEMINAR: STUDIES IN CULTURES OF ASIA
3 credits.

Advanced topics in Asian studies.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ASIAN 631 – HISTORY OF THE CHINESE LANGUAGE
3 credits.

Introduction to Chinese historical linguistics, including the sound systems of the Shih-ching, T'ang poems, and Yuan songs, and their historical relations to the sounds of modern Mandarin, and syntactic interaction between classical and vernacular Chinese. Not open to students with credit for E ASIAN 631 prior to Fall 2019.
Requisites: ASIALANG 102 or 356 (E ASIAN 102 or 312 prior to Fall 2019) or placement into ASIALANG 201
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

ASIAN 632 – STUDIES IN CHINESE LINGUISTICS
3 credits.

Development and exchange of scholarly information on specific topics in the field of linguistics. It rotates between various topics about the Chinese language from contemporary perspectives. It may focus on phonetics, phonology, morphology, syntax, semantics, pragmatics, sociolinguistics, applied linguistics, second language acquisition, or discourse analysis. The mastery of the knowledge learned in this course is essential for further study in Chinese linguistics.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Sharpen their critical and analytical thinking skills
Audience: Undergraduate

2. Discuss various aspects of Chinese pragmatics intelligently
Audience: Undergraduate

3. Evaluate prior research and synthesize research materials
Audience: Undergraduate

4. Develop empirical research skills
Audience: Undergraduate

5. Critique academic readings and discuss various aspects of Chinese pragmatics
Audience: Graduate

6. Synthesize research materials and present strong arguments related to one of the topics discussed
Audience: Graduate

7. Apply theoretical constructs to original research in the field
Audience: Graduate

8. Analyze empirical data and make claims grounded by the data
Audience: Graduate

9. Demonstrate the interplay of context, practice and perception in their original research
Audience: Graduate

ASIAN 633 – CHINESE APPLIED LINGUISTICS
3 credits.

Subfields of applied linguistics in Chinese such as sociolinguistics, pragmatics, corpus linguistics, language pedagogy, second language acquisition, etc.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. understand how language is taught and learned
Audience: Undergraduate

2. develop innovative ideas for language assessment
Audience: Undergraduate

3. describe the relationships among language, context, and society
Audience: Undergraduate

4. apply critical thinking skills to analyze linguistic data
Audience: Undergraduate

5. critique academic readings and discuss various aspects of Chinese applied linguistics
Audience: Graduate

6. synthesize research materials and present strong arguments related to one of the topics discussed
Audience: Graduate

7. apply theoretical constructs to original research in the field
Audience: Graduate

8. analyze empirical data and make claims supported by the data
Audience: Graduate

ASIAN 641 – HISTORY OF CHINESE LITERATURE I
3 credits.

Covers the history of Chinese literature from the Zhou through the end of the Yuan, focusing primarily on poetic and prose genres. Primary source readings will be in Chinese, with additional critical assessment of published translations; secondary source readings in both Chinese and English.
Requisites: ASIALANG 301, placement into ASIALANG 302, or graduate/professional standing. Not open to students with credit for E ASIAN 651 prior to Fall 2019.
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Establish a comprehensive understanding of China's pre-1400 literary history, including major genres, figures, trends, and relationships
Audience: Both Grad & Undergrad

2. Develop the ability to summarize and evaluate literary works
Audience: Both Grad & Undergrad

3. Improve ability to read and translate Chinese literature closely and critically, supported by engaged, question-driven inquiry and discussion
Audience: Both Grad & Undergrad

4. Improve ability to conduct research in Chinese and Western-language sources on pre-1400 Chinese literature
Audience: Both Grad & Undergrad

5. Develop communication skills in the form of concise, well-organized, and original writing, and in-person presentations
Audience: Both Grad & Undergrad

6. Develop an understanding of the field of study of pre-1400 Chinese literature, including key debates and concepts, and resources for further research
Audience: Graduate

7. Develop the ability to contextualize and evaluate one's research interests within the broader literary history of China
Audience: Graduate

ASIAN 642 – HISTORY OF CHINESE LITERATURE II
3 credits.

Covers the history of Chinese-language literature from the late imperial period though today. The primary focus will be on prose fiction, with additional coverage of the development of major forms such as spoken drama, free-verse poetry, and modern criticism. In exploring these genres and forms, special attention given to issues of language, representation, and politics. The majority of readings will be in Chinese.
Requisites: ASIALANG 301 or placement into ASIALANG 302
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Establish a comprehensive understanding of China's late imperial and modern literary history, including major genres, figures, trends, and relationships.
Audience: Undergraduate

2. Improve ability to read and translate Chinese literature closely and critically, supported by engaged, question-driven inquiry and discussion.
Audience: Undergraduate

3. Develop communication skills in the form of concise, well-organized, and original writing, and in-person presentations.
Audience: Undergraduate

4. Develop the ability to summarize and evaluate literary works.
Audience: Both Grad & Undergrad

5. Develop an understanding of the field of modern Chinese literature studies, including key debates and concepts, and resources for further research.
Audience: Graduate

6. Develop the ability to contextualize and evaluate one's research interests within the broader literary history of China.
Audience: Graduate

ASIAN/RELIG ST 650 – PROSEMINAR IN BUDDHIST THOUGHT
2-3 credits.

Advanced topics in theories focused on the mechanisms of contemplative practices such as mindfulness, focused attention and compassion practices, with special emphasis on the interaction of traditional theories from contemplative traditions such as Buddhism and more recent theoretical accounts in psychology and cognitive science.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023

ASIAN 655 – ETHNOGRAPHY IN ASIA
3 credits.

From Greek ethnos, "folk" + grapho, "to write," doing ethnography involves writing about people, societies, and cultures. It is a qualitative, rather than a quantitative, type of research. One does ethnography, and thus it's a process. But an ethnography is also a product: the outcome of the ethnographic process is an ethnography. In-depth studies and discussions of classic and contemporary ethnographies in multiple Asian contexts that focus on themes like religion, health, economics, and sexuality in writing, photography, and film at once illustrate various methods involved in doing ethnography and illuminate why scholars have for decades studied and represented Asia through ethnography. The methods of ethnography are never divorced from the motivations of the scholars, and thus it is crucial to probe critically and collectively what ethnography is (theory), how it is done (practice), and why is it worth doing generally and in Asian contexts in particular.
Requisites: Senior standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Report on how the practice of ethnography relates to research agendas.
Audience: Both Grad & Undergrad

2. Understand how the craft of ethnography impacts the study and articulation of "Asia" as a place and an idea.
Audience: Both Grad & Undergrad

3. Reflect on ethnography in writing.
Audience: Both Grad & Undergrad

4. Learn how to identify and analyze visual ethnographies in filmmaking and photography.
Audience: Both Grad & Undergrad

5. Relate the history, practice, and production of ethnography to particular courses of study (i.e., majors and certificates) and, if applicable, to senior theses and/or final projects.
Audience: Undergraduate

6. Demonstrate how the practice and production of ethnography relates to specific disciplines and, if applicable, to dissertation projects.
Audience: Graduate

7. Articulate how the history, practice, and production of ethnography relates to prior research and experience "on the ground" in Asia.
Audience: Graduate

ASIAN 672 – STUDIES IN CHINESE FICTION
3 credits.

Intensive study of selected short story and novel texts from the xiaoshuo tradition. In addition to the primary texts, traditional and modern audience reception, criticism, and adaptations will be discussed.Readings will be conducted in the original Chinese, supplemented by English translations when available. The course can be repeated if the topic differs.
Requisites: ASIALANG 311 (or E Asian 302 prior to Fall 2019) or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

ASIAN 681 – SENIOR HONORS THESIS
3 credits.

Students engage in an independent research under the guidance of a faculty advisor. Students must be enrolled in Honors in the Major or Honors in the Liberal Arts.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2024

ASIAN 682 – SENIOR HONORS THESIS
3 credits.

Second semester is devoted to writing the thesis paper under the guidance of a faculty advisor. Students must be enrolled in Honors in the Major or Honors in the Liberal Arts.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2025

ASIAN 691 – SENIOR THESIS
3 credits.

The senior thesis involves research conducted in collaboration with a faculty member (non-honors student).
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2003

ASIAN 692 – SENIOR THESIS
3 credits.

The senior thesis involves research conducted in collaboration with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 1996

ASIAN 698 – DIRECTED STUDY
2-3 credits.

Directed study offers the student an opportunity to work with a faculty member on an individual study program.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ASIAN 699 – DIRECTED STUDY
2-3 credits.

Offers the student an opportunity to work with a faculty member on an individual study program. Students must have junior or senior standing.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ASIAN 700 – TEACHING ASIAN LANGUAGES
2-3 credits.

Theoretical background and recent trends in foreign language teaching. Teaching of the four skills (speaking, listening, reading and writing) and culture, developing curricula and lesson plans, and assessment to help you develop a repertoire of teaching techniques and strategies.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No

ASIAN 701 – PROSEMINAR IN CHINESE LITERATURE
3 credits.

Acquaints entering graduate students with the history of the study of Chinese literature in the West, with the basic reference tools and methodologies, and with the various critical approaches to Chinese literature. BA in Chinese or equiv
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022

ASIAN 712 – TEACHING OF CHINESE
3 credits.

Methods of teaching Chinese as a second language including comparative study of Chinese and English structure, introduction to teaching techniques. Not open to students with credit for E ASIAN 622 prior to Fall 2019.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the strengths and weaknesses of various approaches to language teaching
Audience: Graduate

2. Design new Chinese language courses and plan new lessons
Audience: Graduate

3. Teach different modalities of Chinese in various contexts
Audience: Graduate

4. Assess Chinese language learners and adjust teaching methods according to student needs
Audience: Graduate

5. Apply technology to Chinese language teaching
Audience: Graduate

ASIAN 763 – STUDIES IN JAPANESE LITERATURE
3 credits.

One of the general fields such as theater, fiction, etc., studied intensively.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ASIAN 775 – JAPANESE APPLIED LINGUISTICS
3 credits.

One of the general fields such as discourse analysis, sociolinguistics, pragmatics, language pedagogy, etc.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ASIAN 799 – READING FOR RESEARCH
1-3 credits.

Under the guidance of their advisors and other committee members, students compile reading lists for their defined preliminary exam fields and read essential sources and scholarship from those lists. They will demonstrate their critical reading of this material in meetings with the advisor or other committee members.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ASIAN 815 – SEMINAR: INTERDISCIPLINARY APPROACHES TO ASIA
3 credits.

An overview of current research being done on Asia in a variety of different disciplines.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2020

ASIAN 833 – TOPICS IN EAST ASIAN VISUAL CULTURES
3 credits.

Topics in the study of the visual cultures of East Asia from antiquity to the present. Focuses on illustrative texts and genres, major historiographic, theoretical, and methodological issues, and the technologies of vision and visuality in China, Japan, and Korea.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

ASIAN/HISTORY 857 – SEMINAR-HISTORY OF INDIA (SOUTH ASIA)
1-3 credits.

Emphasis upon handling of research problems. Focus upon methods, resources, intellectual approaches, and changing interpretations.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2018

ASIAN 873 – SEMINAR IN LANGUAGES AND LITERATURES OF ASIA
3 credits.

Explore topics in comparative, connected, and/or trans-Asian literatures and languages. Important thinkers and movements in Asian history will be examined and discussed. Through close readings and discussion, presentations, and writing probe vital theories, methodologies, and critical themes in Asian Studies research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 4 number of completions
Last Taught: Fall 2020
Learning Outcomes: 1. Identify and analyze critical themes, both historically and in the present day, works of Asian literature, filmmaking, photography, and art.
Audience: Graduate

2. Articulate the ways in which classic and contemporary theories and methodologies in Asian Studies relate to their own research agendas at UW-Madison and how these theories and methods impact the study and exploration of "Asia" in their own work.
Audience: Graduate

3. Present progress of their research in writing and in presentations to the other seminar participants.
Audience: Graduate

ASIAN 932 – SEMINAR IN CHINESE LINGUISTICS
2-3 credits.

Rotating subjects in the study of Chinese Linguistics.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023

ASIAN 951 – SEMINAR IN CHINESE LITERATURE
3 credits.

Rotating subjects in the study of Chinese Literature.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

ASIAN 990 – THESIS RESEARCH
3 credits.

Research in connection with the doctoral thesis.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ASIAN 999 – INDEPENDENT RESEARCH
1-3 credits.

Independent research for graduate students.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2022

ASIAN LANGUAGES AND CULTURES: LANGUAGES (ASIALANG)

ASIALANG 101 – FIRST SEMESTER CHINESE
4 credits.

Introduces the sounds, basic grammar along with 400 characters of standard spoken Chinese. It also teaches beginner-level communication skills in everyday life.
Requisites: Not open to students with credit for ASIALANG 111 (or E ASIAN 101 or 122 prior to Fall 2019)
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ASIALANG 102 – SECOND SEMESTER CHINESE
4 credits.

Introduces the basic grammar along with 400 Chinese characters of standard spoken Chinese. Students with prior experience in the language are required to take a placement test administered by the department.
Requisites: ASIALANG 101 or 111 (or E Asian 101 or 122 prior to Fall 2019) or placement into ASIALANG 102. Not open to students with credit for E ASIAN 102 prior to Fall 2019
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ASIALANG 103 – FIRST SEMESTER JAPANESE
4 credits.

Focus on proficiency in four skills (speaking, listening, reading, and writing) to communicate in Japanese in basic everyday situations. No previous knowledge of Japanese expected. Not open to students with credit for E ASIAN 103 prior to Summer 2019).
Requisites: Not open to students who have completed ASIALANG 114 (or E ASIAN 124 prior to Summer 2019)
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ASIALANG 104 – SECOND SEMESTER JAPANESE
4 credits.

Focus on proficiency in four skills (speaking, listening, reading, and writing) to communicate in Japanese in basic everyday situations. Continuation of skill development from ASIALANG 103. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for E ASIAN 104 prior to Summer 2019.
Requisites: ASIALANG 103 or 114 (E ASIAN 103 or 124 prior to Summer 2019) or placement into ASIALANG 104
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ASIALANG 105 – FIRST SEMESTER KOREAN
4 credits.

Provides students with basic conversation skills and grammatical patterns, assuming that students have no or little previous background knowledge of the Korean language. The learning goal of the course is to equip students with communicative skills in speaking, listening, reading, and writing at a basic level in Korean; Using contemporary standard Korean, students will learn how to express simple ideas such as attributes, identities, locations, time, daily activities, weekend plan, desires, as well as how to combine simple ideas in a various way. Not open to students who completed E ASIAN 105 prior to summer 2019.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ASIALANG 106 – SECOND SEMESTER KOREAN
4 credits.

Essentials of modern spoken and written Korean. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for E ASIAN 106 prior to Summer 2019
Requisites: ASIALANG 105 (E ASIAN 105 prior to Summer 2019) or placement into ASIALANG 106
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ASIALANG 110 – ELEMENTARY CHINESE I
2 credits.

Introduction to the fundamental phonetic system and grammar of standard spoken Chinese along with 200 characters. Not open to students with credit for ASIALANG 101 (or E ASIAN 101 or 121 prior to Fall 2019).
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2021

ASIALANG 111 – ELEMENTARY CHINESE II
2 credits.

Introduction to the fundamental phonetic system and grammar of standard spoken Chinese along with 200 characters. Students with prior experience in the language are required to take a placement test administered by the department.
Requisites: ASIALANG 110 (E ASIAN 121 prior to Fall 2019) or placement into ASIALANG 111. Not open to students with credit for ASIALANG 101 (or E ASIAN 101 or 122 prior to Fall 2019)
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2021

ASIALANG 113 – FIRST SEMESTER ELEMENTARY JAPANESE
2 credits.

Focus on proficiency in four skills (speaking, listening, reading, and writing) to communicate in Japanese in basic everyday situations.
Requisites: Not open to students with credit for ASIALANG 103 (or E ASIAN 103 prior to Summer 2019)
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ASIALANG 114 – SECOND SEMESTER ELEMENTARY JAPANESE
2 credits.

Focus on proficiency in four skills (speaking, listening, reading, and writing) to communicate in Japanese in basic everyday situations. Students with prior experience in the language are required to take a placement test administered by the department.
Requisites: ASIALANG 113 (or E ASIAN 123 prior to Summer 2019) or placement into ASIALANG 114. Not open to students who have completed ASIALANG 103 (or E ASIAN 103 prior to Summer 2019)
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ASIALANG 121 – FIRST SEMESTER ASIAN LANGUAGE
4 credits.

Proficiency at the elementary level in listening, speaking, reading and writing, using communicative approaches.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ASIALANG 122 – SECOND SEMESTER ASIAN LANGUAGE
4 credits.

Proficiency at the elementary level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 302 prior to Fall 2019.
Requisites: ASIALANG 121 (or LCA LANG 301 prior to Fall 2019)
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022

ASIALANG 123 – FIRST SEMESTER FILIPINO
4 credits.

Proficiency at the elementary level in listening, speaking, reading and writing, using communicative approaches. Not open to students with credit for LCA LANG 305 prior to Fall 2019.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ASIALANG 124 – SECOND SEMESTER FILIPINO
4 credits.

Proficiency at the elementary level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 306 prior to Fall 2019.
Requisites: ASIALANG 123 (or LCA LANG 123 prior to Fall 2019) or ASIALANG 355 or placement into ASIALANG 124
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ASIALANG 125 – FIRST SEMESTER HMONG
4 credits.

Proficiency at the elementary level in listening, speaking, reading and writing, using communicative approaches. Not open to students with credit for LCA LANG 307 prior to Fall 2019.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ASIALANG 126 – SECOND SEMESTER HMONG
4 credits.

Proficiency at the elementary level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 308 prior to Fall 2019.
Requisites: ASIALANG 125 (or LCA LANG 307 prior to Fall 2019) or ASIALANG 355 or placement into ASIALANG 126
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ASIALANG 127 – FIRST SEMESTER INDONESIAN
4 credits.

Proficiency at the elementary level in listening, speaking, reading and writing, using communicative approaches. Not open to students with credit for LCA LANG 309 prior to Fall 2019.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ASIALANG 128 – SECOND SEMESTER INDONESIAN
4 credits.

Proficiency at the elementary level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 310 prior to Fall 2019.
Requisites: ASIALANG 127 (or LCA LANG 309 prior to Fall 2019) or ASIALANG 355 or placement into ASIALANG 128
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ASIALANG 129 – FIRST SEMESTER THAI
4 credits.

Proficiency at the elementary level in listening, speaking, reading and writing, using communicative approaches. Not open to students with credit for LCA LANG 317 prior to Fall 2019.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ASIALANG 130 – SECOND SEMESTER THAI
4 credits.

Proficiency at the elementary level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 318 prior to Fall 2019.
Requisites: ASIALANG 129 (or LCA LANG 317 prior to Fall 2019) or placement into ASIALANG 130
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ASIALANG 131 – FIRST SEMESTER VIETNAMESE
4 credits.

Proficiency at the elementary level in listening, speaking, reading and writing, using communicative approaches. Not open to students with credit for LCA LANG 319 prior to Fall 2019.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ASIALANG 132 – SECOND SEMESTER VIETNAMESE
4 credits.

Proficiency at the elementary level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 320 prior to Fall 2019.
Requisites: ASIALANG 131 (or LCA LANG 319 prior to Fall 2019) or ASIALANG 355 or placement into ASIALANG 132
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ASIALANG 133 – FIRST SEMESTER HINDI
4 credits.

Proficiency at the elementary level in listening, speaking, reading and writing, using communicative approaches. Not open to students with credit for LCA LANG 353 prior to Fall 2019.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

ASIALANG 134 – SECOND SEMESTER HINDI
4 credits.

Proficiency at the elementary level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 354 prior to Fall 2019.
Requisites: ASIALANG 133 (or LCA LANG 353 prior to Fall 2019) or placement into ASIALANG 134
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ASIALANG 135 – FIRST SEMESTER MODERN TIBETAN
4 credits.

Proficiency at the elementary level in listening, speaking, reading and writing, using communicative approaches. Not open to students with credit for LCA LANG 369 prior to Fall 2019.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ASIALANG 136 – SECOND SEMESTER MODERN TIBETAN
4 credits.

Proficiency at the elementary level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 370 prior to Fall 2019.
Requisites: ASIALANG 135 (or LCA LANG 369 prior to Fall 2019) or placement into ASIALANG 136
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ASIALANG 137 – FIRST SEMESTER PERSIAN
4 credits.

Proficiency at the elementary level in listening, speaking, reading and writing, using communicative approaches. Not open to students with credit for LCA LANG 363 prior to Fall 2019.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ASIALANG 138 – SECOND SEMESTER PERSIAN
4 credits.

Proficiency at the elementary level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 364 prior to Fall 2019.
Requisites: ASIALANG 137 (or LCA LANG 363 prior to Fall 2019) or ASIALANG 355 or placement into ASIALANG 138
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ASIALANG 139 – FIRST SEMESTER URDU
4 credits.

Proficiency at the elementary level in listening, speaking, reading and writing, using communicative approaches. Not open to students with credit for LCA LANG 371 prior to Fall 2019.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

ASIALANG 140 – SECOND SEMESTER URDU
4 credits.

Proficiency at the elementary level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 372 prior to Fall 2019.
Requisites: ASIALANG 139 (or LCA LANG 371 prior to Fall 2019) or ASIALANG 355 or placement into ASIALANG 140
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ASIALANG 141 – FIRST SEMESTER SANSKRIT
3-4 credits.

Proficiency at the elementary level in listening, speaking, reading and writing using communicative approaches. Not open to students with credit for LCA LANG 375 prior to Fall 2019.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2022

ASIALANG 142 – SECOND SEMESTER SANSKRIT
3-4 credits.

Proficiency at the elementary level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 376 prior to Fall 2019.
Requisites: ASIALANG 141 (or LCA LANG 375 prior to Fall 2019)
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023

ASIALANG 201 – THIRD SEMESTER CHINESE
4 credits.

Introduces intermediate-level communication skills in varying Chinese settings. Students will learn a wide range of vocabulary, grammar structure and pragmatic usage in situated dialogues. They will improve four language skills (listening, speaking, reading and writing) and pragmatic competence through interactive and meaningful in-class activities and after-class assignments. Students with prior experience in the language are required to take a placement test administered by the department.
Requisites: ASIALANG 102 (or E ASIAN 102 prior to Fall 2019) or placement into ASIALANG 201. Not open to students with credit for E ASIAN 201 prior to Fall 2019.
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ASIALANG 202 – FOURTH SEMESTER CHINESE
4 credits.

Introduces intermediate-level communication skills in varying Chinese settings. Students will learn a wide range of vocabulary, grammar structure and pragmatic usage in situated dialogues. They will improve four language skills (listening, speaking, reading and writing) and pragmatic competence through interactive and meaningful in-class activities and after-class assignments. Students with prior experience in the language are required to take a placement test administered by the department.
Requisites: ASIALANG 201 (or E ASIAN 201 prior to Fall 2019) or placement into ASIALANG 202. Not open to students who completed E ASIAN 202 or 317 prior to Fall 2019.
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ASIALANG 203 – THIRD SEMESTER JAPANESE
4 credits.

Focus on proficiency in four skills (speaking, listening, reading, and writing) and Japanese culture. Continuation of skill development from elementary language courses reviewing, reinforcing and expanding grammar, kanji and vocabulary/ expressions. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for E ASIAN 203 prior to Summer 2019.
Requisites: ASIALANG 104 or 356 (E ASIAN 104 or 320 prior to Summer 2019) or placement into ASIALANG 203
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ASIALANG 204 – FOURTH SEMESTER JAPANESE
4 credits.

Focus on proficiency in four skills (speaking, listening, reading, and writing) and Japanese culture. Continuation of skill development from ASIALANG 203. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for E ASIAN 204 prior to Summer 2019.
Requisites: ASIALANG 203 (E ASIAN 203 prior to Summer 2019) or ASIALANG 357 (or E ASIA 327 prior to Summer 2019) or placement into ASIALANG 204
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ASIALANG 205 – THIRD SEMESTER KOREAN
4 credits.

Focus on two areas of Korean language learning (listening speaking) so that students can understand and express themselves in contemporary Korean. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for E ASIAN 345 prior to Summer 2019.
Requisites: ASIALANG 106 (or E ASIAN 106 prior to Summer 2019) or placement into ASIALANG 205
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ASIALANG 206 – FOURTH SEMESTER KOREAN
4 credits.

Further practice in speaking, reading and writing Korean. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for E ASIAN 346 prior to Summer 2019.
Requisites: ASIALANG 205 (E ASIAN 345 prior to Summer 2019) or placement into ASIALANG 206
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ASIALANG 211 – HERITAGE CHINESE I
3 credits.

Introduces functional vocabulary and grammar, various cultural related topics, reading skills, and writing techniques. Designed for heritage Chinese learners who possess speaking and listening skills but little or no reading/writing skills in Chinese. These learners include those who were born in a non-Chinese-speaking country, but were raised in a home where Mandarin or another dialect was spoken, and those who were born in a Chinese-speaking country but received zero or limited formal education in that country. Students should contact the department about placement. Not open to students with credit for E ASIAN 113 or 213 prior to fall 2019.
Requisites: Consent of instructor
Course Designation: Frgn Lang - 2nd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2020
Learning Outcomes: 1. Communicate formally and sophisticatedly in a wider range of Chinese contexts
Audience: Undergraduate

2. Appreciate Chinese linguistic and cultural heritage
Audience: Undergraduate

3. Read dense materials and difficult texts in Chinese more efficiently
Audience: Undergraduate

4. Produce texts of different genres in Chinese
Audience: Undergraduate

ASIALANG 212 – HERITAGE CHINESE II
3 credits.

Emphasizes reading and writing skills. Students will acquire a wide range of vocabulary, grammatical points and sentence patterns from a variety of readings about Chinese culture. They will also learn how to write compositions about the covered topics. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for E ASIAN 214 prior to Fall 2019.
Requisites: ASIALANG 211
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2021
Learning Outcomes: 1. Communicate formally and sophisticatedly in a wide range of Chinesecontexts
Audience: Undergraduate

2. Appreciate Chinese linguistic and cultural heritage
Audience: Undergraduate

3. Read dense materials and difficult texts in Chinese more efficiently
Audience: Undergraduate

4. Produce texts of different genres in Chinese
Audience: Undergraduate

ASIALANG 221 – THIRD SEMESTER ASIAN LANGUAGE
4 credits.

Proficiency at the intermediate level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department.
Requisites: ASIALANG 121 (or LCA LANG 301 prior to Fall 2019)
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ASIALANG 222 – FOURTH SEMESTER ASIAN LANGUAGE
4 credits.

Proficiency at the intermediate level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 402 prior to Fall 2019.
Requisites: ASIALANG 122 (LCA LANG 302 prior to Fall 2019)
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ASIALANG 223 – THIRD SEMESTER FILIPINO
4 credits.

Proficiency at the intermediate level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 405 prior to Fall 2019.
Requisites: ASIALANG 124 (or LCA LANG 306 prior to Fall 2019) or placement into ASIALANG 223
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ASIALANG 224 – FOURTH SEMESTER FILIPINO
4 credits.

Proficiency at the intermediate level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 406 prior to Fall 2019.
Requisites: ASIALANG 223 (or LCA LANG 405 prior to Fall 2019) or placement into ASIALANG 224
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ASIALANG 225 – THIRD SEMESTER HMONG
4 credits.

Proficiency at the intermediate level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 407 prior to Fall 2019.
Requisites: ASIALANG 126 (or LCA LANG 308 prior to Fall 2019) or placement into ASIALANG 225
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ASIALANG 226 – FOURTH SEMESTER HMONG
4 credits.

Proficiency at the intermediate level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 408 prior to Fall 2019.
Requisites: ASIALANG 225 (or LCA LANG 307 prior to Fall 2019) or placement into ASIALANG 226
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ASIALANG 227 – THIRD SEMESTER INDONESIAN
4 credits.

Proficiency at the intermediate level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 409 prior to Fall 2019.
Requisites: ASIALANG 128 (or LCA LANG 310 prior to Fall 2019) or placement into ASIALANG 227
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ASIALANG 228 – FOURTH SEMESTER INDONESIAN
4 credits.

Proficiency at the intermediate level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 410 prior to Fall 2019.
Requisites: ASIALANG 227 (LCA LANG 409 prior to Fall 2019) or placement into ASIALANG 228
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ASIALANG 229 – THIRD SEMESTER THAI
4 credits.

Proficiency at the intermediate level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 417 prior to Fall 2019.
Requisites: ASIALANG 130 (or LCA LANG 318 prior to Fall 2019) or placement into ASIALANG 229
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ASIALANG 230 – FOURTH SEMESTER THAI
4 credits.

Proficiency at the intermediate level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 418 prior to Fall 2019.
Requisites: ASIALANG 229 (or LCA LANG 417 prior to Fall 2019) or ASIALANG 357 or placement into ASIALANG 230
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ASIALANG 231 – THIRD SEMESTER VIETNAMESE
4 credits.

Proficiency at the intermediate level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 419 prior to Fall 2019.
Requisites: ASIALANG 132 (or LCA LANG 320 prior to Fall 2019) or placement into ASIALANG 231
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ASIALANG 232 – FOURTH SEMESTER VIETNAMESE
4 credits.

Proficiency at the intermediate level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 420 prior to Fall 2019.
Requisites: ASIALANG 231 (or LCA LANG 419 prior to Fall 2019) or placement into ASIALANG 232
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ASIALANG 233 – THIRD SEMESTER HINDI
4 credits.

Proficiency at the intermediate level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 453 prior to Fall 2019.
Requisites: ASIALANG 134 (or LCA LANG 354 prior to Fall 2019) or placement into ASIALANG 233
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

ASIALANG 234 – FOURTH SEMESTER HINDI
4 credits.

Proficiency at the intermediate level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 454 prior to Fall 2019.
Requisites: ASIALANG 233 (or LCA LANG 453 prior to Fall 2019) or placement into ASIALANG 234
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ASIALANG 235 — THIRD SEMESTER MODERN TIBETAN
4 credits.

Proficiency at the intermediate level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 469 prior to Fall 2019.
Requisites: ASIALANG 136 (or LCA LANG 370 prior to Fall 2019) or placement into ASIALANG 235
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ASIALANG 236 — FOURTH SEMESTER MODERN TIBETAN
4 credits.

Proficiency at the intermediate level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 470 prior to Fall 2019.
Requisites: ASIALANG 235 (or LCA LANG 469 prior to Fall 2019) or placement into ASIALANG 236
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023

ASIALANG 237 — THIRD SEMESTER PERSIAN
4 credits.

Proficiency at the intermediate level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 463 prior to Fall 2019.
Requisites: ASIALANG 138 (or LCA LANG 364 prior to Fall 2019) or placement into ASIALANG 237
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ASIALANG 238 — FOURTH SEMESTER PERSIAN
4 credits.

Proficiency at the intermediate level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 464 prior to Fall 2019.
Requisites: ASIALANG 237 (LCA LANG 463 prior to Fall 2019) or placement into ASIALANG 238
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ASIALANG 239 — THIRD SEMESTER URDU
4 credits.

Proficiency at the intermediate level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 471 prior to Fall 2019.
Requisites: ASIALANG 140 (or LCA LANG 372 prior to Fall 2019) or placement into ASIALANG 239
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

ASIALANG 240 — FOURTH SEMESTER URDU
4 credits.

Proficiency at the intermediate level in listening, speaking, reading and writing, using communicative approaches.
Requisites: ASIALANG 239 (or LCA LANG 372 prior to Fall 2019) or placement into ASIALANG 240. Not open to students with credit for LCA LANG 472 prior to Fall 2019.
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Read simple Urdu sentences with understanding.
Audience: Undergraduate

2. Carry out introduction and talk about themselves, their interests, their family and work, other person's family and work .
Audience: Undergraduate

3. Describe the place/s they live in.
Audience: Undergraduate

4. Carry out extended conversation about their daily routine.
Audience: Undergraduate

5. Carry out conversation on simple to fairly difficult topics.
Audience: Undergraduate

6. Take part, often comfortably, in ordinary/general, real life conversation of native speakers.
Audience: Undergraduate

7. Use frequently used compound/double verbs, correctly most of the time.
Audience: Undergraduate

8. Read, discuss ideas and make inferences from authentic texts such as articles, editorials, short stories etc., including some of abstract topics.
Audience: Undergraduate

ASIALANG 241 – THIRD SEMESTER SANSKRIT
3-4 credits.

Proficiency at the intermediate level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 475 prior to Fall 2019.
Requisites: ASIALANG 142 (or LCA LANG 376 prior to Fall 2019)
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2021

ASIALANG 242 – FOURTH SEMESTER SANSKRIT
3-4 credits.

Proficiency at the intermediate level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 476 prior to Fall 2019.
Requisites: ASIALANG 142 (or LCA LANG 376 prior to Fall 2019)
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2022

ASIALANG 301 – FIFTH SEMESTER CHINESE
4 credits.

Selections principally from materials in modern Chinese society, to expose students to reading a variety of topics and styles. Classes conducted in Chinese. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for E ASIAN 301 prior to Fall 2019.
Requisites: ASIALANG 202, 212, or 358 (or E ASIAN 202, 214 or 318 prior to Fall 2019) or placement into ASIALANG 301
Course Designation: Breadth - Humanities
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ASIALANG 302 – SIXTH SEMESTER CHINESE
4 credits.

Selections principally from materials in modern Chinese society, to expose students to reading a variety of topics and styles. Classes conducted in Chinese. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for E ASIAN 302 prior to Fall 2019.
Requisites: ASIALANG 301 (or E ASIAN 301 prior to Fall 2019) or placement into ASIALANG 302
Course Designation: Breadth - Humanities
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ASIALANG 303 – FIFTH SEMESTER JAPANESE
4 credits.

Focus on proficiency in four skills (speaking, listening, reading, and writing) and Japanese culture. Continuation of skill development from the second-year language courses reviewing, reinforcing and expanding grammar, kanji and vocabulary/ expressions. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for E ASIAN 303 prior to Summer 2019.
Requisites: ASIALANG 204 or 358 (or E ASIAN 204 or 328 prior to Summer 2019) or placement into ASIALANG 303
Course Designation: Breadth - Humanities
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ASIALANG 305 – FIFTH SEMESTER KOREAN
3 credits.

Further practice in reading and writing. Extensive as well as intensive readings in contemporary texts. Conducted in Korean. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for E ASIAN 348 prior to Summer 2019
Requisites: ASIALANG 206 or 358 (E ASIAN 346 prior to Summer 2019) or placement into ASIALANG 305
Course Designation: Breadth - Humanities
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ASIALANG 306 – SIXTH SEMESTER KOREAN
3 credits.

Further practice in reading and writing. Extensive as well as intensive readings in contemporary texts. Conducted in Korean. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for E ASIAN 348 prior to Summer 2019
Requisites: ASIALANG 305 (E ASIAN 347 prior to Summer 2019) or placement into ASIALANG 306
Course Designation: Breadth - Humanities
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

ASIALANG 307 — FIRST SEMESTER SOUTHEAST ASIAN LANGUAGE
4 credits.

Proficiency at the elementary level in listening, speaking, reading, and writing, using communicative approaches.
Requisites: Declared in Southeast Asian Studies Summer Institute
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

ASIALANG 308 — SECOND SEMESTER SOUTHEAST ASIAN LANGUAGE
4 credits.

Proficiency at the elementary level in listening, speaking, reading, and writing, using communicative approaches.
Requisites: Declared in Southeast Asian Studies Summer Institute
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

ASIALANG 311 — FIRST SEMESTER CLASSICAL CHINESE
3 credits.

Provides an introduction to basic grammar and vocabulary of literary Chinese prose and poetry. In addition, fundamental background knowledge and reference tools that can aid in the understanding of classical Chinese texts will be introduced. English is the primary language of translation and class discussion, with supplementary use of modern Mandarin. This course is intended for learners of modern Chinese as a foreign language and students of other Asian languages who need Classical Chinese for their studies. Students with prior experience in the language are required to take a placement test administered by the department.
Requisites: ASIALANG 202 (or E ASIAN 202 prior to Fall 2019) or ASIALANG 358 (E ASIA 318 prior to Fall 2019) or placement into ASIALANG 301. Not open to students who completed ASIALANG 315 or E ASIAN 321 prior to Fall 2019.
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

ASIALANG 312 — SECOND SEMESTER CLASSICAL CHINESE
3 credits.

An introduction to basic grammar and vocabulary of literary Chinese prose and poetry. In addition, fundamental background knowledge and reference tools that can aid in the understanding of classical Chinese texts will be introduced. English is the primary language of translation and class discussion, with supplementary use of modern Mandarin. Intended for learners of modern Chinese as a foreign language and students of other Asian languages who need Classical Chinese for their studies. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for E ASIAN 322 prior to Fall 2019.
Requisites: ASIALANG 311 (E ASIAN 321 prior to Fall 2019)
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ASIALANG 313 — CLASSICAL JAPANESE
3 credits.

Introduction to the grammar of classical Japanese and to reading calligraphy on art. Visits to Chazen collection a part of course. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for E ASIAN 323 prior to Fall 2019.
Requisites: ASIALANG 204 or 358 (or E ASIAN 204 or 320 prior to Fall 2019) or placement into ASIALANG 303
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ASIALANG 315 — FIRST SEMESTER CLASSICAL CHINESE FOR CHINESE SPEAKERS
3 credits.

Provides an introduction to basic grammar and vocabulary of literary Chinese prose and poetry as well as the discipline of translation from and into Classical Chinese for students who are native or near-native speakers of modern Chinese. In addition, fundamental background knowledge and reference tools that can aid in the understanding of classical Chinese texts will be introduced. Students improve their own skills in Classical Chinese at the same time as developing materials to aid in the Classical Chinese study of students who are learning the classical and modern language simultaneously. Not open to students with credit for E ASIAN 321 prior to Fall 2019.
Requisites: Consent of instructor
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

ASIALANG 316 – SECOND SEMESTER CLASSICAL CHINESE FOR CHINESE SPEAKERS
3 credits.

Building on basic grammar and vocabulary learned in the first semester, this course improves comprehension of literary Chinese prose and poetry as well as the discipline of translation from and into Classical Chinese for students who are native or near- native speakers of modern Chinese. In addition, fundamental background knowledge and reference tools that can aid in the understanding of classical Chinese texts will be introduced. Students improve their own skills in Classical Chinese at the same time as developing materials to aid in the Classical Chinese study of students who are learning the classical and modern language simultaneously.
Requisites: ASIALANG 315 (or E ASIAN 341 Prior to Fall 2019). Not open to students with credit for ASIAN 312
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ASIALANG 317 – FIRST SEMESTER SUMMER ASIAN LANGUAGE
4 credits.

Proficiency at the elementary level in listening, speaking, reading, and writing, using communicative approaches.
Requisites: Declared in South Asia Summer Language Institute, Southeast Asian Studies Summer Institute, Middle Eastern and Mediterranean Language Institute, or Central Eurasian Studies Summer Institute
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025
Learning Outcomes: 1. Read and write in the target language script.
Audience: Undergraduate

2. Develop basic listening and speaking abilities in the target language.
Audience: Undergraduate

3. Converse in the target language on themes and topics related to the daily life of a native speaker.
Audience: Undergraduate

4. Follow simple songs in the target language.
Audience: Undergraduate

5. Discuss culturally, historically, and geographically salient cities and places, and locate key sites on a map of the country.
Audience: Undergraduate

6. Understand the basic aspects of culture such as festivals, food, clothes and folk tales.
Audience: Undergraduate

7. Understand and control the basic constructions of grammar in the target language.
Audience: Undergraduate

8. Master the vocabulary related to various social-cultural contexts in the target language.
Audience: Undergraduate

9. Prepare and deliver a short presentation in the target language.
Audience: Undergraduate

10. Comprehend news headlines in the target language.
Audience: Undergraduate

ASIALANG 321 – FIFTH SEMESTER ASIAN LANGUAGE
3-4 credits.

Proficiency at the advanced level in listening, speaking, reading and writing, using communicative approaches.
Requisites: ASIALANG 222
Course Designation: Breadth - Humanities
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Engage in spontaneous conversations in target language across casual and certain formal settings.
Audience: Undergraduate

2. Effectively navigate everyday spoken language, including but not limited to: initiating introductions, engaging in social conversations, making travel arrangements, conducting oneself in formal/business environments, expressing personal needs, desires, thoughts, and opinions, ordering food at restaurants, purchasing groceries, seeking directions, and more.
Audience: Undergraduate

3. Comprehend, and employ various approaches to interpreting and creating cultural artifacts such as works of art, literature, music, architecture, philosophy, film, etc.
Audience: Undergraduate

4. Demonstrate knowledge of major movements, trends, or events in the development of world cultures.
Audience: Undergraduate

5. Think critically about and appreciate the complexities of one's own culture and larger global communities.
Audience: Undergraduate

ASIALANG 322 – SIXTH SEMESTER ASIAN LANGUAGE
3-4 credits.

Proficiency at the advanced level in listening, speaking, reading and writing, using communicative approaches.
Requisites: ASIALANG 321
Course Designation: Breadth - Humanities
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Demonstrate an appreciation of the complexities of the interpretative process within historical and cultural contexts.
Audience: Undergraduate

2. Think critically about and appreciate the complexities of one's own culture and larger global communities.
Audience: Undergraduate

3. Be familiar with conventions from a wide variety of linguistic genres and disciplines.
Audience: Undergraduate

4. Have facility with all the grammar required to understand, interpret and translate.
Audience: Undergraduate

5. Gain relative fluency with pronunciation and oral recitation.
Audience: Undergraduate

ASIALANG 323 – FIFTH SEMESTER FILIPINO
3 credits.

Proficiency at the advanced level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 505 prior to Fall 2019.
Requisites: ASIALANG 224 or 358 (or LCA LANG 406 prior to fall 2019) or placement into ASIALANG 323
Course Designation: Breadth - Humanities
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2022

ASIALANG 324 – SIXTH SEMESTER FILIPINO
3 credits.

Proficiency at the advanced level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 506 prior to Fall 2019.
Requisites: ASIALANG 323 (or LCA LANG 505 prior to Fall 2019) or placement into ASIALANG 324
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2021

ASIALANG 325 – FIFTH SEMESTER HMONG
3 credits.

Proficiency at the advanced level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 507 prior to Fall 2019.
Requisites: ASIALANG 226 or 358 (or LCA LANG 408 prior to Fall 2019) or placement into ASIALANG 325
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ASIALANG 326 – SIXTH SEMESTER HMONG
3 credits.

Proficiency at the advanced level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 508 prior to Fall 2019.
Requisites: ASIALANG 325 (or LCA LANG 507 prior to Fall 2019) or placement into ASIALANG 326
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ASIALANG 327 – SECOND SEMESTER SUMMER ASIAN LANGUAGE
4 credits.

Proficiency at the elementary level in listening, speaking, reading, and writing, using communicative approaches.
Requisites: Declared in South Asia Summer Language Institute, Southeast Asian Studies Summer Institute, Middle Eastern and Mediterranean Language Institute, or Central Eurasian Studies Summer Institute
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025
Learning Outcomes: 1. Read and write in the target language script.
Audience: Undergraduate

2. Develop basic listening and speaking abilities in the target language.
Audience: Undergraduate

3. Converse in the target language on themes and topics related to the daily life of a native speaker.
Audience: Undergraduate

4. Follow simple songs in the target language.
Audience: Undergraduate

5. Discuss culturally, historically, and geographically salient cities and places, and locate key sites on a map of the country.
Audience: Undergraduate

6. Understand the basic aspects of culture such as festivals, food, clothes and folk tales.
Audience: Undergraduate

7. Understand and control the basic constructions of grammar in the target language.
Audience: Undergraduate

8. Master the vocabulary related to various social-cultural contexts in the target language.
Audience: Undergraduate

9. Prepare and deliver a short presentation in the target language.
Audience: Undergraduate

10. Comprehend news headlines in the target language.
Audience: Undergraduate

ASIALANG 328 – SIXTH SEMESTER INDONESIAN
3-4 credits.

Proficiency at the advanced level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 509 prior to Fall 2019.
Requisites: ASIALANG 348 (or LCA LANG 509 prior to Fall 2019) or placement into ASIALANG 328
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ASIALANG 329 – FIFTH SEMESTER THAI
3-4 credits.

Proficiency at the advanced level in listening, speaking, reading and writing, using communicative approaches.
Requisites: ASIALANG 230, 358, or placement into ASIALANG 329
Course Designation: Breadth - Humanities
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify main ideas and supporting details of texts from mass media on topics of personal and general interest.
Audience: Undergraduate

2. Follow stories and descriptions of events, persons, and places in past, present and future timeline.
Audience: Undergraduate

3. Follow narrative, informal, and descriptive speech or text and make transitions from idea to idea.
Audience: Undergraduate

4. Exchange general information on topics related to field of interest.
Audience: Undergraduate

5. Handle a complication of conversational unexpected turn of events.
Audience: Undergraduate

6. Summarize movies, news programs, stories, reading texts, etc.
Audience: Undergraduate

7. Construct organized presentations appropriate to their audience on topics relating to general interest, academic, and familiar professional topics.
Audience: Undergraduate

8. Compose outlines of formal and informal compositions.
Audience: Undergraduate

ASIALANG 330 – SIXTH SEMESTER THAI
3-4 credits.

Proficiency at the advanced level in listening, speaking, reading and writing, using communicative approaches.
Requisites: ASIALANG 329 or placement into ASIALANG 330
Course Designation: Breadth - Humanities
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Participate with ease in complex discussion on a wide variety of topics from personal to social, in formal and informal settings.
Audience: Undergraduate

2. Discuss unfamiliar topics and complex situations.
Audience: Undergraduate

3. Can use cultural and historical reference to say less and mean more.
Audience: Undergraduate

4. Summarize texts, films, etc.
Audience: Undergraduate

5. Deliver organized presentations appropriate to the audience on various topics, academic and non-academic, with sufficient detail.
Audience: Undergraduate

6. Perform storytelling and convey ideas in structured manner.
Audience: Undergraduate

7. Write analytical compositions on various social situations in both formal and informal registers.
Audience: Undergraduate

8. Identify main ideas and significant details of texts from mass media.
Audience: Undergraduate

9. Develop listening and reading strategies for extended narratives and/or conversations.
Audience: Undergraduate

ASIALANG 331 – FIFTH SEMESTER VIETNAMESE
3-4 credits.

Proficiency at the advanced level in listening, speaking, reading and writing, using communicative approaches.
Requisites: ASIALANG 232, 358, or placement into ASIALANG 331
Course Designation: Breadth - Humanities
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Exchange general information on topics out of field of interest.
Audience: Undergraduate

2. Handle a complication of conversational unexpected turn of events.
Audience: Undergraduate

3. Summarize movies, plays, news programs, stories, etc.
Audience: Undergraduate

4. Deliver organized presentations appropriate to their audience on topics relating to general interest, academic, and familiar professional topics.
Audience: Undergraduate

5. Write formal and informal compositions.
Audience: Undergraduate

6. Identify main ideas and supporting details of texts from mass media on topics of personal and general interest.
Audience: Undergraduate

7. Follow stories and descriptions of events, persons, and places in past, present and future.
Audience: Undergraduate

8. Follow narrative, informal, and descriptive speech or text.
Audience: Undergraduate

ASIALANG 332 – SIXTH SEMESTER VIETNAMESE
3-4 credits.

Proficiency at the advanced level in listening, speaking, reading and writing, using communicative approaches.
Requisites: ASIALANG 331 or placement into ASIALANG 332
Course Designation: Breadth - Humanities
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Participate with ease in complex discussion on a wide variety of topics from personal to social, in formal and informal settings.
Audience: Undergraduate

2. Discuss unfamiliar topics and complex situations.
Audience: Undergraduate

3. Can use cultural and historical reference to say less and mean more.
Audience: Undergraduate

4. Summarize texts, films, etc.
Audience: Undergraduate

5. Deliver organized presentations appropriate to the audience on various topics, academic and non-academic, with sufficient detail.
Audience: Undergraduate

6. Perform story-telling and convey ideas in a structured manner.
Audience: Undergraduate

7. Write both analytical compositions on various topics in formal and informal situations.
Audience: Undergraduate

8. Identify main ideas and significant details of texts from mass media.
Audience: Undergraduate

9. Develop listening and reading strategies for extended narratives and/or conversations.
Audience: Undergraduate

ASIALANG 333 – FIFTH SEMESTER HINDI
3-4 credits.

Proficiency at the advanced level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 553 prior to Fall 2019.
Requisites: ASIALANG 234 or 358 (or LCA LANG 454 prior to Fall 2019) or placement into ASIALANG 333
Course Designation: Breadth - Humanities
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023

ASIALANG 334 – SIXTH SEMESTER HINDI
3-4 credits.

Proficiency at the advanced level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 554 prior to Fall 2019.
Requisites: ASIALANG 333 (or LCA LANG 553 prior to Fall 2019) or placement into ASIALANG 334
Course Designation: Breadth - Humanities
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023

ASIALANG 335 – FIFTH SEMESTER TIBETAN
4 credits.

Proficiency at the advanced level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 557 prior to Fall 2019.
Requisites: ASIALANG 236 or 358 (or LCA LANG 470 prior to Fall 2019) or placement into ASIALANG 335
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ASIALANG 336 – SIXTH SEMESTER TIBETAN
4 credits.

Proficiency at the advanced level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 558 prior to Fall 2019.
Requisites: ASIALANG 335 (or LCA LANG 557 prior to Fall 2019) or placement into ASIALANG 336
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

ASIALANG 337 – FIFTH SEMESTER PERSIAN
3-4 credits.

Proficiency at the advanced level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 563 prior to Fall 2019.
Requisites: ASIALANG 238 or 358 (or LCA LANG 464 prior to Fall 2019) or placement into ASIALANG 337
Course Designation: Breadth - Humanities
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Initiate and maintain conversations and discussions of various topics important in Persian. culture ranging from personal to social, in academic and non-academic settings.
Audience: Undergraduate

2. Develop listening strategies for conversations and extended narratives.
Audience: Undergraduate

3. Read, understand and discuss the main idea and many details of materials about a variety of topics.
Audience: Undergraduate

4. Write essays in Persian by demonstrating competence in critical thinking.
Audience: Undergraduate

ASIALANG 338 – SIXTH SEMESTER PERSIAN
3-4 credits.

Proficiency at the advanced level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 564 prior to Fall 2019.
Requisites: ASIALANG 337 (or LCA LANG 563 prior to Fall 2019) or placement into ASIALANG 338
Course Designation: Breadth - Humanities
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Use the language confidently and effectively in a variety of situations and across a broad spectrum of topics.
Audience: Undergraduate

2. Acquire insight into the role of Persian life and culture
Audience: Undergraduate

3. Gain skills and confidence in analyzing complex thoughts and ideas in Persian.
Audience: Undergraduate

ASIALANG 339 – FIFTH SEMESTER URDU
3-4 credits.

Proficiency at the advanced level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 571 prior to Fall 2019.
Requisites: ASIALANG 240 or 358 (or LCA LANG 472 prior to Fall 2019) or placement into ASIALANG 339
Course Designation: Breadth - Humanities
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

ASIALANG 340 – SIXTH SEMESTER URDU
3-4 credits.

Proficiency at the advanced level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 572 prior to Fall 2019.
Requisites: ASIALANG 339 (or LCA LANG 571 prior to Fall 2019) or placement into ASIALANG 340
Course Designation: Breadth - Humanities
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ASIALANG 348 – FIFTH SEMESTER INDONESIAN
3-4 credits.

Proficiency at the advanced level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 509 prior to Fall 2019.
Requisites: ASIALANG 228 or 358 (or LCA LANG 410 prior to Fall 2019) or placement into ASIALANG 348
Course Designation: Breadth - Humanities
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ASIALANG 355 – FIRST SEMESTER ASIAN LANGUAGE FOR GRADUATE STUDENTS
4 credits.

Graduate students enrolled in this course attend, and complete all assigned coursework, for one of the first-semester Asian languages offered by the department (Burmese, Chinese, Filipino, Hindi, Hmong, Indonesian, Japanese, Khmer, Korean, Persian, Sanskrit, Thai, Tibetan, Urdu, Vietnamese). In addition, graduate students develop vocabulary lists and other target language materials linked to individual research goals, and reflect both in oral discussion and in writing on progress towards research and professional language learning goals. Graduate students will have additional regular meetings with the instructor or supervisor. May be repeated if enrolled in a different language.
Requisites: Graduate/professional standing
Course Designation: L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ASIALANG 356 – SECOND SEMESTER ASIAN LANGUAGE FOR GRADUATE STUDENTS
4 credits.

Graduate students enrolled in this course attend, and complete all assigned coursework, for one of the second-semester Asian languages offered by the department (Burmese, Chinese, Filipino, Hindi, Hmong, Indonesian, Japanese, Khmer, Korean, Persian, Sanskrit, Thai, Tibetan, Urdu, Vietnamese). In addition, graduate students develop vocabulary lists and other target language materials linked to individual research goals, and reflect both in oral discussion and in writing on progress towards research and professional language learning goals, and will have additional regular meetings with the instructor or supervisor. May be repeated if enrolled in a different language.
Requisites: ASIALANG 355
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ASIALANG 357 – THIRD SEMESTER ASIAN LANGUAGE FOR GRADUATE STUDENTS
4 credits.

Graduate students enrolled in this course attend, and complete all assigned coursework, for one of the third-semester Asian languages offered by the department (Burmese, Chinese, Filipino, Hindi, Hmong, Indonesian, Japanese, Khmer, Korean, Persian, Sanskrit, Thai, Tibetan, Urdu, Vietnamese). In addition, graduate students develop field work interview scripts, simple research proposals, or other intermediate target language materials linked to individual research goals, and reflect both in oral discussion and in writing on progress towards research and professional language learning goals. Graduate students will have additional regular meetings with the instructor or supervisor. Students with prior experience in the language are required to take a placement test administered by the department. May be repeated if enrolled in a different language.
Requisites: ASIALANG 356
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ASIALANG 358 – FOURTH SEMESTER ASIAN LANGUAGE FOR GRADUATE STUDENTS
4 credits.

Graduate students enrolled in this course attend, and complete all assigned coursework, for one of the fourth-semester Asian languages offered by the department (Burmese, Chinese, Filipino, Hindi, Hmong, Indonesian, Japanese, Khmer, Korean, Persian, Sanskrit, Thai, Tibetan, Urdu, Vietnamese). In addition, graduate students develop field work interview scripts, simple research proposals, or other intermediate target language materials linked to individual research goals, and reflect both in oral discussion and in writing on progress towards research and professional language learning goals. Graduate students will have additional regular meetings with the instructor or supervisor. Students with prior experience in the language are required to take a placement test administered by the department. May be repeated if enrolled in a different language.
Requisites: ASIALANG 357
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ASIALANG 360 – INTERMEDIATE READING PROFICIENCY IN ASIAN LANGUAGES
4 credits.

Reinforces the skills of reading various genres of Asian target-language writings. Designed for students who have taken at least a first year Asian language course.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No

ASIALANG 375 – ADVANCED JAPANESE: SOLIDIFYING THE FOUNDATIONS
3 credits.

Focus on proficiency in four skills (speaking, listening, reading, and writing) and Japanese culture. Continuation of skill development in reviewing, reinforcing, and expanding grammar, kanji and vocabulary/ expressions. Introduce skills to understand authentic textual and audiovisual materials. Solidify the foundations in preparation for advanced-level Japanese coursework.
Requisites: ASIALANG 303 or placement into ASIALANG 304
Course Designation: Breadth - Humanities
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Connect sentences to provide information on some familiar and abstract topics (e.g., cultural differences and social issues)
Audience: Undergraduate

2. State nuanced opinions and understand others' view points
Audience: Undergraduate

3. Understand the main idea and some details in talk and authentic texts that contain mostly familiar vocabulary
Audience: Undergraduate

4. Develop the understanding and use of various styles such as spoken vs. written styles, formal vs. casual styles, etc.
Audience: Undergraduate

5. Examine some cultural similarities and differences between the target culture and one's own, as well as the diversity within each culture and their connections in the globalized world
Audience: Undergraduate

ASIALANG 376 – JAPANESE CONVERSATION
3 credits.

Enhance oral communication skills in various everyday contexts. Examines how different terminology, phrases, speech styles, and strategies are used to carry on conversations in various real-life situations and practice adopting them. Not open to students with credit for E ASIAN 335 prior to Fall 2019.
Requisites: ASIALANG 204 (or E ASIAN 204 prior to Summer 2019) or placement into ASIALANG 303
Course Designation: Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. understand the difference between grammars and expressions commonly used in conversational Japanese and written Japanese
Audience: Undergraduate

2. become familiar with a variety of strategies used to initiate, maintain and close a conversation, to overcome the lack of vocabulary knowledge, and to become a supportive listener
Audience: Undergraduate

3. appreciate different styles of speech used depending on the contexts, relationship with the interlocutors, and the speakers' identities
Audience: Undergraduate

4. understand main ideas on familiar topics and some unfamiliar topics delivered through conversations
Audience: Undergraduate

5. state and support your views on a variety of familiar topics and in uncomplicated situations
Audience: Undergraduate

6. narrate a story and make a presentation on familiar topics with preparation
Audience: Undergraduate

7. establish habits of reflecting on your strengths and weaknesses as a speaker of Japanese and consider ways to make improvements
Audience: Undergraduate

ASIALANG 377 – BUSINESS JAPANESE COMMUNICATION
3 credits.

Enhances oral and written communication skills that are specific to business contexts. Review essential grammar and honorific expressions for proper styles of communication. Develop the understanding of cultural and geographical factors that influence business practices in Japan. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for E ASIAN 377 prior to Fall 2019.
Requisites: ASIALANG 204 or 358 (or E ASIAN 204 prior to Fall 2019) or placement into ASIALANG 303
Course Designation: Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply basic rules of Keigo, Japanese respectful expressions, to speak and write properly in common business situations.
Audience: Undergraduate

2. Communicate by e-mail and by phone in Japanese to accomplish everyday tasks.
Audience: Undergraduate

3. Demonstrate social and cultural knowledge that is necessary to work in Japan or to use Japanese at work.
Audience: Undergraduate

4. Evaluate career opportunities after graduation and be able to explain the reasons for applying to jobs in order to obtain desirable careers.
Audience: Undergraduate

5. Develop Shakaijin kiso ryoku, "fundamental competencies for working persons," which are defined by Japanese Ministry of Economy, Trade and Industry, – ability to make actions, ability to think thoroughly, and the ability to work in team.
Audience: Undergraduate

ASIALANG 378 – CHINESE CONVERSATION
3 credits.

Oral communication skills including verbal and nonverbal behavior in Mandarin Chinese. Useful terms and phrases for daily conversations and professional reports. Practice conversation and interacting appropriately in varying real-life situations. Not open to students with credit for E ASIAN 333 prior to Fall 2019.
Requisites: ASIALANG 202 (or E ASIAN 202 prior to Fall 2019) or placement into ASIALANG 301
Course Designation: Breadth - Humanities
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Initiate, maintain, and close a conversation in both formal and informal settings
Audience: Undergraduate

2. Have basic knowledge of Chinese socio-cultural values in order to speak appropriately in various contexts
Audience: Undergraduate

3. Summarize main ideas, narrate a story and give presentations on a familiar topic.
Audience: Undergraduate

4. Discuss a variety of topics and share perspectives concerning both concrete and abstract ideas
Audience: Undergraduate

ASIALANG 379 – BUSINESS CHINESE
3 credits.

Introduces learners of Chinese to the culture, commerce, and etiquette in the Chinese society. Students will acquire a working knowledge of the vocabulary and expressions that are essential for business transactions. They will also learn culturally applicable business strategies and understand Chinese people's expectations, concerns and needs. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for E ASIAN 379 prior to Fall 2019.
Requisites: ASIALANG 202 or 358 (or E ASIAN 202 or 314 prior to Fall 2019) or placement into ASIALANG 301
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ASIALANG 381 – BUSINESS KOREAN
3 credits.

Build advanced-level speaking, vocabulary, and communication skills needed for a variety of Korean business settings. Become familiar with Korean business culture through classroom activities and homework assignments. Topics include formal communication skills, business-related vocabulary frequently used in formal writing, and current issues related to Korea's economy, society and culture. Understand Korean companies' hiring processes and detailed information regarding Korean-specific business culture and issues. Enhance language skills for business settings in South Korea.
Requisites: ASIALANG 305 (E ASIAN 347 prior to Summer 2019) or placement into ASIALANG 306
Course Designation: Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Understand and participate in work-related conversations
Audience: Both Grad & Undergrad

2. Produce coherent and clearly organized written texts in business settings
Audience: Both Grad & Undergrad

3. Understand Korean companies' hiring processes and detailed information regarding Korean-specific business culture and issues.
Audience: Graduate

ASIALANG 405 – SEVENTH SEMESTER KOREAN
3 credits.

Extensive readings in advanced general and specialized texts in Korean, and discussion on the content of the reading materials. Conducted in Korean. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for E ASIAN 405 prior to Summer 2019.
Requisites: ASIALANG 306 (or E ASIAN 348 prior to Summer 2019) or placement into ASIALANG 405
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ASIALANG 406 – EIGHTH SEMESTER KOREAN
3 credits.

Extensive readings in advanced general and specialized texts in Korean, and discussion on the content of the reading materials. Conducted in Korean. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for E ASIAN 406 prior to Summer 2019.
Requisites: ASIALANG 405 (or E ASIAN 405 prior to Summer 2019) or placement into ASIALANG 406
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

ASIALANG 407 – THIRD SEMESTER SOUTHEAST ASIAN LANGUAGE
4 credits.

Proficiency at the intermediate level in listening, speaking, reading, and writing, using communicative approaches.
Requisites: Declared in Southeast Asian Studies Summer Institute
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

ASIALANG 408 – FOURTH SEMESTER SOUTHEAST ASIAN LANGUAGE
4 credits.

Proficiency at the intermediate level in listening, speaking, reading, and writing, using communicative approaches.
Requisites: Declared in Southeast Asian Studies Summer Institute
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

ASIALANG 417 – THIRD SEMESTER SUMMER ASIAN LANGUAGE
4 credits.

Proficiency at the intermediate level in listening, speaking, reading, and writing, using communicative approaches.
Requisites: Declared in South Asia Summer Language Institute, Southeast Asian Studies Summer Institute, Middle Eastern and Mediterranean Language Institute, or Central Eurasian Studies Summer Institute
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025
Learning Outcomes: 1. Converse on everyday topics in the target language.
Audience: Undergraduate

2. Communicate basic needs and ideas in common and less common conversational situations in the target language.
Audience: Undergraduate

3. Read and react to a variety of somewhat complicated texts, dealing with a variety of social situations, in the target language.
Audience: Undergraduate

4. Narrate past and future events in the target language with some control.
Audience: Undergraduate

5. Engage in paragraph-level discourse in the target language.
Audience: Undergraduate

6. Understand somewhat complex conversations in the target language.
Audience: Undergraduate

7. Write essays and letters including somewhat complex vocabulary in the target language.
Audience: Undergraduate

8. Gain cultural competence through independent, project-based activities.
Audience: Undergraduate

ASIALANG 421 – SEVENTH SEMESTER ASIAN LANGUAGE
3-4 credits.

Proficiency at the advanced high level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ASIALANG 422 – EIGHTH SEMESTER ASIAN LANGUAGE
3-4 credits.

Proficiency at the advanced high level in listening, speaking, reading and writing, using communicative approaches. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 602 prior to Fall 2019.
Requisites: ASIALANG 421 (or LCA LANG 601 prior to Fall 2019) or placement into ASIALANG 422
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ASIALANG 427 – FOURTH SEMESTER SUMMER ASIAN LANGUAGE
4 credits.

Proficiency at the intermediate level in listening, speaking, reading, and writing, using communicative approaches.
Requisites: Declared in South Asia Summer Language Institute, Southeast Asian Studies Summer Institute, Middle Eastern and Mediterranean Language Institute, or Central Eurasian Studies Summer Institute
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025
Learning Outcomes: 1. Converse on everyday topics in the target language.
Audience: Undergraduate

2. Communicate basic needs and ideas in common and less common conversational situations in the target language.
Audience: Undergraduate

3. Read and react to a variety of somewhat complicated texts, dealing with a variety of social situations, in the target language.
Audience: Undergraduate

4. Narrate past and future events in the target language with some control.
Audience: Undergraduate

5. Engage in paragraph-level discourse in the target language.
Audience: Undergraduate

6. Understand somewhat complex conversations in the target language.
Audience: Undergraduate

7. Write essays and letters including somewhat complex vocabulary in the target language.
Audience: Undergraduate

8. Gain cultural competence through independent, project-based activities.
Audience: Undergraduate

ASIALANG 451 – ADVANCED READINGS IN JAPANESE
3 credits.

Introduces a variety of authentic texts in Japanese, such as essays, newspaper articles, and short stories. Utilize reading strategies introduced in class, discuss related topics, and write short essays. Develop the advanced level of linguistic proficiency as well as some understanding of the Japanese society and culture.
Requisites: ASIALANG 303 or placement into ASIALANG 304
Course Designation: Breadth - Humanities
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Acquire the vocabulary, kanji, and expressions appropriate for advanced level language use
Audience: Both Grad & Undergrad

2. Develop strategies to understand authentic texts in various genres and styles with unfamiliar vocabulary
Audience: Both Grad & Undergrad

3. Understand authentic texts and recognize some literary and technical styles
Audience: Both Grad & Undergrad

4. State and support their own views based on critical reading of the texts
Audience: Both Grad & Undergrad

5. Develop further understanding of the Japanese culture and society
Audience: Both Grad & Undergrad

6. Acquire study skills to develop their proficiency in Japanese on topics related to their academic field of study
Audience: Graduate

ASIALANG 452 – ADVANCED JAPANESE THROUGH AUDIO-VISUAL MEDIA
3 credits.

Enhance Japanese language proficiency through the study of various genres of audio-visual media, including drama, news, documentary, talk/variety show, and commercials. Primarily focuses on the development of listening comprehension and media literacy, but also provides opportunities to improve ability to express viewpoints through writing and speaking in Japanese.
Requisites: ASIALANG 303 (or E ASIAN 303 prior to Summer 2019) or placement into ASIALANG 304
Course Designation: Breadth - Humanities
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Grasp basic ideas on some unfamiliar topics delivered through a variety of audio-visual media produced in Japanese
Audience: Undergraduate

2. Demonstrate the understanding of different registers and styles of Japanese language used in different genres of media discourse
Audience: Undergraduate

3. Demonstrate how visual and sound effects contribute to the creation of meaning
Audience: Undergraduate

4. Analyze how media discourse contributes to the creation, maintenance, or critique of certain ideological beliefs
Audience: Undergraduate

5. State and support their own views on some social and cultural issues discussed or implied in a variety of audio-visual media produced in Japanese
Audience: Undergraduate

6. Create audio-visual media presentations on topics of their interest
Audience: Undergraduate

ASIALANG 454 – ADVANCED CHINESE THROUGH MEDIA
3 credits.

Designed for advanced learners of Chinese to improve their Chinese language skills and cultural knowledge. Students will watch and analyze audio-visual media, such as documentary, talk show, movies, etc.
In addition, students will make audios/videos to tell stories about themselves, their friends, or others.
Requisites: ASIALANG 301 (or E ASIAN 301 prior to Fall 2019) or placement into ASIALANG 302
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ASIALANG 456 – ADVANCED KOREAN THROUGH AUDIO-VISUAL MEDIA
3 credits.

Improve listening comprehension, media literacy, speaking, and writing skills. Using various genres of audio-visual media materials, including drama, news, documentaries, talk/variety shows, and advertisements, gain a deeper understanding of contemporary Korean society and culture. Develop listening comprehension skills by watching and listening to authentic Korean media content. Analyze media content critically and develop media literacy skills. Practice speaking and writing skills through engaging discussions and assignments.
Requisites: ASIALANG 305 or placement into ASIALANG 306
Course Designation: Breadth - Humanities
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand and interpret unfamiliar topics presented through a diverse range of Korean audio-visual media.
Audience: Undergraduate

2. Demonstrate an understanding of different registers and styles of the Korean language used in various genres of media discourse.
Audience: Undergraduate

3. Analyze the role and significance of visual and sound effects in the creation of meaning within audio-visual media.
Audience: Undergraduate

4. Express students' own views on social and cultural issues depicted in Korean media.
Audience: Undergraduate

5. Create audio-visual media presentations on topics of interest and effectively communicate ideas and messages using audio-visual media.
Audience: Undergraduate

ASIALANG 457 – ADVANCED CHINESE: READING AND WRITING
3 credits.

Learn to interpret modified and authentic Chinese reading materials, including textbook articles, news reports, and online posts from various social media. Learn the basics of Chinese writing, and practice planning, writing, and revising Chinese essays. Solidify Chinese reading and writing skills, cultivate wider and deeper perspectives towards Chinese society and culture, and develop insight into one's own language and culture.
Requisites: ASIALANG 301, 379, placement into ASIALANG 302, or graduate/professional standing
Course Designation: Breadth - Humanities
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and understand main messages and supporting details on selected Chinese reading materials.
Audience: Both Grad & Undergrad

2. Use Chinese (in speaking or writing) to express their opinions, explain complex matters in detail, and provide lengthy and coherent narrations or arguments in response to certain reading materials and writing prompts, all with fluency, accuracy and complexity.
Audience: Both Grad & Undergrad

3. Learn new vocabulary and sentence structures from selected Chinese reading materials.
Audience: Both Grad & Undergrad

4. Learn and practice reading and writing strategies in Chinese.
Audience: Both Grad & Undergrad

5. Search, evaluate and share information from various text sources.
Audience: Both Grad & Undergrad

6. Strengthen intercultural awareness and critical thinking abilities through class discussions, individual projects and group collaborations
Audience: Both Grad & Undergrad

7. Strengthen research skills, inquiry abilities and academic presentation skills.
Audience: Both Grad & Undergrad

8. Strengthen higher-level writing skills in Chinese, including synthesize scholarly literature, present critical analysis, and writing in a scholarly voice.

Audience: Graduate

ASIALANG 460 – INTERMEDIATE HIGH READING PROFICIENCY IN ASIAN LANGUAGES
4 credits.

Reinforces the skills of reading various genres of Asian target-language writings. Designed for students who have taken at least three semesters of an Asian language course.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No

ASIALANG 475 – ADVANCED TOPICS IN ASIAN TRANSLATION
3 credits.

Topics course in advanced translation from Asian languages to English. Discussion of naming conventions, genre, advanced grammar, audience, transcription, etc.
Requisites: Consent of instructor
Course Designation: Breadth - Humanities
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Comprehend and employ various approaches to interpreting literature
Audience: Both Grad & Undergrad

2. Demonstrate knowledge of major movements, trends, or events in the development of world cultures
Audience: Both Grad & Undergrad

3. Demonstrate an appreciation of the complexities of the interpretative process within historical and cultural contexts
Audience: Both Grad & Undergrad

4. Apply critical approaches to the works and think critically about and appreciate the complexities of literary texts and translations
Audience: Both Grad & Undergrad

5. Gain experience presenting texts and topics related to your research to outside audiences (primarily your classmates and the instructor)
Audience: Graduate

ASIALANG 507 – FIFTH SEMESTER SOUTHEAST ASIAN LANGUAGE
4 credits.

Proficiency at the advanced-low level in listening, speaking, reading, and writing, using communicative approaches.
Requisites: Declared in Southeast Asian Studies Summer Institute
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

ASIALANG 508 – SIXTH SEMESTER SOUTHEAST ASIAN LANGUAGE
4 credits.

Proficiency at the advanced-low level in listening, speaking, reading, and writing, using communicative approaches.
Requisites: Declared in Southeast Asian Studies Summer Institute
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

ASIALANG 517 – FIFTH SEMESTER SUMMER ASIAN LANGUAGE
4 credits.

Proficiency at the advanced level in listening, speaking, reading, and writing, using communicative approaches.
Requisites: Declared in South Asia Summer Language Institute, Southeast Asian Studies Summer Institute, Middle Eastern and Mediterranean Language Institute, or Central Eurasian Studies Summer Institute
Course Designation: Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025
Learning Outcomes: 1. Develop a functional vocabulary of approx. 3,000 words and phrases.
Audience: Undergraduate

2. Indulge in somewhat complex conversations, text analyses, and discussions on a range of topics in target language.
Audience: Undergraduate

3. Indulge in situations posing problems and be able to handle it by engaging in negotiations to solve the problem at hand.
Audience: Undergraduate

4. Write essays, letters, passages, and use the dictionaries comprehensively.
Audience: Undergraduate

5. Present comprehensive and accurate summaries of various target language texts including movies, videos, etc.
Audience: Undergraduate

6. Speak in target language during the class, discussions, presentations etc.
Audience: Undergraduate

7. Listen to target language songs, news, and other programs available online and understand most of the content with accuracy.
Audience: Undergraduate

8. Understand the core theme of a discussion and connect them to previous discussions on a related topic.
Audience: Undergraduate

9. Read the target languge script fluently with appropriate pronunciations, grammar, spellings, punctuations, borrowed sounds and comfort level.
Audience: Undergraduate

10. Read longer and more complex texts written in target language script, such as newspaper articles.
Audience: Undergraduate

11. Write thoughts and feelings in a journal.
Audience: Undergraduate

12. Write essays and join paragraphs on various familiar topics.
Audience: Undergraduate

ASIALANG 527 – SIXTH SEMESTER SUMMER ASIAN LANGUAGE
4 credits.

Proficiency at the advanced level in listening, speaking, reading, and writing, using communicative approaches.
Requisites: Declared in South Asia Summer Language Institute, Southeast Asian Studies Summer Institute, Middle Eastern and Mediterranean Language Institute, or Central Eurasian Studies Summer Institute
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025
Learning Outcomes: 1. Develop a functional vocabulary of approx. 3,000 words and phrases.
Audience: Undergraduate

2. Indulge in somewhat complex conversations, text analyses, and discussions on a range of topics in target language.
Audience: Undergraduate

3. Indulge in situations posing problems and be able to handle it by engaging in negotiations to solve the problem at hand.
Audience: Undergraduate

4. Write essays, letters, passages, and use the dictionaries comprehensively.
Audience: Undergraduate

5. Present comprehensive and accurate summaries of various target language texts including movies, videos, etc.
Audience: Undergraduate

6. Speak in target language during the class, discussions, presentations etc.
Audience: Undergraduate

7. Listen to target language songs, news, and other programs available online and understand most of the content with accuracy.
Audience: Undergraduate

8. Understand the core theme of a discussion and connect them to previous discussions on a related topic.
Audience: Undergraduate

9. Read the target language script fluently with appropriate pronunciations, grammar, spellings, punctuations, borrowed sounds and comfort level.
Audience: Undergraduate

10. Read longer and more complex texts written in target language script, such as newspaper articles.
Audience: Undergraduate

11. Write thoughts and feelings in a journal.
Audience: Undergraduate

12. Write essays and join paragraphs on various familiar topics.
Audience: Undergraduate

ASIALANG 560 – ADVANCED READING PROFICIENCY IN ASIAN LANGUAGES
4 credits.

Reinforces the skills of reading various genres of Asian Languages writings. Designed for students who have taken at least a second year Asian languages course
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ASIALANG 607 – SEVENTH SEMESTER SOUTHEAST ASIAN LANGUAGE
4 credits.

Proficiency at the advanced-high level in listening, speaking, reading, and writing, using communicative approaches.
Requisites: Declared in Southeast Asian Studies Summer Institute
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2019

ASIALANG 608 – EIGHTH SEMESTER SOUTHEAST ASIAN LANGUAGE
4 credits.

Proficiency at the advanced-high level in listening, speaking, reading, and writing, using communicative approaches.
Requisites: Declared in Southeast Asian Studies Summer Institute
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2019

ASIALANG 675 – ADVANCED READINGS IN SANSKRIT
3 credits.

Designed for advanced learners of Sanskrit and will enhance students' knowledge of the language through reading in a variety of genres from different time periods. Primarily focuses on reading and analyzing texts. Students with prior experience in the language are required to take a placement test administered by the department. Not open to students with credit for LCA LANG 675 prior to Fall 2019.
Requisites: ASIALANG 242 or 358 (or LCA LANG 476 prior to Fall 2019)
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2020

ASTRONOMY (ASTRON)

ASTRON 103 – THE EVOLVING UNIVERSE: STARS, GALAXIES, AND COSMOLOGY
3 credits.

The cosmos is vast, mysterious, and beautiful. Join us on an exploration of the universe, from the big bang to the birth, life, and death of stars and the warped reality of black holes. Includes lifecycles of stars; supernovae and creation of elements; white dwarfs, pulsars and black holes; the Milky Way and galaxies; distances of stars and galaxies; quasars; expansion of universe; modern big bang cosmology, dark matter, dark energy.
Requisites: Satisfied Quantitative Reasoning (QR) A requirement. Not open to students with credit for ASTRON 200
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply quantitative reasoning to evaluate scientific hypotheses to explain astronomical observations
Audience: Undergraduate

2. Understand and apply--quantitatively--the scientific basis of astronomical concepts such as the Hubble law, the inverse square law, and Newtonian gravity.
Audience: Undergraduate

3. Understand--qualitatively--and be able to explain to a lay audience the scientific basis for the laws of stellar structure and evolution
Audience: Undergraduate

4. Critically evaluate qualitative scientific arguments using the scientific method
Audience: Undergraduate

5. Write basic scientific prose for a variety of lay audiences
Audience: Undergraduate

ASTRON 104 — OUR EXPLORATION OF THE SOLAR SYSTEM
3 credits.

Humanity is linked to the solar system in countless ways. Our view of the solar system, how planets form, and how planetary systems evolve has fundamentally changed with the discovery of countless exoplanets around other stars. Join us in exploring the modern view of the solar system and its relation to other planetary worlds. Includes the sky and celestial motions; ancient astronomy; the Copernican revolution; gravity, orbits, and interplanetary travel; formation of solar system; survey of sun, planets and moons; asteroids, meteors and comets; origin of life.
Requisites: Satisfied Quantitative Reasoning (QR) A requirement. Not open to students with credit for ASTRON 200
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply quantitative reasoning to evaluate scientific hypotheses to explain astronomical observations
Audience: Undergraduate

2. Understand and apply--quantitatively--the scientific basis of astronomical concepts such as the inverse square law, Newtonian gravity, and Kepler's laws.
Audience: Undergraduate

3. Understand--qualitatively--and be able to explain to a lay audience the scientific basis for the laws of stellar structure and stellar and planetary accretion
Audience: Undergraduate

4. Critically evaluate qualitative scientific arguments using the scientific method
Audience: Undergraduate

5. Write basic scientific prose for a variety of lay audiences
Audience: Undergraduate

ASTRON 140 — EARTH 2.0: THE EXOPLANET REVOLUTION
3 credits.

Our Galaxy contains about 100 billion stars. Most of these stars have planets as diverse and as fascinating as the worlds in our own neighborhood, the solar system. Learn about the study of planets and exoplanets, probing some of the deepest questions science and philosophy grapple with. Explore the ways in which scientists search for and analyze planets orbiting distant stars, both in the classroom and in hands-on laboratory experiences. From moons to super-Jupiters, this course provides an engrossing introduction into the brand new science of exoplanet research.
Requisites: Satisfied Quantitative Reasoning (QR) A requirement
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Make scientific measurements, with an emphasis on the role of uncertainty.
Audience: Undergraduate

2. Develop a testable hypothesis, and display and manipulate data in a way that supports or rejects it.
Audience: Undergraduate

3. Apply Newtonian laws of gravity and motion and a quantum mechanics-based understanding of electromagnetic radiation to interpret the properties of stars and exoplanets.
Audience: Undergraduate

4. Apply radial-velocity and transit techniques to discover exoplanets within existing data.
Audience: Undergraduate

5. Use mathematics effectively to determine the masses, radii, densities, and equilibrium temperatures of exoplanets.
Audience: Undergraduate

6. Interpret the compositions of exoplanets in the context of a unified theory of protoplanetary disks and planet formation.
Audience: Undergraduate

7. Apply basic atmospheric and geophysical evolutionary processes to predict exoplanet environments, with an emphasis on the greenhouse effect.
Audience: Undergraduate

8. Integrate history, philosophy, sociology and art to explain the human significance of the exoplanet revolution.
Audience: Undergraduate

ASTRON 150 – TOPICS IN ASTRONOMY
2 credits.

Intensively study selected topics of modern astronomy. Examples include missions to the planets, formation of stars and planets, end states of stellar evolution (supernovae, white dwarfs, pulsars, black holes), origin and evolution of the universe.
Requisites: ASTRON 103 or ASTRON 104
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ASTRON/GEOSCI 160 – LIFE IN THE UNIVERSE
2 credits.

An examination of the origin and evolution of life in the universe based on our knowledge of astronomy, biology, and geology. Includes discussions on the search for extraterrestrial life and the history of life in our solar system.
Requisites: None
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Show how scientific reasoning and the scientific method are used to determine Earth's place within the solar system and the cosmos.
Audience: Undergraduate

2. Connect our current observations of exoplanets with their potential roles in the origin of life elsewhere in the Universe.
Audience: Undergraduate

3. Describe the physical and chemical limits of life on Earth to chart the potential for life on Mars and other worlds.
Audience: Undergraduate

4. Apply the genetic code to interpret the origin and evolution of life on Earth.
Audience: Undergraduate

5. Summarize key geologic events on Earth and Mars; interpret relationships between planetary tectonics and habitability.
Audience: Undergraduate

6. Explain the range of evidence in the rock record for early life on Earth and critique the fidelity of this record.
Audience: Undergraduate

7. Illustrate how quantitative approaches are used to analyze problems in astronomy, biology, and geology.
Audience: Undergraduate

ASTRON 170 – THE DARK SIDE OF THE UNIVERSE: THE GREAT COSMIC MYSTERIES FROM BLACK HOLES TO DARK ENERGY
3 credits.

Some of the greatest mysteries of the cosmos reside in what astrophysicists call "the dark sector". This course explores the nature of black holes, dark matter, and dark energy, which show us nature at its most extreme, taking you from the warping of spacetime and the launching of plasma beams around black holes to the acceleration of the cosmos that indicates the presence of some yet unknown form of energy. Learn about the fundamental laws of nature that govern everything from GPS satellites that enable navigation apps on your cell phone to the birth and ultimate fate of the universe.
Requisites: None
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Evaluate hypotheses to explain astronomical observations
Audience: Undergraduate

2. Write basic scientific prose for a variety of lay audiences
Audience: Undergraduate

3. Understand and apply--qualitatively--the scientific basis of Newtonian Gravity and Relativity
Audience: Undergraduate

4. Understand and apply the basics of cold-dark matter big-bang cosmology
Audience: Undergraduate

5. Understand and articulate evidence for dark matter, dark energy, and black holes
Audience: Undergraduate

ASTRON 199 – DIRECTED STUDY
1-3 credits.

Introductory mentored independent study as arranged with faculty.
Requisites: Consent of instructor
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ASTRON 200 – THE PHYSICAL UNIVERSE
3 credits.

Modern astrophysics involves applying physical principles to understand astronomical phenomena. Includes the solar system, stars, nebulae, galaxies, and cosmology, with emphasis on origins and evolution. Some nighttime observation with telescopes required.
Requisites: PHYSICS 201, 207, 247 or MATH 222
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply quantitative reasoning to evaluate scientific hypotheses to explain astronomical observations.
Audience: Undergraduate

2. Apply--quantitatively--the scientific basis of astronomical concepts such as the Hubble law, the inverse square law, and Newtonian gravity.
Audience: Undergraduate

3. Explain to a lay audience the scientific basis for the laws of stellar structure and evolution.
Audience: Undergraduate

4. Critically evaluate qualitative scientific arguments using the scientific method.
Audience: Undergraduate

5. Explain scientific discoveries for a variety of lay audiences.
Audience: Undergraduate

6. Identify and summarize the nature of the universe's major components.
Audience: Undergraduate

7. Apply important physical laws and concepts to follow the process by which astronomical discoveries are made
Audience: Undergraduate

ASTRON 202 – INTRODUCTION TO ASTRONOMY RESEARCH
1 credit.

Learn the basic tools necessary to conduct research in astronomy. Explore the programming techniques employed in astrophysical research, with a focus on the Python programming language and associated packages that are most often used in astronomy.
Requisites: ASTRON 103, 104, 200, or concurrent enrollment in ASTRON 103, 104, or 200
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Utilize a programming language to perform calculations on astronomical data sets.
Audience: Undergraduate

2. Create visualizations of complex astronomical data sets.
Audience: Undergraduate

3. Write basic documents in LaTeX.
Audience: Undergraduate

4. Demonstrate how astronomical data is obtained, reduced, and analyzed.
Audience: Undergraduate

5. Effectively communicate scientific results in a written format.
Audience: Undergraduate

ASTRON/HIST SCI 206 – HISTORY OF ASTRONOMY AND COSMOLOGY
3 credits.

The development of astronomical knowledge and cosmological views from the earliest times to the present, viewed in their social, philosophical, and technological contexts.
Requisites: None
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2024
Learning Outcomes: 1. Discuss the history of modern astronomy, with an emphasis on tracing how our current conception of the universe has developed.
Audience: Undergraduate

2. Describe the ancient background to western European astronomy, the role of astronomy in the scientific revolution of the 16th and 17th centuries, the development of modern astrophysics, and Wisconsin's contributions to modern astronomy.
Audience: Undergraduate

3. Engage actively and critically with primary historical sources, including Galileo's Siderius Nuncius, through reading, writing, discussion, and examination of rare books.
Audience: Undergraduate

4. Evaluate historical subjects and works in their own contexts while also appreciating their significance for our own world view.
Audience: Undergraduate

5. Demonstrate some familiarity with astronomical instruments, observatories, and technologies through actual use, visits, and class demonstrations.
Audience: Undergraduate

ASTRON 236 – THE HISTORY OF MATTER IN THE UNIVERSE
3 credits.

Multidisciplinary study of how the distribution of elements in the Universe has changed over the last 10-15 billion years by tracing the history of matter from the Big Bang to the present composition of the Earth. Emphasizes connections between astronomy, geology, and chemistry. Readings will draw both on scientific journals and the popular press to allow us to engage the material on multiple levels.
Requisites: None
Course Designation: Gen Ed - Communication Part B
Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop hypotheses and gather evidence on how the composition of the universe came about and how it evolved over cosmic time.
Audience: Undergraduate

2. Describe the composition and structure of the planetary systems.
Audience: Undergraduate

3. Describe how science develops insight and knowledge.
Audience: Undergraduate

4. Perform scientific experiments by gathering data and analyzing them.
Audience: Undergraduate

5. Share evidence and conclusions by writing scientific prose.
Audience: Undergraduate

6. Make productive use of the writing process, including brainstorming, outlining, drafting, incorporating feedback, and revising, to develop a fledgling idea into a formal paper, presentation, and/or project;
Audience: Undergraduate

7. Make use of expressive conventions and protocols (e.g., organization, content, presentation, formatting) consistent with genres of communication relevant to the course subject or discipline.
Audience: Undergraduate

ASTRON 310 – STELLAR ASTROPHYSICS
3 credits.

Properties of normal and peculiar stars as found from an analysis of the radiation they emit; introduction to radiation transfer. Theory of stellar atmospheres, interiors, and evolution.
Requisites: MATH 222 and (PHYSICS 205, 241, or 249, or concurrent enrollment)
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the properties of stars and explain how these properties are deduced from the radiation that they emit.
Audience: Undergraduate

2. Define the basic principles of radiative transfer and apply these principles to interpreting the atmospheres of stars.
Audience: Undergraduate

3. Apply basic physical principles and mathematical techniques learned in prerequisite classes to understand the structure, evolution, and ultimate fates of stars.
Audience: Undergraduate

4. Demonstrate thinking like a scientist, applying heuristics such as dimensional analysis and order-of-magnitude estimation to obtain quick insights into unfamiliar systems.
Audience: Undergraduate

5. Communicate scientific concepts and results clearly, using a combination of writing and visual representations with bibliographic references as appropriate.
Audience: Undergraduate

6. Access, read, and critically evaluate existing scientific literature and information repositories relating to stellar astrophysics.
Audience: Undergraduate

ASTRON 320 – THE INTERSTELLAR MEDIUM
3 credits.

Properties of neutral and ionized interstellar gas, giant molecular clouds, the warm and hot intercloud medium, supernova remnants, and interstellar dust. Physical processes in low density gases including radiation transfer, excitation and ionization of interstellar atoms and molecules, and the interaction between gas and dust.
Requisites: MATH 222 and (PHYSICS 205, 241, or 249, or concurrent enrollment)
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe characteristics of various phases of the interstellar medium (ISM) and explain why these particular phases are stable.
Audience: Undergraduate

2. Explain key physical processes in each phase of ISM.
Audience: Undergraduate

3. For a given set of observations of spectral lines, derive basic physical properties, such as temperature, density, and the total column density of the species.
Audience: Undergraduate

4. Analyze the effects and roles of dust in the ISM.
Audience: Undergraduate

5. For a given set of initial physical conditions, compose equations to describe the environment, and apply these equations to predict the excitation and ionization conditions, molecular abundances, temperatures, and densities of the ISM environment.
Audience: Undergraduate

6. Explain current theories on how stars and planets form to family and friends.
Audience: Undergraduate

ASTRON 330 – GALAXIES
3 credits.

Distribution of stars, gas, and dust within our Milky Way, and their motions. Nearby galaxies: our Local Group. Optical, radio, and other techniques for observing galaxies. Composition and motions of other galaxies; galaxies with active nuclei; galaxy formation.
Requisites: ASTRON 310
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe current astrophysical theories and modern observations of galaxies.
Audience: Undergraduate

2. Apply physical principles and mathematical techniques to understand the natural laws governing galaxies.
Audience: Undergraduate

3. Use scientific computing methods to analyze and physically interpret galaxy data.
Audience: Undergraduate

4. Practice clear and concise written and oral scientific communication.
Audience: Undergraduate

5. Exhibit proper professional and ethical conduct while working in group settings.
Audience: Undergraduate

ASTRON 335 – COSMOLOGY
3 credits.

Introduction to the study of our Universe as a whole. Distribution of matter on the largest scales. Equations for cosmic expansion; making observations in an expanding curved spacetime. Nucleosynthesis and other tests of the Big Bang hypothesis. Gravitational collapse and the growth of structure.
Requisites: MATH 222 and (PHYSICS 205, 241, or 249, or concurrent enrollment)
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain modern cosmological concepts, including dark matter and dark energy, and present evidence supporting the standard Lambda-CDM cosmology.
Audience: Undergraduate

2. Describe the physical and mathematical assumptions in basic cosmological models.
Audience: Undergraduate

3. Use knowledge of these concepts to make testable, observable predictions about the Universe.
Audience: Undergraduate

ASTRON 340 – SOLAR SYSTEM ASTROPHYSICS
3 credits.

Properties of solar system objects, solar atmospheric phenomena, physics of planetary atmospheres, results of recent planetary missions, comets, origin of the solar system.
Requisites: MATH 222 and (PHYSICS 205, 241, or 249, or concurrent enrollment)
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop a sense of wonder and curiosity about our solar system and planetary systems around other stars.
Audience: Undergraduate

2. Describe various methods of how we collect information to study these systems and our limitations and challenges in this process.
Audience: Undergraduate

3. Apply physics learned in their previous physics courses to explain and analyze properties and phenomena seen in our solar system and beyond.
Audience: Undergraduate

4. Apply knowledge of current and forthcoming NASA missions to explain their objectives, and the vital role they play in enhancing our knowledge of the solar system and extrasolar systems.
Audience: Undergraduate

ASTRON 460 – EXPERIENCES IN ASTRONOMICAL OBSERVING
1 credit.

A basic introduction into astronomical research by undertaking a small observing project with optical and/or radio telescopes. Topics covered are: understanding the astronomical literature, observing and data reduction, writing scientific reports and papers, presenting scientific results, and basics of scientific ethics.
Requisites: Declared in Astronomy-Physics
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2022
Learning Outcomes: 1. Design simple astronomical observations with a 2.3-m small radio telescope, and process and analyze obtained observations.
Audience: Undergraduate

2. Use simple scientific computing methods to plan astronomical observations and analyze astronomical data.
Audience: Undergraduate

3. Practice principles and standards of professional and ethical conduct; judge when and how to cite references and when it is appropriate to credit the contributions of others or claim credit for one's own work.
Audience: Undergraduate

4. Present scientific results clearly and concisely in multiple formats.
Audience: Undergraduate

ASTRON 465 – OBSERVATIONAL ASTRONOMY AND DATA ANALYSIS
3 credits.

A basic introduction into astronomical observations and data analysis techniques by undertaking observational projects with optical and radio telescopes. Topics covered include observation and data reduction, basic calibration of radio and optical telescopes, basics of data analysis and statistics, presenting scientific results, and basics of scientific ethics. Although specific to observational astrophysics, these methods are applicable to any of the physical sciences disciplines.
Requisites: PHYSICS 205, 241, or 249
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand how astronomical observations are obtained, processed and analyzed.
Audience: Undergraduate

2. Use simple scientific computing methods to plan astronomical observations and analyze astronomical data.
Audience: Undergraduate

3. Understand uncertainties in astronomical measurements to draw meaningful conclusions from the conducted experiments.
Audience: Undergraduate

4. Demonstrate the basics of oral and written scientific presentations.
Audience: Undergraduate

5. Practice principles and standards of professional and ethical conduct. Learn when and how to cite references and when it is appropriate to credit the contributions of others or claim credit for one's own work.
Audience: Undergraduate

ASTRON 500 – TECHNIQUES OF MODERN OBSERVATIONAL ASTROPHYSICS
3 credits.

An introduction to astrophysics data collection. Students will be familiarized with the concepts, techniques, skills and resources needed to plan, obtain, reduce and interpret observations of astronomical objects.
Requisites: ASTRON 310, 320, 330, 335, 340, or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Perform conversions between instrumental units (e.g., pixels, ADU), astronomical units (e.g., arcseconds, magnitudes), and physical quantities (e.g., distance, luminosity).
Audience: Both Grad & Undergrad

2. Describe limiting cases for signal-to-noise in astronomical observing and how signal-to-noise limitations impact observation planning or instrument design.
Audience: Both Grad & Undergrad

3. Explain steps required for calibrating photometric and spectroscopic data. Describe how Earth's atmosphere impacts ground-based imaging and spectroscopy.
Audience: Both Grad & Undergrad

4. Identify fundamental components of telescopes, imagers, and spectrographs within a conceptual design or diagram. Compare variations in telescope or instrument design and tradeoffs between multiple dimensions of performance.
Audience: Both Grad & Undergrad

5. Compare technology for observing in different electromagnetic regimes (e.g., X-ray, UV, optical, infrared, radio), as well as observing challenges and limitations.
Audience: Both Grad & Undergrad

6. Predict an astronomical instrument's performance using instrument specifications, and characterize the instrument's actual performance using empirical data.
Audience: Graduate

7. Compose technical pieces of an observing proposal: identify an appropriate facility and instrument, and develop an observing plan to achieve science requirements.
Audience: Graduate

ASTRON 540 – EXOPLANETS
3 credits.

Over the past several decades, astronomers have discovered thousands of planets orbiting stars other than the Sun. Learn about the various methods (transits, radial velocities, microlensing, and direct imaging) used to detect these exoplanets, the inherent challenges and limitations of current methodologies (data quality, processing, and bias), and theories related to exoplanet formation, atmospheres, and habitability.
Requisites: (ASTRON 310 or concurrent enrollment), (ASTRON 320 or concurrent enrollment), or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Describe how exoplanets are discovered and the limitations of current discovery methods.
Audience: Both Grad & Undergrad

2. Summarize the current theories of planet formation and observations of protoplanetary disks.
Audience: Both Grad & Undergrad

3. Explain observations of exoplanet atmospheres and habitability theories.
Audience: Both Grad & Undergrad

4. Use mathematical reasoning to derive planet properties from astronomical data.
Audience: Both Grad & Undergrad

5. Demonstrate how astronomical data is proposed for, obtained, reduced, and analyzed.
Audience: Both Grad & Undergrad

6. Effectively communicate scientific results in a written format.
Audience: Both Grad & Undergrad

7. Create a "full-fledged and potentially competitive" telescope proposal
Audience: Graduate

ASTRON/E M A 550 – ASTRODYNAMICS
3 credits.

Coordinate system transformations, central force motion, two body problem, three and n-body problem, theory of orbital perturbations, artificial satellites, elementary transfer orbits, and elementary rocket dynamics.
Requisites: (E M A 202, M E 240, or PHYSICS 311, or concurrent enrollment), or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ASTRON 620 – SEMINAR IN ASTROPHYSICAL TOPICS
1-3 credits.

Current problems; topic changes.
Requisites: ASTRON 310, 320, 330, 335, 340, or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ASTRON 681 – SENIOR HONORS THESIS
3 credits.

Individual study for seniors completing theses for honors in the major as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025

ASTRON 682 – SENIOR HONORS THESIS
3 credits.

Individual study for seniors completing theses for honors in the major as arranged with a faculty member; continuation of ASTRON 681.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2025

ASTRON 691 – SENIOR THESIS
2-3 credits.

Individual study for seniors completing theses as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

ASTRON 692 – SENIOR THESIS
2-3 credits.

Individual study for seniors completing theses as arranged with a faculty member; continuation of ASTRON 691.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ASTRON 699 – DIRECTED STUDY
1-6 credits.

Directed study projects for juniors and seniors as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ASTRON 700 – BASIC ASTROPHYSICS I
2 credits.

Thermodynamics, atomic and molecular spectra, ionization and excitation, line and continuum opacities. Synchrotron radiation, Compton scattering, X-ray spectra. Radiative transfer, simple model atmospheres, radiative and convective energy transport.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ASTRON 702 – BASIC ASTROPHYSICS II
2 credits.

Basic particle and fluid dynamics of stellar and gaseous systems in astrophysics. Review of gravitational dynamics, 2-body relaxation, phase space, basic equations of fluid dynamics, waves, shocks, winds accretion, instabilities.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ASTRON 715 – STELLAR INTERIORS AND EVOLUTION
2 credits.

Physical principles, equilibrium of gaseous spheres, energy transport, energy generation, nucleosynthesis, main sequence red giant and electron degenerate stars. Advanced topics such as origins of stellar variability, binary star evolution, star formation, supernovae explosions, evolution with mass loss.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ASTRON 720 – THE INTERSTELLAR MEDIUM I: BASIC PROCESSES
2 credits.

Observational techniques for interstellar medium studies, overview of the role of interstellar gas in galaxies, dynamics, energetics, major theories of structure and evolution, introduction to star formations and supernova remnant evolution.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

ASTRON 730 – GALAXIES
2 credits.

Stellar content and dynamics of the Milky Way and other galaxies; galaxy types, evolution of normal galaxies, active nuclei, quasars, radio galaxies.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ASTRON 735 – OBSERVATIONAL COSMOLOGY
2 credits.

Extragalactic distance scale; groups and clusters of galaxies; distribution of galaxies and radio sources. Introduction to general relativity, cosmological models, microwave background, early universe, galaxy formation.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ASTRON/PHYSICS 910 – SEMINAR IN ASTROPHYSICS
0-1 credits.

Current topics in astrophysics.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ASTRON 920 – SEMINAR-ASTROPHYSICAL TOPICS
1-3 credits.

Current problems; topic changes.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

ASTRON 990 – RESEARCH AND THESIS
1-12 credits.

Advanced level mentored reading and research for graduate students.
Requisites: Declared in Astronomy PhD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ASTRON 999 – ADVANCED INDEPENDENT READING
1-2 credits.

Advanced level mentored reading and research for graduate students.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2022

ATMOSPHERIC AND OCEANIC SCIENCES (ATM OCN)

ATM OCN 100 – WEATHER AND CLIMATE
3 credits.

Nature and variability of wind, temperature, clouds and precipitation. Storm systems, fronts, thunderstorms, tornadoes and their prediction. Air composition and pollution. Global winds, seasonal changes, climate and climatic change.
Requisites: Not open to students with credit for ATM OCN 101
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ATM OCN 101 – WEATHER AND CLIMATE
4 credits.

Nature and variability of wind, temperature, clouds and precipitation. Storm systems, fronts, thunderstorms, tornadoes and their prediction. Air composition and pollution. Global winds, seasonal changes, climate and climatic change. Includes map analyses and basic quantitative lab exercises.
Requisites: Not open to students with credit for ATM OCN 100
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ATM OCN/ENVIR ST/GEOSCI 102 – CLIMATE AND CLIMATE CHANGE
3 credits.

Describes the basic climate principles governing the climate system. It describes the climate and climate variability at present, climate evolution in the past, and the projected climate change into the future. The scientific principles underlying the natural and anthropogenic greenhouse effect and climate model forecasts are elucidated.
Requisites: None
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ATM OCN/GEOSCI 105 – SURVEY OF OCEANOGRAPHY
3-4 credits.

Nature and behavior of ocean water, interaction of oceans and atmosphere, structure of the ocean floor, life in the oceans, our relationship to the marine environment.
Requisites: None
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ATM OCN/BSE/SOIL SCI 132 – WATER AND PEOPLE
3 credits.

Water is central to the functioning of planet Earth and is influential to shaping many historical and present-day cultures across the globe. As humans increase their impact on Earth's water cycle, our understanding of the multiple roles of water becomes critical to finding sustainable strategies for human and ecosystem health. Explore different perspectives around cultural significance of, engagement with, and access to water, with particular focus to case studies from the United States. Identify the human influence on water quality and quantity in a changing global climate, from local, regional, and global perspectives, and how different racial and ethnic communities in the United States are differentially impacted.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Situate individual experiences with the water cycle in the broader context of different perspectives around the cultural significance of, engagement with, and access to water
Audience: Undergraduate

2. Summarize how historical circumstances/events have affected present day water resource policies, management, and standards, with a focus on the United States
Audience: Undergraduate

3. Apply knowledge of historical circumstances and current policies to describe how present-day communities are affected by water rights and management, and why
Audience: Undergraduate

4. Analyze the human influence on water quality and quantity under changing climate conditions from local, regional, and global perspectives
Audience: Undergraduate

5. Examine how different racial and ethnic communities, with particular focus on marginalized communities in the United States, are impacted by changes in water quality and quantity
Audience: Undergraduate

ATM OCN/GEOSCI 140 — NATURAL HAZARDS AND DISASTERS
3 credits.

An exploration of the science behind natural disasters including earthquakes, tsunamis, volcanic eruptions, landslides, tornadoes, hurricanes, and floods. Why, where, and when do these events occur, and why are some predictable but others are not? Addresses hazard assessment, forecasting, and mitigation to lessen their impact on society.
Requisites: None
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ATM OCN 141 — NATURAL HAZARDS OF WEATHER
2 credits.

Explores the basic science of weather hazards ongoing around the globe and practical issues of Prediction, Risk Reduction, Resilience and Vulnerability (PRRRV) associated with these hazards.
Requisites: None
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2021

ATM OCN/ENVIR ST 171 — GLOBAL CHANGE: ATMOSPHERIC ISSUES AND PROBLEMS
2-3 credits.

Atmospheric problems of global significance. Greenhouse warming, ozone layer, acid rain, climate change. Study based on elementary principles of atmospheric science. Systems approach applied to changing atmospheric composition. Interactions among geochemical cycles, anthropogenic inputs and other parts of the environment.
Requisites: None
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ATM OCN 201 — EXPLORATIONS OF ATMOSPHERIC AND OCEANIC SCIENCES
2-3 credits.

Exploration of a field within atmospheric and oceanic sciences. Exposure to scientific principles, current findings, and career routes as it applies to topics such as meteorology, weather systems and weather forecasting, climate and climate change, atmospheric satellite remote sensing, oceanography, and professional careers in the discipline.
Requisites: ATM OCN 100, 101, 141, ATM OCN/GEOSCI 105, 140, SOIL SCI/ATM OCN/BSE 132, ATM OCN/ENVIR ST 171, or ATM OCN/ENVIR ST/GEOSCI 102
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024
Learning Outcomes: 1. Describe the basic scientific principles behind the concepts being explored and skills needed to further explore the topic
Audience: Undergraduate

2. Interpret how scientific articles, media stories, and reports advance our understanding of the topic
Audience: Undergraduate

3. Conduct and evaluate interviews of practitioners in the topic on their roles and professional development to understand future careers in this topic
Audience: Undergraduate

ATM OCN 310 — DYNAMICS OF THE ATMOSPHERE AND OCEAN I
3 credits.

Introduction to theory of fluid motions for atmosphere and ocean. Elementary kinematics, fundamental forces, effects of earth's gravity and rotation, concepts and applications of hydrostatic and geostrophic balance.
Requisites: (PHYSICS 202, 208, or 248 or concurrent enrollment in PHYSICS 202, 208, or 248) and MATH 234 or concurrent enrollment in MATH 234
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ATM OCN 311 – DYNAMICS OF THE ATMOSPHERE AND OCEAN II
3 credits.

Intermediate theory of fluid motions for atmosphere and ocean. Emphasis on large scale applications and basic theory for geophysical wave types. Thermal wind shear, frictional flow, vorticity concepts, Rossby waves, Sverdrup ocean flow.
Requisites: ATM OCN 310
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ATM OCN/ENVIR ST/GEOG 322 – POLAR REGIONS AND THEIR IMPORTANCE IN THE GLOBAL ENVIRONMENT
3 credits.

Reviews the past, present, and future of the Arctic and Antarctic regions. Covers the history, geography, atmospheric and ocean circulations, permafrost, ice sheets, glaciers, and future state of the Arctic and Antarctica as projected by earth system models. Also explores the role of the polar regions in the earth's system and associated global climatic feedbacks.
Requisites: Sophomore standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Describe the history, geography, atmospheric and ocean circulations, permafrost, ice sheets, glaciers, and the future state of the Arctic and Antarctic Regions.
Audience: Both Grad & Undergrad

2. Explain the major theories and concepts of the Arctic and Antarctic regions.
Audience: Both Grad & Undergrad

3. Identify how interactions occur between the major components of each polar region and their influence on global processes and climate.
Audience: Both Grad & Undergrad

4. Recognize the need for multi-disciplinary research to further our understanding of the polar regions and their role in the global system.
Audience: Both Grad & Undergrad

5. Integrate thesis or dissertation research directly or indirectly with polar processes research, thereby gaining better insight into Arctic and Antarctic regions.
Audience: Graduate

ATM OCN 330 – PHYSICS OF THE ATMOSPHERE AND OCEAN I
3 credits.

Physical variables, laws, characteristics and direct measurements for atmosphere and ocean. Thermodynamics and moist atmospheric processes. Basic physics of clouds, precipitation, and chemical constituents.
Requisites: (PHYSICS 202, 208, or 248 or concurrent enrollment in PHYSICS 202, 208, or 248) and MATH 234 or concurrent enrollment in MATH 234
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ATM OCN/ENVIR ST/GEOG 332 – GLOBAL WARMING: SCIENCE AND IMPACTS
3 credits.

Offers a fundamental understanding of how and why global warming is happening and what to expect in the future. Investigate and discuss the evidence for change, the science that explains these observations, predicted impacts on humans and ecosystems, and the societal debate over proposed solutions.
Requisites: Sophomore standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

ATM OCN/ENVIR ST/GEOG/GEOSCI 335 – CLIMATIC ENVIRONMENTS OF THE PAST
3 credits.

Climate change at timescales from the last several million years to the last 100 years, with emphasis on more recent timescales. Examines how climate variability arises from interplay between external forcings, feedbacks within the earth system, and (more recently) human activity.
Requisites: Sophomore standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the major climatic events and trends during the Quaternary, spanning timescales from the last 50,000,000 years to the last 100 years.
Audience: Undergraduate

2. Identify the physical processes controlling the behavior of the earth system and its components (atmosphere, oceans, cryosphere, biosphere, etc.).
Audience: Undergraduate

3. Discuss how climatic variability results from a combination of external forcings and internal dynamics within the earth system.
Audience: Undergraduate

4. Recognize how paleoclimatologists collect, date, and analyze a staggering variety of paleoclimatic records, including ocean and lake sediment cores, ice cores, tree rings, corals, and speleothems.
Audience: Undergraduate

5. Analyze and critically evaluate climate experiments that are simulated by earth system models.
Audience: Undergraduate

6. Think and write critically, with particular attention to critically reading the scientific literature and critically employing the climate proxies and models used by paleoclimatologists.
Audience: Undergraduate

ATM OCN 340 – PHYSICS OF THE ATMOSPHERE AND OCEAN II
3 credits.

Radiation, energy budget, and cloud physics. Scattering, absorption, emission and diabatic heating by shortwave and longwave processes. Introduction to cloud physics including cloud nucleation processes, particle growth, precipitation development, and convective cloud processes.
Requisites: ATM OCN 330
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ATM OCN/ENVIR ST 355 – INTRODUCTION TO AIR QUALITY
3 credits.

Links chemistry and meteorology to engineering, law, policy, and public health. Presents key ideas in air quality, with focus on reactive pollutants in the outdoor environment, especially gas and particle phase chemicals that react with human tissue to cause sickness and death. Discusses environmental impacts of these pollutants and regulatory approaches for their control in the U.S. and around the world. Indoor air quality will be included. Non-reactive pollutants, especially carbon dioxide, will be compared and contrasted with reactive air pollutants.
Requisites: Sophomore standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Build basic understanding of atmospheric pollutants affecting health, visibility, ecosystems, climate, and the ozone hold.
Audience: Undergraduate

2. Develop skills in analyzing air pollution data and related information, with a focus on evaluating and presenting original research on an air pollution episode of choice.
Audience: Undergraduate

3. Consider a single issue – air quality – from multiple disciplinary perspectives, including atmospheric science, engineering, policy, economics, and chemistry.
Audience: Undergraduate

ATM OCN 401 – TOPICS IN METEOROLOGY
2-3 credits.

Special topics to be given as the need and opportunity arise.
Requisites: ATM OCN 310 and 330
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ATM OCN 404 – METEOROLOGICAL MEASUREMENTS
3 credits.

Practical experience in planning experiment implementation, performing instrument quality control, conducting computational data analysis, and writing and presenting of meteorological and climatological observations in a team setting.
Requisites: Consent of instructor
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Characterize principles of measurement, calibration, and uncertainty estimation of in situ meteorological instrumentation, including technologies for data acquisition.
Audience: Both Grad & Undergrad

2. Develop testable hypotheses of atmospheric phenomena and deploy instrumentation in lab or field settings to acquire observations for testing hypotheses.
Audience: Both Grad & Undergrad

3. Analyze and interpret collected observations and describe in oral and written form how observations help advance understanding of theories of atmospheric and oceanic sciences.
Audience: Both Grad & Undergrad

4. Share skills and techniques in project management, advanced data analysis, interpretation, and graphing with classmates.
Audience: Graduate

ATM OCN 405 – AOS SENIOR CAPSTONE SEMINAR
1 credit.

Provides synthesis and overview. Research on topic of the student's choosing is presented at the end.
Requisites: ATM OCN 310, 311, 330 and 340
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ATM OCN 425 – GLOBAL CLIMATE PROCESSES
3 credits.

Overview of physical processes of the atmosphere and its coupling to the ocean and land. Understanding its seasonal climatology and variability. Synthesis through application of junior AOS core dynamics and physics to quantitatively understand diabatic, transport, and dissipative processes. Examples include global warming, air-ocean coupling, ENSO, ozone hole, tropospheric water and chemistry issues, diurnal to interannual time scales.
Requisites: ATM OCN 311 and 340
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ATM OCN 441 – RADAR AND SATELLITE METEOROLOGY
3 credits.

Provides necessary knowledge about radar and satellite meteorology.
Requisites: ATM OCN 340
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ATM OCN 452 – SYNOPTIC LABORATORY I: THE FRONTAL CYCLONE
4 credits.

Cyclone and frontal theory; case studies illustrating the structure and evolution of the frontal cyclone; diagnostic techniques: interpretation of satellite photographs, preparation of vertical cross sections and isentropic analysis.
Requisites: ATM OCN 311 and 340
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ATM OCN 453 – SYNOPTIC LABORATORY II: MESOSCALE METEOROLOGY
4 credits.

Local wind systems, thunderstorms, mesoscale convection systems, interactions with synoptic scale weather. Analysis, prediction, nowcasting and observation of mesoscale weather, including interpretation of satellite and radar information.
Requisites: ATM OCN 311 and 340
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ATM OCN 460 – FUNDAMENTALS OF PHYSICAL OCEANOGRAPHY
3 credits.

Introduction to the physics and thermodynamics of the ocean. Learn about the the physical characteristics and properties of the ocean and its circulation. Covers the basic equations of motion including the mathematics of Ekman transport, Sverdrup balance, thermal wind balance, ocean heat, salinity, and momentum conservation and budgets, waves, and tides.
Requisites: ATM OCN 311 and (MATH 319, 320, or 376), or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Describe the general physical characteristics and properties of the ocean and the relationships between them via the thermodynamic equation of state of seawater
Audience: Undergraduate

2. Write down the general equations that govern movement in the ocean including gyre circulations, the meridional overturning circulation, waves, and tides
Audience: Undergraduate

3. Understand how the ocean's physical characteristics, properties, and spatial structure arise from thermodynamics and the general equations of motion
Audience: Undergraduate

4. Describe the ocean's role in Earth's climate and apply concepts in the course to novel situations or further research
Audience: Undergraduate

ATM OCN/ENVIR ST 520 – BIOCLIMATOLOGY
3 credits.

How climate systems and biological organisms operate and interact at the global scale and the implications of this for climate change, ecosystem ecology and human land use.
Requisites: (ATM OCN 101, ENVIR ST/ATM OCN 171, or GEOG 323), (ZOOLOGY/BIOLOGY/BOTANY 152, BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY 102, BIOCORE 381, or 485), and junior standing, or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ATM OCN 522 – TROPICAL METEOROLOGY
3 credits.

Characteristics of the tropical atmosphere; local and diurnal phenomena; tropical synoptic systems; circulation and energetics; mechanisms of tropical climate variations.
Requisites: ATM OCN 311 and 340, or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ATM OCN/PLANTSCI 532 – ENVIRONMENTAL BIOPHYSICS
3 credits.

Plant-environment interactions with particular reference to energy exchanges and water relations. Models are used to provide a quantitative synthesis of information from plant physiology, soil physics, and micrometeorology with some consideration of plant-pest interactions.
Requisites: (BIOLOGY/BOTANY 130, ZOOLOGY/BIOLOGY/BOTANY 152, or BIOCORE 381) and (MATH 211, 217, or 221) and (PHYSICS 103, 201, 207, or 247), or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Apply numerical models that describe radiation fluxes in natural environments and account for latitude and longitude, time of day and year, sun angle, direct and diffuse solar radiation, and radiative properties of natural surfaces
Audience: Both Grad & Undergrad

2. Apply numerical models that describe how soil and air temperatures vary across a continuum of temporal scales (from hourly to annual) and are impacted by varied physical environments
Audience: Both Grad & Undergrad

3. Calculate growing degree-days using different numerical models and demonstrate knowledge about phenological development of plants and insects
Audience: Both Grad & Undergrad

4. Apply numerical models that represent wind speed within and above vegetative canopies and account for atmospheric turbulence
Audience: Both Grad & Undergrad

5. Calculate heat and mass (water, carbon dioxide) transport between organisms, soils, plant canopies, and the atmosphere using numerical models that represent conductance, diffusion, convective transport of heat, infiltration of water and drainage in soil, evaporation, and transpiration
Audience: Both Grad & Undergrad

6. Apply numerical modeling to calculate transmission and interception of direct, diffuse, and scattered solar radiation in plant canopies
Audience: Both Grad & Undergrad

7. Demonstrate knowledge about different numerical approaches to calculate evapotranspiration and photosynthesis of plants from the leaf to canopy level
Audience: Both Grad & Undergrad

8. Demonstrate basic knowledge about environmental biophysics through application of numerical equations and/or a model to a scientific question developed in close collaboration with the course instructor
Audience: Undergraduate

9. Demonstrate advanced knowledge about environmental biophysics through the independent development of a research project that produces new information
Audience: Graduate

ATM OCN 573 – RESEARCH COMPUTING IN ATMOSPHERIC AND OCEANIC SCIENCES
3 credits.

Hands-on introduction to open-source research computing tools commonly used in the atmospheric and oceanic sciences. Covers Python basics, including standard data structures, environments, and packages that are useful for analyzing and visualizing a variety of observational and computational atmospheric and oceanic science datasets. Additional open-source tools for version control, sharing code, and collaborating on analysis are also introduced and open science best practice are discussed.
Requisites: (MATH 234 and COMP SCI 220) or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Become familiar with computing tools that are useful in managing, analyzing, and visualizing atmospheric and oceanic science data, including Unix, git, and Python
Audience: Both Grad & Undergrad

2. Understand multiple Python packages that are critical for atmospheric and oceanic science data analysis and use these packages to analyze and visualize atmospheric and oceanic science datasets
Audience: Both Grad & Undergrad

3. Develop proficiency in the use of version control and other elements of open science best practices
Audience: Both Grad & Undergrad

4. Implement a reproducible data analysis workflow that incorporates Python computing tools and version control and apply it to an unfamiliar dataset or new research topic
Audience: Graduate

ATM OCN 575 – CLIMATOLOGICAL ANALYSIS
3-4 credits.

Mathematical and statistical tools applicable to the investigation of climatological problems; nature and treatment of climatological data.
Requisites: ATM OCN 573, or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Test hypotheses about geoscientific processes by applying statistical methods to real-world data
Audience: Graduate

2. Apply appropriate statistical analyses that can be used to address specific problems in climatological analysis
Audience: Graduate

3. Carry out statistical analysis of digitized atmospheric, oceanic, and other geoscientific datasets, including parsing through and analyzing large data sets
Audience: Graduate

4. Critically evaluate the results of climatological data analyses including identifying alternate interpretations of the results, other techniques that could be applied to investigate results, and sources of independent data that could be used to corroborate results
Audience: Graduate

5. Critique the application of statistical analyses in existing climate literature
Audience: Graduate

6. Test hypotheses about geoscientific processes by applying statistical methods to existing data
Audience: Undergraduate

7. Identify appropriate statistical analyses to address specific problems in climatological analysis
Audience: Undergraduate

8. Carry out statistical analysis of atmospheric, oceanic, and other geoscientific datasets
Audience: Undergraduate

9. Evaluate the results of climatological data analyses of specific problems, including relating results to other statistical techniques or to alternate data sets
Audience: Undergraduate

10. Understand the application of statistical analyses in existing climate literature
Audience: Undergraduate

ATM OCN 610 – GEOPHYSICAL FLUID DYNAMICS I
3 credits.

Basic dynamic concepts: equations of motion, basic approximations, Coriolis force, wave motions, normal modes, gravity waves, frictional turbulence and convective processes, geostrophic adjustment, scaling argument, effects of rotation on wave motions. Vorticity and potential vorticity.
Requisites: (PHYSICS 202, 208, or 248) and MATH 234, or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ATM OCN 611 – GEOPHYSICAL FLUID DYNAMICS II
3 credits.

Quasi-geostrophic motion, potential vorticity equations, E-P fluxes, Rossby waves, boundary layer processes, wind-driven ocean circulation and western boundary currents, barotropic and baroclinic instability, tropical flows.
Requisites: ATM OCN 610 or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ATM OCN 630 – INTRODUCTION TO ATMOSPHERIC AND OCEANIC PHYSICS
3 credits.

Covers thermodynamics theory of multiphase systems, thermodynamic analysis of atmosphere, microphysical processes in the atmosphere, atmospheric and oceanic chemical processes, conduction of heat and moisture into the atmosphere from ocean and land surface.
Requisites: (PHYSICS 202, 208, or 248) and MATH 234, or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ATM OCN 637 – CLOUD PHYSICS
3-4 credits.

Processes of cloud formation, growth, and dissipation from the standpoint of both the cloud particles and the whole cloud as a dynamic entity.
Requisites: ATM OCN 311 and 340, or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ATM OCN 640 – RADIATION IN THE ATMOSPHERE AND OCEAN
3 credits.

Introduction to radiation: basic laws, radiative transfer under clear sky conditions, scattering by individual particles, multiple scattering, radiative properties of clouds and aerosols, energy budget, miscellaneous applications.
Requisites: (PHYSICS 202, 208, or 248) and MATH 234, or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ATM OCN 660 – INTRODUCTION TO PHYSICAL OCEANOGRAPHY
3 credits.

Physical properties of sea water: ocean climatology, water, salt and heat budget, measurements, ocean circulation and water mass of the world ocean, thermocline, thermohaline, equatorial ocean and southern ocean.
Requisites: ATM OCN 311 or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ATM OCN 681 – SENIOR HONORS THESIS
3 credits.

Individual mentored study for seniors completing theses for Honors in the Major as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025

ATM OCN 682 – SENIOR HONORS THESIS
3 credits.

Individual mentored study for seniors completing theses for Honors in the Major as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2025

ATM OCN 691 – SENIOR THESIS
2-3 credits.

Individual mentored study for seniors completing theses, as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

ATM OCN 692 – SENIOR THESIS
2-3 credits.

Individual mentored study for seniors completing theses, as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ATM OCN 698 – DIRECTED STUDY
1-5 credits.

Independent study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ATM OCN 699 – DIRECTED STUDY
1-5 credits.

Independent study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ATM OCN/CIV ENGR 701 – THE CHEMISTRY OF AIR POLLUTION
2 credits.

Covers background and modern research methods for the application of chemical analysis tools to understanding of the origin, composition, and the chemical transformations of pollutants that occur in the atmosphere. Emphasis will be directed at the pollutants impacting human health, climate change, and ecosystem degradation. Approximately half of the course materials will be taken from the scientific literature and will provide the opportunity to advance skills in the critical reading of journal articles. The course is directed at graduate students conducting research and interested in air pollution and environmental chemistry. Gain experiences in presenting scientific research methods and results related to course materials.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

ATM OCN 712 – GENERAL CIRCULATION OF THE ATMOSPHERE
3 credits.

The theory of the general circulation with emphasis on the sources, sinks, and transport of mass, angular momentum, and energy that serve to maintain the circumpolar vortex.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ATM OCN 718 – DYNAMICS OF MOIST CONVECTIVE SYSTEMS
3 credits.

Governing equations for non-hydrostatic dynamics, mixed phase thermodynamics and microphysics. Cumulus parameterization and scale interactions. Application to theoretical and numerical models of thunderstorms (and attendant weather phenomena) and Mesoscale Convective Systems in the extra tropics and tropics.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021

ATM OCN/ENVIR ST 745 – METEOROLOGICAL SATELLITE APPLICATIONS
2-3 credits.

Use of satellite imagery and measurements in meteorological research and operations; orbital characteristics; navigation; instrumentation.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ATM OCN/ENVIR ST/GEOSCI/ZOOLOGY 750 – PROBLEMS IN OCEANOGRAPHY
3 credits.

Introduction to techniques used in the study of the biology, chemistry, geology, and physics of the marine environment.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

ATM OCN 751 – THE FRONTAL CYCLONE
3 credits.

Application of fundamental dynamics and thermodynamics to cyclone and frontal theory; case studies illustrating the structure and evolution of the frontal cyclone; diagnostic consideration of vertical motions, frontogenesis and potential inversion; computational analysis of fundamental diagnostic equations, analysis of vertical cross sections.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand how thermodynamics and dynamics of the atmosphere are brought to bear on the broad problem of the mid-latitude cyclone.
Audience: Graduate

2. Acquire an understanding of the diagnosis of synoptic-scale vertical motions, frontal circulations, the process of cyclogenesis, and the potential vorticity perspective on cyclone life cycles.
Audience: Graduate

3. Communicate diagnosis of the current weather and forecasts of future weather to both scientific and broad audiences.
Audience: Graduate

4. Develop computer code to solve diagnostic second order differential equations that appear in modern cyclone and frontal theory.
Audience: Graduate

ATM OCN 753 – MESOSCALE METEOROLOGY
3 credits.

Synthesizes the fundamentals of atmospheric dynamics, thermodynamics and microphysics to explain the theory behind the structure, evolution and prediction of microscale, mesoscale and cloud scale weather. Learn the dynamics, and thermodynamics of mesoscale, fogs, cumulus, and severe storms (including tornadoes), mountain meteorology and convective tropical weather systems (including hurricanes and typhoons) and application of multi-scale numerical methods and models for analysis and prediction.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Synthesize fundamentals of atmospheric dynamics and thermodynamics to develop a state-of-the-art understanding of the theory behind how weather systems are formed, maintained, and evolve.
Audience: Graduate

2. Apply adjustment theory to understanding of multiscale weather structures.
Audience: Graduate

3. Analyze raw data and numerical prediction products directly available in real time or archived on the Internet to predict mesoscale and cloud scale weather.
Audience: Graduate

4. Apply unconventional state-of the art observation tools, including ground- based, surface-based and mobile Radar, Lidar, aircraft, and satellite observational systems to diagnose and predict weather systems.
Audience: Graduate

5. Identify clues regarding the substructure of weather, that conventional observations have neither the temporal or special resolution to resolve.
Audience: Graduate

6. Recognize how data assimilation methods help build the unresolved structures into an analysis through marriage of numerical models, conventional and unconventional data.
Audience: Graduate

7. Communicate diagnosis of current weather and forecasts of future weather to both scientific and broad audiences.
Audience: Graduate

ATM OCN 760 – LARGE-SCALE OCEAN-ATMOSPHERE COUPLING
3 credits.

Various aspects of global ocean-atmosphere coupling and climate variability; global surface flux distribution; mixed layer dynamics; tropical dynamics and El Nino and Southern Oscillation; extratropical ocean-atmosphere coupling; interannual to interdecadal climate variability.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

ATM OCN/GEOSCI 762 – ICE AND CLIMATE DYNAMICS
3 credits.

Introduction to the role of ice in the climate system. Review main components of the cryosphere (Arctic and Antarctic sea ice, Greenland and Antarctic ice sheets, mountain glaciers, snow cover, and permafrost), with particular focus on recent and future changes as documented in recent publications. Consider different methods to study the cryosphere and its role in the climate system, such as remote sensing and in situ observations, state estimates and reanalyses, with a particular focus on idealized and comprehensive global climate models. Covers fundamental physical concepts as well as unresolved research questions such as the debates surrounding potential instabilities in the climate system and uncertainties in future projections of ice loss, teleconnections, and sea level rise.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Differentiate between the main components of Earth's cryosphere and their respective roles in the climate system.
Audience: Graduate

2. Compare the range of methodologies used to study Earth's cryosphere, including in situ and remote sensing observations, theoretical considerations, and numerical models.
Audience: Graduate

3. Develop idealized models of sea ice, land ice, and snow and their interactions with the climate system.
Audience: Graduate

4. Carry out analysis of output from idealized and comprehensive ice and climate models.
Audience: Graduate

ATM OCN 773 – BOUNDARY LAYER METEOROLOGY
3 credits.

Observations of and theories for boundary layers, turbulence, spectra, plumes, dust devils, convection, terrain effects, and other phenomena in the lowest 2 km of the atmosphere.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

ATM OCN 775 – ADVANCED CLIMATOLOGICAL ANALYSIS
3 credits.

Application and analysis of advanced statistical, mathematical, and machine learning tools in Atmospheric, Oceanic, and Climate Sciences. Emphasizes application of statistical techniques to synthetic and real data; analysis of existing research in Atmospheric, Oceanic, and Climate Sciences; and exploration of new applications of statistical and machine learning techniques in relevant scientific literature. Knowledge of basic statistical methods and statistical programming [such as those introduced in 575] is required
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Identify and apply appropriate statistical, mathematical, and machine learning techniques for testing hypotheses using geophysical data
Audience: Graduate

2. Carry out, evaluate and interpret results from specific statistical analyses of atmospheric, oceanic, or climatic phenomena
Audience: Graduate

3. Identify alternate methods for evaluating or interpreting results from statistical analyses of atmospheric, oceanic, or climate phenomena
Audience: Graduate

4. Critically evaluate application of statistical, mathematical, and machine learning techniques in existing atmospheric, oceanic, and climate literature

Audience: Graduate

5. Identify and research new applications of statistical and machine learning techniques in atmospheric, oceanic, and climate sciences
Audience: Graduate

ATM OCN 801 – TOPICS IN THEORETICAL METEOROLOGY
2-3 credits.

Advanced level subjects in dynamics, synoptics, climate-dynamics and atmospheric physics including recent advances.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ATM OCN 810 – PRACTICAL TRAINING IN ATMOSPHERIC AND OCEANIC SCIENCES I
1 credit.

Practical training in atmospheric and oceanic sciences. Provides direct, hands-on exposure to careers in the discipline. Includes placement into student-designed or existing internship in atmospheric and oceanic science related companies, agencies, and organizations.
Requisites: Declared in Atmospheric and Oceanic Sciences MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Apply knowledge in the classroom to real-world atmospheric science programs
Audience: Graduate

2. Acquire direct hands-on experience in atmospheric science careers
Audience: Graduate

3. Develop portfolio materials necessary for the consulting meteorologist exam
Audience: Graduate

4. Work collaboratively in professional group and team settings
Audience: Graduate

ATM OCN 811 – PRACTICAL TRAINING IN ATMOSPHERIC AND OCEANIC SCIENCES II
2 credits.

Practical training in atmospheric and oceanic sciences. Provides direct hands-on exposure to careers in the discipline. Continues the internship in atmospheric and oceanic science related companies, agencies, and organizations. Develop a portfolio of items necessary for the American Meteorological Society Certified Consulting Meteorology exam.
Requisites: ATM OCN 810
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Apply knowledge in the classroom to real-world atmospheric science programs
Audience: Graduate

2. Acquire direct hands-on experience in atmospheric science careers
Audience: Graduate

3. Develop portfolio materials necessary for the consulting meteorologist exam
Audience: Graduate

4. Work collaboratively in professional group and team settings
Audience: Graduate

ATM OCN 900 – SEMINAR-METEOROLOGY
1-2 credits.

Discussion of the philosophy of science, communication, and history of atmospheric and oceanic science topics.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

ATM OCN 901 – FOUNDATIONS OF ATMOSPHERIC AND OCEANIC SCIENCES RESEARCH
1 credit.

Discussions on adapting to graduate school and graduate-level research, history and future of discipline, research ethics, issues of diversity and inclusion.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize and describe the evolution of fundamental principles and processes that make up atmospheric and oceanic sciences
Audience: Graduate

2. Demonstrate capability in graduate-level learning and research through practice of skills in research ethics, literature review, and scientific collaboration
Audience: Graduate

3. Investigate how discrimination and bias have influenced the history of atmospheric and oceanic sciences and what efforts have occurred to redress harm through diversity and inclusion efforts
Audience: Graduate

ATM OCN 902 – SCIENTIFIC COMMUNICATIONS IN THE ATMOSPHERIC AND OCEANIC SCIENCES
1 credit.

Written and oral communication about topics related to graduate research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify the purpose and structure of various genres of scientific writing and oral presentation in the atmospheric and oceanic sciences
Audience: Graduate

2. Describe and apply elements of effective science communication
Audience: Graduate

3. Evaluate and provide constructive feedback of written work through application of peer review practices
Audience: Graduate

4. Prepare written and presentation material that meets criteria for department advancement process and thesis requirements
Audience: Graduate

ATM OCN 903 – RESEARCH ADVANCES IN THE ATMOSPHERIC AND OCEANIC SCIENCES
1 credit.

Discussions on philosophy of science, literature review, development of ideas in Atmospheric and Oceanic Sciences, training in proposal writing, and preparation for Ph.D. dissertation proposal in advance of preliminary exam.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Appraise original papers of on atmospheric and oceanic sciences research to understand the evolution of approaches to solve problems
Audience: Graduate

2. Articulate unresolved research problems and formulate ideas beyond the current boundaries of knowledge within the atmospheric and oceanic sciences
Audience: Graduate

3. Formulate science problems and research questions and use these to evaluate experimental designs resources required to answer them
Audience: Graduate

4. Prepare dissertation proposals that meets criteria for department preliminary examination
Audience: Graduate

ATM OCN/BOTANY/CIV ENGR/ENVIR ST/GEOSCI/ZOOLOGY 911 – LIMNOLOGY AND MARINE SCIENCE SEMINAR
1 credit.

Sections in various fields of zoological research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ATM OCN/ENVIR ST 925 – SEMINAR-CLIMATOLOGY
1-2 credits.

Historical climatology with emphasis on the last few centuries.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2018

ATM OCN/AGROECOL/BOTANY/ENTOM/ENVIR ST/F&W ECOL/GEOG/ZOOLOGY 953 – INTRODUCTION TO ECOLOGY RESEARCH AT UW-MADISON
1-2 credits.

Introduction to diverse ecological research across the UW-Madison Campus. Discussions on adapting to graduate school and graduate-level ecological research, key topics in professional development, and research presentations by faculty members.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop an appreciation for the foundations and legacy of ecology research and conservation science at UW-Madison
Audience: Graduate

2. Recognize the diversity and strength of current research in ecology at UW-Madison
Audience: Graduate

3. Differentiate expectations between undergraduate education and those of independent research for graduate degrees in ecology
Audience: Graduate

4. Develop appropriate expectations for advisors and advisees
Audience: Graduate

5. Reason through hypothetical ethical challenges and identify potential solutions based on professional codes of ethics
Audience: Graduate

6. Develop an understanding of the suite of skills associated with success in graduate school and in science
Audience: Graduate

ATM OCN 965 – SEMINAR-OCEANOGRAPHY
1-2 credits.

Advanced topics in oceanography.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2021

ATM OCN/BOTANY/ENVIR ST/F&W ECOL/GEOG/GEOSCI/ZOOLOGY 980 – EARTH SYSTEM SCIENCE SEMINAR
1 credit.

Topics in earth system science. Emphasis on the coupling between atmospheric, oceanic and land surface systems, involving physical geochemical and biological processes, and including interactions with human systems.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

ATM OCN 990 – RESEARCH
1-12 credits.

Research with atmospheric and oceanic science faculty advisors.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ATM OCN 999 – ADVANCED INDEPENDENT STUDY
1-6 credits.

Advanced independent study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

BIOCHEMISTRY (BIOCHEM)

BIOCHEM 100 – BIOCHEMISTRY FRESHMAN SEMINAR
1 credit.

Introduction to the discipline of biochemistry, to the UW Biochemistry Department, to some of the research projects the faculty are pursuing, to the University, and to the career options open to an individual with a biochemistry background.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Determine whether biochemistry is a major they want to pursue and defend that decision based on knowledge of the biochemistry major at UW-Madison
Audience: Undergraduate

2. Establish connections within the biochemistry department community including interacting with faculty
Audience: Undergraduate

3. Discuss the career opportunities available to individuals with biochemistry and/or life science backgrounds
Audience: Undergraduate

4. Identify resources available at the university that will support success at UW-Madison
Audience: Undergraduate

5. Describe the format and content of a scientific paper
Audience: Undergraduate

BIOCHEM 104 – MOLECULES TO LIFE AND THE NATURE OF SCIENCE
3 credits.

Introduction to how life works at a molecular level and the evolutionary paths that led to the great diversity of life on our planet. With this foundation, discuss current topics in the news such as: exploring the human genome to understand our species' history and to diagnose and treat disease; genetic engineering of crops in relation to foods safety and effects on ecosystems; gene editing of insects and mammals including humans; how to determine whether herbal remedies, vaccines, etc. are effective and safe; and current trends in biotechnology and what might be on the horizon. Focus on appreciating the nature of science and becoming better equipped to explore and evaluate scientific topics of interest.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand the nature of science and what science can tell us.
Audience: Undergraduate

2. Gain an appreciation for the beauty of biology and the remarkable diversity of life on earth.
Audience: Undergraduate

3. Discuss fundamentals of the evolutionary process and the molecular basis of how cells and organisms operate.
Audience: Undergraduate

4. Appreciate the range of how science is presented and sometimes misrepresented in the media.
Audience: Undergraduate

5. Equip students with the ability to inform their own decision making as they encounter scientific topics that may influence their daily life.
Audience: Undergraduate

BIOCHEM 207 – ENGINEERING BACTERIOPHAGE LABORATORY
2 credits.

Introduces the lab skills and techniques used in biochemistry and molecular biology laboratories. Engineer mutants of the T7 bacteriophage and test the virulence of the bacteriophages on various bacterial strains. Integrate biochemistry, molecular biology, microbiology, genetics, and basic laboratory techniques.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply basic molecular biology laboratory techniques to engineer and test bacteriophages
Audience: Undergraduate

2. Demonstrate good laboratory habits such as, keeping laboratory records, following laboratory safety standards, working collaboratively, and maintaining a clean working environment
Audience: Undergraduate

3. Develop hypotheses and evaluate experimental results with instructor support
Audience: Undergraduate

4. Effectively communicate scientific ideas and results verbally and in written form
Audience: Undergraduate

5. Discuss the collaborative nature of biochemistry
Audience: Undergraduate

BIOCHEM 289 – HONORS INDEPENDENT STUDY
1-2 credits.

Research work for Honors students under direct guidance of a Biochemistry faculty member. Students are responsible for arranging the work and credits with the supervising instructor.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2016
Learning Outcomes: 1. Develop critical, analytical, and independent thinking skills through a scientific research project
Audience: Undergraduate

2. Apply the scientific method and engage in constructive problem solving in a scientific research project
Audience: Undergraduate

3. Demonstrate application of research skills and methodologies through a research project
Audience: Undergraduate

4. Effectively communicate scientific findings in an oral and/or written format
Audience: Undergraduate

BIOCHEM 299 – INDEPENDENT STUDY
1-3 credits.

Research work for students under direct guidance of a Biochemistry faculty member. Students are responsible for arranging the work and credits with the supervising instructor.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate a clear research question or problem and formulate a hypothesis
Audience: Undergraduate

2. Identify appropriate research methodologies and collect sound scientific data
Audience: Undergraduate

3. Apply critical thinking skills to interpret laboratory data and apply problem solving skills to constructively address research setbacks
Audience: Undergraduate

4. Practice research ethics and responsible conduct in research
Audience: Undergraduate

5. Communicate scientific ideas and results verbally and in written form effectively
Audience: Undergraduate

BIOCHEM 301 – SURVEY OF BIOCHEMISTRY
3 credits.

Explore the basic chemical properties of proteins, lipids, carbohydrates, and nucleic acids. Topics to be discussed include protein structure and function, the chemical logic of metabolism, and the mechanisms of DNA replication, DNA transcription, DNA repair, and gene expression. Understand principles and themes in biochemistry that relate to metabolic diseases, drug design, virus infection and vaccination, and gene therapy. Does not cover the foundational material necessary to succeed in additional biochemistry coursework, and is not likely to be acceptable for medical or veterinary school admission.
Requisites: CHEM 104, 109, or 116. Not open to students with credit for BIOCHEM 501.
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply basic concepts of protein and enzyme structure and function
Audience: Undergraduate

2. Differentiate structures of lipids and their biochemical roles
Audience: Undergraduate

3. Differentiate structures of carbohydrates and their biochemical roles
Audience: Undergraduate

4. Differentiate structures of nucleic acids and their biochemical roles
Audience: Undergraduate

5. Apply chemical concepts involved in both anabolic and catabolic pathways
Audience: Undergraduate

6. Explain basics of gene expression and regulation
Audience: Undergraduate

7. Describe fundamentals of cancer and certain viral diseases
Audience: Undergraduate

BIOCHEM 375 – SPECIAL TOPICS
1-4 credits.

Examines various special topics in biochemistry. Topics and content will vary each semester and by section of the course.
Requisites: None
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

BIOCHEM 399 – COORDINATIVE INTERNSHIP/COOPERATIVE EDUCATION
1-8 credits.

An internship under guidance of a faculty or instructional academic staff member in Biochemistry and internship site supervisor. Students are responsible for arranging the work and credits with the faculty or instructional academic staff member and the internship site supervisor.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Workplace - Workplace Experience Course
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2020
Learning Outcomes: 1. Apply concepts learned in coursework to authentic professional situations
Audience: Undergraduate

2. Demonstrate professional skills appropriate for the industry
Audience: Undergraduate

3. Identify and reflect on how concepts learned in coursework apply to specific work settings and situations
Audience: Undergraduate

BIOCHEM 400 – STUDY ABROAD IN BIOCHEMISTRY
1-6 credits.

Provides an area equivalency for courses taken on Madison Study Abroad Programs that do not equate to existing UW courses. Enrollment in a UW-Madison resident study abroad program
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions

BIOCHEM 501 – INTRODUCTION TO BIOCHEMISTRY
3 credits.

Chemistry, nutrition, and metabolism of biological systems.
Requisites: (CHEM 341, 343, or concurrent enrollment), or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe how biomolecules store, transmit, and receive information to carry out cellular functions, such as catalysis, information transfer, energy production, and biosynthesis
Audience: Undergraduate

2. Explain how molecular interactions drive the formation of macromolecular structure, including protein, lipid, nucleic acid, and carbohydrate structure
Audience: Undergraduate

3. Recognize and identify the molecular structure of the building blocks for proteins, lipids, nucleic acids, and carbohydrates and describe how their structure relates to their biological function.
Audience: Undergraduate

4. Describe the process of DNA replication, DNA repair, RNA transcription, and protein synthesis
Audience: Undergraduate

5. Relate the chemical structure of metabolites and the pathways through which they flow to how cells use those pathways for both biosynthesis (anabolism)and energy production (catabolism
Audience: Undergraduate

6. Analyze the major anabolic and catabolic pathways of central metabolism in terms of energetics, molecular structure, hormonal control, and regulation
Audience: Undergraduate

7. Recognize that all life on earth shares a common ancestor as illustrated by the use of the same genetic code and the existence of common biochemical pathways between all organisms
Audience: Undergraduate

BIOCHEM 507 – GENERAL BIOCHEMISTRY I
3 credits.

Chemistry of biological materials, intermediary metabolism and protein structure.
Requisites: CHEM 345
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Relate the chemical structure of proteins, nucleic acids, carbohydrates, and lipids to their respective biological functions
Audience: Undergraduate

2. Analyze the molecular interactions that drive the formation of macromolecular structure, including protein and nucleic acid structure
Audience: Undergraduate

3. Apply qualitative and quantitative descriptions of protein-ligand, enzyme-substrate, and enzyme-inhibitor interactions, enzyme catalysis, and enzyme kinetics to interpret experimental data in terms of biochemical mechanism
Audience: Undergraduate

4. Describe how biomolecules store, transmit, and receive information to carry out cellular functions
Audience: Undergraduate

5. Analyze the major catabolic pathways of central metabolism in terms of energetics, chemical structure, and regulation
Audience: Undergraduate

6. Connect biochemical processes to applications in medicine, agriculture, food science, and other aspects of everyday life
Audience: Undergraduate

7. Communicate with others about scientific concepts and ideas using the vocabulary of biochemistry
Audience: Undergraduate

BIOCHEM 508 – GENERAL BIOCHEMISTRY II
3-4 credits.

Biosynthesis of biological molecules, signal transduction mechanisms, chemistry and metabolism of nucleic acids, protein synthesis, and molecular and cellular biology.
Requisites: BIOCHEM 507
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Compare the molecular biology process of DNA replication, RNA transcription and protein synthesis between prokaryotes and eukaryotes
Audience: Undergraduate

2. Assess the investment of cellular energy during nucleic acid, protein carbohydrate and lipid synthesis
Audience: Undergraduate

3. Predict the outcome of disruptive mutations and diseases on nucleic acid, protein, carbohydrate and lipid synthesis and hormonal signaling
Audience: Undergraduate

4. Relate the chemical structure of metabolites to their functional role and amount of energy produced when oxidized
Audience: Undergraduate

5. Distinguish cellular and organ signaling pathways and their downstream effects on metabolism
Audience: Undergraduate

6. Predict how metabolism of carbohydrates and lipids changes depending on the supply of energy to the body disease state
Audience: Undergraduate

7. Relate molecular processes in biochemistry to medicine and agriculture
Audience: Undergraduate

BIOCHEM/NUTR SCI 510 – NUTRITIONAL BIOCHEMISTRY AND METABOLISM
3 credits.

Lectures in nutrition with a substantial background in biochemistry. Emphasis on biochemical and physiological fundamentals of nutrition. Discussion of protein, fat, carbohydrate, energy, minerals and vitamins and their roles and interrelationships in nutrition and metabolism.
Requisites: BIOCHEM 301, 501, 507, BMOLCHEM 503, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand nutrient metabolism in normal and disease states
Audience: Both Grad & Undergrad

2. Integrate the regulation of metabolism of nutrients under normal and disease state conditions.
Audience: Both Grad & Undergrad

3. Understand the biochemical and molecular functions of nutrients we consume
Audience: Both Grad & Undergrad

4. Apply how nutrients affect pathogenesis and health
Audience: Graduate

5. Think critically about nutrient claims and fads using your knowledge of nutritional biochemistry.
Audience: Both Grad & Undergrad

6. Integrate current research in the area of metabolism and micronutrient function into existing knowledge and formulate new hypotheses to guide future research
Audience: Graduate

BIOCHEM 551 – BIOCHEMICAL METHODS
4 credits.

Introduction to modern biochemical laboratory techniques and current biochemical literature. Includes student seminar presentations based upon scientific literature that parallels experiments performed in the lab.
Requisites: BIOCHEM 501, 507, or concurrent enrollment
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss the theory of several fundamental biochemical techniques that form hypotheses based on biochemical principles
Audience: Undergraduate

2. Form hypotheses based on biochemical principles
Audience: Undergraduate

3. Design and perform experiments to address a hypothesis
Audience: Undergraduate

4. Collect sound scientific data
Audience: Undergraduate

5. Critically analyze one's own data as well as data from other sources
Audience: Undergraduate

6. Communicate scientific theory and findings in both oral and written form
Audience: Undergraduate

7. Evaluate the importance of collaboration in biochemistry research
Audience: Undergraduate

BIOCHEM/NUTR SCI 560 – PRINCIPLES OF HUMAN DISEASE AND BIOTECHNOLOGY
2 credits.

Covers basic and applied biochemical principles related to human disease. Topics such as: cancer, including cell cycle regulation, oncogenes and tumor suppressors, and cellular metabolism; metabolic disorders, including cardiovascular disease, metabolic syndrome, and diabetes; biotechnology, including metabolomics, CRISPR-based genetic screens, and experimental models of human disease.
Requisites: BIOCHEM 501, 507, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Critically evaluate, and accurately describe findings from primary research publications
Audience: Both Grad & Undergrad

2. Analyze how genetic and cell cycle perturbations contribute to cancer progression
Audience: Both Grad & Undergrad

3. Identify how genetic and environmental factors impact altered cellular metabolism in cancer
Audience: Both Grad & Undergrad

4. Describe biochemical mechanisms that contribute to cardiovascular disease, metabolic syndrome, and diabetes
Audience: Both Grad & Undergrad

5. Explain biochemical techniques, engineering strategies, and state-of-the-art technologies used in biomedical research
Audience: Both Grad & Undergrad

6. Collaborate with peers in a small group
Audience: Both Grad & Undergrad

7. Apply knowledge of biochemical principles and biotechnology to solve research and disease treatment related problems
Audience: Both Grad & Undergrad

8. Execute written critical evaluation of primary research literature related to the molecular basis of human diseases and advances in biotechnology.
Audience: Graduate

BIOCHEM/M M & I 575 – BIOLOGY OF VIRUSES
2 credits.

Broad coverage of animal virology taught at molecular level. Topics include virus structure, viral replication/lifecycle, aspects of pathogenesis and prevention.
Requisites: (BIOCORE 381 and 382), ZOOLOGY/BIOLOGY/BOTANY 151, M M & I 301, or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and recognize fundamental members of the predominant families of RNA and DNA viruses that affect animals (humans included) by causing viral diseases, including AIDS, cancer, flu, and COVID-19
Audience: Both Grad & Undergrad

2. Describe and demonstrate the basic concepts of virus particle structure and the biochemical mechanisms for entry and multiplication of diverse RNA and DNA viruses
Audience: Both Grad & Undergrad

3. Recognize and apply the basic principles of virus transmission and viral pathogenicity, combined with the factors that contribute to virus emergence and evolution, to situations involving virus outbreaks that affect global health
Audience: Both Grad & Undergrad

4. Identify and evaluate individual steps in a virus' replication cycle that can be effectively targeted by anti-viral drugs for pharmaceutical intervention of virus diseases
Audience: Both Grad & Undergrad

5. Design effective strategies for a) prevention of infection through development of viral vaccines and b) treatment of diverse human diseases by gene therapy through the design and administration of genetically engineered virus vectors
Audience: Both Grad & Undergrad

6. Use knowledge gained in lecture to critically assess primary literature and data presented in the weekly Molecular Virology Seminar Series
Audience: Graduate

BIOCHEM 601 – PROTEIN AND ENZYME STRUCTURE AND FUNCTION
2 credits.

Protein structure and dynamics. Protein folding. Physical organic chemistry of enzymatic catalysis. Analysis of enzyme kinetics and receptor-ligand interactions. Enzymatic reaction mechanisms.
Requisites: CHEM 345 and (BIOCHEM 501 or 507) or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify basic stereochemical principles of protein components
Audience: Both Grad & Undergrad

2. Describe the chemistry of amino acids
Audience: Both Grad & Undergrad

3. Describe the noncovalent forces that control the secondary and tertiary structure of proteins
Audience: Both Grad & Undergrad

4. Evaluate the fundamental strengths and weaknesses of structures determined by X- ray crystallography and electron microscopy
Audience: Both Grad & Undergrad

5. Explain chemical kinetics as they apply to enzymes
Audience: Both Grad & Undergrad

6. Differentiate the role of cofactors in enzyme chemistry
Audience: Both Grad & Undergrad

7. Explain the fundamental underpinnings of protein stability, protein evolution, and their application to protein engineering by site-directed mutagenesis
Audience: Both Grad & Undergrad

8. Distinguish the key features of representative enzymes families including the ATPases and the peptidases
Audience: Both Grad & Undergrad

9. Compare the differences and unique properties of membrane proteins
Audience: Both Grad & Undergrad

10. Critically evaluate the primary biochemical literature regarding protein structure, function, and enzyme catalysis
Audience: Graduate

BIOCHEM/B M I/BMOLCHEM/MATH 609 – MATHEMATICAL METHODS FOR SYSTEMS BIOLOGY
3 credits.

Provides a rigorous foundation for mathematical modeling of biological systems. Mathematical techniques include dynamical systems and differential equations. Applications to biological pathways, including understanding of bistability within chemical reaction systems, are emphasized.
Requisites: MATH 415 and (MATH 320, 340, 341, or 375) or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall and state the formal definitions of the mathematical objects and their properties in systems biology (e.g., reaction networks, reaction rate equations, mass-action kinetics models, detailed balanced and complex balanced systems, Lyapunov functions, etc.).
Audience: Both Grad & Undergrad

2. Use such definitions to argue that a mathematical object does or does not have the condition of being a particular type or having a particular property (e.g., reversible, weakly reversible, mass-action, detailed balanced, complex balanced, globally stable, oscillatory, persistent, permanent, etc.).
Audience: Both Grad & Undergrad

3. Recall and state the standard theorems of the field (e.g., the Horn-Jackson theorem, the deficiency zero theorem, theorems on characterization of mass-action systems, theorems on persistence and permanence, theorems on dynamical equivalence, etc.) and recall the arguments for these theorems and the underlying logic of their proofs.
Audience: Both Grad & Undergrad

4. Construct mathematical arguments related to the above definitions, properties, and theorems, including the construction of examples and counterexamples.
Audience: Both Grad & Undergrad

5. Convey arguments using English and appropriate mathematical terminology, notation and grammar.
Audience: Both Grad & Undergrad

6. Model real biological systems by means of systems of differential equations, and be able to use software (such as Matlab) for visualization of their dynamics. Example models could include: (i) Enzymes, substrates and saturating kinetics, (ii) Glycolytic oscillations, (iii) Cell cycle control, budding yeast cell cycle models, (iv) Activator-inhibitor and positive feedback systems.
Audience: Both Grad & Undergrad

7. Identify applications of course content in current areas of research.
Audience: Graduate

BIOCHEM/GENETICS/MICROBIO 612 – PROKARYOTIC MOLECULAR BIOLOGY
3 credits.

Molecular basis of bacterial physiology and genetics with emphasis on molecular mechanisms; topics include nucleic acid-protein interactions, transcription, translation, replication, recombination, regulation of gene expression.
Requisites: (BIOCHEM 501 or 507) and (MICROBIO 470, GENETICS 466 or 468) or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Access and evaluate original research literature.
Audience: Undergraduate

2. Demonstrate problem solving practices.
Audience: Undergraduate

3. Identify enzyme mechanisms responsible for transcription, translation, gene regulation, and replication in bacteria.
Audience: Graduate

4. Compare the structural bases for the mechanisms.
Audience: Graduate

5. Evaluate the experiments that led to our understanding of theses mechanisms.
Audience: Graduate

6. Deconstruct how these enzymes respond to nutritional and environmental signals in cells.
Audience: Graduate

7. Outline the evolutionary basis and selection pressure for these mechanisms in vivo.
Audience: Graduate

BIOCHEM/NUTR SCI 619 – ADVANCED NUTRITION: INTERMEDIARY METABOLISM OF MACRONUTRIENTS
3 credits.

Principles underlying the control of metabolism as it applies to macronutrients. Discusses advanced aspects of metabolic control. Metabolism of protein and amino acids, fat, and carbohydrate. Discusses fuel sensing and metabolism in disease.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe regulatory mechanisms at the organ, cellular and biochemical level controlling intermediary metabolism of carbohydrates, lipids and proteins
Audience: Graduate

2. Identify regulatory points in metabolic pathways and explain how they may change with metabolic state
Audience: Graduate

3. Detail the changes and mechanisms underlying such changes in protein, carbohydrate and fat metabolism in changing physiological state and also in health vs disease state
Audience: Graduate

4. Evaluate modern experimental approaches for studying metabolism
Audience: Graduate

BIOCHEM/GENETICS/MD GENET 620 – EUKARYOTIC MOLECULAR BIOLOGY
3 credits.

Focuses on the basic molecular mechanisms that regulate DNA, RNA, and protein metabolism in eukaryotic organisms.
Requisites: BIOCHEM 501, 508 or graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recall core principles that govern the structure and function of DNA, RNA, and protein.
Audience: Both Grad & Undergrad

2. Describe techniques for quantifying the expression, interaction, and cellular localization of specific molecules and for determining their necessity and sufficiency in molecular processes.
Audience: Both Grad & Undergrad

3. Explain how molecular processes that control the synthesis, decay, interactions, localization, folding, and modification of molecules are silenced, initiated, maintained, and terminated.
Audience: Both Grad & Undergrad

4. Describe how information is transferred between molecules to alter cellular activity in response to developmental and environmental signals.
Audience: Both Grad & Undergrad

5. Critique and weigh the credibility of existing molecular data.
Audience: Both Grad & Undergrad

6. Develop and draw hypotheses that use existing data to account for as yet unexplained molecular processes in eukaryotic organisms.
Audience: Both Grad & Undergrad

7. Design discovery/observation, loss-of-function, and gain-of-function experiments to test molecular hypotheses.
Audience: Both Grad & Undergrad

8. Implement problem solving strategies in thesis research project.
Audience: Graduate

BIOCHEM/BOTANY 621 – PLANT BIOCHEMISTRY
3 credits.

Biochemistry of photosynthesis, respiration, cell walls, and other metabolic and biosynthetic processes in plants.
Requisites: BIOCHEM 501, 507, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain how CO2 and other nutrients are converted to various metabolites in plants through different metabolic pathways
Audience: Both Grad & Undergrad

2. Employ various analytical tools used in the field of plant biochemistry
Audience: Both Grad & Undergrad

3. Apply critical scientific thinking skills (e.g. how to read literature, critically evaluate data, and identify unresolved questions) to support scientific arguments
Audience: Both Grad & Undergrad

4. Synthesize and critically evaluate scientific claims and hypotheses
Audience: Graduate

BIOCHEM 625 – MECHANISMS OF ACTION OF VITAMINS AND MINERALS
2 credits.

Emphasizes the importance of coenzyme and cofactors of enzymes (i.e., vitamins and minerals) in biochemistry. All aspects of the biochemistry of coenzymes will be covered, including their biosynthesis as far as is known, the biochemical reactions they catalyze, their chemical and spectroscopic properties, and the mechanisms by which they facilitate biochemical reactions.
Requisites: CHEM 345 and (BIOCHEM 501, 507, or concurrent enrollment), or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify stereochemical, electronic, and spatial constraints on enzyme reactions
Audience: Undergraduate

2. Integrate principles from general chemistry, organic chemistry, basic biology and biochemistry to clarify how vitamins and minerals (cofactors and coenzymes) function in living systems
Audience: Undergraduate

3. Apply precise terminology when speaking and writing about biochemistry and organic chemistry principles
Audience: Undergraduate

BIOCHEM/GENETICS 631 – PLANT GENETICS AND DEVELOPMENT
3 credits.

Covers the basic concepts of genetics and genomics as applied to plants and their development, including discussions on breeding systems (modes of reproduction, sex determination, self incompatibility and crossing barriers), linkage analysis, genome structure and function (structure, function and evolution of nuclear and organellar chromosomes; haploidy and polyploidy; expression regulation and epigenetics), along with a description of current methodologies used in the analysis of these processes within the context of plant development. The objective is to instigate a broader knowledge and understanding of the principles and methodologies used in plant genetics and their applications in investigations of the molecular mechanisms that modulate plant development.
Requisites: GENETICS 466, 468, BIOCORE 587, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the plant life cycles and key concepts in plant development
Audience: Both Grad & Undergrad

2. Explore and compare experimental approaches to study breeding systems, recombination, and modes of trait segregation in plants, including quantitative traits
Audience: Both Grad & Undergrad

3. Explain genetic, epigenetic and genomic approaches to study plant growth, development and responses to the environment
Audience: Both Grad & Undergrad

4. Analyze and interpret data in plant genetics and development
Audience: Both Grad & Undergrad

5. Critically evaluate papers from the primary literature
Audience: Both Grad & Undergrad

6. Compare and contrast published experimental data that address specific biological questions in plants, use the corresponding information to develop novel hypotheses, and design experiments that test these hypotheses.
Audience: Graduate

BIOCHEM/NUTR SCI 645 – MOLECULAR CONTROL OF METABOLISM AND METABOLIC DISEASE
3 credits.

Examination of various physiological states and how they affect metabolic pathways. Discussion of a number of special topics related to the unique roles of various tissues and to metabolic pathways in disease states, including adipocyte biology, beta-cell biology, epigenetics, inflammation, and aging related diseases.
Requisites: BIOCHEM 501, 508 or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the mechanisms by which tissues maintain metabolic flexibility.
Audience: Undergraduate

2. Differentiate between how lipid metabolism regulates carbohydrate metabolism and vice versa.
Audience: Undergraduate

3. Describe the regulation of lipogenesis.
Audience: Undergraduate

4. Discuss how hormone secreting endocrine cells in the pancreas sense nutrients to regulate blood glucose.
Audience: Undergraduate

5. Explain the importance of intracellular lipid cycling for body temperature regulation.
Audience: Undergraduate

6. Discuss the manner in which mitochondrial metabolism is assessed.
Audience: Undergraduate

7. Examine hormonal regulation of circadian rhythms.
Audience: Undergraduate

8. Describe the basis for thermogenesis.
Audience: Undergraduate

9. Explain the pathways leading to inflammation.
Audience: Undergraduate

BIOCHEM 681 – SENIOR HONORS THESIS
2-4 credits.

First semester of individual study for undergraduate students in an Honors program completing a thesis in the area of Biochemistry, as arranged with a Biochemistry faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Review and analyze scientific literature
Audience: Undergraduate

2. Identify and use appropriate research methodologies to address a research question
Audience: Undergraduate

3. Begin structuring and writing a thesis based on original research
Audience: Undergraduate

4. Effectively communicate scientific findings in an oral and/or written format
Audience: Undergraduate

BIOCHEM 682 – SENIOR HONORS THESIS
2-4 credits.

Second semester of individual study for undergraduate students in an Honors program completing a thesis in the area of Biochemistry, as arranged with a Biochemistry faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Review and analyze scientific literature
Audience: Undergraduate

2. Identify and use appropriate research methodologies to address a research question
Audience: Undergraduate

3. Begin structuring and writing a thesis based on original research
Audience: Undergraduate

4. Effectively communicate scientific findings in an oral and/or written format
Audience: Undergraduate

BIOCHEM 691 – SENIOR THESIS
2 credits.

First semester of individual study for undergraduate students completing a thesis in the area of Biochemistry, as arranged with a Biochemistry faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Review and analyze scientific literature
Audience: Undergraduate

2. Identify and use appropriate research methodologies to address a research question
Audience: Undergraduate

3. Begin structuring and writing a thesis based on original research
Audience: Undergraduate

4. Effectively communicate scientific findings in an oral and/or written format
Audience: Undergraduate

BIOCHEM 692 – SENIOR THESIS
2 credits.

Second semester of individual study for undergraduate students completing a thesis in the area of Biochemistry, as arranged with a Biochemistry faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Review and analyze scientific literature
Audience: Undergraduate

2. Identify and use appropriate research methodologies to address a research question
Audience: Undergraduate

3. Write a thesis based on original research
Audience: Undergraduate

4. Effectively communicate scientific findings in an oral and/or written format
Audience: Undergraduate

BIOCHEM 699 – SPECIAL PROBLEMS
1-4 credits.

Provides academic credit for research, library, and/or laboratory work under direct guidance of a faculty member. Students are responsible for arranging the work and credits with the supervising faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate a clear research question or problem and formulate a hypothesis
Audience: Undergraduate

2. Identify appropriate research methodologies and collect sound scientific data
Audience: Undergraduate

3. Apply critical thinking skills to interpret laboratory data and apply problem solving skills to constructively address research setbacks
Audience: Undergraduate

4. Practice research ethics and responsible conduct in research
Audience: Undergraduate

5. Communicate scientific ideas and results verbally and in written form effectively
Audience: Undergraduate

BIOCHEM/BMOLCHEM 701 – RESPONSIBLE CONDUCT IN BIOSCIENCE RESEARCH
2 credits.

Introductory training in the practical aspects of being a graduate-level scientist and the professional standards and expectations of ethical researchers. Covers a wide variety of professional development topics, including choosing a research laboratory and a thesis mentor, transitioning to self-education, managing stress in graduate school, and the importance of diversity in science. Ethics topics include conflicts of interest, the protection of human subjects, the welfare of laboratory animals and workers, safe laboratory spaces, mentor and mentee responsibilities, collaborative research, peer review, data acquisition and data management practices, research misconduct, responsible authorship and publication, contemporary ethical issues in biomedical research, and the roles of responsible scientists in society. Covers all NIH-recommended topics for Responsible Conduct of Research, thus meeting the requirements for trainees involved in NIH-sponsored research programs.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Evaluate and apply fundamental concepts and best practices in bioscience research conduct and research ethics
Audience: Graduate

2. Identify and meet individual and professional responsibilities and obligations to society
Audience: Graduate

3. Explore and implement activities for professional skills development and career management
Audience: Graduate

BIOCHEM/CHEM 704 – CHEMICAL BIOLOGY
3 credits.

Chemistry and biology of proteins, nucleic acids and carbohydrates; application of organic chemistry to problems in cell biology, biotechnology, and biomedicine.
Requisites: Declared in Biochemistry or Chemistry graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Be able to describe the chemical basis for replication, transcription, translation and how each of these central processes can be expanded to include new chemical matter.
Audience: Graduate

2. Develop skills to critically read the literature and effectively communicate research in a peer setting.
Audience: Graduate

3. Describe the substance and importance of chemical biology research in the format of a cover letter to a journal editor, and an original figure.
Audience: Graduate

4. Demonstrate knowledge of chemical biology by designing an original research project that focuses on answering a biological question or solving a biomedical problem.
Audience: Graduate

BIOCHEM 719 – FROM ATOMS TO MOLECULES
3 credits.

Topics covered include protein structure and folding, protein dynamics, biological catalysis, membrane structure and assembly, nucleic acid structure and folding, and bioenergetics. Each topic includes discussion of the primary literature, hypothesis generation, experimental design, data, analysis and interpretation underlying the facts in the textbook. Supports transition from undergraduate consumers of knowledge to graduate students and future independent scientists who will discover and add new knowledge.
Requisites: Declared in Biochemistry PhD program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand the chemical principles underlying the structure, dynamics, interaction, and function of biological molecules
Audience: Graduate

2. Design experiments to test a particular hypothesis using various techniques
Audience: Graduate

3. Analyze, interpret, test, and share experimental data
Audience: Graduate

4. Understand how biochemical principles are derived from primary experimental data and practice developing broader biochemical insights from experimental data
Audience: Graduate

BIOCHEM 721 – BIOCHEMICAL COMMUNICATION
2 credits.

Introduction to written and visual communication of biochemical research, both to other scientists and to general audiences, including: how to recognize and adapt work to different audiences; how to construct a scientific argument and the different strategies used for research reports, reviews, and proposals; and how to create figures and posters that clearly convey scientific data and concepts. Learn about the peer review process and revision of scientific writing. An intensive writing component, which requires multiple written and visual documentation on topics related to thesis research.
Requisites: Declared in Biochemistry PhD program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Differentiate different types of scientific writing, including the goals, audience and components of research papers, review articles, and proposals
Audience: Graduate

2. Analyze the structure of scientific arguments
Audience: Graduate

3. Write about their own research and field of science, both retrospectively (research papers and review articles) and prospectively (proposal), utilizing the strategies previously identified to synthesize data or the literature, organize the work, and construct a convincing scientific argument at the appropriate level for the target audience to demonstrate mastery of these concepts
Audience: Graduate

4. Create figures that clearly, accurately, and concisely convey scientific information to support the written words
Audience: Graduate

5. Revise their scientific writing to improve clarity, organization, language, and to better achieve the rhetorical goals of the piece
Audience: Graduate

6. Develop a scientific poster to visually and orally communicate scientific data and results
Audience: Graduate

7. Compose one piece targeted to non-scientists
Audience: Graduate

BIOCHEM 729 – ADVANCED TOPICS
1-3 credits.

Specialized subjects of current interest.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

BIOCHEM 799 – PRACTICUM IN BIOCHEMISTRY TEACHING
1-3 credits.

Instructional orientation to teaching at the higher education level in biochemistry, direct teaching experience under faculty supervision, experience in testing and evaluation of students, and the analysis of teaching performance.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Articulate learning goals for the practicum in cooperation with supervising instructor.
Audience: Graduate

2. Communicate biochemistry content in a format appropriate to the student audience.
Audience: Graduate

3. Prepare and/or implement lesson plans for a class period, week, or module of the class.
Audience: Graduate

4. Deliver course content and/or facilitate discussion.
Audience: Graduate

5. Identify pedagogical strengths and opportunities for growth based on classroom assessment and/or feedback.
Audience: Graduate

BIOCHEM/BOTANY/GENETICS 840 – REGULATORY MECHANISMS IN PLANT DEVELOPMENT
3 credits.

Molecular mechanisms whereby endogenous and environmental regulatory factors control development; emphasis on stimulus perception and primary events in the signal chain leading to modulated gene expression and cellular development.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2020

BIOCHEM/CHEM 872 – SELECTED TOPICS IN MACROMOLECULAR AND BIOPHYSICAL CHEMISTRY
1-3 credits.

Various selected topics in contemporary macromolecular or biophysical chemistry.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss current topics of active interest in molecular biophysics
Audience: Graduate

2. Evaluate primary research literature in molecular biophysics
Audience: Graduate

3. Design and interpret experiments in molecular biophysics
Audience: Graduate

4. Conduct rigorous research in molecular biophysics
Audience: Graduate

BIOCHEM/NUTR SCI 901 – SEMINAR-NUTRITION AND METABOLISM (ADVANCED)
1 credit.

Presentation of original research results; discussion of recent articles in animal metabolism and nutrition.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss state-of-the-art research in nutrients and genetic regulation of metabolism
Audience: Graduate

2. Communicate scientific research and critically evaluate experimental results
Audience: Graduate

BIOCHEM 910 – SEMINAR-MOLECULAR VIROLOGY (ADVANCED)
1 credit.

Research reports, special topics, and reports from recent literature in molecular virology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss current topics, cutting-edge research approaches, and next challenges in molecular virology
Audience: Graduate

2. Deliver an effective research presentation
Audience: Graduate

BIOCHEM/BMOLCHEM 913 – SEMINAR-RIBOGROUP (ADVANCED)
1 credit.

Student-led discussions of RNA-related problems.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Develop an understanding of current research questions in the field of RNA biology
Audience: Graduate

2. Become familiar with the approaches used to study RNA and its interactions with proteins
Audience: Graduate

3. Build a professional network with other RNA biologists on campus
Audience: Graduate

4. Develop techniques for presenting complex concepts to a diverse audience
Audience: Graduate

BIOCHEM/B M E/B M I/CBE/COMP SCI/GENETICS 915 – COMPUTATION AND INFORMATICS IN BIOLOGY AND MEDICINE
1 credit.

Participants and outside speakers will discuss current research in computation and informatics in biology and medicine. This seminar is required of all CIBM program trainees.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss how methods from computer science, statistics, information science and engineering are applied to problems in biology, medicine and population health
Audience: Graduate

2. Recognize and be able to define applications in translational bioinformatics, clinical informatics and public health informatics
Audience: Graduate

BIOCHEM 916 – CELLULAR MECHANISMS OF PROTEIN BIOGENESIS AND TRAFFICKING
1 credit.

Recent literature relating to cellular aspects of the regulation of protein biogenesis including protein synthesis, folding, modification, degradation and trafficking, as well as function of molecular chaperones, will be presented and discussed.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Present on current research in membrane and organelle dynamics
Audience: Graduate

2. Interpret and evaluate the results and conclusions in primary research publications related to membrane and organelle dynamics
Audience: Graduate

3. Apply critical scientific thinking skills to supporting scientific arguments
Audience: Graduate

4. Discuss background literature in membrane and organelle dynamics
Audience: Graduate

5. Discuss methodologies and analytical tools used to study membrane and organelle dynamics
Audience: Graduate

BIOCHEM/MICROBIO 917 – REGULATION OF GENE EXPRESSION (ADVANCED SEMINAR)
1 credit.

Analysis of recent literature in topics related to prokaryotic and eukaryotic gene regulation, including regulation of transcription, translation, and genome organization.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss state-of-the-art research in gene expression and regulation
Audience: Graduate

2. Communicate and critically evaluate experimental results
Audience: Graduate

BIOCHEM/CHEM 918 – SINGLE MOLECULE APPROACHES TO BIOLOGY
1 credit.

A combination of recent literature and original research presentations relating to the use of single molecule techniques in biochemistry including fluorescence microscopy, tethered particle motion, patch-clamping, cryo-electron microscopy, optical trapping, magnetic tweezers, and super resolution microscopy.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024
Learning Outcomes: 1. Discuss state-of-the-art research in single molecule biophysics
Audience: Graduate

2. Communicate and critically evaluate experimental results
Audience: Graduate

BIOCHEM 919 – SYNTHETIC BIOLOGY SEMINAR
1 credit.

Synthetic biology is a burgeoning field encompassing understanding and designing biological systems spanning from biomolecules to ecosystems. It builds on advances in molecular and cellular technologies to revolutionize biological engineering in the same way that organic synthesis transformed chemistry and integrated circuit design transformed computing. Synthetic biology has the potential to address many of society's grand challenges including: understanding human disease, sustainable biomanufacturing, medical diagnostics and therapeutics, programming mammalian cell behaviors, engineering living materials, information storage, carbon sequestration, and energy generation. Latest advances in the field will be reviewed by covering literature including but not limited to biomolecular design, sequence-structure-function relationship, regulatory and signaling networks, metabolic engineering, interactions in microbial communities, cell-based therapeutics and genome design.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Critically analyze data and conclusions reported in current literature on synthetic biology
Audience: Graduate

2. Summarize and present the findings of a scientific article
Audience: Graduate

3. Lead and contribute productively to discussions of current research in the field
Audience: Graduate

BIOCHEM 924 – MEMBRANE PROTEIN STRUCTURE AND FUNCTION
1 credit.

Membrane proteins comprise over a fourth of proteins encoded in any given genome, providing many vital functions to all cells. For example, ion channels and pumps modulate the membrane potential and help conduct information via nerves and other long distance conducting tissue. Transporters mediate the uptake and secretion of molecules. Receptors, such as G protein coupled receptors and receptor protein kinases, transfer information about the environment to the inside of the cell. Membrane proteins also contribute to the shape of the cell, the structure of the membrane and a myriad of other functions. Structure/function relationships for this critical class of proteins are discussed, addressing questions such as "how do membrane proteins fold?", "how do certain important classes of membrane proteins work?", "what are the challenges in studying membrane proteins" and "what methods are available for studying their biophysical properties?"
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Synopsize recent and classic research literature about membrane proteins structure and function, including relevant methods, biological systems, or general principles.
Audience: Graduate

2. Critically analyze data and conclusions presented in research literature, present it with clarity and discuss it with peers.
Audience: Graduate

BIOCHEM/CBE 932 – BIOTECHNOLOGY TRAINING PROGRAM SEMINAR
1 credit.

Biotechnology Training Program trainees will present their research for critical review by audience.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss research conducted by Biotechnology Training Program trainee peers' labs and the biotechnological applications thereof
Audience: Graduate

2. Examine industrial applications of biotechnology through internship presentations
Audience: Graduate

3. Communicate with a broad scientific audience
Audience: Graduate

BIOCHEM/CHEM 945 – SEMINAR-CHEMICAL BIOLOGY (ADVANCED)
1 credit.

Presentations and discussions of recently published research in chemical biology and related areas.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss recent published research in chemical biology and related areas
Audience: Graduate

2. Apply tools used in research at the chemistry–biology interface
Audience: Graduate

3. Demonstrate professional and ethical responsibility in research
Audience: Graduate

4. Communicate and critically evaluate published research with scientists with diverse backgrounds and interests
Audience: Graduate

BIOCHEM 990 – RESEARCH
1-12 credits.

Independent laboratory research in preparation of a graduate thesis or dissertation under supervision of a faculty member.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate graduate-level research skills and techniques
Audience: Graduate

2. Apply the biochemical principles that underlie all biological processes
Audience: Graduate

3. Address research challenges using a broad range of theories, research methods, and approaches to scientific inquiry
Audience: Graduate

4. Formulate and design new approaches that extend biochemical principles beyond their current boundaries
Audience: Graduate

BIOLOGICAL SYSTEMS ENGINEERING (BSE)

BSE 1 – COOPERATIVE EDUCATION PROGRAM
1 credit.

Full-time off-campus work experience which combines classroom theory with practical knowledge of operations to provide a background upon which to base a professional career.
Requisites: Consent of instructor
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

BSE/ATM OCN/SOIL SCI 132 – WATER AND PEOPLE
3 credits.

Water is central to the functioning of planet Earth and is influential to shaping many historical and present-day cultures across the globe. As humans increase their impact on Earth's water cycle, our understanding of the multiple roles of water becomes critical to finding sustainable strategies for human and ecosystem health. Explore different perspectives around cultural significance of, engagement with, and access to water, with particular focus to case studies from the United States. Identify the human influence on water quality and quantity in a changing global climate, from local, regional, and global perspectives, and how different racial and ethnic communities in the United States are differentially impacted.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Situate individual experiences with the water cycle in the broader context of different perspectives around the cultural significance of, engagement with, and access to water
Audience: Undergraduate

2. Summarize how historical circumstances/events have affected present day water resource policies, management, and standards, with a focus on the United States
Audience: Undergraduate

3. Apply knowledge of historical circumstances and current policies to describe how present-day communities are affected by water rights and management, and why
Audience: Undergraduate

4. Analyze the human influence on water quality and quantity under changing climate conditions from local, regional, and global perspectives
Audience: Undergraduate

5. Examine how different racial and ethnic communities, with particular focus on marginalized communities in the United States, are impacted by changes in water quality and quantity
Audience: Undergraduate

BSE 170 – PRODUCT DESIGN PRACTICUM
2 credits.

Work in small groups to design, fabricate, and test a device that solves a real world problem. Includes retrieval techniques, specification writing, methods for enhancing creativity, selection methodologies, safety engineering, sustainability in design, shop safety, fabrication equipment and techniques, and oral and written communication.
Requisites: Declared in Biological Systems Engineering BS or classified as Pre-Biological Systems Engineering
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Work effectively in teams by creating a collaborative and inclusive environment, establishing goals and meeting objectives
Audience: Undergraduate

2. Practice oral and written communication
Audience: Undergraduate

3. Demonstrate safe use of engineering fabrication equipment and techniques and general shop safety procedures
Audience: Undergraduate

4. Generate a functional design prototype based on working through the engineering design process steps
Audience: Undergraduate

BSE 249 – ENGINEERING PRINCIPLES FOR BIOLOGICAL SYSTEMS
3 credits.

Applications of basic engineering principles such as mass and energy balances, psychrometric heat and mass transfer and fluid flow to problems encountered in agricultural and biological systems including grain conditioning, fruit and vegetable storage, food processing, animal housing, and environmental control.
Requisites: MATH 217 or 221
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the definitions and relationships between material properties of biological materials, such as bulk density, moisture content, and porosity.
Audience: Undergraduate

2. Employ dimensional analysis to check the correctness of physical relations and to convert the value of a physical quantity in one system to the value in another.
Audience: Undergraduate

3. Describe the definitions and relationships among the thermodynamic properties such as internal energy, enthalpy, and entropy for pure materials and air-water mixtures.
Audience: Undergraduate

4. Employ energy and material balances in the analysis of batch and continuous as well as reactive and nonreactive processes.
Audience: Undergraduate

5. Use psychometric charts to design heating, cooling, and drying systems for biological materials.
Audience: Undergraduate

BSE 270 – INTRODUCTION TO COMPUTER AIDED DESIGN
3 credits.

Introduction to computer aided design (CAD) concepts and techniques, including two- and three-dimensional drawing presentation, methods of graphic communication and design synthesis. Specific topics include parametric solid modeling, part design, survey data and surface construction, orthographic drawings, dimensioning rules and drawing standards, assemblies, and animation.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge about fundamentals of computer aided design (CAD) concepts and techniques that include two- and three-dimensional graphical presentations
Audience: Undergraduate

2. Create CAD parts, assemblies, and engineering drawings
Audience: Undergraduate

3. Apply the methods of graphic communication rules which include Geometric Dimensioning and Tolerancing (GD&T)
Audience: Undergraduate

4. Present data, design synthesis, and production methods in engineering graphics
Audience: Undergraduate

5. Apply the proper and efficient use of the latest engineering design and analysis tools
Audience: Undergraduate

BSE 289 – HONORS INDEPENDENT STUDY
1-2 credits.

Research work for Honors students under direct guidance of a faculty member in an area of Biological Systems Engineering. Students are responsible for arranging the work and credits with the supervising instructor.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions

BSE 299 – INDEPENDENT STUDY
1-3 credits.

Research work for students under direct guidance of a faculty member in an area of Biological Systems Engineering. Students are responsible for arranging the work and credits with the supervising instructor.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

BSE 301 – LAND INFORMATION MANAGEMENT
3 credits.

An introduction to land information management through the principles of geospatial technologies and methods for analysis and interpretation of geospatial data. Includes both the basic land surveying technology and advanced remote observation of land resources by airborne and space-based sensors.
Requisites: MATH 113, 114, or 217
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Describe basic geospatial concepts and engineering principles applicable to the acquisition and management of land information.
Audience: Undergraduate

2. Apply an engineer's level and total station instrument for land surveying.
Audience: Undergraduate

3. Identify important resources, and retrieve, interpret, analyze and critique information for use in solving geospatial engineering problems and conducting basic land information investigations.
Audience: Undergraduate

4. Apply the remote sensing techniques and geospatial data processing tools for land information management.
Audience: Undergraduate

5. Communicate effectively through engagement during in-class discussions.
Audience: Undergraduate

BSE 305 – INTRODUCTION TO PRECISION AGRICULTURE
3 credits.

Introduces managing agricultural production systems using Precision Agriculture (PA), including its modern extensions in smart and digital farming. Provides an overview of the fundamentals of agricultural production systems and the sources of crop variability. Explores geographic positioning and information systems, examining how these tools integrate yield and quality sensors to monitor spatial variability. Covers temporal observation techniques using remote and proximal sensing systems. Culminates in studying the technologies used for implementing and managing variable-rate prescriptions and other management interventions.
Requisites: Sophomore standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define key terminology related to agricultural production systems and precision agriculture technologies.
Audience: Undergraduate

2. Recognize factors contributing to variability in yield and quality of agricultural products.
Audience: Undergraduate

3. Explain the technologies used to predict spatial and temporal variability in plant growth and development.
Audience: Undergraduate

4. Assess management tools designed to optimize input usage and reduce environmental impact.
Audience: Undergraduate

BSE 308 – CAREER MANAGEMENT FOR ENGINEERS
1 credit.

Develop engineering career and life skills in time management, housing selection, financial management, the job search process, professional networking, branding and social media presence, professional development and professional society membership, leadership, professional ethics, and registration/licensure. Understand future trends in digital technology, climate change, diversity, and sustainability and how they affect career opportunities in the engineering field.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Identify the basic personal financial management skills#necessary for early-career engineers, including preparing for costs such as#housing, healthcare, and transportation.#
Audience: Undergraduate

2. Recognize and implement select improvement strategies in the areas of interpersonal skills, communication, and social media facility to build personal and professional networks and create a “brand” as an engineer.#
Audience: Undergraduate

3. Identify and explain the benefits of direct involvement in one’s engineering professional society/organization, including building ongoing professional relationships and pursuing ongoing professional development and lifelong learning.
Audience: Undergraduate

4. Explain the processes and professional benefits associated with completing the FE (Fundamentals of Engineering) exam and becoming a PE (Professional Engineer).
Audience: Undergraduate

5. Apply the Engineering Code of Ethics to specific cases and scenarios that present ethical challenges for engineers around decision making, product safety, economic tradeoffs, sustainability, and other issues.
Audience: Undergraduate

6. Provide examples of the importance of understanding diversity (gender, ethnicity, culture, etc.) as a practicing engineer as it relates to working on an engineering team and best serving a global customer base.#
Audience: Undergraduate

7. Develop a long-range,#comprehensive career plan that includes goal setting, plans for lifelong learning, personal financial management/ decision making, and#other factors,#synthesizing the semester’s class content.
Audience: Undergraduate

8. Recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts. (ABET Outcome 4)
Audience: Undergraduate

9. Acquire and apply new knowledge as needed, using appropriate learning strategies. (ABET Outcome 7)
Audience: Undergraduate

10. Apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors. (ABET Outcome 2)
Audience: Undergraduate

BSE 310 – PROJECT ECONOMICS & DECISION ANALYSIS
3 credits.

Evaluation techniques for research, development engineering projects. Covers the time value of money and other cash-flow concepts, capital budgeting, economic practices and techniques used to evaluate and optimize decisions, and research development project portfolio management techniques.
Requisites: MATH 113, 114, or (MATH 171 and 217)
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Define the terminology used in project economic analysis
Audience: Undergraduate

2. Describe time-value-of-money and discounting concepts
Audience: Undergraduate

3. Apply the criteria for making economic-based decisions
Audience: Undergraduate

4. Analyze before-tax and after-tax cash flows
Audience: Undergraduate

5. Explain economic risk analysis techniques
Audience: Undergraduate

6. Demonstrate capability to use a spreadsheet program in solving economic problems
Audience: Undergraduate

7. Estimate costs and perform an economic analysis in support of a research or engineering project
Audience: Undergraduate

8. Describe techniques used to manage company project portfolios
Audience: Undergraduate

9. Develop engineering economic problem-solving techniques similar to those in the Engineering Economics portion of the Fundaments of Engineering exam
Audience: Undergraduate

BSE/AN SCI 344 – DIGITAL TECHNOLOGIES FOR ANIMAL MONITORING
3 credits.

Introduces key concepts of sensor technology used for livestock and companion animal monitoring and veterinary medicine. Describes applications of Artificial Intelligence (AI) systems for livestock animals and veterinary medicine, including animal monitoring, computer-aided diagnosis, and optimized farm management decisions.
Requisites: (MATH 112, 114, 171, or placement into MATH 221) or graduate/professional standing
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain what precision livestock is and why it is needed
Audience: Undergraduate

2. Demonstrate familiarity with data science and artificial intelligence principles as applied to agricultural systems and veterinary medicine
Audience: Undergraduate

3. Describe the current sensor sensing technologies used in livestock and companion animals
Audience: Undergraduate

4. Explain principles and applications of sensor technology applied to animals
Audience: Undergraduate

5. Identify artificial intelligence applications in veterinary medicine
Audience: Undergraduate

6. Evaluate the major ethical concerns associated with Artificial Intelligence for agriculture
Audience: Undergraduate

BSE 349 – QUANTITATIVE TECHNIQUES FOR BIOLOGICAL SYSTEMS
3 credits.

Principles of how energy and materials are utilized in Cells, organisms and ecosystems. Mass transfer, heat and energy balances applied to cell metabolism, plants, and ecosystems. Quantification of biological processes to allow manipulation for human benefit.
Requisites: MATH 222, (CHEM 104, 109, or 116), and (BOTANY/ BIOLOGY/ZOOLOGY 151, ZOOLOGY 153, ZOOLOGY/BIOLOGY 101, BOTANY/BIOLOGY 130, MICROBIO 101, or ENVIR ST/BOTANY/ ZOOLOGY 260)
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and analyze how energy and materials enter and are utilized by cells, organisms, and ecosystems using engineering concepts including material and energy balances, redox balance, and the first and second laws of thermodynamics.
Audience: Undergraduate

2. Mathematically model important biological processes including enzyme kinetics and microbial growth and be able to quantitatively assess how interactions between biological characteristics and the environment affect system performance.
Audience: Undergraduate

3. Recognize the basic types of plants and their ecosystems and be able to describe the ways in which plants interact with their environment and how that interaction can be manipulated to achieve desired outcomes.
Audience: Undergraduate

4. Describe the ways in which all living creatures interact with each other and their environment on the local, regional, and global scale and to consider how the activities of people can affect the sustainability of these interactions.
Audience: Undergraduate

BSE 364 – ENGINEERING PROPERTIES OF FOOD AND BIOLOGICAL MATERIALS
3 credits.

Study of various physical, mechanical, thermal and other properties of food and biological materials. Importance of such property values on the design and operation of various food and bioprocess engineering systems.
Requisites: (BSE 249 or CBE 250) and (M E 361 or CBE 310)
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the engineering properties of food and biomaterials, including physical, rheological, thermal, aerodynamic and hydrodynamic, and electromagnetic properties
Audience: Undergraduate

2. Explain moisture and water activity and their impacts on the properties and processing of food and biomaterials
Audience: Undergraduate

3. Demonstrate the importance and applications of the engineering properties in agricultural systems
Audience: Undergraduate

4. Analyze how the environmental conditions and the composition and structure of biomaterials affect the engineering properties
Audience: Undergraduate

5. Interpret the designs, working principles, experimental setups. and operations of the instruments/devices for measuring/determining the engineering properties
Audience: Undergraduate

6. Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics (ABET Outcome 1)
Audience: Undergraduate

7. Develop and conduct appropriate experimentation, analyze, and interpret data, and use engineering judgment to draw conclusions (ABET Outcome 6)
Audience: Undergraduate

BSE 365 – MEASUREMENTS AND INSTRUMENTATION FOR BIOLOGICAL SYSTEMS
3 credits.

Principles of instrumentation and measurement systems, analysis of experimental data, electronic components, instrumentation for measuring various parameters of biological systems (e.g., temperature, force, flow).
Requisites: Declared in Biological Systems Engineering or Environmental Engineering BS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the calibration and measurement process.
Audience: Undergraduate

2. Design systems for the acquisition, analysis, and communication of measured data.
Audience: Undergraduate

3. Describe the principles of operation and limitations of common engineering instruments and sensors.
Audience: Undergraduate

4. Implement measures to minimize electromagnetic interference and noise in measurements.
Audience: Undergraduate

5. Select and use position, velocity, force, torque, temperature, pressure, and fluid flow sensors.
Audience: Undergraduate

6. Display enhanced problem solving skills involving electronics and instrumentation.
Audience: Undergraduate

7. Display improved communications skills both written (lab reports) and oral (presentation).
Audience: Undergraduate

8. Display enhanced teamwork skills.
Audience: Undergraduate

9. Select and/or utilize the most appropriate methodologies and practices.
Audience: Graduate

BSE/ENVIR ST 367 – RENEWABLE ENERGY SYSTEMS
3 credits.

Learn about the state-of-the-art in renewable energy applications including biomass for heat, electric power and liquid fuels as well as geo-energy sources such as wind, solar, and hydro power. Practice engineering calculations of power and energy availability of renewable energy sources and learn about requirements for integrating renewable energy sources into production, distribution and end-use systems.
Requisites: MATH 112, 114, 217, placement into MATH 221, or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Calculate energy and power production for renewable energy systems
Audience: Both Grad & Undergrad

2. Determine renewable resource availability and impact on energy infrastructure
Audience: Both Grad & Undergrad

3. Design and assess the technical and economic feasibility of renewable energy systems
Audience: Both Grad & Undergrad

4. Explain the social, economic, and/or environmental dimensions of the sustainability challenge(s) of renewable energy systems.
Audience: Both Grad & Undergrad

5. Produce comprehensive renewable energy project analysis.
Audience: Graduate

BSE/CIV ENGR/SOIL SCI 372 – ON-SITE WASTE WATER TREATMENT AND DISPERSAL
2 credits.

On-site treatment and dispersal of waste water from homes, commercial sources and small communities. Sources, pretreatment units, nutrient removal units, constructed wetlands, surface and soil dispersal systems, recycle and reuse systems, regulations, alternative collection systems.
Requisites: CHEM 103, 109, or 115
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify, formulate, solve complex wastewater management and engineering problems by applying engineering and science principles to design a complete residential onsite wastewater treatment system.
Audience: Undergraduate

2. Use engineering design to produce wastewater management solutions that meet treatment goals with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
Audience: Undergraduate

3. Communicate effectively with the instructor and other students during in-class discussions.
Audience: Undergraduate

4. Recognize ethical and professional responsibilities in onsite wastewater management and engineering situations and make informed design assumptions/judgments, which must consider the impact of wastewater management solutions in global, economic, environmental, and societal context.
Audience: Undergraduate

5. Analyze and interpret data related to wastewater flow, source, and characteristics, soil/site characteristics, and use engineering judgement to select appropriate design solutions.
Audience: Undergraduate

6. Acquire and apply new knowledge regarding advanced treatment processes for residential wastewater treatment.
Audience: Undergraduate

BSE 375 – SPECIAL TOPICS
1-4 credits.

Specialized subject matter of current interest to undergraduate students.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

BSE 380 – INTRODUCTORY DATA SCIENCE FOR THE AGRICULTURAL AND LIFE SCIENCES
3 credits.

Agricultural and life scientists need to creatively apply physical, chemical, and biological principles to address technical, business, and environmental challenges. Many of these challenges involve numerical analyses, including the interpretation of large datasets. The fundamentals of computer coding using numerical software will be taught, using real-world data science challenges from the agricultural and life sciences.
Requisites: (CHEM 103, 109, or 115) and (MATH 112, 114, 217 or placement into MATH 211 or 221)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze agricultural and life sciences data using computer code
Audience: Undergraduate

2. Import data from multiple formats into numeric software for analysis
Audience: Undergraduate

3. Perform fundamental statistical analyses and basic data interpretation
Audience: Undergraduate

4. Write code to create graphical displays of data and model simulations
Audience: Undergraduate

5. Critique and improve data presentation with ethics and inclusivity in mind
Audience: Undergraduate

6. Work as an individual and in teams to solve data science challenges
Audience: Undergraduate

7. Create scientific workflows for automated data import, analysis, and presentation
Audience: Undergraduate

BSE 399 – COORDINATIVE INTERNSHIP/COOPERATIVE EDUCATION
1-8 credits.

An internship under the guidance of a faculty or instructional academic staff member in BSE and internship site supervisor. Students are responsible for arranging the work and credits with the faculty or instructional academic staff member and the internship site supervisor.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Workplace - Workplace Experience Course
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2024

BSE 400 – STUDY ABROAD IN BIOLOGICAL SYSTEMS ENGINEERING
1-6 credits.

Provides an area equivalency for courses taken on Madison Study Abroad Programs that do not equate to existing UW courses. Enrollment in a UW-Madison resident study abroad program
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions

BSE 405 – ARTIFICIAL INTELLIGENCE IN AGRICULTURE
3 credits.

Provides an understanding of how cutting-edge Artificial Intelligence (AI) technologies revolutionize and optimize various aspects of the agricultural sector. Covers topics related to advanced sensors for data acquisition, data processing and visualization, and machine learning models to inform agricultural decision making. Introduces both theoretical concepts and practical insights into real-world AI implementation in agriculture.
Requisites: BSE 380, COMP SCI 220, 300, or graduate/professional standing
Course Designation: Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply advanced sensing and computing techniques and modern engineering tools for intelligent agricultural system design
Audience: Undergraduate

2. Apply basic machine learning models and engineering principles to solve digital agriculture problems
Audience: Undergraduate

3. Identify important resources to retrieve, interpret, analyze, and critique information for use in solving problems in digital agriculture
Audience: Undergraduate

4. Deliver presentations to an audience of peers discussing the development of machine learning models and interpretation of modeling results
Audience: Undergraduate

BSE 460 – BIOREFINING: ENERGY AND PRODUCTS FROM RENEWABLE RESOURCES
3 credits.

Concepts, processes, status quo and future direction of biorefining for production of energy (fuels), chemicals and materials from biomass, with emphases on chemical, biological and engineering aspects of the biorefining.
Requisites: (CHEM 104 or 109) and (CHEM 341 or 343), or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify the opportunities and challenges of energy, chemicals, and materials from biomass
Audience: Both Grad & Undergrad

2. Describe chemical composition, anatomical structure, and physical & chemical properties of lignocellulosic biomass and their effect on biomass processing and conversion
Audience: Both Grad & Undergrad

3. Evaluate the technologies and processes and their working principles for producing liquid biofuels, such as corn ethanol, cellulose ethanol, biodiesel, and other alternative fuels.
Audience: Both Grad & Undergrad

4. Outline representative platform chemicals derivable from biomass, such as furfural, HMF, levulinic acid, lactic acid, xylitol, and sorbitol, and their production technologies and reaction chemistry
Audience: Both Grad & Undergrad

5. Compare the production of fibers, pulp & paper, and biobased materials from lignocellulosic biomass
Audience: Both Grad & Undergrad

6. Develop mass balance for a process to convert biomass to fuel, chemical, or material.
Audience: Both Grad & Undergrad

7. Design a process to produce a target product (fuel, chemical, or material)
Audience: Both Grad & Undergrad

8. Synthesize the historical and current research on a select topic in biorefining and generate evidence-based predictions regarding the future direction of the topic.
Audience: Graduate

BSE 461 – FOOD AND BIOPROCESSING OPERATIONS
3 credits.

Principles of mechanics, fluid dynamics, and heat and mass transfer as applied to food and bioprocessing operations. Specific focus on unit operations and equipment associated with the products key to Wisconsin industries including pulp and paper, dairy products, ethanol, forage, and grain.
Requisites: (BSE 249 or CBE 250), (CIV ENGR 310, CBE 320, or M E 363), or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Describe bioprocessing operations (e.g., food processing and biofuels)
Audience: Both Grad & Undergrad

2. Develop mass and energy balances on unit operations (e.g., heat exchangers, evaporators, dryers, filters)
Audience: Both Grad & Undergrad

3. Develop a series of unit operations to perform the desired transformations of mass and energy in bioprocessing operations
Audience: Both Grad & Undergrad

4. Stimulate a system or process to determine impact of theoretical changes and conduct virtual experiments to optimize components or system
Audience: Both Grad & Undergrad

5. Consider the effect of public health, safety, and welfare, as well as global, culture, social, environmental, and economic factors on process design
Audience: Both Grad & Undergrad

6. Design a system to meet the operational and regulatory demands of food and bioprocessing plants
Audience: Graduate

BSE 464 – HEAT AND MASS TRANSFER IN BIOLOGICAL SYSTEMS
3 credits.

Introduction to heat and mass transfer fundamentals, including transport mechanisms of conduction, convection, radiation, diffusion and evaporation. Development of governing equations and boundary conditions with application to living systems, controlled environments, water systems, and food processing. Introduction to, and application of, finite-difference and finitevolume methods, including computational fluid dynamics (CFD).
Requisites: (M E 361 or CBE 310) and (M E 363, CBE 320, or CIV ENGR 310)
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate knowledge about fundamental heat and mass transfer modes
Audience: Undergraduate

2. Identify governing equations, boundary conditions, and initial conditions
Audience: Undergraduate

3. Analyze the interrelationships among conduction, convection, radiation, and mass diffusion
Audience: Undergraduate

4. Demonstrate knowledge about the significance of theoretical, computational, and experimental approaches to solve heat and mass transfer problems
Audience: Undergraduate

5. Apply heat and mass transfer concepts and principles to real-world agricultural, environmental, and biosystems problems
Audience: Undergraduate

BSE 472 – SEDIMENT AND BIO-NUTRIENT ENGINEERING AND MANAGEMENT
3 credits.

Hydrologic, biologic and engineering applications in the design and management of sediment and bio-nutrient control systems.
Requisites: Junior standing
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify, formulate, and solve complex water, sediment, and manure management, and engineering problems by applying engineering and science principles to design water control, erosion control, and nutrient management systems.
Audience: Undergraduate

2. Apply engineering design to produce water, sediment, and manure management solutions that meet agricultural production needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
Audience: Undergraduate

3. Communicate effectively with the instructor and other students during in-class discussions.
Audience: Undergraduate

4. Recognize ethical and professional responsibilities in water, sediment, and manure management, and engineering situations and make informed design assumptions/judgments, which must consider the impact of soil & water conservation and manure management solutions in global, economic, environmental, and societal context.
Audience: Undergraduate

5. Function effectively on a team to accomplish assigned tasks.
Audience: Undergraduate

6. Analyze and interpret data related to rainfall and runoff, soil characteristics, tillage practices, and manure characteristics and use engineering judgement to select appropriate design solutions.
Audience: Undergraduate

7. Acquire and apply new knowledge relate to sustainable agricultural production systems that can protect and preserve soil and water resources while maintaining agricultural productivity.
Audience: Undergraduate

BSE 473 – WATER MANAGEMENT SYSTEMS
3 credits.

Engineering and management applications of soil-plant-water relationships applied to water management systems and efficient water use.
Requisites: MATH 217, 221, or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify, formulate and solve complex water management and engineering problems by applying hydrologic, biologic, and engineering principles applicable to the design of efficient water management systems and components.
Audience: Both Grad & Undergrad

2. Apply engineering design to produce water management solutions that meet agricultural production needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
Audience: Both Grad & Undergrad

3. Communicate effectively through engagement during in-class discussions
Audience: Both Grad & Undergrad

4. Recognize ethical and professional responsibilities in water management and engineering situations and make informed judgements, which must consider the impact of water management solutions in global, economic, environmental, and societal context
Audience: Both Grad & Undergrad

5. Explain the social, economic, and/or environmental dimensions of the sustainability challenge of water use
Audience: Both Grad & Undergrad

6. Analyze the causes of and solutions for the sustainability challenge of clean water and efficient use of water
Audience: Both Grad & Undergrad

7. Identify, evaluate, and synthesize contemporary literature on a specific water management issue
Audience: Graduate

BSE/M E 474 – FLUID POWER
3 credits.

Engineering principles of design and analysis of fluid power systems and fluid power components. Topics include hydraulic fluid properties, fluid flow and, positive displacement pumps, valves for pressure, flow, and directional control, linear and rotary actuators, accumulators, pressure compensation, load sensing, energy management and system efficiency.
Requisites: M E 363, CIV ENGR 310, CBE 320, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Analyze various positive displacement pumps for flow, pressure, power, and efficiency
Audience: Both Grad & Undergrad

2. Determine flow and pressure drop characteristics of spool-type and poppet-type proportional, on-off, and servovalves
Audience: Both Grad & Undergrad

3. Construct hydraulic system schematics and select components from a functional system description
Audience: Both Grad & Undergrad

4. Determine efficiency and design improvements for mobile and industrial hydraulic systems
Audience: Both Grad & Undergrad

5. Develop mathematical models of hydraulic system/components and solve using numerical techniques
Audience: Graduate

BSE/M E 475 – ENGINEERING PRINCIPLES OF AGRICULTURAL MACHINERY
3 credits.

Engineering design principles of machines for the production, processing and handling of crops for food, fuel, bio-mass and fiber. Environmental and biological factors that influence machine design and operation. Economic and capacity analysis of machines and systems.
Requisites: Declared in Biological Systems Engineering or Mechanical Engineering and (M E 240, E M A 202, PHYSICS 201, 207, or 247), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and describe key operating and design principles, concepts, and methods related to agricultural field machinery
Audience: Both Grad & Undergrad

2. Calculate relevant quantities regarding the design and engineering of agricultural field machinery
Audience: Both Grad & Undergrad

3. Critically review results of engineering calculations to ensure answers are realistic
Audience: Both Grad & Undergrad

4. Choose, synthesize and effectively utilize appropriate ASABE engineering standards, methods, and concepts regarding agricultural field machinery
Audience: Both Grad & Undergrad

5. Hone skills in teamwork, oral and written communication, and problem solving
Audience: Both Grad & Undergrad

6. Critically review emerging technology and apply relevant concepts to current issues with agricultural field machinery
Audience: Both Grad & Undergrad

7. Demonstrate an ability to formulate, analyze, and independently solve advanced engineering problems
Audience: Graduate

BSE/M E 476 – ENGINEERING PRINCIPLES OF OFF-ROAD VEHICLES
3 credits.

Engineering design principles of heavy-duty vehicles intended for off-road use: fuels, engine cycles, engine principles and construction, clutches, mechanical and hydrostatic transmissions, final drives, traction systems, traction modeling, dynamic behavior, suspension systems and braking.
Requisites: (M E 361 or concurrent enrollment), (M E 240, E M A 202, PHYSICS 201, 207, or 247), and declared in Biological Systems Engineering or Mechanical Engineering or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Identify, formulate, and solve engineering problems related to off-road vehicle dynamics and mobility
Audience: Both Grad & Undergrad

2. Glean relevant data from the engineering research literature and technical data sheets, and specify appropriate components and systems in the application of off-road vehicle design
Audience: Both Grad & Undergrad

3. Perform an experiment on off-road vehicle systems, analyze and interpret data, and use engineering judgment to draw conclusions
Audience: Both Grad & Undergrad

4. Apply knowledge gained in the course to evaluate off-road vehicle design alternatives
Audience: Both Grad & Undergrad

5. Critically review off-road vehicle research
Audience: Graduate

BSE 508 – BIOLOGICAL SYSTEMS ENGINEERING DESIGN PRACTICUM I
2 credits.

Overview of the engineering design process including problem identification, information retrieval, specification writing, development and analysis of alternative solutions, selection methodology, product safety, standardization, scheduling and cost estimating. Develop design project proposals for real-world design problems.
Requisites: Declared in Biological Systems Engineering BS
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop design requirements for biological systems engineering design problems.
Audience: Undergraduate

2. Conduct technical reviews of engineering problems.
Audience: Undergraduate

3. Develop alternative solutions to biological systems engineering problems.
Audience: Undergraduate

4. Provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives as part of a team.
Audience: Undergraduate

BSE 509 – BIOLOGICAL SYSTEMS ENGINEERING DESIGN PRACTICUM II
3 credits.

Individual or team work on a biological systems engineering design project: problem identification, information retrieval, specification writing, development and analysis of alternative solutions, selection methodology.
Requisites: Senior standing and BSE 508
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics.
Audience: Undergraduate

2. Develop alternative solutions to biological systems engineering problems.
Audience: Undergraduate

3. Develop a model or prototype to evaluate an engineering design.
Audience: Undergraduate

4. Provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives as part of a team.
Audience: Undergraduate

5. Communicate effectively with a range of audiences.
Audience: Undergraduate

BSE 571 – SMALL WATERSHED ENGINEERING
3 credits.

Application of engineering principles to small, ungauged watershed analysis. Application of hydrologic and sedimentologic principles to upland watersheds for run-off and sediment control.
Requisites: MATH 222 or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify, formulate and solve complex hydrologic engineering problems by applying hydrologic, sedimentologic, and engineering principles applicable to the design of water and sediment control systems and components
Audience: Both Grad & Undergrad

2. Apply engineering design to produce water and sediment control solutions that meet regulatory requirements with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
Audience: Both Grad & Undergrad

3. Communicate technical information effectively
Audience: Both Grad & Undergrad

4. Recognize ethical and professional responsibilities in watershed engineering situations and make informed judgements, which must consider the impact of watershed engineering solutions in global, economic, environmental, and societal context
Audience: Both Grad & Undergrad

5. Demonstrate advanced application of hydrologic, sedimentologic, and/or engineering principles.
Audience: Graduate

BSE 681 – SENIOR HONORS THESIS
2-4 credits.

Individual study for undergraduate students in an Honors program completing a thesis in the area of Biological Systems Engineering, as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

BSE 682 – SENIOR HONORS THESIS
2-4 credits.

Second semester of individual study for undergraduate students in an Honors program completing a thesis in the area of Biological Systems Engineering, as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: No

BSE 691 – SENIOR THESIS
2 credits.

Individual study for undergraduate students completing a thesis in the area of Biological Systems Engineering, as arranged with a faculty member.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2017

BSE 692 – SENIOR THESIS
2 credits.

Second semester of individual study for undergraduate students completing a thesis in the area of Biological Systems Engineering, as arranged with a faculty member.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2018

BSE 699 – SPECIAL PROBLEMS
1-4 credits.

Individual advanced work in an area of Biological Systems Engineering under the direct guidance of a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

BSE 799 – PRACTICUM IN AGRICULTURAL ENGINEERING TEACHING
1-3 credits.

Hands-on teaching experience through working with a course instructor to improve pedagogical understanding. Guidance will be provided on such aspects as course planning, delivery, student supervision, and evaluation, etc.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

BSE 875 – SPECIAL TOPICS
1-4 credits.

Specialized subject matter of current interest to graduate students.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023

BSE 900 – SEMINAR
1 credit.

Provides an overview of research-related activities and resources available to graduate students in the department, college, and on campus. Includes library resources, statistical consulting, professional development, research proposal development, thesis writing, technical presentation, etc.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Use departmental and campus resources to make academic progress (coursework and research) with their graduate degree program.
Audience: Graduate

2. Develop research questions related to their thesis research work.
Audience: Graduate

3. Develop skills to effectively review/critique scientific publications.
Audience: Graduate

4. Communicate technical information effectively using posters and oral presentations.
Audience: Graduate

BSE 901 – GRADUATE RESEARCH SEMINAR
1 credit.

Presentation, evaluation, and discussion of Biological Systems Engineering graduate student thesis and non-thesis research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 10 number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Evaluate (in both verbal and written formats) the quality of professional or academic research presentations.
Audience: Graduate

2. Apply the principles of ethical and professional conduct.
Audience: Graduate

3. Analyze peer-reviewed research within a select subject area.
Audience: Graduate

4. Communicate field specific information effectively with a professional/academic audience.
Audience: Graduate

BSE 990 – RESEARCH
1-12 credits.

Independent laboratory research in preparation of a graduate thesis under supervision of a faculty member
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

BSE 999 – SPECIAL PROBLEMS
1-3 credits.

In-depth study of a research or design and development problem under the supervision of a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

BIOLOGY (BIOLOGY)

BIOLOGY/ZOOLOGY 101 – ANIMAL BIOLOGY
3 credits.

General biological principles. Topics include: evolution, ecology, animal behavior, cell structure and function, genetics and molecular genetics and the physiology of a variety of organ systems emphasizing function in humans.
Requisites: Not open to students with credit for BOTANY/BIOLOGY/ZOOLOGY 151 or 152
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

BIOLOGY/ZOOLOGY 102 – ANIMAL BIOLOGY LABORATORY
2 credits.

General concepts of animal biology at an introductory level emphasizing the evolutionary relationships between animals. Learn about general body plans and strategies used to accomplish the basic tasks of staying alive in major animal groups using preserved and live animals. Study the diversity within each group of animals by integrating the body plans with the lifestyle and ecology of animals. Dissections of earthworm, freshwater mussel, squid, sea star, and rat aid the study of these general principles.
Requisites: Not open to students with credit for BOTANY/BIOLOGY/ZOOLOGY 151 or 152
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

BIOLOGY/BOTANY 130 — GENERAL BOTANY
5 credits.

Introduction to the basic principles and concepts of the biology of plants. an integrative approach stressing evolutionary sequences and the relationship between structure and function at succeeding levels of organization: molecule, cell, organism, population, community. Correlated lectures, laboratories, and discussions.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

BIOLOGY/BOTANY/ZOOLOGY 151 — INTRODUCTORY BIOLOGY
5 credits.

Topics include: cell structure and function, cellular metabolism (enzymes, respiration, photosynthesis), information flow (DNA, RNA, protein), principles of genetics and selected topics in Animal Physiology.
Requisites: Not open to students with credit for BIOLOGY/ZOOLOGY 101, 102 or BIOLOGY/BOTANY 130
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

BIOLOGY/BOTANY/ZOOLOGY 152 — INTRODUCTORY BIOLOGY
5 credits.

Topics include: selected topics in plant physiology, a survey of the five major kingdoms of organisms, speciation and evolutionary theory, and ecology at multiple levels of the biological hierarchy.
Requisites: ZOOLOGY/BIOLOGY/BOTANY 151
Course Designation: Gen Ed - Communication Part B
Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

BIOLOGY 299 — DIRECTED STUDIES
1-4 credits.

Introductory directed study as arranged with a faculty member. Open only to students declared in Biology.
Requisites: Consent of instructor
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

BIOLOGY 375 — SPECIAL TOPICS
1-5 credits.

Introductory special topics on contemporary issues relevant to studying biology.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023

BIOLOGY 399 — INTERNSHIP/FIELD EXPERIENCE
1-8 credits.

An internship under guidance of a faculty or instructional academic staff member and internship site supervisor. Students are responsible for arranging the work and credits with the faculty or instructional academic staff member and the internship site supervisor. Open only to students declared in Biology.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022

BIOLOGY/GENETICS 522 – COMMUNICATING EVOLUTIONARY BIOLOGY
2-3 credits.

Exposure to diverse topics in contemporary evolutionary biology and development of critical thinking and communication skills. Most weeks guest lecturers present their own primary research on a specialized topic in evolutionary biology. Seminars include perspectives from genetics, ecology, geoscience, zoology, botany, microbiology, systematics, molecular biology, and integrative research. Some weeks feature special topics and discussions on pedagogical, legal, outreach, or other issues in evolutionary biology. Includes thinking critically about methodology, experimental design and interpretation, and how conclusions are reached in evolutionary biology by reading primary and secondary literature, attending seminars, discussing topics with speakers and other students, and preparing a written report. The 3-credit version of the course delves deeper into communication of evolutionary biology to researchers, undergraduates, K-12 students, and the general public.
Requisites: GENETICS 466, 468, ZOOLOGY/ANTHRO/BOTANY 410, or BIOCORE 381, or concurrent enrollment
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate the ability to critically read and comprehend primary scientific literature from diverse areas of evolutionary biology.
Audience: Undergraduate

2. Comprehend and critically evaluate oral research presentations in the field of evolutionary biology.
Audience: Undergraduate

3. Participate effectively in discussions of scientific research in the field of evolutionary biology.
Audience: Undergraduate

4. Write a clear and concise review of a selected topic in evolutionary biology and a critique of a research seminar in that area.
Audience: Undergraduate

5. Synthesize and apply knowledge from other didactic courses and personal experiences in discussions of scientific research.
Audience: Undergraduate

BIOLOGY 681 – SENIOR HONORS THESIS
2-3 credits.

Individual study for seniors completing theses as arranged with a faculty member for an Honors program. Open only to students declared in Biology.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025

BIOLOGY 682 – SENIOR HONORS THESIS
2-3 credits.

Individual study for seniors completing theses as arranged with a faculty member for an Honors program. Open only to students declared in Biology.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2025

BIOLOGY 691 – SENIOR THESIS
2-3 credits.

Individual study for seniors completing theses as arranged with a faculty member. Open only to students declared in Biology.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023

BIOLOGY 692 – SENIOR THESIS
2-3 credits.

Individual study for seniors completing theses as arranged with a faculty member. Open only to students declared in Biology.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023

BIOLOGY 699 – DIRECTED STUDIES
1-4 credits.

Advanced directed study as arranged with a faculty member. Open only to students declared in Biology.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

BIOLOGY CORE CURRICULUM (BIOCORE)

BIOCORE 181 – BECOMING A SCIENTIST: DOING BIOLOGY RESEARCH
2 credits.

Orientation to biology research on campus, work in a research team to investigate a novel research question, and do biology research on a choice of topics: from ecology and physiology to cell biology. Emphasis is on critical thinking required in designing and conducting experiments, analyzing and interpreting data, and communicating findings orally and in writing.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply approaches for being a successful college student
Audience: Undergraduate

2. Communicate what biology research looks like, sounds like, and feels like at UW Madison
Audience: Undergraduate

3. Do biology research and engage as a member of a biology research community
Audience: Undergraduate

BIOCORE 381 – EVOLUTION, ECOLOGY, AND GENETICS
3 credits.

Basic principles of ecology and interrelations between individuals, populations, communities, ecosystems and their environment; transmission genetics and introduction to population genetics; origin of life, evolutionary mechanisms, ancestral relationships among species, and the diversity of life.
Requisites: Declared in Biology Core Curriculum Honors Certificate
Course Designation: Gen Ed - Communication Part B
Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand what we know, how we know, and what we don't know in ecology, transmission genetics and evolution at the intermediate level
Audience: Undergraduate

2. Apply scientific theory, concepts, reasoning, and quantitative and qualitative approaches to understand and solve problems
Audience: Undergraduate

3. Use terminology accurately and effectively within appropriate conventions of the discipline
Audience: Undergraduate

4. Find, evaluate and relate relevant information found in primary scientific literature using core library resources
Audience: Undergraduate

5. Build a logical argument in writing based on critical reading, and use of evidence and scientific reasoning
Audience: Undergraduate

6. Analyze a problem using a systems approach, recognizing levels of biological scale and organization
Audience: Undergraduate

7. Work as a member of a productive, collaborative group
Audience: Undergraduate

8. Demonstrate scientific communication skills and the ability to translate scientific concepts to a broader community using appropriate style and disciplinary conventions
Audience: Undergraduate

BIOCORE 382 – EVOLUTION, ECOLOGY, AND GENETICS LABORATORY
2 credits.

Writing-intensive with opportunities to make observations and generate and test questions. Includes ecology field trips and research projects that focus on genetics and evolution.
Requisites: BIOCORE 381 or concurrent enrollment
Course Designation: Gen Ed - Communication Part B
Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Ask testable, relevant, creative scientific questions related to ecology, transmission genetics and evolution.
Audience: Undergraduate

2. Search, sort and gather relevant background information from texts and primary literature.
Audience: Undergraduate

3. Make predictions and formulate clear, testable hypotheses.
Audience: Undergraduate

4. Develop protocols that test hypotheses.
Audience: Undergraduate

5. Evaluate assumptions associated with experimental design and the biological system.
Audience: Undergraduate

6. Analyze data and make logical conclusions utilizing statistical reasoning.

Audience: Undergraduate

7. Communicate effectively about science through writing and oral presentations.
Audience: Undergraduate

8. Work as a member of a productive, collaborative research team.
Audience: Undergraduate

BIOCORE 383 – CELLULAR BIOLOGY
3 credits.

Cellular and molecular basis of life. The main themes are the structure and function of cells and organelles, the flow of energy in cells, and the storage, expression, and regulation of genetic information.
Requisites: BIOCORE 381
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply scientific concepts, reasoning, and quantitative and qualitative approaches to solve problems in cell biology, cell signaling, and molecular genetics at the intermediate level.
Audience: Undergraduate

2. Use scientific terms to accurately describe the concepts of cell biology, biochemistry, cell signaling, and molecular genetics.
Audience: Undergraduate

3. Build logical arguments to explain how cellular systems and processes function.
Audience: Undergraduate

4. Analyze cell biology problems that require synthesizing knowledge about cellular structure, function, and genetics.
Audience: Undergraduate

5. Diagram and explain the complex interplay of how cellular function is regulated through biochemical and genetic processes.
Audience: Undergraduate

6. Make predictions about cell biology and molecular genetics data based on evidence and quantitative reasoning.
Audience: Undergraduate

BIOCORE 384 – CELLULAR BIOLOGY LABORATORY
2 credits.

Writing-intensive with opportunities to generate and test questions utilizing concepts and procedures of cell biology. Includes research projects in subcellular fractionation, protein structure and enzyme catalysis, molecular genetics of C.elegans worms, and signal transduction in yeast.
Requisites: BIOCORE 383 or concurrent enrollment
Course Designation: Gen Ed - Communication Part B
Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Search, sort, and gather relevant background information from texts and primary literature in cellular biology.
Audience: Undergraduate

2. Make predictions and formulate clear, testable hypotheses supported by biological rationale at an intermediate level.
Audience: Undergraduate

3. Develop protocols and work with tools and procedures to test hypotheses in cellular and molecular biology.
Audience: Undergraduate

4. Communicate effectively about science through writing and oral presentations.
Audience: Undergraduate

5. Give and receive constructive feedback using professional communication and effective interpersonal skills.
Audience: Undergraduate

6. Utilize quantitative and scientific reasoning skills to analyze, evaluate, and interpret data to make logical conclusions based on evidence.
Audience: Undergraduate

7. Work as a member of a productive, collaborative research team.
Audience: Undergraduate

BIOCORE 401 – PEER MENTORING
1 credit.

Develops mentoring, group facilitation, leadership, and interpersonal skills used in peer learning and leading mentored study groups. Focuses on the pedagogy, skills, and effective techniques used to facilitate learning in small groups. Discuss lower order to higher order cognitive levels using Blooms Taxonomy, and reciprocal mentor observations.
Requisites: BIOCORE 381, 383, and (BIOCORE 382 or 384)
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Facilitate small group discussion by questioning and challenging biological misconceptions.
Audience: Undergraduate

2. Develop biological problems and questions at increasingly more challenging cognitive levels using Bloom's taxonomy.
Audience: Undergraduate

3. Recognize essential problem solving skills and develop activities to foster those skills.
Audience: Undergraduate

4. Provide support for mentee development of effective study habits and time management.
Audience: Undergraduate

5. Create a positive and inclusive environment to help foster community development and reduce mentee course anxiety.
Audience: Undergraduate

6. Develop as a reflective leader.
Audience: Undergraduate

7. Mentor and contribute to development of your peers through observations and feedback.
Audience: Undergraduate

8. Facilitate development of autonomous study groups in a Biocore course.
Audience: Undergraduate

BIOCORE 485 – PRINCIPLES OF PHYSIOLOGY
3 credits.

Study the physiology of and consider how plants and animals interact with their environments to survive, obtain nutrients, exchange gases, and reproduce, also how the complex systems of neural and endocrine regulation in animals and hormonal and environmental regulation in plants allow cells and organs to communicate.
Requisites: BIOCORE 383
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Frame biological questions about physiological systems, formulate testable hypotheses to guide in answering the questions, design experiments to test hypotheses (including appropriate controls), and predict/recognize/graph data that support these hypotheses.
Audience: Undergraduate

2. Build logical arguments about the operation of physiological systems based on evidence.
Audience: Undergraduate

3. Use and manipulate basic mathematical equations that model physiological systems.
Audience: Undergraduate

4. Integrate past experience, accumulated knowledge, and creativity to solve complex physiological problems.
Audience: Undergraduate

5. Recognize diversity in organismal design and response to environmental challenges
Audience: Undergraduate

6. Define the components of regulatory systems, propose models to explain observed physiological phenomena, and explain the fundamental role of regulation in physiological processes.
Audience: Undergraduate

7. Explain and give specific examples to demonstrate how structure - function relationships underlie/determine physiological phenomena.
Audience: Undergraduate

8. Evaluate the reliability and validity of scientific information.
Audience: Undergraduate

9. Use scientific terminology precisely and appropriately.
Audience: Undergraduate

10. Demonstrate effective scientific discourse as a member of a group.
Audience: Undergraduate

BIOCORE 486 – PRINCIPLES OF PHYSIOLOGY LABORATORY
2 credits.

Experience the process of science by collaborating on independent experiments to investigate your questions about animal and plant physiology. Emphasis is on critical thinking required in designing and conducting experiments, analyzing and interpreting data, and communicating findings orally and in writing.
Requisites: BIOCORE 485 or concurrent enrollment
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Appropriately utilize Biocore 485 lecture concepts in an applied setting.
Audience: Undergraduate

2. Engage in the process of science, including the problem-solving involved in designing and executing experiments, and the critical thinking required to carefully analyze and interpret results.
Audience: Undergraduate

3. Work with tools & procedures to investigate biology.
Audience: Undergraduate

4. Concisely, clearly, and precisely communicate your plans and findings to others using written and oral communication
Audience: Undergraduate

5. Utilize quantitative reasoning skills (statistical analysis skills).
Audience: Undergraduate

6. Work as a member of a productive, collaborative research team
Audience: Undergraduate

7. Build on, apply, and integrate concepts & skills that you learn in other Biocore courses.
Audience: Undergraduate

8. Contribute to a safe, sustainable, socially and ethically responsible learning environment
Audience: Undergraduate

BIOCORE 587 – BIOLOGICAL INTERACTIONS
3 credits.

A capstone course to build on and integrate the knowledge and skills gained in previous Biocore coursework through readings and analysis of primary scientific literature. Work in small groups to analyze current and emerging topics through the lens of scientific research. Topics include signaling pathways, systems biology, genetic disease, and cancer.
Requisites: BIOCORE 485
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Work as a productive, collaborative member of a team.
Audience: Undergraduate

2. Explain why there is not always just one right answer to a question.
Audience: Undergraduate

3. Draw on experience, accumulated knowledge, and creativity to solve complex biological problems.
Audience: Undergraduate

4. Build a logical evidence-based argument.
Audience: Undergraduate

5. Describe how a whole system works from the molecular to the organismal level.
Audience: Undergraduate

6. Frame sophisticated biological questions and formulate testable hypotheses, using appropriate methods to test your hypothesis.
Audience: Undergraduate

7. Read and analyze primary scientific literature.
Audience: Undergraduate

8. Think as a biological scientist and be able to communicate your knowledge to others.
Audience: Undergraduate

BIOCORE 699 – DIRECTED STUDY
1-3 credits.

Independent mentored study as arranged with a faculty member
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

BIOMEDICAL ENGINEERING (B M E)

B M E 1 – COOPERATIVE EDUCATION PROGRAM
1 credit.

Work experience which combines classroom theory with practical knowledge of operations providing a background upon which to base a professional career in industry.
Requisites: Sophomore standing
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and respond appropriately to real-life engineering ethics cases relevant to co-op work
Audience: Undergraduate

2. Synthesize and apply appropriate technical education to real world technical work
Audience: Undergraduate

3. Communicate effectively in writing and speaking with a range of audiences in the workplace, including those without disciplinary expertise
Audience: Undergraduate

4. Develop professional and transferable habits like time management skills, collaborative problem-solving skills, and research skills for learning new information
Audience: Undergraduate

B M E 200 – BIOMEDICAL ENGINEERING DESIGN
2 credits.

Collaborate with students in B M E 300 on a client-centered biomedical engineering design project to learn concept generation, product analysis, specifications, evaluation, regulation, and ethics.
Requisites: Sophomore standing and declared in Biomedical Engineering
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
Audience: Undergraduate

2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
Audience: Undergraduate

3. an ability to communicate effectively with a range of audiences
Audience: Undergraduate

4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
Audience: Undergraduate

5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
Audience: Undergraduate

6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
Audience: Undergraduate

7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies
Audience: Undergraduate

B M E 201 – BIOMEDICAL ENGINEERING DESIGN AND FUNDAMENTALS
3 credits.

Fundamentals of biomedical engineering and principles of design including the design process, standards, documentation, inclusion in design and research methods. Hands-on skills including electronics, programming, computer-aided design, machining, safety training, microscopy, cell and tissue engineering principles and fabrication of physical prototypes.
Requisites: B M E 200
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
Audience: Undergraduate

2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
Audience: Undergraduate

3. an ability to communicate effectively with a range of audiences
Audience: Undergraduate

4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
Audience: Undergraduate

5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
Audience: Undergraduate

6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
Audience: Undergraduate

7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies
Audience: Undergraduate

B M E 300 – BIOMEDICAL ENGINEERING DESIGN AND LEADERSHIP
3 credits.

Work on a client-centered biomedical engineering design project to learn leadership styles, concept generation, product analysis, specifications, evaluation, regulation, and ethics. Provide leadership and mentorship to students in B M E 200.
Requisites: B M E 201
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
Audience: Undergraduate

2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
Audience: Undergraduate

3. an ability to communicate effectively with a range of audiences
Audience: Undergraduate

4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
Audience: Undergraduate

5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
Audience: Undergraduate

6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
Audience: Undergraduate

7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies
Audience: Undergraduate

B M E 301 – BIOMEDICAL ENGINEERING DESIGN AND COMMUNICATION
3 credits.

Technical communication for biomedical engineering practice applied to real-world, client-based projects including research methods, documentation, preparing and critiquing reports, ethical problem solving, diversity and inclusion, presenting, and professional development.
Requisites: Satisfied Communications A requirement and B M E 201
Course Designation: Gen Ed - Communication Part B
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
Audience: Undergraduate

2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
Audience: Undergraduate

3. share research, design ideas, testing plans and results in writing and in presentations to both peers and professionals
Audience: Undergraduate

4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
Audience: Undergraduate

5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
Audience: Undergraduate

6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
Audience: Undergraduate

7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies
Audience: Undergraduate

8. identify and make skillful use of relevant, reliable, and high-quality research sources appropriate for the design project
Audience: Undergraduate

9. make productive use of the writing process, including brainstorming, outlining, drafting, incorporating feedback, and revising, to develop a fledgling idea into a formal paper, presentation, and project
Audience: Undergraduate

10. make use of expressive conventions and protocols (e.g., organization, content, presentation, formatting) consistent with technical communication
Audience: Undergraduate

B M E 310 – BIOINSTRUMENTATION
3 credits.

Bioinstrumentation covering clinical and research measurements. Laboratory experiments complement the lectures.
Requisites: (CHEM 104, 109, or 116), MATH 222, and (PHYSICS 202, 208, or 248), or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Solve mathematical problems for electrical and electronic circuits
Audience: Undergraduate

2. Employ simulation tools to analyze electrical and electronic circuits
Audience: Undergraduate

3. Design and build basic instrumentation system for measuring physiological and biological signals
Audience: Undergraduate

4. Program a microcontroller to acquire and process physiological and biological signals
Audience: Undergraduate

5. Perform experiments using the instrumentation system, analyze data and draw conclusions
Audience: Undergraduate

B M E 315 – BIOMECHANICS
3 credits.

An introduction to the mechanical behavior of biological tissues and systems. Specific topics include: structure and function of biological tissues, mechanical properties of biological tissues, and analysis of specific tissues (i.e. bone, muscle, and soft connective tissues).
Requisites: (E M A 303 or M E 306), or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply mechanical equilibrium analyses to compute forces acting on tissues, organs and structures within the human body
Audience: Undergraduate

2. Examine mechanical stress and deformation associated with the loading of biological tissues
Audience: Undergraduate

3. Analyze, interpret and present data collected during experiments in biomechanics
Audience: Undergraduate

4. Describe the relevance of mechanics for investigating biological systems at scales ranging from cellular to the whole body
Audience: Undergraduate

B M E 325 – APPLIED STATISTICS FOR BIOMEDICAL ENGINEERS
3 credits.

Learn and apply the fundamentals of descriptive and inferential statistics to analyze data and present the results in appropriate graphical formats. Emphasis will be on applications commonly encountered in biomedical engineering including t-tests, linear regression, analysis of variance, diagnostic tests, ROC curves, and methods for graphing and presenting data. Examples and practice problems will be drawn from biomedical research. Learn how to analyze data and interpret statistical analysis presented in research papers, and will get practical hands-on experience implementing these tools during class in a computer lab setting.
Requisites: Declared in Biomedical Engineering and MATH 222
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. interpret statistics that are presented and recognize statistical evidence that supports a conclusion
Audience: Undergraduate

2. apply descriptive statistical analysis to data
Audience: Undergraduate

3. make inferences based on sampled data (test a hypothesis)
Audience: Undergraduate

4. present data and statistical analysis in appropriate graphical format
Audience: Undergraduate

B M E 330 – ENGINEERING PRINCIPLES OF MOLECULES, CELLS, AND TISSUES
4 credits.

Introduction to the fundamental principles of kinetics and transport that are relevant for the analysis of biological systems. Topics covered include concepts of reaction rate, stoichiometry, equilibrium, momentum/mass transport, and the interaction between transport and kinetics in biological systems.
Requisites: (E M A 201, PHYSICS 201, 207, or 247), (MATH 319, 320, or 375) and (CHEM 104, 109, or 116), or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Assess the relationship between system variables based on dimensional homogeneity and dimensional analysis
Audience: Undergraduate

2. Convert a reaction system into a series of kinetic equations
Audience: Undergraduate

3. Recognize the parallels between different transport mechanisms
Audience: Undergraduate

4. Analyze kinetic and transport equations to determine dynamic and steady state behavior
Audience: Undergraduate

5. Evaluate how the physical principles of kinetics and transport constrain living organisms and impact the design and interpretation of biological experiments
Audience: Undergraduate

B M E 389 – HONORS IN RESEARCH
1-3 credits.

Undergraduate honors research projects supervised by faculty members.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Conduct and report on independent biomedical engineering research
Audience: Undergraduate

2. Formulate hypotheses into experimental methods
Audience: Undergraduate

B M E 399 – INDEPENDENT STUDY
1-3 credits.

Directed study projects as arranged with instructor.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Conduct and report on independent biomedical engineering research
Audience: Undergraduate

B M E 400 – CAPSTONE DESIGN COURSE IN BIOMEDICAL ENGINEERING
3 credits.

Applies classroom study and prior design course experiences for senior teams to solve a directed client-based biomedical engineering design project.
Requisites: (B M E 300 or B M E 301) and (B M E 310, 315, or PHM SCI/ B M E 430)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
Audience: Undergraduate

2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
Audience: Undergraduate

3. an ability to communicate effectively with a range of audiences
Audience: Undergraduate

4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
Audience: Undergraduate

5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
Audience: Undergraduate

6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
Audience: Undergraduate

7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies
Audience: Undergraduate

B M E 402 – BIOMEDICAL ENGINEERING CAPSTONE DESIGN II
3 credits.

Work in a team to evaluate, refine, document and present the client-centered biomedical engineering design started in B M E 400.
Requisites: B M E 400
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
Audience: Undergraduate

2. an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
Audience: Undergraduate

3. an ability to communicate effectively with a range of audiences
Audience: Undergraduate

4. an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
Audience: Undergraduate

5. an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
Audience: Undergraduate

6. an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
Audience: Undergraduate

7. an ability to acquire and apply new knowledge as needed, using appropriate learning strategies
Audience: Undergraduate

B M E/M E 414 – ORTHOPAEDIC BIOMECHANICS - DESIGN OF ORTHOPAEDIC IMPLANTS
3 credits.

Apply the design process for orthopaedic implants (total joint replacements). Topics include: library skills; joint anatomy; tissue properties; surgical approach; joint loading; implants materials; preclinical testing and analysis.
Requisites: Senior standing and M E 342, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply engineering mechanics (statics, dynamics, mechanics of materials) to analyze human joints
Audience: Both Grad & Undergrad

2. Describe sources and implications of patient-to-patient variability in functional anatomy, biomechanics, and disease states
Audience: Both Grad & Undergrad

3. Synthesize knowledge about functional anatomy, biomechanics, and disease states to define clinical needs and design inputs
Audience: Both Grad & Undergrad

4. Justify design decisions and testing plans based on rigorous engineering calculations through both written and oral communication
Audience: Both Grad & Undergrad

5. Formulate rigorous testing plans for design and device verification and validation based on established standards and/or guidance documents
Audience: Both Grad & Undergrad

6. Analyze interactions between multiple sources of variability
Audience: Graduate

B M E/M E 415 – BIOMECHANICS OF HUMAN MOVEMENT
3 credits.

An overview of experimental and modeling techniques used to study human movement. Specific topics will include locomotion, motion capture systems, force plates, muscle mechanics, musculoskeletal modeling, three dimensional kinematics, inverse dynamics, forward dynamic simulation and imaging based biomechanics. Homework and laboratory activities emphasize applications of movement biomechanics in orthopedics and rehabilitation.
Requisites: B M E 315 and M E 340, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and describe fundamental concepts and methods in movement biomechanics
Audience: Both Grad & Undergrad

2. Apply fundamental concepts and methods in biomechanics to acquire experience and gain confidence using engineering tools to study movement
Audience: Both Grad & Undergrad

3. Establish a framework for self-teaching and research through open-ended laboratory assignments and a research project
Audience: Both Grad & Undergrad

4. Constructively review and provide feedback on written research proposals related to movement biomechanics
Audience: Graduate

B M E/PHM SCI 430 – BIOLOGICAL INTERACTIONS WITH MATERIALS
3 credits.

Addresses the range of materials currently being utilized for various biomedical applications, the biological systems governing biomaterial applications, analytical techniques pertinent to biomaterial evaluation, and selected major medical applications in which biomaterials play an important role.
Requisites: (ZOOLOGY/BIOLOGY 101 and 102, ZOOLOGY/BIOLOGY/BOTANY 151, ZOOLOGY 153, or BIOCORE 383) and (CHEM 341 or 343)
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Integrate biology, material science, and engineering
Audience: Undergraduate

2. Evaluate the design of materials for specific biomedical applications
Audience: Undergraduate

3. Formulate experimental designs and demonstrate data analyses to assess biological responses to materials
Audience: Undergraduate

4. Describe the clinical utility and limitations of various materials for specific biomedical applications
Audience: Undergraduate

5. Demonstrate practical understanding of biomaterial-based laboratory safety and techniques
Audience: Undergraduate

B M E/E C E 462 – MEDICAL INSTRUMENTATION
3 credits.

Design and application of electrodes, biopotential amplifiers, biosensors, therapeutic devices. Medical imaging. Electrical safety. Measurement of ventilation, blood pressure and flow.
Requisites: E C E 340, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Solve complicated mathematical problems for electrical and electronic circuits
Audience: Both Grad & Undergrad

2. Employ simulation tools to test and analyze electronic circuits for measuring physiological signals
Audience: Both Grad & Undergrad

3. Design electronic schematics for advanced instrumentation system using software tools
Audience: Both Grad & Undergrad

4. Solder and build advanced instrumentation system for measuring physiological signals
Audience: Both Grad & Undergrad

5. Program a microcontroller to acquire and process physiological signals
Audience: Both Grad & Undergrad

6. Perform experiments using the instrumentation system, analyze data and draw conclusions
Audience: Both Grad & Undergrad

7. Demonstrate an ability to formulate, analyze and, independently design and build instrumentation system to measure physiological signals
Audience: Graduate

B M E/E C E 463 – COMPUTERS IN MEDICINE
3 credits.

Study of microprocessor-based medical instrumentation. Emphasis on real-time analysis of electrocardiograms. Labs and programming project involve design of biomedical digital signal processing algorithms. Knowledge of computer programming language like C, C++ or Java, strongly encouraged.
Requisites: E C E 330 and (COMP SCI 200, 220, 300, 301, or placement into COMP SCI 300), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Solve complicated mathematical problems with design of digital filters for biomedical signals
Audience: Both Grad & Undergrad

2. Build electrocardiogram (ECG) instrumentation system to view their ECG and use it as an input to a microcontroller for signal analysis
Audience: Both Grad & Undergrad

3. Employ simulation tools to design and test a variety of linear digital filters
Audience: Both Grad & Undergrad

4. Perform experiments, analyze and interpret the performance of digital filters on a database of ECGs
Audience: Both Grad & Undergrad

5. Write microcontroller code for real-time processing of biomedical signals, particularly the ECG, to attenuate diverse noise sources and find clinically-significant features
Audience: Both Grad & Undergrad

6. Demonstrate an ability to formulate and, independently design and implement digital filters and algorithm to process biomedical signals
Audience: Graduate

B M E 489 – HONORS IN RESEARCH
1-3 credits.

Biomedical engineering undergraduate honors research projects supervised by faculty members.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Conduct and report on independent biomedical engineering research
Audience: Undergraduate

2. Formulate hypotheses into experimental methods
Audience: Undergraduate

3. Prepare and defend experimental results and conclusions
Audience: Undergraduate

B M E/H ONCOL/MED PHYS/PHYSICS 501 – RADIATION PHYSICS AND DOSIMETRY
3 credits.

Interactions and energy deposition by ionizing radiation in matter; concepts, quantities and units in radiological physics; principles and methods of radiation dosimetry.
Requisites: (PHYSICS 323, 449 and MATH 320) or graduate/professional standing or declared in Medical Physics VISP
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use the physics of microscopic structures of nucleus, nuclear decay, electronic structure of atoms to calculate nuclear decay lifespan and solid state energy band structure
Audience: Both Grad & Undergrad

2. Calculate the radiation power spectrum for an accelerating charge particle under different physical conditions
Audience: Both Grad & Undergrad

3. Calculate cross-sections for the following interaction processes between photons and matter: Rayleigh scattering, photoelectric effect, Compton scattering, and pair production
Audience: Both Grad & Undergrad

4. Calculate the scattering cross-section of Coulomb scattering and energy transfer cross-section in collisions processes and radiative energy loss processes
Audience: Both Grad & Undergrad

5. Calculate radiation dose for both external photon beams, neutron beams, and charged particle beams
Audience: Both Grad & Undergrad

6. Identify open research topics in radiation imaging, radiation therapy, and radiation protection fields
Audience: Graduate

B M E/M E 505 – BIOFLUIDICS
3 credits.

Introduction to the physics of biological fluid flow with an emphasis on the cardiovascular system including blood rheology, pulsatile flow, wave travel, and topics relevant to blood flow measurement and biomedical device design.
Requisites: B M E 330, CBE 320, M E 363, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain the physical properties of a fluid and the consequence of such properties on fluid flow; compare and contrast non-Newtonian models for blood rheology
Audience: Both Grad & Undergrad

2. State the conservation principles of mass, linear momentum, and energy for fluid flow
Audience: Both Grad & Undergrad

3. Analyze systems using the conservation equations
Audience: Both Grad & Undergrad

4. Identify the relevant parameters that govern a fluid system and use dimensional analysis to identify the fundamental variables that define flow
Audience: Both Grad & Undergrad

5. Describe the flow dynamic metrics in different physiological or pathological conditions
Audience: Both Grad & Undergrad

6. Identify the role of other professionals in biofluid mechanics
Audience: Graduate

7. Foster skills to interact with clinical professionals
Audience: Graduate

B M E 510 – INTRODUCTION TO TISSUE ENGINEERING
3 credits.

Overview of tissue engineering, including discussion of cell sources, cell-material interactions, tailoring biomaterials, methods of culture and characterization of engineering tissues, ethical issues, concluding with case studies of specific types of tissue engineering. Optional laboratory exercises offered throughout semester.
Requisites: B M E/PHM SCI 430, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the experimental assay that is appropriate to characterize a particular cellular behavior
Audience: Both Grad & Undergrad

2. Describe how to tailor mechanical properties, cell-material interactions, growth factor/gene delivery, and bioreactor conditions to match the needs of a biological system
Audience: Both Grad & Undergrad

3. Critically evaluate tissue engineering approaches
Audience: Both Grad & Undergrad

4. Assess a biological system and develop a tissue engineering strategy
Audience: Both Grad & Undergrad

5. Summarize and synthesize recent tissue engineering related research from various resources
Audience: Graduate

B M E 511 – TISSUE ENGINEERING LABORATORY
1 credit.

Tissue engineering refers to the generation of biological substitutes to restore, maintain, or improve tissue function. Laboratory techniques are multi-disciplinary, from basic biological sciences, engineering, and biotechnology. Engineering approaches and analysis will be applied to these techniques.
Requisites: B M E 510 or concurrent enrollment, or graduate/professional standing
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and describe the biology of, growth conditions for and laboratory equipment used in tissue culture
Audience: Undergraduate

2. Design and conduct laboratory experiments, including making measurements and interpreting experimental data from living systems
Audience: Undergraduate

3. Apply knowledge of advanced mathematics and statistical analysis to evaluate scientific outcomes
Audience: Undergraduate

4. Communicate scientific findings from experimental results effectively
Audience: Undergraduate

B M E/M E 516 – FINITE ELEMENTS FOR BIOLOGICAL AND OTHER SOFT MATERIALS
3 credits.

Finite element modeling of soft materials, with an emphasis on biological tissues. Basics of the finite element method, verification and validation methods, and selection of constitutive models. Emphasis on finite element modeling for materials that are generally nonlinear, and that generally undergo large deformation.
Requisites: (M E 306 or E M A 303), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Define the finite element method, explain its mathematical basis, and articulate alternatives
Audience: Both Grad & Undergrad

2. Justify the selection of a constitutive model for a particular modeling application
Audience: Both Grad & Undergrad

3. Design and complete validation and verification analyses
Audience: Both Grad & Undergrad

4. Build and analyze a finite element model, and present relevant results
Audience: Both Grad & Undergrad

5. Complete a term project using finite element analysis individually
Audience: Graduate

B M E 517 – BIOLOGY IN ENGINEERING SEMINAR
1 credit.

Current topics at the interface of biology and engineering with special emphasis on the ways in which engineers have contributed to knowledge and advances in biology.
Requisites: (ZOOLOGY/BIOLOGY 101 and 102, ZOOLOGY/BIOLOGY/BOTANY 151, ZOOLOGY 153, or BIOCORE 381), graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and describe a wide variety of engineering approaches that have advanced our understanding of biology
Audience: Undergraduate

2. Assimilate presented topics with relevant literature into writing
Audience: Undergraduate

B M E 520 – STEM CELL BIOENGINEERING
3 credits.

Covers engineering approaches that are used to understand and manipulate stem cells. Concepts covered include: introduction to stem cell biology, quantitative modeling of stem cell signaling, methods to engineer the stem cell microenvironment, and the role of stem cells in tissue development and regeneration.
Requisites: (MATH 319 or 320), (ZOOLOGY 470, 570, or BIOCORE 383), and (CHEM 341 or 343), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the historical development and current state of stem cell engineering
Audience: Both Grad & Undergrad

2. Model stem cell signaling
Audience: Both Grad & Undergrad

3. Characterize the technical features and functions of stem cell therapy
Audience: Both Grad & Undergrad

4. Evaluate stem cell-based tissue development and regeneration
Audience: Both Grad & Undergrad

5. Demonstrate higher-order synthesis and analysis to address a current problem in stem cell bioengineering
Audience: Graduate

B M E/MED PHYS 535 – INTRODUCTION TO ENERGY-TISSUE INTERACTIONS
3 credits.

Explore physical interactions between thermal, electromagnetic and acoustic energies and biological tissues with emphasis on therapeutic medical applications.
Requisites: PHYSICS 202, 208, 248, or PHYSICS/MED PHYS 265, or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Derive and solve bioheat transfer problems relevant to therapeutic hyperthermia and hypothermia
Audience: Both Grad & Undergrad

2. Explain changes at the tissue and cellular levels during thermal therapies
Audience: Both Grad & Undergrad

3. Analyze technologies that apply electromagnetic and acoustic energy to tissue
Audience: Both Grad & Undergrad

4. Discuss medical applications and regulatory guidelines/requirements involving energy-tissue interactions
Audience: Both Grad & Undergrad

5. Demonstrate an advanced ability to synthesize recent literature, formulate technical problems, and describe plausible solutions
Audience: Graduate

B M E 545 – ENGINEERING EXTRACELLULAR MATRICES
3 credits.

Overview of the structure, function and biophysical properties of extracellular matrix (ECM) proteins, followed by discussion of how control or manipulation of ECM protein expression and distribution impacts on cell and tissue function, concluding with impacts of engineering ECM for regenerative medicine.
Requisites: B M E/PHM SCI 430, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the structure and function of individual ECM components and their relevance to physiological and pathophysiological processes
Audience: Both Grad & Undergrad

2. Apply biological knowledge of the ECM to inform the manipulation, mimicking, or engineering of ECM-based systems
Audience: Both Grad & Undergrad

3. Critically evaluate ECM engineering approaches
Audience: Both Grad & Undergrad

4. Apply advanced knowledge of bioconjugate chemistry to design dynamic scaffold platforms
Audience: Graduate

B M E 550 – INTRODUCTION TO BIOLOGICAL AND MEDICAL MICROSYSTEMS
3 credits.

Introduction to the field of MEMS (Micro-Electro-Mechanical-Systems), as it applies to biology and medicine. Topics will cover methodology of traditional MEMS devices, how they can be incorporated with biological systems, and methods for micro-structuring biological materials.
Requisites: B M E 310 and (ZOOLOGY/BIOLOGY 101 and 102, ZOOLOGY/BIOLOGY/BOTANY 151, ZOOLOGY 153, or BIOCORE 383), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify prominent materials and their properties commonly used in fabrication of biomedical microdevices
Audience: Both Grad & Undergrad

2. Analyze and implement microfabrication techniques for patterning, lithography, etching and deposition
Audience: Both Grad & Undergrad

3. Understand and design fabrication processes with appropriate fabrication tools for biomedical microdevices
Audience: Both Grad & Undergrad

4. Describe the principles underlying the interface between biological samples and different microdevices
Audience: Both Grad & Undergrad

5. Analyze, demonstrate, and communicate recent scientific literature in the field of biomedical microdevices
Audience: Graduate

B M E 556 – SYSTEMS BIOLOGY: MAMMALIAN SIGNALING NETWORKS
3 credits.

Introduction to the experimental and mathematical modeling techniques used in systems biology through lectures and critical analyses of relevant publications with a primary focus on gene/protein networks and mammalian systems.
Requisites: (MATH 319, 320, or 375), (B M E 510, ZOOLOGY 470, 570, PSYCH/ZOOLOGY 523, or BIOCORE 383) and Junior Standing, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Describe the structure and function of individual extracellular matrix (ECM) components and their relevance to physiological and pathophysiological processes
Audience: Both Grad & Undergrad

2. Apply biological knowledge of the ECM to inform the manipulation, mimicking, or engineering of ECM-based systems
Audience: Both Grad & Undergrad

3. Critically evaluate ECM engineering approaches
Audience: Both Grad & Undergrad

4. Apply advanced knowledge of bioconjugate chemistry to design dynamic scaffold platforms
Audience: Graduate

B M E/CBE 560 – BIOCHEMICAL ENGINEERING
3 credits.

Properties of biological molecules; enzyme kinetics, enzyme reactors, and enzyme engineering; metabolic engineering; microbial growth kinetics; bioreactor design; bioseparations.
Requisites: Junior standing and (ZOOLOGY/BIOLOGY 101 and 102, ZOOLOGY/BIOLOGY/BOTANY 151, ZOOLOGY 153, or BIOCORE 383), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply principles of chemical engineering in the analysis and design of industrial biochemical processes
Audience: Both Grad & Undergrad

2. Describe the role chemistry plays in understanding how bio-molecules and bio-molecular systems work
Audience: Both Grad & Undergrad

3. Extract, communicate and critique key idea(s) from any work of the current technical literature
Audience: Both Grad & Undergrad

4. Identify opportunities for biochemical engineering to address societal needs (e.g., energy, health, materials, food, and the environment)
Audience: Both Grad & Undergrad

5. Demonstrate how chemical engineering principles can be applied to alter the molecular properties of a biological system
Audience: Graduate

B M E/I SY E 564 – OCCUPATIONAL ERGONOMICS AND BIOMECHANICS
3 credits.

Introduces engineers how to design manufacturing and industrial operations in which people play a significant role, so that human capabilities are maximized, physical stress is minimized, and workload is optimized. Examples and topics emphasize industrial applications.
Requisites: PSYCH/I SY E 349 or B M E 315, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Evaluate jobs, equipment, tools, products, and environments, in which people play a significant role, for health and safety hazards and the risk of injuries and illnesses
Audience: Both Grad & Undergrad

2. Devise how to reduce or eliminate physical stresses and the risk of injuries and illnesses in jobs, equipment, tools, products, and environments

Audience: Both Grad & Undergrad

3. Design jobs, workspaces and products for a diverse work population, to accommodate the variability of human dimensions strength, endurance, and physical capacity to do work
Audience: Both Grad & Undergrad

4. Design jobs equipment, tools, products, and environments so that human capabilities are maximized, physical stress is minimized, and workload is optimized
Audience: Both Grad & Undergrad

5. Identify fundamental physiological principles and biomechanical theories that are germane to the evaluation, design and reduction or elimination of stresses and strain in jobs, equipment, tools, products, and environments
Audience: Graduate

B M E/MED PHYS 566 – PHYSICS OF RADIOTHERAPY
3 credits.

Ionizing radiation use in radiation therapy to cause controlled biological effects in cancer patients. Physics of the interaction of the various radiation modalities with body-equivalent materials, and physical aspects of clinical applications.
Requisites: PHYSICS/B M E/H ONCOL/MED PHYS 501
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate knowledge of the potentials and limits, with respect to fundamental physics, of ionizing radiation production and therapy
Audience: Both Grad & Undergrad

2. Apply the concepts and/or techniques of radiation physics in cancer therapy
Audience: Both Grad & Undergrad

3. Accurately compute radiation dose and dose delivery for clinically acceptable conditions
Audience: Both Grad & Undergrad

4. Communicate applied concepts in a clear and understandable manner
Audience: Undergraduate

5. Communicate complex applied concepts in a clear and understandable manner, including concepts of medical imaging, radiation biology, radiation production, and radiation detection as they apply to radiation physics in cancer therapy
Audience: Graduate

B M E/MED PHYS 567 – THE PHYSICS OF DIAGNOSTIC RADIOLOGY
4 credits.

Physics of x-ray diagnostic procedures and equipment, radiation safety, general imaging considerations; lecture and lab.
Requisites: MATH 234 and (PHYSICS 241 or 249) or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2018
Learning Outcomes: 1. Learn the physics and technology of medical x-ray system design and the parameters that determine image contrast, noise, spatial resolution, and patient radiation dose.
Audience: Both Grad & Undergrad

2. Gain a detailed knowledge of x-ray sources, x-ray detectors, and data acquisition strategies used in radiography, mammography, fluoroscopy, angiography and computed tomography.
Audience: Both Grad & Undergrad

3. Apply a knowledge of x-ray systems and physics to analyze and compare the performance of different medical x-ray imaging systems.
Audience: Both Grad & Undergrad

4. Through laboratory modules, receive hands on experience concerning the first three objectives. This includes learning the proper means for evaluating the performance and conducting measurements on x-ray systems which are commonly done by a clinical medical physicist.
Audience: Both Grad & Undergrad

5. Identify the defining strengths and limitations with utilizing the imaging modalities for conducting research investigations of human physiology and disease.
Audience: Graduate

B M E/MED PHYS 568 – MAGNETIC RESONANCE IMAGING (MRI)
2 credits.

Core course covering the physics associated with magnetic resonance imaging emphasizing techniques employed in medical diagnostic imaging. Major MRI topics include: physics of MR, pulse sequences, hardware, imaging techniques, artifacts, and clinical applications. At the completion of this course, students should have an understanding of the technical and scientific details of modern magnetic resonance imaging and its use in diagnosing disease. Graduate students who have not taken MATH 222 and PHYSICS 202 at UW-Madison must have the equivalent coursework in order to be successful in this course.
Requisites: Graduate/professional standing or (MATH 222 and PHYSICS 202, 208, 241, 244, 248 or 249)
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Identify the mechanisms in which nuclear magnetic resonance harnessed for imaging
Audience: Both Grad & Undergrad

2. Differentiate the different MRI sequences used and the appearance of disease aspects in each of these sequences
Audience: Both Grad & Undergrad

3. Evaluate potential biological effects of imaging on patients and effects of patients on imaging
Audience: Both Grad & Undergrad

4. Contextualize the acquired knowledge to formulate research questions to solve specific clinical needs
Audience: Graduate

B M E/MED PHYS 573 – MATHEMATICAL METHODS IN MEDICAL PHYSICS
3 credits.

Mathematical fundamentals required for medical physics and biomedical applications, including signal analysis and mathematical optimization.
Requisites: (MATH 234 and 319), (MATH 234 and 320), or MATH 376 and (PHYSICS 202 or 208), graduate/professional standing, or declared in Medical Physics VISP
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Summarize the utility of signal analysis in one and several dimensions
Audience: Both Grad & Undergrad

2. Identify and apply convolutions and Fourier Transforms in one and several dimensions
Audience: Both Grad & Undergrad

3. Apply the properties of the Fourier Transform in medical physics and other biomedical settings
Audience: Both Grad & Undergrad

4. Illustrate the limitations of the Fourier transform, and recall the advantages of alternative signal analysis tools (e.g. wavelet transform)
Audience: Graduate

5. Distinguish between types of optimization problems, including convex vs non-convex, and unconstrained vs constrained
Audience: Both Grad & Undergrad

6. Recognize the relative performance of basic optimization algorithms
Audience: Both Grad & Undergrad

7. Formulate image reconstruction as an optimization problem
Audience: Both Grad & Undergrad

8. Formulate therapy planning as an optimization problem
Audience: Both Grad & Undergrad

9. Implement practical optimization algorithms using computational methods
Audience: Both Grad & Undergrad

B M E/MED PHYS 575 – DIAGNOSTIC ULTRASOUND IMAGING
2 credits.

Propagation of ultrasonic waves in biological tissues; principles of ultrasonic measuring and imaging instrumentation; design and use of currently available tools for performance evaluation of diagnostic instrumentation; biological effects of ultrasound.
Requisites: Graduate/professional standing or (MATH 234, 319, or 320 and PHYSICS 202 or 208)
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019
Learning Outcomes: 1. Explain principles underlying ultrasound propagation and biological effects of ultrasound.
Audience: Both Grad & Undergrad

2. Apply knowledge of clinical uses and limitations/artifacts of ultrasound imaging.
Audience: Both Grad & Undergrad

3. Recall the technical details of modern medical ultrasound devices and methods to measure acoustic parameters.
Audience: Both Grad & Undergrad

4. Utilize and integrate ultrasound imaging approaches for diagnostic and therapeutic research and clinical applications.
Audience: Graduate

B M E/MED PHYS 578 – NON-IONIZING DIAGNOSTIC IMAGING
4 credits.

Covers the physics associated with magnetic resonance imaging and diagnostic ultrasound emphasizing techniques employed in medical diagnostic imaging. Major MRI topics include: physics of MR, pulse sequences, hardware, imaging techniques, artifacts, and spectroscopic localization. Ultrasound based topics covered include: propagation of ultrasonic waves in biological tissues, principles of ultrasonic measuring and imaging instrumentation, design and use of currently available tools for performance evaluation of diagnostic instrumentation, and biological effects of ultrasound. Gain an understanding of the technical and scientific details of modern non-ionizing medical magnetic resonance and ultrasound devices and their use in diagnosing disease.
Requisites: MATH 234, (MATH 319 or 320) and (PHYSICS 202, 208, 241 or 248), or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Accurately describe, using the correct mathematics and terminology, how the signals for MRI and ultrasound are generated, the sensitivity of these techniques to tissue variations
Audience: Both Grad & Undergrad

2. Accurately describe, using the correct mathematics and terminology, spatial encoding methods for MRI and ultrasound and trade offs in imaging parameter and hardware selection
Audience: Both Grad & Undergrad

3. Identify and develop strategies to mitigate common artifacts
Audience: Both Grad & Undergrad

4. Understand how to apply the knowledge to their own research projects
Audience: Graduate

B M E/MED PHYS 580 – THE PHYSICS OF MEDICAL IMAGING WITH IONIZING RADIATION
4 credits.

Concepts and principles on the physics of medical imaging systems that form images using high energy photons are presented. Such systems are divided into two categories: (1) those based on the transmission of x-rays through the human body, including radiography, mammography, fluoroscopy, and computed tomography (CT), and (2) those based on the emission of gamma rays or annihilation radiation following radioactive decay of an internal radiolabeled molecule, including the gamma camera, single photon emission tomography (SPECT), and positron emission tomography (PET) and PET hybrid imaging systems. Emphasis is placed on understanding how physics, system design, and imaging technique determine image performance metrics such as contrast, signal-to-noise ratio, and spatial resolution. Clinical applications and radiation safety concepts are detailed for the different types of imaging systems.
Requisites: PHYSICS/B M E/H ONCOL/MED PHYS 501 and MED PHYS/B M E 573
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify the physical principles underlying imaging technologies used in radiology and nuclear medicine: radiography, mammography, fluoroscopy, computed tomography (CT), scintigraphy, single-photon emission tomography (SPECT), and positron emission tomography (PET).
Audience: Both Grad & Undergrad

2. Describe each imaging modality in terms of a general imaging framework in which (i) a form of energy or probe is introduced to the body, (ii) a clinically interesting signal is generated within the body, and (iii) this signal is detected and spatially localized to form an image.
Audience: Both Grad & Undergrad

3. Apply physics and engineering concepts to understand how the design and operation of an imaging system determines the contrast, noise, and spatial resolution of the images produced by the system.
Audience: Both Grad & Undergrad

4. Differentiate the characteristics of radiotracers that make them suitable for research and clinical applications in human physiology.
Audience: Both Grad & Undergrad

5. Identify the defining strengths and limitations with utilizing the imaging modalities for conducting research investigations of human physiology and disease.
Audience: Graduate

B M E 601 – SPECIAL TOPICS IN BIOMEDICAL ENGINEERING
1-3 credits.

Directed study projects as arranged with instructor.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and describe key theories, concepts, and methods in biomedical engineering
Audience: Undergraduate

2. Apply key theories, concepts, and methods in biomedical engineering, using appropriate tools, processes, and/or software
Audience: Undergraduate

B M E 602 – SPECIAL TOPICS IN BIOMEDICAL ENGINEERING
1-3 credits.

Special topics in biomedical engineering for graduate students or both graduate and undergraduate students together.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023
Learning Outcomes: 1. Identify and describe key theories, concepts, and methods in biomedical engineering
Audience: Both Grad & Undergrad

2. Apply key theories, concepts, and methods in biomedical engineering, using appropriate tools, processes, and/or software
Audience: Both Grad & Undergrad

3. Apply, analyze, or evaluate advanced theories, concepts, or methods in biomedical engineering
Audience: Graduate

B M E 603 – SPECIAL TOPICS IN BIOINSTRUMENTATION AND MEDICAL DEVICES
1-3 credits.

Various special topics in bioinstrumentation and medical devices.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and describe key theories, concepts, and methods in bioinstrumentation and medical devices
Audience: Both Grad & Undergrad

2. Apply key theories, concepts, and methods in bioinstrumentation and medical devices, using appropriate tools, processes, and/or software
Audience: Both Grad & Undergrad

3. Apply, analyze, or evaluate advanced theories, concepts, or methods in bioinstrumentation and medical devices
Audience: Graduate

B M E 604 – SPECIAL TOPICS IN BIOMEDICAL IMAGING AND OPTICS
1-3 credits.

Various special topics in biomedical imaging and optics.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Identify and describe key theories, concepts, and methods in biomedical imaging and optics
Audience: Both Grad & Undergrad

2. Apply key theories, concepts, and methods in biomedical imaging and optics, using appropriate tools, processes, and/or software
Audience: Both Grad & Undergrad

3. Apply, analyze, or evaluate advanced theories, concepts, or methods in biomedical imaging and optics
Audience: Graduate

B M E/M E 605 – SPECIAL TOPICS IN BIOMECHANICS
1-3 credits.

Various special topics in biomechanics.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and describe key theories, concepts, and methods in biomechanics
Audience: Both Grad & Undergrad

2. Apply key theories, concepts, and methods in biomechanics, using appropriate tools, processes, and/or software
Audience: Both Grad & Undergrad

3. Apply, analyze, or evaluate advanced theories, concepts, or methods in biomechanics
Audience: Graduate

B M E 606 – SPECIAL TOPICS IN BIOMATERIALS, CELLULAR AND TISSUE ENGINEERING
1-3 credits.

Various special topics in biomaterials, cellular and tissue engineering.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and describe key theories, concepts, and methods in biomaterials, cellular and tissue engineering
Audience: Both Grad & Undergrad

2. Apply key theories, concepts, and methods in biomaterials, cellular and tissue engineering, using appropriate tools, processes, and/or software
Audience: Both Grad & Undergrad

3. Apply, analyze, or evaluate advanced theories, concepts, or methods in biomaterials, cellular and tissue engineering
Audience: Graduate

B M E/M E 615 – TISSUE MECHANICS
3 credits.

Focus on solid mechanics of prominent musculoskeletal and cardiovascular tissues. Their normal and pathological behaviors (stiffness, strength, relaxation, creep, adaptive remodeling, etc.) in response to physiologic loading will be examined and quantified.
Requisites: M E 306 or E M A 303, or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Mathematically and conceptually define stress and strain tensors
Audience: Both Grad & Undergrad

2. Calculate stress given a deformation and a constitutive relationship
Audience: Both Grad & Undergrad

3. Describe key features of tissue mechanics
Audience: Both Grad & Undergrad

4. Describe structure-function relationships for biological tissues
Audience: Both Grad & Undergrad

5. Summarize and present current biomechanical knowledge on a specific tissue
Audience: Graduate

B M E/MED PHYS/PHMCOL-M/PHYSICS/RADIOL 619 – MICROSCOPY OF LIFE
3 credits.

Survey of state of the art microscopic, cellular and molecular imaging techniques, beginning with subcellular microscopy and finishing with whole animal imaging.
Requisites: PHYSICS 104, 202, 208, or 248 or PHYSICS/MED PHYS 265
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

B M E 640 – MEDICAL DEVICES ECOSYSTEM: THE PATH TO PRODUCT
3 credits.

Development of medical devices for therapeutic or diagnostic purposes. Gap analysis, market analysis, reimbursement/distribution, regulatory approval, and manufacturing/supply chain development. Refinement and presentation of design ideas and corporate strategy within a team setting. Case studies of device design/manufacture including supply chain, intellectual property, pre-clinical testing, U.S. and European regulatory pathways and clinical trial design.
Requisites: B M E 402 or concurrent enrollment, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop an evolving competitive landscape analysis
Audience: Both Grad & Undergrad

2. Identify common issues in manufacturing/supply chain
Audience: Both Grad & Undergrad

3. Describe key aspects of clinical trial design
Audience: Both Grad & Undergrad

4. Discuss intellectual property both In theory and in practice
Audience: Both Grad & Undergrad

5. Articulate the differences between regulatory pathways in Europe and the United States
Audience: Graduate

6. Define key aspects of pre-clinical testing, including Quality Systems, Good Laboratory Practices, and Good Manufacturing Practices
Audience: Graduate

B M E 651 – BIOPHOTONICS LABORATORY
3 credits.

Learn and apply the fundamentals of optical imaging, microscopy and instrumentation via practical hands-on training with a specific emphasis on the life-sciences applications. Topics include constructing imaging systems using fundamental optical tools and instruments, illumination and aberrations, microscopy techniques, resolution and contrast measurement, optical spectroscopy, nanophotonics, bioimaging and biosensing.
Requisites: PHYSICS 202, 208, 248, MED PHYS/PHYSICS 265, E C E 320, 434, or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and use optical tools and instruments and construct optical imaging systems
Audience: Both Grad & Undergrad

2. Measure optical resolution and summarize parameters, such as optical aberrations, illumination and collecting optical system settings, that affect resolution in optical imaging
Audience: Both Grad & Undergrad

3. Implement Kohler illumination, identify conjugate planes and illustrate Abbe theory of image formation on a hands-on optical hardware
Audience: Both Grad & Undergrad

4. Measure contrast in different microscopy techniques and identify parameters that contribute to signal-to-background
Audience: Both Grad & Undergrad

5. Measure and analyze light spectra using filters and spectrometers to identify different light sources, and nanoparticle and light interactions
Audience: Both Grad & Undergrad

6. Follow and implement written experiment protocols, collect, and analyze data, and write coherent reports presenting experimental findings
Audience: Both Grad & Undergrad

7. Identify and evaluate an optical imaging setup that was developed in a recently published journal article applying knowledge that was learned in class
Audience: Graduate

B M E/I SY E 662 – DESIGN AND HUMAN DISABILITY AND AGING
3 credits.

Design of products for persons with physical, sensory or cognitive impairments is covered as well as the design of standard mass market products. Interdisciplinary teams explore specific disabilities, then design a standard mass market product in competition with each other.
Requisites: Junior standing or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain the access and usability issues that users with physical, sensory, or cognitive impairments due to age or permanent or temporary disability might experience when interacting with everyday products and environmental designs
Audience: Both Grad & Undergrad

2. Apply human factors principles of universal design to describe redesign solutions for common products and environmental designs to improve accessibility for all users
Audience: Both Grad & Undergrad

3. Identify barriers to access for users based on specific disabilities
Audience: Both Grad & Undergrad

4. Articulate common misconceptions and biases related to users with disabilities and use various data sources to discuss the reality of designing for users with disabilities or impairments
Audience: Both Grad & Undergrad

5. Identify usability issues for mass-market products and environmental designs using universal design and basic access principles
Audience: Both Grad & Undergrad

6. Propose methods for improving accessibility and usability using universal design and basic access principles
Audience: Both Grad & Undergrad

7. Articulate how social, institutional, and organizational structures and insufficiently designed systems and environments disadvantage various user groups, with special focus on aging and disabled users
Audience: Graduate

B M E/CRB 670 – BIOLOGY OF HEART DISEASE AND REGENERATION
3 credits.

Presents diverse topics in contemporary heart biology to facilitate understanding of biological, mechanistic, and experimental concepts of cardiac physiology, disease, and regeneration. Learn cellular and molecular mechanisms underlying heart physiology, function, disease and regenerative ability in various model systems. Includes thinking critically about methodology, experimental design and interpretation, and how conclusions are reached in heart biology through cutting-edge literature.
Requisites: (ZOOLOGY/BIOLOGY/BOTANY 151 and BIOCHEM 501) or graduate/professional standing.
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Gain knowledge of cardiovascular physiology and biology, use of genetic model organisms, stem cell biology and regenerative medicine (didactic portion of course; attendance, and exams).
Audience: Both Grad & Undergrad

2. Understand the main themes of heart biology by reading and discussing state-of-the-art literature (journal reviews; evaluated by lecturer for each journal review session).
Audience: Both Grad & Undergrad

3. Develop ability to critically evaluate published scientific research in the cardiovascular field by discussing with peers and instructors.
Audience: Both Grad & Undergrad

4. Analyze scientific data and methodology employed in the field of heart biology.
Audience: Graduate

5. Develop ability to create an experimental design for different types of heart biology research (such as hypothesis, methodology or phenomenon driven studies).
Audience: Graduate

6. Understand the current challenges for developing therapeutic strategies for heart disease and regeneration and propose feasible approaches to resolve these challenges.
Audience: Graduate

7. Understand the concepts of techniques and methods that are currently used for cardiac biology research.
Audience: Undergraduate

8. Describe the challenges for developing therapeutic strategies for heart disease and regeneration.
Audience: Undergraduate

B M E 701 – SEMINAR IN BIOMEDICAL ENGINEERING
1 credit.

Presentation of advancements in biomedical engineering research by leaders in the field, accompanied by critical analysis of related literature.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate understanding of technical presentations of current research in biomedical engineering
Audience: Graduate

2. Formulate and articulate a question regarding research presented in a technical seminar
Audience: Graduate

3. Analyze current scientific literature to draw connections to research presented in a technical seminar
Audience: Graduate

B M E 702 – GRADUATE COOPERATIVE EDUCATION PROGRAM
1-2 credits.

Work experience that combines classroom theory with practical knowledge of operations to provide students with a background on which to develop and enhance a professional career. The work experience is tailored for MS students from within the U.S. as well as eligible international students.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and respond appropriately to real-life engineering ethics cases relevant to co-op work
Audience: Graduate

2. Synthesize and apply appropriate technical education to real world technical work
Audience: Graduate

3. Communicate effectively in writing and speaking with a range of audiences in the workplace, including those without disciplinary expertise
Audience: Graduate

4. Develop professional and transferable habits like time management skills, collaborative problem-solving skills, and research skills for learning new information
Audience: Graduate

B M E 703 – RESPONSIBLE CONDUCT OF RESEARCH FOR BIOMEDICAL ENGINEERS
2 credits.

Develop an understanding of the elements involved in being a responsible member of the Biomedical Engineering research community. Topics include mentor/mentee relationships, identifying research problems, research integrity, ethics, regulations, and improving the scientific climate.
Requisites: Declared in Biomedical Engineering, Ph.D. or Biomedical Engineering: Research, M.S.
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Interpret research ethics regulations and policies
Audience: Graduate

2. Differentiate research misconduct from sloppy behavior
Audience: Graduate

3. Identify biased or hostile behaviors
Audience: Graduate

4. Develop an individualized plan for graduate training
Audience: Graduate

B M E/MED PHYS 710 – ADVANCES IN MEDICAL MAGNETIC RESONANCE
3 credits.

Addresses the theory and applications of magnetic resonance (MR) in medicine, by providing the necessary theoretical background to understand advanced MR techniques including magnetic resonance imaging (MRI).
Requisites: MED PHYS/B M E 568 or 578
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall and apply principles of MR signal generation, relaxation, echo generation, and spatial encoding.
Audience: Graduate

2. Compose and test concepts of advanced MR image reconstruction concepts including partial Fourier MRI, parallel MRI, non-Cartesian MRI, compressed sensing.
Audience: Graduate

3. Apply and judge image processing methods for the analysis of MR images for biomarkers such as T1 and T2 mapping and metabolite maps.
Audience: Graduate

4. Summarize and organize advanced MR applications used in the clinic and research including quantitative MRI, BOLD MRI (fMRI), MR Angiography with and without contrast agents, motion sensitive MRI, perfusion and diffusion MRI, and PET-MRI.
Audience: Graduate

5. Organize and compose concepts on sampling theory, signal-to-noise, artifacts, and pulse sequences to design protocols for MRI data acquisition, reconstruction, or processing.
Audience: Graduate

6. Demonstrate scientific communication skills for MRI research by composing oral presentations, written reports, and critiquing the work of others.
Audience: Graduate

B M E/M E 715 – ADVANCED TISSUE MECHANICS
3 credits.

Central topics in solid mechanics applied to soft tissues, including analysis of strain in the setting of large deformations, computation of stress in multiple experimental loading configurations, constitutive modeling of biomaterials using hyperelastic strain-energy functions, modeling tissue growth and remodeling, and the main theories for soft tissue failure will be covered. Application of finite elasticity theory in practical laboratory situations, and key papers and concepts in soft tissue mechanics.
Requisites: (M E/B M E 615, E M A 710, or 622 prior to Fall 2024) and graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Compute strain from multiple different types of marker and image data
Audience: Graduate

2. Compute stresses using data from uniaxial, biaxial, and inflation mechanical tests
Audience: Graduate

3. Construct and utilize constitutive models appropriate for soft tissues
Audience: Graduate

4. Formulate and analyze continuum models of biological growth
Audience: Graduate

5. Identify common failure criteria applied to soft tissues
Audience: Graduate

B M E 740 – BIOMANUFACTURING ENTREPRENEURSHIP
3 credits.

Industry-relevant concepts of biotechnology innovation and translation, directly connecting lessons and classwork to real-world experience and career opportunities and promoting meaningful and sustained engagement between students and industry representatives. Diverse range of translational biotechnology principles, such as product development in biotechnology, regulating biotechnology products, and quality and compliance in biomanufactured products.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall, differentiate, and interpret key terms of art and jargon commonly associated with translation, commercial development, and regulation of novel biotechnologies and human therapies
Audience: Graduate

2. Describe common tools and strategies used by biotechnology industry to assess project progress, risk, and overall value
Audience: Graduate

3. Identify and evaluate business strategy and technology translation approach of a real biotech start-up company applying knowledge that was learned in class
Audience: Graduate

4. Produce a product-focused value proposition based on the student's research topic, or of a technology of interest to the student by integrating aspects of a business model canvas and constructing a strategic technology development plan
Audience: Graduate

B M E/CHEM/MED PHYS 750 – BIOLOGICAL OPTICAL MICROSCOPY
3 credits.

Covers several aspects of state-of-the-art biological and biophysical imaging with an emphasis on instrumentation, beginning with an overview of geometrical optics and optical and fluorescence microscopy. The bulk of the course will focus on advanced imaging techniques including nonlinear optical processes (multi-photon excitation, second harmonic generation, and stimulated Raman processes) and emerging super-resolution methods. Special emphasis will be given to current imaging literature and experimental design. Knowledge of physics-based optics [such as PHYSICS 202] strongly recommended.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Provide a clear, concise oral presentation critiquing a paper in the literature
Audience: Graduate

2. Write a hypothesis driven research proposal and present an oral defense
Audience: Graduate

3. Write a critical written assessment of literature papers
Audience: Graduate

4. Use course concepts to better design experiments and extract quantitative information
Audience: Graduate

5. Articulate a fundamental understanding of the function of a microscope

Audience: Graduate

B M E 751 – BIOMEDICAL OPTICS AND BIOPHOTONICS
3 credits.

The study and use of light in the life sciences. Interactions of light with cells and tissue can be used for imaging, measurement, diagnosis, and therapy. Applications include optical imaging, endoscopy, microscopy, resolution enhancement, adaptive optics, Optical Coherence Tomography (OCT), quantitative phase microscopy, spectroscopy (fluorescence, elastic scattering), diffuse optical tomography, and computational modeling of light transport in tissue. Fundamental skills, concepts, and theory used for these applications include geometric optics, lens design, Fourier transforms, polarization, interference, coherence, and scattering theory. Particular emphasis will be placed on current literature and cutting edge instruments and methods.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021
Learning Outcomes: 1. identify common optical components and describe their fundamental principles
Audience: Graduate

2. select an appropriate technique or technology best suited to solve a given research or medical problem and explain the rationale
Audience: Graduate

3. solve optical design problems including 1st order optical design of a scanning light microscope
Audience: Graduate

4. orally present and critique a recent journal article with a succinct description of the optical methods or concepts employed and evaluate the pros and cons
Audience: Graduate

B M E 770 – NANOTECHNOLOGY IN NEUROSCIENCE
2 credits.

Principles of micro- and nano-technology applied to neuroscience, including technological approaches applied to both in vitro and in vivo neurobiological experimentation and neurology. Fundamentals of recording and processing neural signals using nanoscale synthesis processes and technologies including nanostructured electrodes and their electrical, mechanical, and biochemical properties, active and passive 2D and 3D multielectrode arrays (MEAs), nanoscale transistors for subcellular recordings, nanoparticles, and nano-synthesized agents for recording and stimulating neural activity. Relevant theory of cell electrode coupling, electrophysiology, and neurochemical signaling. Knowledge of microfabrication technologies and biology [such as in B M E 550] recommended.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Evaluate nerve cell signaling and apply signal processing methods for analyzing neural signals
Audience: Graduate

2. Create nanofabrication processes for designing nano-scale patterning neural recording devices
Audience: Graduate

3. Analyze neuron-device interface and compute coupling using equivalent electrical circuit models
Audience: Graduate

4. Evaluate chemical synthesis techniques for biocompatible device coating, cell patterning, and nanoparticle-based sensing
Audience: Graduate

B M E/E C E/MED PHYS 778 – MACHINE LEARNING IN ULTRASOUND IMAGING
3 credits.

Concepts and machine learning techniques for ultrasound beamforming for image formation and reconstruction to image analysis and interpretation will be presented. Key machine learning and deep learning concepts applied to beamforming, compressed sampling, speckle reduction, segmentation, photoacoustics, and elasticity imaging will be evaluated utilizing current peer-reviewed publications.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Critically read and evaluate peer-reviewed journal papers describing machine learning applications in ultrasound imaging.
Audience: Graduate

2. Apply, implement and expand upon ideas from these publications to applications in ultrasound imaging.
Audience: Graduate

3. Present the results of their critical evaluation and implementation to the class.
Audience: Graduate

4. Write a research paper based on their findings suitable for publication.
Audience: Graduate

B M E 780 – METHODS IN QUANTITATIVE BIOLOGY
1 credit.

Focuses on understanding the key methods and principles of quantitative biology through a close reading of the primary literature. Topics covered will include deterministic and stochastic methods for modeling cellular systems, techniques in systems and synthetic biology, image processing tools and image analysis for biology, data-driven network models, genomic approaches, single-molecule approaches, and key computational biology tools. This course is intended for graduate students from a variety of backgrounds who are interested in pursuing quantitative biology during their graduate studies.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and describe the benefits and limitations of key methods used in the field of quantitative biology
Audience: Graduate

2. Critically evaluate experimental and theoretical papers in quantitative biology
Audience: Graduate

B M E/CBE 783 – DESIGN OF BIOLOGICAL MOLECULES
3 credits.

Introduction to the methodologies for engineering the structure and function of biological molecules, especially proteins. Develop an understanding for the integration of computation and experiment to address biological molecular engineering problems. Knowledge of biochemistry and cell biology [such as BIOCHEM 501 or ZOOLOGY 570] required.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019

B M E 790 – MASTER'S RESEARCH AND THESIS
1-9 credits.

Under faculty supervision.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Integrate knowledge from a subset of the biological and physical sciences to address a research question
Audience: Graduate

2. Conduct a research study using experimental, computational, and/or theoretical approaches
Audience: Graduate

3. Communicate research results in a written thesis and defense
Audience: Graduate

B M E 799 – ADVANCED INDEPENDENT STUDY
1-5 credits.

Under faculty supervision.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Conduct and report on an independent biomedical engineering project
Audience: Graduate

2. Appropriately utilize online and library resources
Audience: Graduate

3. Connect their research clearly to other research in their field of study
Audience: Graduate

B M E 890 – PRE-DISSERTATION RESEARCH
1-9 credits.

Under faculty supervision.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Integrate knowledge from a subset of the biological and physical sciences to address a research question
Audience: Graduate

2. Recognize and apply appropriate ethical and regulatory principles
Audience: Graduate

3. Conduct preliminary studies using experimental, computational, and/or theoretical approaches
Audience: Graduate

4. Generate and defend a research proposal
Audience: Graduate

B M E/B M I/BIOCHEM/CBE/COMP SCI/GENETICS 915 – COMPUTATION AND INFORMATICS IN BIOLOGY AND MEDICINE
1 credit.

Participants and outside speakers will discuss current research in computation and informatics in biology and medicine. This seminar is required of all CIBM program trainees.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss how methods from computer science, statistics, information science and engineering are applied to problems in biology, medicine and population health
Audience: Graduate

2. Recognize and be able to define applications in translational bioinformatics, clinical informatics and public health informatics
Audience: Graduate

B M E 990 – RESEARCH AND THESIS
1-9 credits.

Under faculty supervision.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Integrate knowledge from a subset of the biological and physical sciences to address a research question
Audience: Graduate

2. Recognize and apply appropriate ethical and regulatory principles
Audience: Graduate

3. Conduct a research study using experimental, computational, and/or theoretical approaches
Audience: Graduate

4. Communicate research results in a written thesis and defense
Audience: Graduate

B M E 999 – ADVANCED INDEPENDENT STUDY
1-9 credits.

Under faculty supervision.
Requisites: Declared in Biomedical Engineering PhD or professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2019
Learning Outcomes: 1. Conduct and report on an independent biomedical engineering project
Audience: Graduate

2. Appropriately utilize online and library resources
Audience: Graduate

3. Connect their research clearly to other research in their field of study
Audience: Graduate

BIOMEDICAL SCIENCES AND TECHNOLOGIES (BIOMDSCI)

BIOMDSCI 720 – SURVEY OF QUALITY ASSURANCE AND REGULATORY AFFAIRS IN BIOTECHNOLOGY
3 credits.

Success in the biotechnology industry is based on learning the language and understanding the development process utilized in bringing products to market. Focus on techniques used in the biotechnology industry to comply with the quality and regulatory requirements set forth by professional and governmental agencies in the effort to develop, manufacture, and commercialize products safely for the public.
Requisites: Declared in the Capstone Certificate in Quality Assurance and Regulatory Affairs in Biotechnology
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize, foster, and apply principles of ethical and professional conduct.
Audience: Graduate

2. Describe local, national, and international agencies involved in ensuring quality and safety.
Audience: Graduate

3. Integrate how testing and manufacturing relies upon regulatory requirements.
Audience: Graduate

4. Demonstrate effective listening, written, verbal, and nonverbal communication skills.
Audience: Graduate

5. Analyze product development and project management innovations in terms of quality assurance and regulatory compliance requirements.
Audience: Graduate

BIOMDSCI 721 – TOPICS IN QUALITY ASSURANCE AND REGULATORY AFFAIRS IN BIOTECHNOLOGY
3 credits.

Quality Assurance and Regulatory Affairs departments influence and facilitate successful product development within the biotechnology industry. Use a case study approach to explore and apply how quality assurance and regulatory compliance systems are used to bring medical devices to market. Practice how cross functional teams work together to meet regulatory standards of safety.
Requisites: Declared in the Capstone Certificate in Quality Assurance and Regulatory Affairs in Biotechnology
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Evaluate quality systems used in product development and commercialization of medical devices.
Audience: Graduate

2. Influence medical device development and project vision from quality assurance and regulatory affairs standpoints.
Audience: Graduate

3. Produce quality and regulatory strategies to achieve organizational objectives of medical devices.
Audience: Graduate

4. Compose effective communication with colleagues, customers, and regulatory agencies.
Audience: Graduate

5. Troubleshoot design and manufacturing issues of medical device development to meet regulatory standards.
Audience: Graduate

6. Monitor how diverse teams fit into organizational culture and successfully contribute towards product development.
Audience: Graduate

BIOMDSCI 722 – LEADERSHIP IN QUALITY ASSURANCE AND REGULATORY AFFAIRS IN BIOTECHNOLOGY
3 credits.

Leaders in the Quality Assurance and Regulatory Affairs departments influence and facilitate bringing products to market within the biotechnology industry. Focus on building communication among cross functional teams; exercising writing to specific audiences; and meeting internal and external customer needs and expectations. Explore and apply how quality and regulatory affairs skills are managed within diverse product and project teams.
Requisites: Declared in the Capstone Certificate in Quality Assurance and Regulatory Affairs in Biotechnology
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Influence product and project vision from quality assurance and regulatory affairs standpoints.
Audience: Graduate

2. Develop strategies to achieve organizational objectives.
Audience: Graduate

3. Communicate effectively with colleagues, customers, and regulatory bodies.
Audience: Graduate

4. Illustrate leadership principles and use ethical behavior in challenging and ambiguous situations.
Audience: Graduate

5. Practice how diverse teams fit into organizational culture and successfully contribute from product development through submission, product launch, and post-market surveillance.
Audience: Graduate

BIOMDSCI 800 – INTELLECTUAL PROPERTY, PATENTS AND LICENSING
2 credits.

Explore core concepts of how intellectual property, patent law, trademarks, copyrights, trade secrets, licensing and patent litigation specifically relate to the field of biotechnology. Evaluate how types of intellectual property work to protect a product or service. Explain the importance of patents in terms of licensing and technology transfer. Assess the unique aspects of early-stage intellectual property, including how it pertains to market dynamics, pricing and valuation.
Requisites: Declared in Biotechnology MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Distinguish the principal types of intellectual property and how to protect a service or product.
Audience: Graduate

2. Assess technology transfer opportunities and its importance to the field of biotechnology.
Audience: Graduate

3. Evaluate market dynamics, pricing, and valuation of early-stage intellectual property.
Audience: Graduate

4. Deliver a technology assessment plan based on legal issues.
Audience: Graduate

BIOMDSCI 801 – BIOTECHNOLOGY REGULATION AND ETHICS
2 credits.

Explore political, legal, and ethical issues and paradigms that drive product development within the biotechnology industry with special emphasis given to how new drugs, devices, and biologics are regulated by local, national, and global agencies. Describe the regulations and ethics of human subjects' research. Develop skills to support how regulation and politics interact with business and finance to influence the formation and growth of biotechnology companies. Discuss how ethics and regulatory policy influence how biotechnology products come to market.
Requisites: Declared in Biotechnology MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Examine the structure of the US legal and regulatory system.
Audience: Graduate

2. Explore ethical concerns regarding research on biotechnology and applications of biotechnology.
Audience: Graduate

3. Investigate content of key laws and regulations governing biotechnology research and its medical applications.
Audience: Graduate

4. Deliver an ethical argument that justifies a regulatory position.
Audience: Graduate

BIOMDSCI 802 – BUSINESS OF BIOTECHNOLOGY: BUSINESS FUNDAMENTALS
2 credits.

Discover the business challenges inherent in translating scientific discoveries into a successful business. Apply fundamental business principles that guide the operations of biotechnology companies.
Requisites: Declared in Biotechnology MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Compare scientific and commercial success strategies.
Audience: Graduate

2. Evaluate how new product selection and development delivers a positive return on investment.
Audience: Graduate

3. Practice using financial tools to evaluate investments and monitor the financial progress of a company.
Audience: Graduate

4. Deliver a technology assessment plan utilizing business strategies.
Audience: Graduate

BIOMDSCI 803 – MOLECULAR TECHNOLOGIES I: DIAGNOSTIC TESTING
2 credits.

Assess various biotechnology techniques to determine effective and efficient methods used in biotechnology product development. Utilize analytical and communication skills when critiquing biotechnology applications that simulate both corporate and academic biotechnology settings.
Requisites: Declared in Biotechnology MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Build effective communication skills and science theory and practice by developing a laboratory notebook and scientific presentations.
Audience: Graduate

2. Perform and evaluate molecular based technologies for genetic mutation detection.
Audience: Graduate

3. Identify the vocabulary of biotechnology and the science that underlies it through hands-on laboratory experience.
Audience: Graduate

4. Critically assess research studies and laboratory results for technology recommendations.
Audience: Graduate

BIOMDSCI 810 – BIOTECHNOLOGY OPERATIONS
4 credits.

Explore the six operational specialties of product development: Regulatory; Quality Assurance; Biomanufacturing; Quality Control; Nonclinical Development; and Clinical Development. Expand upon leadership skills by implementing biotechnology operation plans that successfully bring new products to market.
Requisites: Declared in Biotechnology MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Examine key disciplines and principles required to successfully develop a variety of biotechnology products for targeted markets.
Audience: Graduate

2. Select the regulatory environments required for biotechnology product development.
Audience: Graduate

3. Design a biotechnology product development strategy, to clearly communicate objectives, and to provide leadership throughout implementation.
Audience: Graduate

4. Appraise the interplay between quality and efficacy in biotechnology product development relative to patient, regulatory, and business risk.
Audience: Graduate

5. Collaborate effectively to develop concise and accurate presentations and papers on key regulatory topics critical for biotechnology product development.
Audience: Graduate

BIOMDSCI 812 – PROJECT MANAGEMENT AND LEADERSHIP
2 credits.

Practice developing, modifying, and maintaining project management plans within the biotechnology and medical device industries. Hone leadership skills and experience by working among diverse teams and addressing situations faced by Project Managers.
Requisites: Declared in Biotechnology MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Distinguish the components of technical project management, and the social and leadership skills that are needed to lead a team in the global biopharmaceutical or medical device industries.
Audience: Graduate

2. Apply effective leadership skills to work within diverse groups of professionals and communities as they address and solve problems, make critical decisions, and measure and mitigate risk.
Audience: Graduate

3. Design, use, and defend a project management plan using common project management methods.
Audience: Graduate

4. Discuss social forces that impact a team.
Audience: Graduate

BIOMDSCI 813 – MOLECULAR TECHNOLOGIES II: BIOMANUFACTURING
2 credits.

Develop, create, and present scientific poster presentation. Utilize and assess multiple technology platforms used in biomanufacturing. Develop and critique batch records used in biomanufacturing and bio-engineering environments.
Requisites: Declared in Biotechnology MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Determine the importance of nucleic acid and protein analysis applications in biotechnology research and manufacturing.

Audience: Graduate

2. Perform and compare biomanufacturing strategies required to purify target biomolecules critical in biotechnology.
Audience: Graduate

3. Evaluate current technologies in agricultural biotechnology and protein engineering.
Audience: Graduate

4. Compose effective scientific poster presentations, biomanufacturing batch records, and genetic identity analysis reports.
Audience: Graduate

BIOMDSCI 820 – EARLY DRUG DISCOVERY
4 credits.

Examine the early drug discovery process, including target identification and validation, generation of diverse chemical libraries, assay development and high throughput screening, lead optimization by compound profiling, and drug targeting and delivery.
Requisites: Declared in Biotechnology MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Assess the early drug discovery process and key steps, from target identification to nonclinical trials.
Audience: Graduate

2. Determine the scientific mechanism of one or more disease processes and assess how modulation of that target could treat or prevent a disease.
Audience: Graduate

3. Compare current and emerging methods for generating compound diversity in chemical libraries, natural products, and antibodies, including molecular modeling and structure-based drug design.
Audience: Graduate

4. Evaluate a technology used in drug discovery, understand the unmet need it addresses, and summarize the key information in a clear and concise way, both verbally and in a written format.
Audience: Graduate

BIOMDSCI 822 – BUSINESS OF BIOTECHNOLOGY: COMMERCIALIZATION PATHWAYS
2 credits.

Explore contemporary issues in the business of biotechnology and apply concepts critical to the success of modern biotechnology firms. Focus on modern problem-solving topics, including issues relating to corporate leadership, fundings sources for product development, customer identification, financial accounting management, and negotiation.
Requisites: Declared in Biotechnology MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Justify risks and challenges associated with commercialization of early-stage research and innovation.
Audience: Graduate

2. Analyze the elements that make up a viable business opportunity.
Audience: Graduate

3. Evaluate strengths and limitations of various business models.
Audience: Graduate

4. Develop an argument to influence product buy in and support.
Audience: Graduate

BIOMDSCI 823 – MOLECULAR TECHNOLOGIES III: ASSAY DEVELOPMENT
2 credits.

Evaluate laboratory assays and methods used in primary, secondary, and in vitro ADMETox (Absorption, Distribution, Metabolism, Excretion, Toxicity) drug screening. Build scientific communication and critical thinking skills while working on team projects and analyzing scientific results.
Requisites: Declared in Biotechnology MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Employ effective scientific communication methods demonstrating knowledge and skills when: writing scientific papers, preparing detailed scientific protocols, critiquing scientific journal articles in drug discovery, and developing and presenting detailed scientific presentations.
Audience: Graduate

2. Determine how protein kinase and cytochrome P450 enzyme assay technologies are used in the drug discovery process.
Audience: Graduate

3. Perform and evaluate multiple assay formats (luminescent, fluorescent, colorimetric) including, but not limited to: Cytochrome P450 enzymes, kinase assay technologies, cell culture techniques, and genome editing and CRISPR/Cas-9.
Audience: Graduate

4. Compare and contrast the roles that fluorescent microscopy, high content screening, and in vivo imaging play in the drug discovery process and biotechnology.
Audience: Graduate

5. Analyze and interpret scientific data and quality control measures as they relate to biotechnology and drug discovery, facilitating critical thinking.
Audience: Graduate

BIOMDSCI 830 – PROFESSIONAL DEVELOPMENT AND EFFECTIVE MANAGEMENT
1 credit.

Focus on effective management and career development techniques that lead to career success. Practice and apply skills needed to effectively lead synergistic team success within a biotechnology company. Explore different communication styles used to engage and assess employees. Expand career pathways through networking and by generating professional resumes and interviewing skills.
Requisites: Declared in Biotechnology MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Evaluate team culture in terms of what really matters to set goals, enable results, and provide psychological safety.
Audience: Graduate

2. Create situational, behavioral, and impact driven feedback strategies so that both the employee and manager are successful.
Audience: Graduate

3. Prepare a career development plan that includes effective resumes, cover letters, networking, and employment research skills.
Audience: Graduate

4. Analyze skills required to influence, prioritize, and set goals in a biotechnology company.
Audience: Graduate

BIOMDSCI 831 – ADVANCED BIOTECHNOLOGY: GLOBAL PERSPECTIVES
3 credits.

Investigate state-of-the-art topics of global importance to biotechnology. Integrated skills and knowledge to achieve synergistic levels of understanding the importance of biotechnology today. Formulate the scientific, ethical, and regulatory standards used in the development of novel technologies around the globe. Increase awareness for intellectual collaboration and entrepreneurship opportunities.
Requisites: Declared in Biotechnology MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Identify, research, and create a final research project with both faculty and peer input, from numerous perspectives (science, business, law, regulatory, ethical, and political).
Audience: Graduate

2. Evaluate an assigned special topic in global biotechnology, including stem cell applications, healthcare innovations, biomanufacturing issues, metagenomic and microbiome analysis, or agricultural biotechnology.
Audience: Graduate

3. Develop effective written and oral communication through a variety of formats to a variety of audiences.
Audience: Graduate

4. Build effective strategies for researching and critically assessing different biotechnologies.
Audience: Graduate

BIOMDSCI 832 – BUSINESS OF BIOTECHNOLOGY: CORPORATE STRATEGY
3 credits.

Examine how companies gain and sustain competitive advantages by utilizing business tools, methods, and strategies. Critique how company leaders make decisions under uncertainty. Integrate the knowledge and skills gained from prior studies (e.g., marketing, management, finance, accounting) to apply synergistic responses and insights when developing company-wide strategy.
Requisites: Declared in Biotechnology MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Analyze industry forces and environmental trends to distinguish industry potential and competitive advantage.
Audience: Graduate

2. Relate how companies add value across diverse lines of business through knowledge of Research and Development strategic management.
Audience: Graduate

3. Evaluate how negotiation and management skills guide strategic change efforts.
Audience: Graduate

4. Deliver business strategies to support company growth.
Audience: Graduate

BIOMDSCI 834 — BIOTECHNOLOGY CAPSTONE
1 credit.

Identify a global biotechnology problem, find a novel technical solution, analyze all aspects from a business, regulatory, and intellectual property perspective, and deliver a final written capstone thesis.
Requisites: Declared in Biotechnology MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Identify an important global biotechnology-based problem and formulate a novel biotechnology-based solution to address it.

Audience: Graduate

2. Analyze the economic logic of the global biotechnology problem and solution. Consider customers, market, pricing, and competitors.
Audience: Graduate

3. Compose insightful business and technical questions to research including identifying effective resources and subject matter experts.
Audience: Graduate

4. Identify a company to implement your proposed solution to augment the company's current portfolio.
Audience: Graduate

5. Justify key regulatory, intellectual property, manufacturing, social, and/or political issues that could impact the success of the solution.
Audience: Graduate

6. Critique both technical and business considerations in a clear, concise, and logical manner to make credible technical and business solutions and recommendations.
Audience: Graduate

BIOMDSCI 890 — BIOTECHNOLOGY INDEPENDENT STUDY
1-3 credits.

Learning experience to further develop skills and apply them in an independent and/or research project with a faculty advisor.
Requisites: Declared in Biotechnology MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 2 number of completions
Learning Outcomes: 1. Apply concepts learned in coursework to real life professional experiences (academic or industry).
Audience: Graduate

2. Develop critical, analytical, and independent thinking skills using scientific, business, legal, and/or regulatory knowledge.
Audience: Graduate

3. Evaluate scientific, business, legal, and/or regulatory practices as an active team member.
Audience: Graduate

BIOMOLECULAR CHEMISTRY (BMOLCHEM)

BMOLCHEM/B M I/BIOCHEM/MATH 609 — MATHEMATICAL METHODS FOR SYSTEMS BIOLOGY
3 credits.

Provides a rigorous foundation for mathematical modeling of biological systems. Mathematical techniques include dynamical systems and differential equations. Applications to biological pathways, including understanding of bistability within chemical reaction systems, are emphasized.
Requisites: MATH 415 and (MATH 320, 340, 341, or 375) or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall and state the formal definitions of the mathematical objects and their properties in systems biology (e.g., reaction networks, reaction rate equations, mass-action kinetics models, detailed balanced and complex balanced systems, Lyapunov functions, etc.).
Audience: Both Grad & Undergrad

2. Use such definitions to argue that a mathematical object does or does not have the condition of being a particular type or having a particular property (e.g., reversible, weakly reversible, mass-action, detailed balanced, complex balanced, globally stable, oscillatory, persistent, permanent, etc.).
Audience: Both Grad & Undergrad

3. Recall and state the standard theorems of the field (e.g., the Horn-Jackson theorem, the deficiency zero theorem, theorems on characterization of mass-action systems, theorems on persistence and permanence, theorems on dynamical equivalence, etc.) and recall the arguments for these theorems and the underlying logic of their proofs.
Audience: Both Grad & Undergrad

4. Construct mathematical arguments related to the above definitions, properties, and theorems, including the construction of examples and counterexamples.
Audience: Both Grad & Undergrad

5. Convey arguments using English and appropriate mathematical terminology, notation and grammar.
Audience: Both Grad & Undergrad

6. Model real biological systems by means of systems of differential equations, and be able to use software (such as Matlab) for visualization of their dynamics. Example models could include: (i) Enzymes, substrates and saturating kinetics, (ii) Glycolytic oscillations, (iii) Cell cycle control, budding yeast cell cycle models, (iv) Activator-inhibitor and positive feedback systems.
Audience: Both Grad & Undergrad

7. Identify applications of course content in current areas of research.
Audience: Graduate

BMOLCHEM/MICROBIO 668 – MICROBIOLOGY AT ATOMIC RESOLUTION
3 credits.

Three-dimensional protein structures form the basis for discussions of high resolution microbiology; how particular problems are solved with given protein architectures and chemistries and how themes of protein structure are modified and recycled.
Requisites: (BIOCHEM 501 or 507) and (MICROBIO 470 or 612) or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate proficient use of PyMol software for visualizing 3D structures.
Audience: Both Grad & Undergrad

2. Evaluate the quality of published structural models for biological macromolecules.
Audience: Both Grad & Undergrad

3. Identify common themes in structural biology which are used when addressing structural biology research questions.
Audience: Both Grad & Undergrad

4. Design and deliver a presentation to communicate scientific results to an audience of their peers.
Audience: Graduate

BMOLCHEM 675 – ADVANCED OR SPECIAL TOPICS IN BIOMOLECULAR CHEMISTRY
1-3 credits.

Examines special topics in biomolecular chemistry. Topics and content will vary each semester and by section of the course.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024
Learning Outcomes: 1. Apply, analyze, or evaluate advanced theories, concepts, or methods in biomolecular chemistry.
Audience: Both Grad & Undergrad

2. Explore a new phenomenon or modality in the biomolecular chemistry area and apply the knowledge gained to research in the field.
Audience: Graduate

BMOLCHEM 699 – SPECIAL RESEARCH PROBLEMS
1-5 credits.

Self-directed work under the supervision and guidance of an Instructor and often in conjunction with a day-to-day mentor that is a graduate student or postdoc researcher in the instructor's group. Students normally participate in aspects of ongoing research projects.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply concepts learned in coursework to real life situations
Audience: Undergraduate

2. Read and effectively search scientific literature
Audience: Undergraduate

3. Develop critical, analytical, and independent thinking skills
Audience: Undergraduate

BMOLCHEM 700 – PRACTICAL BIOPHYSICS
3 credits.

Introduction to methods used in biophysical measurements. Thermodynamics and kinetics are introduced along with the theory and instrumentation used for several complementary biophysical approaches. Hands-on experimentation using state-of-the-art instrumentation and data interpretation.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the strengths and weaknesses of several biophysical methods and use that knowledge to design biophysical experiments for their research.
Audience: Graduate

2. Explain the fundamentals of thermodynamics, kinetics, and fluorescence and practically apply this knowledge to modern research problems.
Audience: Graduate

3. Use data interpretation skills to interpret results from several biophysical instruments.
Audience: Graduate

4. Integrate their knowledge of biophysical methods in the form of an experimental plan within a grant application.
Audience: Graduate

BMOLCHEM/BIOCHEM 701 – RESPONSIBLE CONDUCT IN BIOSCIENCE RESEARCH
2 credits.

Introductory training in the practical aspects of being a graduate-level scientist and the professional standards and expectations of ethical researchers. Covers a wide variety of professional development topics, including choosing a research laboratory and a thesis mentor, transitioning to self-education, managing stress in graduate school, and the importance of diversity in science. Ethics topics include conflicts of interest, the protection of human subjects, the welfare of laboratory animals and workers, safe laboratory spaces, mentor and mentee responsibilities, collaborative research, peer review, data acquisition and data management practices, research misconduct, responsible authorship and publication, contemporary ethical issues in biomedical research, and the roles of responsible scientists in society. Covers all NIH-recommended topics for Responsible Conduct of Research, thus meeting the requirements for trainees involved in NIH-sponsored research programs.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Evaluate and apply fundamental concepts and best practices in bioscience research conduct and research ethics
Audience: Graduate

2. Identify and meet individual and professional responsibilities and obligations to society
Audience: Graduate

3. Explore and implement activities for professional skills development and career management
Audience: Graduate

BMOLCHEM 720 – EXPERIMENTAL DESIGN AND PARADIGMS IN CELLULAR BIOCHEMISTRY AND MOLECULAR BIOLOGY
3 credits.

Covers following areas from historical to modern contexts: biochemistry of post-translational modification of proteins, model organisms, transcriptional switches, chromosome replication, and RNA in biological regulation.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop critical thinking skills required to design and interpret an experiment in molecular and/or cellular biology
Audience: Graduate

2. Develop the writing skills relevant to preparing a grant proposal
Audience: Graduate

3. Gain insight into how the scientific method is applied in molecular and cellular biology
Audience: Graduate

4. Develop an ability to critically evaluate research literature
Audience: Graduate

BMOLCHEM 901 – BIOMOLECULAR CHEMISTRY SEMINAR
1 credit.

Critical review of selected topics in biomolecular chemistry.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Gain exposure to a variety of relevant research topics, potentially leading to cross-disciplinary, collaborative research opportunities
Audience: Graduate

2. Identify principles and best practice for preparing and presenting a seminar
Audience: Graduate

3. Gain experience in evaluating and critiquing research presentations in light of those principles and best practices
Audience: Graduate

BMOLCHEM/BIOCHEM 913 – SEMINAR-RIBOGROUP (ADVANCED)
1 credit.

Student-led discussions of RNA-related problems.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Develop an understanding of current research questions in the field of RNA biology
Audience: Graduate

2. Become familiar with the approaches used to study RNA and its interactions with proteins
Audience: Graduate

3. Build a professional network with other RNA biologists on campus
Audience: Graduate

4. Develop techniques for presenting complex concepts to a diverse audience
Audience: Graduate

BMOLCHEM 990 – ADVANCED BIOMOLECULAR CHEMISTRY AND RESEARCH
1-12 credits.

Research supervised by individual faculty members.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Exhibit a broad understanding of general biochemical principles.
Audience: Graduate

2. Conduct independent research using a variety of approaches.
Audience: Graduate

3. Think critically to address research challenges.
Audience: Graduate

4. Exhibit and foster professional and ethical conduct in their research.
Audience: Graduate

5. Collaborate with other investigators within or outside the thesis lab.
Audience: Graduate

BIOSTATISTICS AND MEDICAL INFORMATICS (B M I)

B M I/POP HLTH 451 – INTRODUCTION TO SAS PROGRAMMING FOR POPULATION HEALTH
2 credits.

Use of the SAS programming language for the management and analysis of biomedical data.
Requisites: Declared in the Population Health, Epidemiology or Clinical Investigation graduate program.
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Create and modify SAS datasets using programming structures within the SAS Data Step (e.g. Do loops, If/Then/Else, Functions, and Arrays).
Audience: Graduate

2. Utilize various SAS Procedures to explore SAS datasets, to summarize information in SAS datasets, and to perform basic statistical analyses.
Audience: Graduate

3. Recognize common SAS program errors, identify strategies for debugging SAS programs, and implement general techniques to check and verify your coding.
Audience: Graduate

B M I/STAT 541 – INTRODUCTION TO BIOSTATISTICS
3 credits.

Course designed for the biomedical researcher. Topics include: descriptive statistics, hypothesis testing, estimation, confidence intervals, t-tests, chi-squared tests, analysis of variance, linear regression, correlation, nonparametric tests, survival analysis and odds ratio. Biomedical applications used for each topic.
Requisites: Graduate/professional standing. Not open to students with credit for STAT 511 or POP HLTH/B M I 551
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand building blocks and fundamentals that support core themes of Biostatistics in the application of biomedicine and public health
Audience: Both Grad & Undergrad

2. Conduct basic statistical analyses of biomedical data
Audience: Both Grad & Undergrad

3. Use R for statistical computing
Audience: Both Grad & Undergrad

4. Critique methods and evidence from others' studies
Audience: Graduate

5. Collaborate effectively with biostatisticians
Audience: Graduate

B M I/STAT 542 – INTRODUCTION TO CLINICAL TRIALS I
3 credits.

Intended for biomedical researchers interested in the design and analysis of clinical trials. Topics include definition of hypotheses, measures of effectiveness, sample size, randomization, data collection and monitoring, and issues in statistical analysis.
Requisites: B M I/STAT 541
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop skills to critically review clinical trials literature
Audience: Graduate

2. Formulate focused research questions, specific aims, and key outcomes

Audience: Graduate

3. Recognize the strengths and weaknesses of alternative clinical trials designs and design components
Audience: Graduate

4. Develop related technical skills, including basic sample size calculations and survival analysis
Audience: Graduate

5. Write a clinical trial protocol with all its core components
Audience: Graduate

B M I 544 – INTRODUCTION TO CLINICAL AND HEALTHCARE RESEARCH II
3 credits.

Practical training and skills required in clinical and healthcare research; design, implementation, and conduct of clinical trials and health services research studies; protocol and informed consent development using protocol templates; regulatory requirements; human subjects research protections considerations; data and safety monitoring plans; data collection strategies and data management; strategies to recruit/retain diverse and equitable study participants; research study agreements; budget development and justification; federal, institutional, and sponsor-defined requirements; establishment of research infrastructures for participant safety and study success; preparation of investigator-INDs/IDEs; and investigator responsibilities.
Requisites: STAT/B M I 542
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Apply applicable legal and regulatory responsibilities, liabilities, and accountabilities for clinical trials and health services research studies according to IRBs, HIPAA, CGP, FDA, NIH, ClinicalTrials.gov, and other applicable entities
Audience: Graduate

2. Apply and implement best practices for human subjects' protection
Audience: Graduate

3. Apply team science through working with multidisciplinary and interprofessional team
Audience: Graduate

4. Analyze requirements in conduct of a clinical trial or health services research study and implement the use of a protocol to standardize procedures
Audience: Graduate

5. Evaluate and select data collection processes and implement quality control and assurance processes
Audience: Graduate

6. Create a protocol and consent/assent processes and documents for a clinical trial or health services research study, as well as supportive components
Audience: Graduate

B M I/POP HLTH 551 – INTRODUCTION TO BIOSTATISTICS FOR POPULATION HEALTH
4 credits.

Designed for population health researcher. Topics include descriptive statistics, elementary probability, probability distributions, one- and two-sample normal inference (point estimation, hypothesis testing, confidence intervals), power and sample size calculations, one- and two-sample binomial inference, underlying assumptions and diagnostic work.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and recognize statistical and probability terminology, symbols, definitions, and formulas
Audience: Graduate

2. Explain the meaning, assumptions, and interrelationships of statistical and probability concepts and formulas
Audience: Graduate

3. Execute probability and statistical calculations from information provided
Audience: Graduate

4. State assumptions, conclusions and interpretation in terms of statistical and probability computations
Audience: Graduate

B M I/POP HLTH 552 – REGRESSION METHODS FOR POPULATION HEALTH
4 credits.

Introduction to the primary statistical tools used in epidemiology and health services research: logistic regression for binary outcomes, multiple linear regression for continuous outcomes, multinomial regression models for categorical outcomes, and Poisson and negative binomial regression models for count outcomes.
Requisites: STAT/B M I 541 or POP HLTH/B M I 551
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. State the assumptions underlying linear, logistic, multinomial and Poisson regression models, recognize and address violations of those assumptions, and estimate and interpret regression models to answer epidemiologic and public health research questions.
Audience: Graduate

2. Critique uses of linear, logistic, multinomial and Poisson regression models in the epidemiologic and public health literature.
Audience: Graduate

3. Translate epidemiologic concepts into statistical modeling assumptions, and explain statistical modeling assumptions in epidemiologic terms.
Audience: Graduate

4. Recognize applications that require methods beyond their expertise, and identify resources to learn about more advanced techniques.
Audience: Graduate

B M I/COMP SCI 567 – BIOMEDICAL IMAGE ANALYSIS
3 credits.

Hands-on introduction to biological and medical image analysis techniques. Topics include medical imaging formats, segmentation, registration, image quantification, and classification.
Requisites: (MATH 320, 340, 341, 345, or 375) and (STAT 511, 541, POP HLTH/B M I 551, MATH 331, MATH/STAT 431, 309, STAT 240, 301, 311, 324, 371, or STAT/F&W ECOL 571) or graduate/professional standing
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Implement the key principles of ideas from probability, statistics and computer vision algorithms used in medical image analysis
Audience: Undergraduate

2. Recognize which image analysis problems will benefit from which modeling approach
Audience: Undergraduate

3. Apply algorithms about image analysis tasks and implement algorithms and pipelines using a programming language
Audience: Undergraduate

4. Implement the building blocks taught in this course to independently learn and apply new, but related imaging analysis algorithms
Audience: Undergraduate

B M I 573 – FOUNDATIONS OF DATA-DRIVEN HEALTHCARE
3 credits.

Familiarize students with basic informatics principles and techniques to support clinical research and quality improvement studies from a perspective of data-driven approaches. Content includes information systems for study design; regulatory compliance; use of electronic health records data for research; data collection and acquisition; data security, storage, transfer, processing and analysis.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Utilize informatics-based tools in translational research including locate relevant informatics tools; select appropriate informatics tools; and use those tools in research for managing and analyzing biomedical and health information.
Audience: Graduate

2. Describe the essential functions of the major clinical systems (e.g., the EHR-- (electronic health record and its feeder systems, such as radiology and lab) that are relevant to healthcare analytics and quality improvement and the challenges to using these data for research.
Audience: Graduate

3. Explain the role of health information technology standards in the interoperability of research, clinical, and administrative information systems and on secondary use of data for Clinical Translational Research or CTS.
Audience: Graduate

4. Describe the essential information generation, management, analysis, transformation, summarization, and visualization methods that apply to healthcare analytics and quality improvement, such as clinical data; imaging data; consumer and patient reported data; and population-level and environmental exposure data.
Audience: Graduate

5. Identify and describe available methods for handling large-scale data for machine learning and medical language processing.
Audience: Graduate

6. Illustrate the nature of the contributions in consulting and/or collaborating with biomedical and health informaticians throughout the life cycle of clinical and translational research projects: use the terminology and principles of biomedical informatics; discriminate among the different subdomains of biomedical informatics; and enumerate the roles of biomedical informatics specialists.
Audience: Graduate

7. Identify how structure and organization of information in a domain can affect quality research foci through fundamental data categories and elements, terminologies and taxonomies, and ontologies.
Audience: Graduate

8. Identify, retrieve, and manage biomedical and health science knowledge through literature searches using advanced search techniques (MeSH, PubMed, Google Scholar, etc.).
Audience: Graduate

9. Discuss the fundamental principles and practices that address the ethical, legal, social, privacy, and security implications of bio- medical and health informatics.
Audience: Graduate

B M I/COMP SCI 576 – INTRODUCTION TO BIOINFORMATICS
3 credits.

Algorithms for computational problems in molecular biology. Studies algorithms for problems such as: genome sequencing and mapping, pairwise and multiple sequence alignment, modeling sequence classes and features, phylogenetic tree construction, and gene-expression data analysis.
Requisites: (COMP SCI 320 or 400) and MATH 222, graduate/professional standing, or declared in the Capstone Certificate in Computer Sciences for Professionals
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the biology and significance of the most commonly measured molecules in molecular biology.
Audience: Undergraduate

2. Identify the primary computational problems associated with each type of biological data.
Audience: Undergraduate

3. Explain the major algorithms and approaches used to address the computational problems.
Audience: Undergraduate

4. Implement efficient algorithms for bioinformatic tasks through the use of the discussed approaches.
Audience: Undergraduate

5. Apply the discussed algorithms to novel but closely-related tasks.
Audience: Undergraduate

6. Understand the methods covered such that parts of the methods sections of published biological papers are interpretable.
Audience: Undergraduate

7. Begin to gain the qualifications of a bioinformatician.
Audience: Undergraduate

B M I/BIOCHEM/BMOLCHEM/MATH 609 – MATHEMATICAL METHODS FOR SYSTEMS BIOLOGY
3 credits.

Provides a rigorous foundation for mathematical modeling of biological systems. Mathematical techniques include dynamical systems and differential equations. Applications to biological pathways, including understanding of bistability within chemical reaction systems, are emphasized.
Requisites: MATH 415 and (MATH 320, 340, 341, or 375) or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall and state the formal definitions of the mathematical objects and their properties in systems biology (e.g., reaction networks, reaction rate equations, mass-action kinetics models, detailed balanced and complex balanced systems, Lyapunov functions, etc.).
Audience: Both Grad & Undergrad

2. Use such definitions to argue that a mathematical object does or does not have the condition of being a particular type or having a particular property (e.g., reversible, weakly reversible, mass-action, detailed balanced, complex balanced, globally stable, oscillatory, persistent, permanent, etc.).
Audience: Both Grad & Undergrad

3. Recall and state the standard theorems of the field (e.g., the Horn-Jackson theorem, the deficiency zero theorem, theorems on characterization of mass-action systems, theorems on persistence and permanence, theorems on dynamical equivalence, etc.) and recall the arguments for these theorems and the underlying logic of their proofs.
Audience: Both Grad & Undergrad

4. Construct mathematical arguments related to the above definitions, properties, and theorems, including the construction of examples and counterexamples.
Audience: Both Grad & Undergrad

5. Convey arguments using English and appropriate mathematical terminology, notation and grammar.
Audience: Both Grad & Undergrad

6. Model real biological systems by means of systems of differential equations, and be able to use software (such as Matlab) for visualization of their dynamics. Example models could include: (i) Enzymes, substrates and saturating kinetics, (ii) Glycolytic oscillations, (iii) Cell cycle control, budding yeast cell cycle models, (iv) Activator-inhibitor and positive feedback systems.
Audience: Both Grad & Undergrad

7. Identify applications of course content in current areas of research.
Audience: Graduate

B M I/STAT 620 – STATISTICS IN HUMAN GENETICS
3 credits.

Provides a comprehensive survey of statistical methods in human genetics research. Covered topics include linkage analysis, genome-wide association study, rare variant association analysis, meta-analysis, genome and variant annotation, heritability estimation, multi-trait modeling techniques, multi-omic data integration, and genetic risk prediction.
Requisites: STAT 333, 340, or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize problems in human genetics that are appropriate for statistical modeling
Audience: Both Grad & Undergrad

2. Identify appropriate statistical procedures and computational algorithms for different tasks
Audience: Both Grad & Undergrad

3. Gain practical experience in applying a select set of statistical methods on real data and evaluate its outputs
Audience: Both Grad & Undergrad

4. Evaluate the strengths and weaknesses of different statistical and computational approaches designed for a specific biological problem
Audience: Graduate

B M I/STAT 641 – STATISTICAL METHODS FOR CLINICAL TRIALS
3 credits.

Statistical issues in the design of clinical trials, basic survival analysis, data collection and sequential monitoring.
Requisites: STAT/MATH 310 or graduate/professional standing
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

B M I/STAT 642 – STATISTICAL METHODS FOR EPIDEMIOLOGY
3 credits.

Methods for analysis of case-control, cross sectional, and cohort studies. Covers epidemiologic study design, measures of association, rates, classical contingency table methods, and logistic and Poisson regression.
Requisites: STAT/MATH 310 or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Summarize key concepts of statistical methods in epidemiology study: study design, association, causation
Audience: Both Grad & Undergrad

2. Build parametric or semiparametric model for analyzing categorical data and survival data
Audience: Both Grad & Undergrad

3. Utilize model design tools for model performance assessment
Audience: Both Grad & Undergrad

4. Build semiparametric model for analyzing categorical data and survival data
Audience: Graduate

B M I/STAT 643 – CLINICAL TRIAL DESIGN, IMPLEMENTATION, AND ANALYSIS
3 credits.

Gain an understanding of fundamental elements of clinical trials (such as objectives, endpoints, surrogate endpoints, and statistical decisions) and statistical design considerations (such as randomization and blinding). Designs of clinical trials for Phase I, II, and III studies including single-arm, two-arm, and drug combination trials. Introduction to adaptive designs for precision medicine and master protocol designs such as umbrella trials and basket trials.
Requisites: STAT 609, 610, B M I/STAT 641, or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Summarize the objectives of clinical trials and key statistical design components
Audience: Both Grad & Undergrad

2. Design the clinical trials and investigate the operating characteristics of the design to implement clinical trials
Audience: Both Grad & Undergrad

3. Write the protocol section of statistical considerations and communicate the design of clinical trials to both statisticians and clinicians
Audience: Both Grad & Undergrad

4. Build sequential and adaptive methods for clinical trials
Audience: Graduate

B M I/POP HLTH 651 – ADVANCED REGRESSION METHODS FOR POPULATION HEALTH
3 credits.

Extension of regression analysis to observational data with unequal variance, unequal sampling and propensity weights, clusters and longitudinal measurements, using different variance structures, mixed linear models, generalized linear models and GEE. Matrix notation will be introduced and underlying mathematical and statistical principles will be explained. Examples use data sets from ongoing population health research.
Requisites: POP HLTH/B M I 552
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Extend the knowledge of regression analysis beyond ordinary linear models
Audience: Graduate

2. Describe the features of correlated data and their implications in drawing inference
Audience: Graduate

3. Construct proper linear and generalized linear models for longitudinal and clustered data
Audience: Graduate

4. Describe the assumptions needed for estimation and inference
Audience: Graduate

5. Implement the inference procedures to solve real-world problems using statistical packages such as SAS and R
Audience: Graduate

6. Use diagnostic tools to assess model fit
Audience: Graduate

7. Interpret and present the analytic results to answer substantive questions
Audience: Graduate

B M I/POP HLTH 694 – APPLIED BIOMEDICAL INFORMATICS & REAL-WORLD DATA FOR PRECISION MEDICINE & POPULATION HEALTH
2 credits.

Provides an introduction to key concepts, methods, and tools of biomedical and health informatics used in precision medicine and population health, with emphasis on collection, management, and analysis of real-world data.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Demonstrate understanding of biomedical informatics concepts, methods, and tools used in precision medicine and population health.
Audience: Graduate

2. Demonstrate understanding of real-world data (patient-generated, clinical, and genomic) and data standards used in biomedical research.
Audience: Graduate

3. Demonstrate understanding of FAIR Guiding Principles for scientific data management and stewardship.
Audience: Graduate

4. Demonstrate understanding of regulations for using protected health information (PHI) data in health research, and ability to recognize potential ethical and compliance issues.
Audience: Graduate

B M I 699 – INDEPENDENT STUDY
1-8 credits.

Directed study to pursue knowledge beyond curriculum.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply concepts learned in coursework to real biomedical applications
Audience: Both Grad & Undergrad

2. Read and effectively analyze scientific literature
Audience: Both Grad & Undergrad

3. Develop critical, analytical, and independent thinking skills
Audience: Both Grad & Undergrad

4. Create literature reviews and publications
Audience: Graduate

B M I/COMP SCI/E C E/MED PHYS 722 – COMPUTATIONAL OPTICS AND IMAGING
3 credits.

Computational imaging includes all imaging methods that produce images as a result of computation on collected signals. Learn the tools to design new computational imaging methods to solve specific imaging problems. Provides an understanding of the physics of light propagation and measurement, and the computational tools to model it, including wave propagation, ray tracing, the radon transform, and linear algebra using matrix and integral operators and the computational tools to reconstruct an image, including linear inverse problems, neural networks, convex optimization, and filtered back-projection. Covers a variety of example computational imaging techniques and their applications including coded apertures, structured illumination, digital holography, computed tomography, imaging through scattering media, compressed sensing, and non-line-of-sight imaging.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Apply ray and wave based light propagation models
Audience: Graduate

2. Explain the process of image formation in conventional imaging systems using theory and computational models
Audience: Graduate

3. Select and combine the different components required in an imaging system to perform light manipulation, collection, and image reconstruction

Audience: Graduate

4. Apply the linear matrix and integral operators that model light propagation
Audience: Graduate

5. Apply the linear inverse algorithms that allow an imaging system to reconstruct properties of the scene from collected data
Audience: Graduate

6. Simulate different computational imaging systems and perform computation on simulated datasets
Audience: Graduate

7. Understand the most common computational imaging techniques and be able to use and adapt them for their own applications
Audience: Graduate

B M I/STAT 727 – THEORY AND METHODS OF LONGITUDINAL DATA ANALYSIS
3 credits.

Theory and methods of fundamental statistical models for the analysis of longitudinal data, including repeated measures analysis of variance, linear mixed models, generalized linear mixed models, and generalized estimating equations. Introduction of how to implement these methods in statistical softwares such as in R and/or SAS, within the context of appropriate statistical models and carry out and interpret analyses.
Requisites: STAT 610
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze longitudinal data in a variety of settings and with a variety of outcome variables
Audience: Graduate

2. Apply statistical methods in fitting longitudinal data models for addressing scientific questions
Audience: Graduate

3. Perform longitudinal data analyses in statistical softwares such as R and/or SAS
Audience: Graduate

4. Interpret and communicate the scientific meanings of the results to both statisticians and non-statisticians (such as clinicians and scientists)
Audience: Graduate

B M I 738 – ETHICS FOR DATA SCIENTISTS
1 credit.

Designed to educate data scientists, particularly those who work with biomedical data, about ethical and regulatory issues that may arise in the course of their research and professional interactions.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify ethical issues and recognize challenges to integrity that arise during the course of planning and conducting research or reporting research results.
Audience: Graduate

2. Formulate a justified response to an ethical issue or integrity challenge, using ethical decision-making approaches and concepts.
Audience: Graduate

3. Identify where to find professional resources that provide guidance for resolving ethical and research integrity issues.
Audience: Graduate

4. Conduct improved discussions about ethical issues.
Audience: Graduate

B M I/STAT 741 – SURVIVAL ANALYSIS THEORY AND METHODS
3 credits.

Theory and practice of analytic methods for censored survival data, including nonparametric and parametric methods, the proportional hazards regression model, and a review of current topics in survival analysis.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Summarize the features of censored data and their implications in drawing inference
Audience: Graduate

2. Implement proper non- and semi-parametric methods for analysis of various types of data
Audience: Graduate

3. Recognize and check the assumptions needed for estimation and inference
Audience: Graduate

4. Implement the inference procedures to solve real-world problems using statistical packages such as R (or SAS)
Audience: Graduate

5. Interpret and present the analytic results in a clear and coherent way to answer substantive questions
Audience: Graduate

B M I/COMP SCI 767 – COMPUTATIONAL METHODS FOR MEDICAL IMAGE ANALYSIS
3 credits.

Review of advanced medical image analysis techniques. Covers advanced segmentation and registration methods. Describes the use and extension of statistical and machine learning methods for medical image analysis tasks.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2016
Learning Outcomes: 1. Implement advanced ideas from machine learning, statistics, and computer vision for medical image analysis tasks.
Audience: Graduate

2. Develop a deep technical understanding of the machine learning and statistical ideas being utilized in contemporary research in this area, and identification of blockers where research efforts can be focused
Audience: Graduate

B M I/STAT 768 – STATISTICAL METHODS FOR MEDICAL IMAGE ANALYSIS
3 credits.

Introduce key statistical methods and concepts for analyzing various medical images. Analyze publicly available and student/instructor supplied imaging data using the most up-to-date methods and tools.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Implement the key concepts of biomedical image processing and analysis
Audience: Graduate

2. Describe the key concepts of statistical inference procedures for single and multiple images
Audience: Graduate

3. Apply scalable computation in breaking bigger imaging problems into smaller computable problems
Audience: Graduate

4. Describe functional data analysis (FA), geometric data analysis (GDA) and topological data analysis (TDA) methods in analyzing biomedical images
Audience: Graduate

B M I/COMP SCI 771 – LEARNING BASED METHODS FOR COMPUTER VISION
3 credits.

Addresses the problems of representation and reasoning for large amounts of visual data, including images and videos, medical imaging data, and their associated tags or text descriptions. Introduces deep learning in the context of computer vision. Covers topics on visual recognition using deep models, such as image classification, object detection, human pose estimation, action recognition, 3D understanding, and medical image analysis. Emphasizes the design of vision and learning algorithms and models, as well as their practical implementations. Strongly recommended to have knowledge in computer vision or machine learning [such as COMP SCI 540] or medical image analysis [such as B M I / COMP SCI/ B M I 567].
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate their understanding of basic theories, current approaches, key concepts, and common practices in the area of deep learning for computer vision.
Audience: Graduate

2. Recognize and distinguish among a variety of visual recognition problems in computer vision, including their problem formulations and evaluation metrics.
Audience: Graduate

3. Utilize and implement deep learning models to solve visual recognition problems.
Audience: Graduate

4. Design deep learning models for visual recognition problems, conduct experiments to evaluate the proposed model, and analyze and interpret the results.
Audience: Graduate

5. Communicate effectively through written reports, oral presentations, and discussions.
Audience: Graduate

B M I 773 – CLINICAL RESEARCH INFORMATICS
3 credits.

Course will familiarize students with basic informatics principles and techniques to support clinical research. Content includes information systems for protocol design; regulatory compliance; approaches for patient recruitment; efficient protocol management; data collection and acquisition; data security, storage, transfer, processing and analysis.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Recognize the various types and sources of health data, and the key issues involved in processing health data including security, privacy, noise, and missingness
Audience: Graduate

2. Conduct observational studies using data that are centered around answering research questions
Audience: Graduate

3. Implement basic programming and data manipulation using R, and be familiar with a variety of techniques such as descriptive analysis, regression methods, prediction models, phenotyping, and natural language processing
Audience: Graduate

4. Apply common tools for managing, accessing and mapping health data, including data standards, controlled vocabularies, and ontologies
Audience: Graduate

B M I/COMP SCI 775 – COMPUTATIONAL NETWORK BIOLOGY
3 credits.

Introduces networks as a powerful representation in many real-world domains including biology and biomedicine. Encompasses theory and applications of networks, also referred to as graphs, to study complex systems such as living organisms. Surveys the current literature on computational, graph-theoretic approaches that use network algorithms for biological modeling, analysis, interpretation, and discovery. Enables hands-on experience in network biology by implementing computational projects.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize problems in molecular biology that are appropriate for network modeling
Audience: Graduate

2. Identify appropriate network algorithms for different tasks
Audience: Graduate

3. Evaluate the strengths and weaknesses of different network algorithms designed for a specific biological problem
Audience: Graduate

4. Gain practical experience in applying a select set of network algorithms on real data and evaluate its outputs
Audience: Graduate

5. Understand the algorithmic and statistical concepts of different network-based approaches
Audience: Graduate

B M I/COMP SCI 776 – ADVANCED BIOINFORMATICS
3 credits.

Advanced course covering computational problems in molecular biology. The course will study algorithms for problems such as: modeling sequence classes and features, phylogenetic tree construction, gene-expression data analysis, protein and RNA structure prediction, and whole-genome analysis and comparisons.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Select and implement appropriate algorithms and probabilistic models for analyzing genomes, RNA, proteins, and biological networks
Audience: Graduate

2. Write a manuscript describing a bioinformatics research study, including the motivation for the research, the scientific outcomes, and the detailed methods required to reproduce the study
Audience: Graduate

3. Read a bioinformatics research paper to identify the key computational techniques and assess the evidence supporting the paper's claims
Audience: Graduate

4. Identify emerging biological data types and data processing (e.g., single cell biology) and how the data can contribute to their research
Audience: Graduate

B M I 800 – BECOMING A BIOMEDICAL DATA SCIENTIST
1 credit.

Learn how to conduct research as an interdisciplinary scientist at the interface of biomedical sciences and data science. Consider the diverse career trajectories available to an individual scientist. Gain an overview of problems in the field, approaches and practices in biomedical research, and different examples of approaches and paths taken from conceptualization to implementation of computational/statistical/data science tools to address specific biomedical research problems.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the breadth of research in biomedical data science.
Audience: Graduate

2. Describe the approaches, resources and environment available to conduct interdisciplinary research at UW.
Audience: Graduate

3. Describe the high-level goals of research programs of individual faculty trainers in the Biomedical Data Science program.
Audience: Graduate

B M I 826 – SPECIAL TOPICS IN BIOSTATISTICS AND BIOMEDICAL INFORMATICS
1-3 credits.

Covers advanced topics in the areas of biostatistics and biomedical informatics. Includes reading and discussion of original literature and individual student projects.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Design, implement, and evaluate a graduate level independent research project that applies or extends these theories, concepts, and methods
Audience: Graduate

B M I/STAT 828 – SEMIPARAMETRIC METHODS IN DATA SCIENCE
3 credits.

Review of statistical convergence modes, M-estimation, and basics of Hilbert space. Introduction of how to derive the nuisance tangent space, its complement, and the corresponding efficient influence function, from the geometric perspective of semiparametric models. Introduction of how to estimate nuisance functions using machine learning methods, and their implementations in R and/or Python. Introduction of a variety of semiparametric models in missing data analysis, causal inference, dimension reduction, precision medicine, semi-supervised learning, transfer learning and domain adaptation.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Derive the nuisance tangent space, its complement, and the corresponding efficient influence function in semiparametric models
Audience: Graduate

2. Apply a variety of semiparametric methods and models in applications ranging from biomedical studies to social sciences
Audience: Graduate

3. Perform machine learning algorithms for estimating nuisance functions in software such as R and/or Python
Audience: Graduate

B M I/COMP SCI/PSYCH 841 – COMPUTATIONAL COGNITIVE SCIENCE
3 credits.

Studies the biological and computational basis of intelligence, by combining methods from cognitive science, artificial intelligence, machine learning, computational biology, and cognitive neuroscience. Requires ability to program.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

B M I/STAT 877 – STATISTICAL METHODS FOR MOLECULAR BIOLOGY
3 credits.

Statistical and computational methods in statistical genomics for human and experimental populations. Review methods for quality control, experimental design, clustering, network analysis, and other downstream analysis of next-generation sequencing studies along with methods for genome wide association studies.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Understand the statistical and computational background underlying many state-of-the-art techniques for the pre-processing and analysis of high-throughput genomics datasets
Audience: Graduate

2. Identify the appropriateness and limitations of such methods in a variety of settings.
Audience: Graduate

3. Discuss scientific problems and identify the statistical and computational aspects embedded in the processing and analysis of genomics datasets.
Audience: Graduate

4. Become proficient in select software packages commonly used in analysis of next-generation sequencing data.
Audience: Graduate

B M I 881 – BIOMEDICAL DATA SCIENCE SCHOLARLY LITERATURE 1
2 credits.

Critical evaluation of the scholarly literature is a crucial skill for researchers. Through this course, students will develop this valuable skill by focused reading and discussion of a variety of journal articles of present or historical importance from the biomedical sciences literature, including biostatistics, biomedical informatics, and relevant topics in statistics and computer science.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Critically evaluate quantitative approaches in the scientific literature
Audience: Graduate

2. Articulate the biological context of a research question and the scientific relevance of analysis results
Audience: Graduate

3. Identify and articulate the strengths and weaknesses of different study designs and analysis methods, including potential biases in research data sets
Audience: Graduate

B M I 882 – BIOMEDICAL DATA SCIENCE SCHOLARLY LITERATURE 2
2 credits.

Critical evaluation of the scholarly literature is a crucial skill for researchers. Through this course, students will develop this valuable skill by focused reading and discussion of a variety of journal articles of present or historical importance from the biomedical sciences literature, including biostatistics, biomedical informatics, and relevant topics in statistics and computer science.
Requisites: B M I 881
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Critically evaluate quantitative approaches in the scientific literature
Audience: Graduate

2. Articulate the biological context of a research question and the scientific relevance of analysis results
Audience: Graduate

3. Identify and articulate the strengths and weaknesses of different study designs and analysis methods, including potential biases in research data sets
Audience: Graduate

B M I 883 – BIOMEDICAL DATA SCIENCE PROFESSIONAL SKILLS 1
1 credit.

A variety of skills that are important for a successful research career are often left to students to develop on their own. This course attempts to fill many of those gaps, including writing and reviewing papers, securing research funding, giving talks, presenting posters, making a personal website, job opportunities in universities and industry, and teaching.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the review processes for journal articles and research grant proposals
Audience: Graduate

2. Write clear, well-formed journal articles and research grant proposals
Audience: Graduate

3. Provide a clear oral presentation of their research work
Audience: Graduate

4. Demonstrate understanding of research on unconscious bias (for example, in reviewing papers/grants, in writing/evaluating recommendation letters, and in hiring/promotion) and assumptions and strategies to overcome them
Audience: Graduate

B M I 884 – BIOMEDICAL DATA SCIENCE PROFESSIONAL SKILLS 2
1 credit.

A variety of skills that are important for a successful research career are often left to students to develop on their own. This course attempts to fill many of those gaps, including writing and reviewing papers, securing research funding, giving talks, presenting posters, making a personal website, job opportunities in universities and industry, and teaching.
Requisites: B M I 883
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Prepare a web-based profile of their research efforts and products
Audience: Graduate

2. Describe good practices for research scientists' participation in social media
Audience: Graduate

3. Define sexual harassment and describe practices for handling sexual harassment
Audience: Graduate

4. Describe strategies for forming and managing scientific collaborations
Audience: Graduate

5. Construct a personal website for networking and self-promotion
Audience: Graduate

6. Identify employment opportunities at universities and in industry and demonstrate understanding of strategies for applying and interviewing for such positions
Audience: Graduate

7. Describe and compare different teaching practices and methods for motivating students
Audience: Graduate

B M I 899 – PRE-DISSERTATOR RESEARCH
1-12 credits.

Pre-dissertator Research. Course is open to pre-dissertator students only.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Develop critical, analytical, and independent thinking skills to support the development of independent research
Audience: Graduate

B M I 901 – FUNDAMENTALS OF INFORMATICS IN CLINICAL RESEARCH
2 credits.

Become familiar with basic informatics principles and techniques to support clinical research. Content includes information systems for protocol design; regulatory compliance; approaches for patient recruitment; efficient protocol management; data collection and acquisition; data security, storage, transfer, processing and analysis.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Utilize informatics-based tools in translational research including: locate relevant informatics tools; select appropriate informatics tools; and use those tools in research for managing and analyzing biomedical and health information. Describe the essential functions of the major clinical systems (e.g., the EHR and its feeder systems, such as radiology and lab) that are relevant to CTS and the challenges to using these data for research.
Audience: Graduate

2. Describe the essential functions of major research computer systems (e.g., clinical trials management systems, biospecimen management systems, research grant and finance management systems, and research services tracking systems) that are relevant to CTS.
Audience: Graduate

3. Compare and contrast the organizational roles and principal responsibilities essential for access, management, and governance of data related to CTS.
Audience: Graduate

4. Explain the role of health information technology standards in the interoperability of research, clinical, and administrative information systems and on secondary use of data for CTS.
Audience: Graduate

5. Describe the essential information generation, management, analysis, transformation, summarization, and visualization methods that apply to CTS data, such as: genomic, proteomic and other "-omics" data; clinical data; imaging data; consumer and patient-reported data; and population-level and environmental exposure data.
Audience: Graduate

6. Illustrate the nature of the contributions in consulting and/or collaborating with biomedical and health informaticians throughout the life cycle of clinical and translational research projects: use the terminology and principles of biomedical informatics; discriminate among the different subdomains of biomedical informatics; and enumerate the roles of biomedical informatics specialists.
Audience: Graduate

7. Identify how structure and organization of information in a domain can impact researchers' translational research foci through fundamental data categories and elements, terminologies and taxonomies, and ontologies.
Audience: Graduate

8. Identify, retrieve, and manage biomedical and health science knowledge through literature searches using advanced search techniques (MeSH, PubMed, Google Scholar, etc.).
Audience: Graduate

9. Discuss the fundamental principles and practices that address the ethical, legal, social, privacy, and security implications of bio- medical and health informatics.

B M I/B M E/BIOCHEM/CBE/COMP SCI/GENETICS 915 – COMPUTATION AND INFORMATICS IN BIOLOGY AND MEDICINE
1 credit.

Participants and outside speakers will discuss current research in computation and informatics in biology and medicine. This seminar is required of all CIBM program trainees.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss how methods from computer science, statistics, information science and engineering are applied to problems in biology, medicine and population health
Audience: Graduate

2. Recognize and be able to define applications in translational bioinformatics, clinical informatics and public health informatics
Audience: Graduate

B M I/MEDICINE 918 – HEALTH INFORMATICS FOR MEDICAL STUDENTS ELECTIVE
2 credits.

Biomedical Informatics is an interdisciplinary field that combines knowledge of information sciences and medical sciences to optimize the use and application of biomedical data across the spectrum from molecules to individuals to populations. Offers an overview of the field of health informatics by providing students with the fundamental knowledge of the concepts of health informatics and how technology can be used in the delivery of health care.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Describe main concepts and challenges in health informatics.
Audience: Graduate

2. Identify the different aspects of electronic health records.
Audience: Graduate

3. Recognize medical safety issues related to chart maintenance and poor systems.
Audience: Graduate

4. Instruct patients in proper use of a personal health record (PHR).
Audience: Graduate

5. Compare and contrast the concept of learning health systems that is patient-centered, population-based, and promotes learning from data.
Audience: Graduate

6. Define population-based care and the informatics underlying it.
Audience: Graduate

7. Recognize different types of clinical decision support.
Audience: Graduate

8. Describe the area of quality measurement and improvement.
Audience: Graduate

9. Formulate how the area of quality measurement and improvement applies to clinical practice.
Audience: Graduate

10. Recognize the types and limitations of different types of quality measures.
Audience: Graduate

11. Formulate a clinical question as an answerable one, and then be able to select the appropriate resource and make optional use of it.
Audience: Graduate

12. Recognize growing role of genomics and personalized medicine in care.

Audience: Graduate

13. Describe and manage ethical issues in privacy and security.
Audience: Graduate

B M I 990 – DISSERTATOR RESEARCH
1-3 credits.

Dissertator Research. Course is open to dissertators only.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Develop skills to design, implement and apply computational and statistical frameworks to address diverse biomedical questions
Audience: Graduate

BOTANY (BOTANY)

BOTANY 100 – SURVEY OF BOTANY
3 credits.

Major emphasis on the roles of plants and microbes in past and present global ecology, and the past and present uses of plants and microbes by humans, including emerging applications of biotechnology.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

BOTANY/PL PATH 105 – MUSHROOMS
3 credits.

An introduction to fungi. The fungal kingdom is made up of millions of species. We use fungi to brew beer and make cheese, as medicines, and as symbols of both rampant decay and unstinting selflessness. Come unpack the mythology and walk away with a deep appreciation of a poorly understood but fascinating part of Earth's biodiversity.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Notice, recognize, and catalog fungi as you walk in the world; in Madison and in all of Earth's lands and waters.
Audience: Undergraduate

2. Explain the myriad ecological roles fungi play on planet Earth.
Audience: Undergraduate

3. Talk about fungal biodiversity at length and in depth.
Audience: Undergraduate

4. Think critically about the natural world; be able to not just read but also critique popular science writing.
Audience: Undergraduate

5. Interpret "how science gets done" and what constitutes scientific knowledge.
Audience: Undergraduate

BOTANY/PL PATH 123 – PLANTS, PARASITES, AND PEOPLE
3 credits.

Explores the interaction between society and plant-associated microbes. Topics include: the Irish potato famine, pesticides in current agriculture, role of economics and consumer preference in crop disease management and the release of genetically engineered organisms.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

BOTANY/BIOLOGY 130 — GENERAL BOTANY
5 credits.

Introduction to the basic principles and concepts of the biology of plants. an integrative approach stressing evolutionary sequences and the relationship between structure and function at succeeding levels of organization: molecule, cell, organism, population, community. Correlated lectures, laboratories, and discussions.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

BOTANY/BIOLOGY/ZOOLOGY 151 — INTRODUCTORY BIOLOGY
5 credits.

Topics include: cell structure and function, cellular metabolism (enzymes, respiration, photosynthesis), information flow (DNA, RNA, protein), principles of genetics and selected topics in Animal Physiology.
Requisites: Not open to students with credit for BIOLOGY/ZOOLOGY 101, 102 or BIOLOGY/BOTANY 130
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

BOTANY/BIOLOGY/ZOOLOGY 152 — INTRODUCTORY BIOLOGY
5 credits.

Topics include: selected topics in plant physiology, a survey of the five major kingdoms of organisms, speciation and evolutionary theory, and ecology at multiple levels of the biological hierarchy.
Requisites: ZOOLOGY/BIOLOGY/BOTANY 151
Course Designation: Gen Ed - Communication Part B
Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

BOTANY 211 — UNDERSTANDING CHANGED LANDSCAPES: WISCONSIN
3 credits.

Exposure to to the changing uses of Wisconsin landscapes: as the home of native peoples; as a source of fur, lead and timber; as part of the new nation of the United States; and as a modern, vibrant collection of communities focused on enterprises as diverse as agriculture and education. Asks what roles science has played in shaping the landscape and in current land use. Covers genetically modified crops, the endangered species act, water use, global change.
Requisites: Sophomore standing and declared in an Honors program
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Describe the last 400 years of Wisconsin's environmental history, with a particular focus on human uses of land
Audience: Undergraduate

2. Understand the science behind Wisconsin's environmental history (e.g. whether or not early Wisconsinites recognized it, soil fertility was a driver in the shift from wheat to dairy, and then the green revolution radically changed agriculture, etc.)
Audience: Undergraduate

3. Think critically about the roles science plays in human choices (e.g. does understanding the genetics of genetic modification impact whether or not we plant GMO soybeans?)
Audience: Undergraduate

4. Describe and think critically about the environmental history of a specific place in Wisconsin, based on original research (often drawing on the resources of the Wisconsin Historical Society)
Audience: Undergraduate

BOTANY 240 — PLANTS AND HUMANS
3 credits.

Plant parts and demonstrations of their utility to humans, origins of domesticated plants, modifications of plants by humans, ecosystem services owed to plants, and reasons to sustain plant diversity.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

BOTANY 250 — FORESTS AND HUMANS: FROM THE MIDWEST TO MADAGASCAR
2 credits.

Provides an overview of the geography, ecology, and economic importance of the world's forest biomes. Learn how climate influences vegetation and, in-turn, how forests impact global climate. Meet scientists working to understand the astounding biodiversity and ecological complexity of forest ecosystems, and how these ecosystems support human life. Discuss the threats to forest ecosystems around the world, and hear from the people trying to protect them. Emphasizes the forest resources and services upon which humans depend, and how we can maintain these resources into the future. Analyze the idea of "sustainability" when it comes to forest management, hear alternative viewpoints about what this word means, and discuss potential trade-offs and conflicts. Look at the many real-world programs in place at the global, national, and local level to sustainably manage forests.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2020

BOTANY/ENVIR ST/ZOOLOGY 260 — INTRODUCTORY ECOLOGY
3 credits.

The relationships of organisms and the environment. Population dynamics and community organization, human-environment relationships, action programs.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

BOTANY 265 — RAINFORESTS AND CORAL REEFS
3 credits.

Are you awed by the amazing biodiversity found in rainforests and coral reefs? See these ecosystems first hand and decide if a career in tropical biology or international conservation is for you. Focuses on the ecology of the world's most biodiverse ecosystems, and their global importance. Learn the physical, chemical, and biological processes that make rainforests and coral reefs function, and the history of human dependence upon these ecosystems. Understand why both of these ecosystems currently are threatened and what actions can and must be taken to protect them.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

BOTANY 299 — DIRECTED STUDY IN BOTANY
1-3 credits.

Introduces students to research questions and facilitates learning in the field of botany by providing guidance and mentorship in a research environment.
Requisites: Consent of instructor
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

BOTANY 300 — PLANT ANATOMY
4 credits.

Plant structure and development of seed plants, primarily of flowering plants. Emphasis is placed on structure in relation to function and on the plant body as a structural and functional entity.
Requisites: Sophomore standing and (ZOOLOGY/BIOLOGY/BOTANY 151, BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY 101, or BIOCORE 381) or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

BOTANY 305 — PLANT MORPHOLOGY AND EVOLUTION
4 credits.

A broad survey of the diversity of plants in the context of their evolutionary history. Similarities and differences in structure and reproduction among extant bryophytes, lycopods, ferns, gymnosperms, and flowering plants are emphasized along with the study of fossils representing extinct plant lineages.
Requisites: ZOOLOGY/BIOLOGY/BOTANY 151, BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY 101, BIOCORE 381, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

BOTANY 330 — ALGAE
3 credits.

Introduction to ecology, evolution, systematics, taxonomy, physiology, biochemistry, cell biology, and molecular biology of freshwater, terrestrial and marine algae. Emphasis on techniques for identification, culture, analysis of growth and reproduction, and community composition assessment.
Requisites: ZOOLOGY/BIOLOGY/BOTANY 151, BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY 101, BIOCORE 381, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Comprehend the local-global biogeochemical impacts of the organisms known as algae at a level needed for future graduate or professional work.
Audience: Both Grad & Undergrad

2. Acquire hands-on technical laboratory experience and skills key to future graduate or professional work in biology, particularly microbiology.
Audience: Both Grad & Undergrad

3. Write technical reports with excellent English usage, information content, and accessibility at a level expected by future professional colleagues in biology fields.
Audience: Both Grad & Undergrad

4. Develop skills to search, assess, and summarize relevant scientific literature on algal topics related to research.
Audience: Graduate

BOTANY/PL PATH 332 — FUNGI
4 credits.

Growth, development, variability and dispersal of saprophytic, parasitic, and symbiotic fungi, with a consideration of their ecological and economic significance. Develop skills in microscopy with live fungal materials.
Requisites: ZOOLOGY/BIOLOGY/BOTANY 151, BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY 101, BIOCORE 381, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

BOTANY/PL PATH 333 — BIOLOGY OF THE FUNGI
2 credits.

Growth, development, variability and dispersal of saprophytic, parasitic, and symbiotic fungi, with a consideration of their ecological and economic significance.
Requisites: ZOOLOGY/BIOLOGY/BOTANY 151, BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY 101, BIOCORE 381, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Will have a detailed knowledge of the biodiversity of Fungi, and organisms traditionally included in mycology courses, including but not limited to systematics, life cycles, genetics, pathology, ecology.
Audience: Both Grad & Undergrad

2. Apply knowledge of Fungi and fungal-like organisms for use in agriculture and industry.
Audience: Both Grad & Undergrad

3. Communicate about fungi in either an outreach or professional capacity.
Audience: Graduate

BOTANY/AN SCI/MICROBIO 335 – THE MICROBIOME OF PLANTS, ANIMALS, AND HUMANS
3 credits.

Examination of the structure and function of microbial communities that live inside and on host organisms (plants, animals, and humans). Introduction to general concepts of the microbiome and microbiota, and their relationship to host nutrition, health, and disease.
Requisites: MICROBIO 101 or 303 or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe how microorganisms interact with plant and animal (including human) hosts in beneficial, neutral or detrimental ways.
Audience: Undergraduate

2. Express how the environment affects these host-microbe interactions.
Audience: Undergraduate

3. Summarize new molecular and bioinformatic methods that allow for the study of microbial communities.
Audience: Undergraduate

4. Describe how microbial communities are essential for life as we know it, and the processes that support life.
Audience: Undergraduate

5. Articulate several ways in which microbial communities are essential to plant and animal (including human) health.
Audience: Undergraduate

6. Explain our current knowledge about the diversity of microbial life and why its effects and potential benefits have not been fully explored.
Audience: Undergraduate

BOTANY/GEOG 338 – ENVIRONMENTAL BIOGEOGRAPHY
3 credits.

Explores how physical and biological factors affect the distribution of terrestrial biomes, ecosystem types, and biodiversity, as well as the role of disturbance and recent human activities on differences in past and modern day species distributions.
Requisites: Sophomore standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify patterns and mechanisms of local to global gene, species, ecosystem and biome distributions.
Audience: Both Grad & Undergrad

2. Describe how past, current and future environmental change affect biogeography.
Audience: Both Grad & Undergrad

3. Explain how humans affect geographic patterns of biodiversity.
Audience: Both Grad & Undergrad

4. Discuss major paradigm changes in biogeography and how changes in conceptual frameworks and technology have altered interpretations of data and understanding of processes.
Audience: Both Grad & Undergrad

5. Apply concepts from biogeography to current environmental problems.
Audience: Both Grad & Undergrad

6. Explain how legacies of colonialism and scientific racism affect historical and current biases in the representation, methods, practice, and applications of biogeography.
Audience: Both Grad & Undergrad

7. Discuss and critique the primary literature (scientific articles in peer-reviewed journals) in biogeography.
Audience: Both Grad & Undergrad

8. Identify a controversy in biogeography and state the problem, trace its origins in the literature, provide arguments on opposing sides from the peer-reviewed literature, and what implications it has on current thinking and practice in conservation or sustainable use.
Audience: Graduate

BOTANY 400 – PLANT SYSTEMATICS
4 credits.

Plant systematics: the integration of taxonomy (identification, nomenclature, classification emphasizing flowering plants), evolution (speciation, reproductive biology, adaptation, convergence, biogeography), and phylogenetics. Emphasis on representative families and genera of flowering plants in Wisconsin, use of keys, manuals, and iNaturalist, plant collection.
Requisites: ZOOLOGY/BIOLOGY/BOTANY 151, BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY 101, BIOCORE 381, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

BOTANY 401 – VASCULAR FLORA OF WISCONSIN
4 credits.

Taxonomic survey of the vascular plants of Wisconsin. Emphasis on in forest identification.
Requisites: ZOOLOGY/BIOLOGY/BOTANY 151, BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY 101, BIOCORE 381, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

BOTANY/F&W ECOL 402 – DENDROLOGY: WOODY PLANT IDENTIFICATION AND ECOLOGY
3 credits.

Identification, ecological characteristics, ranges, adaptations to environment, and uses of evergreen and deciduous woody plants, with emphasis on species native to Wisconsin; lab and field work.
Requisites: Sophomore standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify all native Wisconsin trees, some common shrubs and vines, and a few important woody exotics by common and scientific name, in summer or winter condition.
Audience: Both Grad & Undergrad

2. Demonstrate a basic understanding of wood structure and use a key to identify blocks of wood.
Audience: Both Grad & Undergrad

3. Recognize the characteristic tree taxa of some of the world's major forest types and some interesting examples of the diversity of trees and their adaptations to their environments.
Audience: Both Grad & Undergrad

4. Compare the morphology, life history, and ecology of woody species to their distribution and habits.
Audience: Both Grad & Undergrad

5. Understand how humans affect the composition, structure and economic value of tree communities and apply this information to questions about management of woody vegetation under changing conditions.
Audience: Both Grad & Undergrad

6. Compare at least two methods for learning to identify a plant species using evidence from your experience in this course.
Audience: Both Grad & Undergrad

7. Construct new materials to teach woody plant ID or tree management issues to a particular target audience.
Audience: Graduate

8. Survey current scientific literature on a particular topic relevant to management of woody vegetation under changing conditions, and summarize current knowledge and knowledge gaps. Recommend next steps in research to improve management.
Audience: Graduate

BOTANY 403 — FIELD COLLECTIONS AND IDENTIFICATION
1-4 credits.

An independent experience in collecting plant specimens, identifying the specimens to species, making labels, and mounting of some specimens.
Requisites: Consent of instructor
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

BOTANY/ANTHRO/ZOOLOGY 410 — EVOLUTIONARY BIOLOGY
3 credits.

Evolutionary biology, emphasizing how modern scientists study evolution. Topics include: nature and mechanisms of microevolution, macroevolution, adaptation, speciation; systematics and taxonomy; quantitative genetics and measurement of natural selection; phylogenetic analyses of behavior, physiology, morphology, biochemistry; current controversies in evolution.
Requisites: ZOOLOGY/BIOLOGY 101, BIOLOGY/BOTANY 130, ZOOLOGY/BIOLOGY/BOTANY 152, BIOCORE 381, (ANTHRO 105 and satisfied QR-A requirement), or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

BOTANY 422 — PLANT GEOGRAPHY
3 credits.

Biogeography of plants. Relationship to climate and geology; paleobiogeography, historical biogeography and island biogeography; history and distribution of floras of North America and Wisconsin.
Requisites: ZOOLOGY/BIOLOGY/BOTANY 151, BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY 101, BIOCORE 381, ENVIR ST/GEOG 120, 127, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

BOTANY/ZOOLOGY 450 — MIDWESTERN ECOLOGICAL ISSUES: A CASE STUDY APPROACH
2 credits.

How ecological principles can be used to address contemporary environmental issues such as water quality, invasive species, and population growth. Emphasis on midwestern issues, practical approaches, the role of history, and geographic context.
Requisites: ZOOLOGY/BIOLOGY/BOTANY 152, BOTANY/BIOLOGY 130, (ZOOLOGY/BIOLOGY 101 and ZOOLOGY/BIOLOGY 102), or BIOCORE 381
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025

BOTANY 455 — THE VEGETATION OF WISCONSIN
4 credits.

Ecology of Wisconsin plant communities: floristic composition, community structure; relationship to history, climate, soil, and geology; response to human perturbation.
Requisites: ZOOLOGY/BIOLOGY/BOTANY 151, BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY 101, BIOCORE 381, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

BOTANY/F&W ECOL/ZOOLOGY 460 — GENERAL ECOLOGY
4 credits.

Ecology of individual organisms, populations, communities, ecosystems, landscapes, and the biosphere. The interaction of organisms with each other and their physical environment. These relationships are studied, often in quantitative terms, in both field and laboratory settings.
Requisites: Satisfied Quantitative Reasoning (QR) A requirement and ZOOLOGY/BIOLOGY/BOTANY 152, (ZOOLOGY/BIOLOGY 101 and 102), BIOCORE 381, or BOTANY/BIOLOGY 130, or graduate/professional standing
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

BOTANY/ENTOM/ZOOLOGY 473 — PLANT-INSECT INTERACTIONS
3 credits.

Multiple ways in which arthropods exploit plants, plant traits that deter or augment insects, environmental mediation of these interactions, effects on population dynamics, community ecology and co-evolution, and implications to natural resource management, environmental quality, and sustainable development.
Requisites: F&W ECOL/BOTANY/ZOOLOGY 460, FW ECOL 500, ENTOM/BOTANY/PL PATH 505, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

BOTANY/AMER IND/ANTHRO 474 — ETHNOBOTANY
3-4 credits.

Study of the interactions between human cultures and plants. Topics include: traditional resource management and agriculture; crop domestication, evolution, and conservation; archaeobotany; indigenous knowledge; folk taxonomy; plants in symbolism and religion; dietary patterns; phytochemistry; global movement of plants and peoples.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Biological Science or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

BOTANY 499 — INTERMEDIATE DIRECTED RESEARCH
1-3 credits.

Explore research questions that facilitate learning in the field of botany through guidance and mentorship in a research environment.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

BOTANY 500 — PLANT PHYSIOLOGY
3-4 credits.

An in-depth look at plant growth, development, respiration, photosynthesis, mineral nutrition, and water relations. Experimental approaches will be used to demonstrate principles described.
Requisites: Satisfied Quantitative Reasoning (QR) A requirement, sophomore standing, and (ZOOLOGY/BIOLOGY/BOTANY 151, BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY 101, or BIOCORE 381), or graduate/professional standing
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

BOTANY/ENTOM/PL PATH 505 — PLANT-MICROBE INTERACTIONS: MOLECULAR AND ECOLOGICAL ASPECTS
3 credits.

Molecular and ecological aspects of the interactions between plants and microorganisms. Explores many of the themes, from genetic to integrative, of modern biology, and illustrates how study of plant-microbe interactions contributes to understanding of fundamental plant science.
Requisites: MICROBIO 303, GENETICS 466, 468, BIOCHEM 501, 508, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

BOTANY/ENVIR ST/F&W ECOL/ZOOLOGY 516 – CONSERVATION BIOLOGY
3 credits.

Investigate the science behind the protection of nature and preservation of biodiversity by focusing on both the biological and socioeconomic factors that underlie the challenges to and the impacts of conservation efforts. Explore the theory, research, and application of biological conservation from an interdisciplinary, international, solutions-focused perspective. Learn about the many threats to Earth's biodiversity but also examine in-depth and apply approaches to overcome them.
Requisites: Satisfied Quantitative Reasoning (QR) A requirement and ZOOLOGY/BIOLOGY/BOTANY 152, BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY 101, BIOCORE 381, or graduate/professional standing
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Distinguish conservation biology from other scientific disciplines and describe its over-arching principles.
Audience: Both Grad & Undergrad

2. Articulate many reasons why the conservation of biological diversity (at many levels) is important.
Audience: Both Grad & Undergrad

3. Quantify biodiversity at the individual, population, and species level by applying various commonly used models and indices.
Audience: Both Grad & Undergrad

4. Explain orally and in writing the principal threats to biodiversity, to both scientific and layperson audiences (habitat loss and fragmentation; industrial agriculture; climate change; overexploitation; invasive species; pollution) and the specific biological effects of these threats.
Audience: Both Grad & Undergrad

5. Outline strategies to implement at the personal, local, and global scales for solving the biodiversity crisis.
Audience: Both Grad & Undergrad

6. Critically analyze, apply, and communicate recommendations for changing personal behaviors to mitigate the biodiversity and climate crises.
Audience: Both Grad & Undergrad

7. Assess the strengths and weaknesses of various conservation strategies or policy approaches.
Audience: Both Grad & Undergrad

8. Synthesize multiple investigations of conservation strategies to assess trade#offs and synergies among them.
Audience: Graduate

9. Make science#based recommendations for the appropriate conservation approach or strategy for a given situation.
Audience: Graduate

10. Manipulate quantitative data using multi-step arguments to evaluate, interpret, and express solutions to problems in biodiversity estimation, population monitoring, and genetics in the context of conservation.
Audience: Both Grad & Undergrad

BOTANY/PL PATH 563 – PHYLOGENETIC ANALYSIS OF MOLECULAR DATA
3 credits.

Theory and practice of phylogenetic inference from DNA sequence data.
Requisites: (ZOOLOGY/BIOLOGY/BOTANY 151, BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY 101, or BIOCORE 381) and (STAT 240, 301, 324, or 371) or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain in details all the steps in the pipeline for phylogenetic inference and how different data and model choices affect the inference outcomes
Audience: Both Grad & Undergrad

2. Plan and produce reproducible scripts with the analysis of real biological data
Audience: Both Grad & Undergrad

3. Justify the data and model choices made for the data analysis
Audience: Both Grad & Undergrad

4. Interpret the results of the most widely used phylogenetic methods in biological terms
Audience: Both Grad & Undergrad

5. Orally present the results of phylogenomic data analyses based on the best scientific and reproducibility practices
Audience: Graduate

BOTANY 575 – SPECIAL TOPICS
1-3 credits.

Topics of interest focusing on specific subjects or groups of organisms of plants, algae, or fungi.
Requisites: (ZOOLOGY/BIOLOGY 101, 102 and BIOLOGY/BOTANY 130), ZOOLOGY/BIOLOGY/BOTANY 152, BIOCORE 381, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

BOTANY/BIOCHEM 621 – PLANT BIOCHEMISTRY
3 credits.

Biochemistry of photosynthesis, respiration, cell walls, and other metabolic and biosynthetic processes in plants.
Requisites: BIOCHEM 501, 507, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain how CO2 and other nutrients are converted to various metabolites in plants through different metabolic pathways
Audience: Both Grad & Undergrad

2. Employ various analytical tools used in the field of plant biochemistry
Audience: Both Grad & Undergrad

3. Apply critical scientific thinking skills (e.g. how to read literature, critically evaluate data, and identify unresolved questions) to support scientific arguments
Audience: Both Grad & Undergrad

4. Synthesize and critically evaluate scientific claims and hypotheses
Audience: Graduate

BOTANY/GENETICS/M M & I/PL PATH 655 – BIOLOGY AND GENETICS OF FUNGI
3 credits.

Fungal genetics, genomics, and physiology using plant pathogenic fungi and the genetic models Aspergillus nidulans and Neurospora crassa as model systems to explore the current knowledge of fungal genetics and plant/fungal interactions.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Demonstrate a basic understanding of fungal biology and genetics
Audience: Graduate

2. Analyze current research topics in fungal genetics/biology
Audience: Graduate

3. Identify members of the fungal research community
Audience: Graduate

4. Write and critique research grants
Audience: Graduate

5. Critique and discuss peer reviewed manuscripts
Audience: Graduate

6. Develop and deliver oral presentations (research paper and own research)
Audience: Graduate

7. Improve communication skills (oral and written)
Audience: Graduate

BOTANY/F&W ECOL/ZOOLOGY 672 – HISTORICAL ECOLOGY
2 credits.

Study the importance of past events for current ecosystems. Emphasizes concepts and applications.
Requisites: Senior standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

BOTANY 681 – SENIOR HONORS THESIS
3 credits.

Individual research for students completing theses for honors in the Botany major as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2024

BOTANY 682 – SENIOR HONORS THESIS
3 credits.

Individual research for students completing theses for honors in the Botany major as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2025

BOTANY 691 – SENIOR THESIS
2-3 credits.

Individual research for students completing theses as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

BOTANY 692 – SENIOR THESIS
2-3 credits.

Individual research for students completing theses as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

BOTANY 698 – DIRECTED STUDY
1-4 credits.

Advanced directed research projects as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2017

BOTANY 699 – DIRECTED STUDY
1-4 credits.

Explore research questions that facilitate learning in the field of botany through guidance and mentorship in a research environment.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

BOTANY/ZOOLOGY 725 – ECOSYSTEM CONCEPTS
3 credits.

Scope and objectives of ecosystem ecology; roles of theory, long-term studies, comparative studies, and large-scale experiments; scaling problems; ecosystem services and ecological economics; adaptive ecosystem assessment and management.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

BOTANY 801 – ADVANCED PLANT COMMUNITY ECOLOGY
4 credits.

Ecological determinants of plant community structure, dynamics, and diversity from an evolutionary perspective. Relations of vegetation types, physiognomy and phenology to plant adaptation and constraints. Gradient analysis, succession, nutrient cycling, plant-herbivore interactions, species richness.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023

BOTANY 802 – PHYSIOLOGICAL PLANT ECOLOGY
3 credits.

Gas exchange at the individual plant and community level, energy balance and water relations, nutrient cycling, biomechanical adaptations; growth analysis; adaptations to sun and shade, primary productivity models, physiological ecology of selected plant communities (arctic/alpine, boreal, chaparral, desert, tropical, aquatic).
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

BOTANY/ENTOM/GENETICS/ZOOLOGY 820 – FOUNDATIONS OF EVOLUTION
2 credits.

Explore some of the most important themes and debates that have permeated evolutionary biology over the last 50 years. Read key papers related to each controversial topic, debate the pros and cons of competing viewpoints, and reflect on the relevance of the issue to contemporary evolutionary biology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

BOTANY/ENTOM/F&W ECOL/ZOOLOGY 821 – FOUNDATIONS OF ECOLOGY
2 credits.

Foundational ideas in the field of ecology. Discussion topics trace the development of ecology as a discipline, and the roots of modern ecological thought, as well as the research approaches in ecology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and describe key debates in the history of ecology and ongoing controversies in the field.
Audience: Graduate

2. Differentiate ecological processes and how they sustain ecological systems.
Audience: Graduate

3. Moderate and participate in discussions about the significance of important ecological concepts.
Audience: Graduate

4. Summarize, interpret, and synthesize conceptual theories of ecology orally and in writing.
Audience: Graduate

5. Evaluate peer work and provide constructive, professional feedback.
Audience: Graduate

BOTANY/BIOCHEM/GENETICS 840 – REGULATORY MECHANISMS IN PLANT DEVELOPMENT
3 credits.

Molecular mechanisms whereby endogenous and environmental regulatory factors control development; emphasis on stimulus perception and primary events in the signal chain leading to modulated gene expression and cellular development.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2020

BOTANY 858 – SPECIAL TOPICS IN PLANT PHYSIOLOGY
1-3 credits.

Topics of interest in the area of Plant Physiology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

BOTANY 860 – PLANT CELL BIOLOGY
2 credits.

Structure/function relationships at the cellular level. Topics include the biogenesis of organelles, vesicle traffic, ion transport and signalling processes, and organization of the cytoskeleton and cell wall.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

BOTANY/ZOOLOGY 879 – ADVANCED LANDSCAPE ECOLOGY
3 credits.

Emphasizes spatial patterning (its development and importance for ecological processes) and often focuses on large regions. Learn concepts, methods, and applications of landscape ecology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

BOTANY/ATM OCN/CIV ENGR/ENVIR ST/GEOSCI/ZOOLOGY 911 – LIMNOLOGY AND MARINE SCIENCE SEMINAR
1 credit.

Sections in various fields of zoological research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

BOTANY/PL PATH 930 – SEMINAR-MYCOLOGY
1 credit.

Topics, recent advances literature in the area of Mycology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

BOTANY 940 – SEMINAR IN PLANT SYSTEMATICS AND EVOLUTION
1 credit.

Topics, recent advances literature in the area of Plant Systematics and Evolution.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

BOTANY 950 – SEMINAR-PLANT ECOLOGY
1 credit.

Topics, recent advances literature in the area of Plant Ecology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

BOTANY/AGROECOL/ATM OCN/ENTOM/ENVIR ST/F&W ECOL/GEOG/ZOOLOGY 953 – INTRODUCTION TO ECOLOGY RESEARCH AT UW-MADISON
1-2 credits.

Introduction to diverse ecological research across the UW-Madison Campus. Discussions on adapting to graduate school and graduate-level ecological research, key topics in professional development, and research presentations by faculty members.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop an appreciation for the foundations and legacy of ecology research and conservation science at UW-Madison
Audience: Graduate

2. Recognize the diversity and strength of current research in ecology at UW-Madison
Audience: Graduate

3. Differentiate expectations between undergraduate education and those of independent research for graduate degrees in ecology
Audience: Graduate

4. Develop appropriate expectations for advisors and advisees
Audience: Graduate

5. Reason through hypothetical ethical challenges and identify potential solutions based on professional codes of ethics
Audience: Graduate

6. Develop an understanding of the suite of skills associated with success in graduate school and in science
Audience: Graduate

BOTANY 960 – SEMINAR-PLANT PHYSIOLOGY
1 credit.

Topics, recent advances literature in the area of Plant Physiology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

BOTANY/ATM OCN/ENVIR ST/F&W ECOL/GEOG/GEOSCI/ZOOLOGY 980 – EARTH SYSTEM SCIENCE SEMINAR
1 credit.

Topics in earth system science. Emphasis on the coupling between atmospheric, oceanic and land surface systems, involving physical geochemical and biological processes, and including interactions with human systems.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

BOTANY 990 – RESEARCH-PHYCOLOGY
1-12 credits.

Independent research in the area of Phycology.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2019

BOTANY 993 – RESEARCH: FUNGAL BIOLOGY
1-12 credits.

Independent research in the area of Fungal Biology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

BOTANY 994 – RESEARCH-PLANT SYSTEMATICS
1-12 credits.

Independent research in the area of Plant Systematics.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

BOTANY 995 – RESEARCH-PLANT ECOLOGY
1-12 credits.

Independent research in the area of Plant Ecology.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

BOTANY 996 – RESEARCH-PLANT PHYSIOLOGY
1-12 credits.

Independent research in the area of Plant Physiology.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

BOTANY 999 – INDEPENDENT WORK
1-3 credits.

Mentored reading and research for dissertators.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2011

CELL AND REGENERATIVE BIOLOGY (CRB)

CRB/MED HIST 615 – REGENERATIVE MEDICINE ETHICS AND SOCIETY
3 credits.

Study of regenerative medicine and stem cell research within social, ethical and political contexts.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand current and past legal, political and social issues related to regenerative medicine. This includes laws and regulations, but also an understanding of clinical ethics issues, translational research and commercialization, and emerging, novel techniques requiring careful ethical consideration.
Audience: Both Grad & Undergrad

2. Understand more about relations of science, the state, and public, particularly around controversial or novel innovations and will learn how best to address emerging controversies and public concerns ethically in their professional careers.
Audience: Both Grad & Undergrad

3. Learn the guidelines for the responsible conduct of research for stem cell science, where to access regulatory and oversight documents, and how to apply for research protocols with ethics oversight.
Audience: Both Grad & Undergrad

4. Gain analytical skills for addressing policy, legal and social issues through research and writing exercises. Analytical and professional presentation skills will also be learned through classroom interactions and discussion.
Audience: Graduate

CRB 625 – STEM CELL SEMINAR
1 credit.

Examines various special topics in stem cell and regenerative medicine research.
Requisites: Junior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Appreciate the broad range of stem cell and regenerative medicine research and potential clinical applications
Audience: Both Grad & Undergrad

2. Critically consider the current state of specific regenerative medicine applications
Audience: Both Grad & Undergrad

3. Evaluate the ethical and public policy questions that stem cell research raises
Audience: Both Grad & Undergrad

4. Identify and describe potential clinical applications of current stem cell and regenerative medicine research
Audience: Undergraduate

5. Apply the knowledge gained on current themes in stem cell and regenerative medicine to research in the field
Audience: Graduate

CRB 630 – PROTEOMICS APPROACHES FOR BIOLOGISTS
2 credits.

Proteomics and metabolomics are playing an increasingly important role in biology and medicine. Many biology labs are now starting to use proteomics and metabolomics in their research projects. Includes the essential fundamentals and applications in mass spectrometry-based proteomics and metabolomics to address biological/medical problems. Design of proteomics/metabolomics experiments, troubleshooting, and proper interpretation of the results.
Requisites: BIOCHEM 501, 507, or graduate/professional standing
Repeatable for Credit: No
Last Taught: Fall 2024

CRB 640 – FUNDAMENTALS OF STEM CELL AND REGENERATIVE BIOLOGY
3 credits.

Provides a foundation to understand fundamental biological, mechanistic, and experimental concepts in the field of stem cell and regenerative biology.
Requisites: BIOCORE 383, BIOCHEM 501, BIOCHEM 507, GENETICS 466, GENETICS 467, ZOOLOGY 570, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify the characteristics of embryonic stem cells, induced pluripotent stem cells, and adult stem cells from cardiac, blood, neural, endodermal, and vascular tissues
Audience: Both Grad & Undergrad

2. Identify experimental technologies used to investigate stem cells
Audience: Both Grad & Undergrad

3. Present scientific articles assigned by the instructor
Audience: Both Grad & Undergrad

4. Moderate a scientific discussion among their peers
Audience: Both Grad & Undergrad

5. Critique and discuss scientific articles
Audience: Both Grad & Undergrad

6. Formulate hypotheses and propose experiments as future directions that could follow from the discussed articles
Audience: Graduate

CRB 650 – MOLECULAR AND CELLULAR ORGANOGENESIS
3 credits.

Covers the most current knowledge of the principles of organogenesis. Focuses on the molecular and cellular pathways leading to normal tissue and organ development and regeneration, including in depth discussions of specification and differentiation processes.
Requisites: (ZOOLOGY/BIOLOGY/BOTANY 151 or BIOCORE 383) and junior standing, or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe common biological principles of organogenesis and unique pathways for different organs
Audience: Both Grad & Undergrad

2. Describe current experimental technologies used to investigate organogenesis
Audience: Both Grad & Undergrad

3. Critically read, discuss, and summarize scientific articles
Audience: Both Grad & Undergrad

4. Recognize and restate the hypothesis underlying a research article
Audience: Both Grad & Undergrad

5. Give a formal scientific presentation
Audience: Both Grad & Undergrad

6. Identify strengths and weaknesses of different experimental approaches
Audience: Graduate

7. Propose future experimental directions based on data presented
Audience: Graduate

CRB/B M E 670 – BIOLOGY OF HEART DISEASE AND REGENERATION
3 credits.

Presents diverse topics in contemporary heart biology to facilitate understanding of biological, mechanistic, and experimental concepts of cardiac physiology, disease, and regeneration. Learn cellular and molecular mechanisms underlying heart physiology, function, disease and regenerative ability in various model systems. Includes thinking critically about methodology, experimental design and interpretation, and how conclusions are reached in heart biology through cutting-edge literature.
Requisites: (ZOOLOGY/BIOLOGY/BOTANY 151 and BIOCHEM 501) or graduate/professional standing.
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Gain knowledge of cardiovascular physiology and biology, use of genetic model organisms, stem cell biology and regenerative medicine (didactic portion of course; attendance, and exams).
Audience: Both Grad & Undergrad

2. Understand the main themes of heart biology by reading and discussing state-of-the-art literature (journal reviews; evaluated by lecturer for each journal review session).
Audience: Both Grad & Undergrad

3. Develop ability to critically evaluate published scientific research in the cardiovascular field by discussing with peers and instructors.
Audience: Both Grad & Undergrad

4. Analyze scientific data and methodology employed in the field of heart biology.
Audience: Graduate

5. Develop ability to create an experimental design for different types of heart biology research (such as hypothesis, methodology or phenomenon driven studies).
Audience: Graduate

6. Understand the current challenges for developing therapeutic strategies for heart disease and regeneration and propose feasible approaches to resolve these challenges.
Audience: Graduate

7. Understand the concepts of techniques and methods that are currently used for cardiac biology research.
Audience: Undergraduate

8. Describe the challenges for developing therapeutic strategies for heart disease and regeneration.
Audience: Undergraduate

CRB 675 – TOPICS IN CELL AND REGENERATIVE BIOLOGY
1-3 credits.

Examines various special topics in Cell and Regenerative Biology.
Requisites: (ZOOLOGY/BIOLOGY 101 and 102) or BOTANY/BIOLOGY 130 or (ZOOLOGY/BIOLOGY/BOTANY 151 and 152) or BIOCORE 383; or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2021
Learning Outcomes: 1. Apply, analyze, or evaluate advanced theories, concepts, or methods in cell and regenerative biology
Audience: Both Grad & Undergrad

2. Identify and describe key theories, concepts, and methods in cell and regenerative biology
Audience: Both Grad & Undergrad

3. Explore a new phenomenon or modality in cell and regenerative biology and apply the knowledge gained to research in the field
Audience: Graduate

CRB 699 – INDEPENDENT STUDY
1-4 credits.

One-on-one learning experience allowing undergraduates to work with a faculty adviser to develop research projects and skills.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply concepts learned in coursework to real life situations and settings
Audience: Undergraduate

2. Read, understand, and effectively search scientific literature
Audience: Undergraduate

3. Develop critical, analytical, and independent thinking skills
Audience: Undergraduate

CRB/MEDICINE 701 – CELL SIGNALING AND HUMAN DISEASE
1 credit.

Landmark discoveries, as well as current knowledge and controversies in human health, with an emphasis on cancer biology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Critically evaluate the primary literature underlying medical knowledge.
Audience: Graduate

2. Practice presentation and leading discussion of primary literature.
Audience: Graduate

3. Read the basic evidence underlying landmark discoveries and controversies in cancer biology.
Audience: Graduate

4. Understand how grant proposals are written and evaluated.
Audience: Graduate

CRB/GENETICS 710 – DEVELOPMENTAL GENETICS
3 credits.

Covers a broad range of topics in animal development, with an emphasis on molecular mechanisms. Focuses on common themes, with the goal of understanding and analyzing current research in developmental biology and genetics.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Ability to critically evaluate published scientific work (journal reviews).
Audience: Graduate

2. Ability to communicate critical evaluations professionally and articulately (lecturer and TA feedback at each session).
Audience: Graduate

3. Develop deep knowledge of developmental biology, use of genetic model organisms, stem cell biology and regenerative medicine (didactic portion of course).
Audience: Graduate

4. Improved presentation skills (each student has a scheduled presentation four times during the semester in addition to ad hoc participation).
Audience: Graduate

5. Skills in providing feedback to peers (through student evaluations peer presentations each class period).
Audience: Graduate

CRB 720 – EXPERIMENTAL APPROACHES TO DEVELOPMENT AND ORGANOGENESIS: METHODS, TECHNIQUES, AND INSIGHTS
3 credits.

Covers the most current knowledge of the principles of development and organogenesis with a particular focus on novel experimental and analytical approaches (microscopy, single cell multi-omics, bioinformatics). Focuses on the molecular and cellular pathways leading to normal tissue and organ development and regeneration, including in depth discussions of specification and differentiation processes.
Requisites: GENETICS/CRB 710, not open to students with credit for CRB 650
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Describe common biological principles of organogenesis and unique pathways for different organs
Audience: Graduate

2. Describe current experimental technologies used to investigate organogenesis
Audience: Graduate

3. Critically read, discuss, and summarize scientific articles
Audience: Graduate

4. Recognize and restate the hypothesis underlying a research article
Audience: Graduate

5. Give a formal scientific presentation
Audience: Graduate

6. Identify strengths and weaknesses of different experimental approaches
Audience: Graduate

7. Propose future experimental directions based on data presented
Audience: Graduate

CRB 810 – MOUSE GENETICS AND EMBRYONIC STEM CELLS: LAB IMMERSION AND UNDERSTANDING CURRENT LITERATURE
2 credits.

Clinically relevant methods of scientific thought, inquiry and analysis via the presentation of specific research topics. Emerging concepts in developmental genetics and embryonic stem (ES) cell biology are used as a means of introducing the participants to the critical importance of identifying the "right" question, selecting the "best" tools to answer the question, using the appropriate logic to interpret experimental results and finally, constructing appropriate conclusions. Application of the literature of mouse genetics and laboratory research to biomedical health decisions. Strong emphasis on the tools used in the research literature and to 'get your hands dirty' learning the basics of the laboratory techniques involved.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Demonstrate competencies in design and interpretation of mouse genetic experiments from literature.
Audience: Graduate

2. Demonstrate competencies in techniques in early embryonic stem cell fate decisions.
Audience: Graduate

3. Successful performance of basic wet lab techniques related to mouse genetic experiments
Audience: Graduate

4. Successful performance of embryonic stem cell culture derivation and differentiation.
Audience: Graduate

CRB 830 – EARLY DRUG DISCOVERY
4 credits.

Provides an overview of the early drug discovery process, including target identification and validation, generation of diverse chemical libraries, assay development and high throughput screening, lead optimization by compound profiling, and drug targeting and delivery.
Requisites: Declared in the Biotechnology graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Outline the early drug discovery process, from target identification up to nonclinical trials.
Audience: Graduate

2. Develop a scientific understanding of mechanisms of one or more disease processes.
Audience: Graduate

3. Identify a disease target and explain how modulation of that target could treat or prevent a disease.
Audience: Graduate

4. Describe current and emerging methods for generating compound diversity in chemical libraries, natural products, and antibodies,including molecular modeling and structure-based drug design.
Audience: Graduate

5. Be able to research a technology used in drug discovery, understand the unmet need it addresses, and summarize the key information in a clear and concise way, both verbally and in a written format.
Audience: Graduate

CRB 834 – MOLECULAR TECHNOLOGIES III
2 credits.

Covers topics and concepts in the drug discovery process, with emphasis on laboratory assays and methods used in primary, secondary, and in vitro ADMETox (Absorption, Distribution, Metabolism, Excretion, Toxicity) drug screening. In addition, students build communication and critical thinking skills while working on team projects and analyzing scientific results.
Requisites: Declared in the Biotechnology graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Employ effective scientific communication methods demonstrating knowledge and skills when: writing scientific papers; preparing detailed scientific protocols, critiquing scientific journal articles in the area of ADMET and drug discovery, and organizing and presenting detailed scientific presentations.
Audience: Graduate

2. Investigate how protein kinase and cytochrome P450 enzyme assay technology are used in the drug discovery process.
Audience: Graduate

3. Perform and evaluate multiple assays using a variety of technologies including, but not limited to: Cytochrome P450 enzyme and TR-FRET kinase assay technologies, cell culture techniques, and genome editing and CRISPR/Cas-9.
Audience: Graduate

4. Evaluate multiple assay methods for efficiency by measuring viability, toxicity, permeability, and ion channel activity.
Audience: Graduate

5. Compare the following roles in biotechnology and the drug discovery processes for fluorescent microscopy, high content screening, and in vivo imaging.
Audience: Graduate

6. Analyze and summarize data and quality control measures for assays as they relate to biotechnology and drug discovery, which will facilitate critical thinking.
Audience: Graduate

CRB 841 – BUSINESS OF BIOTECHNOLOGY: CONTEMPORARY CHALLENGES AND APPLICATIONS
2 credits.

Presents contemporary issues in the business of biotechnology where students apply concepts critical to the success of modern biotechnology firms. Topics focus on modern problem-solving, including issues relating to leadership and management, product development and negotiation and licensing.
Requisites: Declared in the Biotechnology graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize and appreciate risks and challenges associated with commercialization of early-stage research and innovation.
Audience: Graduate

2. Determine those elements that make up a viable business opportunity.
Audience: Graduate

3. Recognize strengths and limitations of a variety of business models.
Audience: Graduate

CRB 842 – BUSINESS OF BIOTECHNOLOGY: SUSTAINING GROWTH
3 credits.

Examine how companies gain and sustain competitive advantages.
Requisites: Declared in the Biotechnology graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze industry forces and environmental trends to assess industry potential.
Audience: Graduate

2. Assess company's resources for potential to generate a competitive advantage.
Audience: Graduate

3. Identify opportunities and strategies to add or supplement capabilities.
Audience: Graduate

4. Understand the challenges and opportunities of creating value through a global strategy.
Audience: Graduate

5. Explain how companies might add value across diverse lines of business through knowledge of R&D strategic management.
Audience: Graduate

6. Understand how to apply negotiation and management skills to guide strategic change efforts.
Audience: Graduate

7. Apply tools learned across curriculum, including quantitative and qualitative analysis.
Audience: Graduate

CRB 844 – ADVANCED BIOTECHNOLOGY: GLOBAL PERSPECTIVES
3 credits.

Focuses on state-of-the-art topics of global importance in biotechnology. Skills and knowledge from previous courses are integrated and applied to achieve a new level of synthesis and depth of understanding about important programs in biotechnology today. Deepen technical understanding of novel technologies and broaden awareness of ethical and regulatory issues in biotechnology globally. Increase awareness of opportunities for intellectual collaboration and entrepreneurship.
Requisites: Declared in the Biotechnology graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify, research, and devise a final research topic with both faculty and peer input, from numerous perspectives (science, business, law, regulatory, ethical, and political)
Audience: Graduate

2. Summarize and communicate an assigned special topic in global biotechnology, including stem cell applications, healthcare innovations, biomanufacturing issues, or metagenomic and microbiome analysis.
Audience: Graduate

3. Demonstrate effective written and oral communication through a variety of formats and to a variety of audiences.
Audience: Graduate

4. Develop effective strategies for researching different biotechnologies in depth and critical analysis, using a variety of sources.
Audience: Graduate

CRB 845 – PROFESSIONAL DEVELOPMENT AND EFFECTIVE MANAGEMENT

1 credit.

Focus on effective management and career development. Learn and practice the applied skills needed for effective managers that lead to synergistic team success within a biotechnology company. Different communication styles will be explored that are used to engage and assess employees. Professional development will be explored to expand career pathways through networking and by generating professional resumes and interviewing skills.
Requisites: Declared in Biotechnology MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze skills required to influence, prioritize, and set goals in a biotechnology company.
Audience: Graduate

2. Evaluate team culture in terms of what really matters to enable results and provide psychological safety.
Audience: Graduate

3. Create situational, behavioral, and impact driven feedback strategies so that both the employee and manager are successful.
Audience: Graduate

4. Explore the differences between managing and coaching the team through case studies and scenarios.
Audience: Graduate

5. Generate a career development plan that includes effective resumes, cover letters, networking, and employment research skills.
Audience: Graduate

CRB 846 – BIOTECHNOLOGY CAPSTONE

1 credit.

Goal is to identify a global biotechnology problem, find a technical solution, and analyze all aspects from a business, regulatory, and scientific perspective.
Requisites: Declared in Biotechnology MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify an important global biotechnology-based problem and define a novel biotechnology-based solution to address it.
Audience: Graduate

2. Analyze the economic logic of the global biotechnology problem and solution. Consider customers, market, pricing, and competitors.
Audience: Graduate

3. Provide insightful business and technical questions to research including finding effective resources and subject matter experts.
Audience: Graduate

4. Discuss the global/international technical and business considerations using information and tools covered in previous courses in the MS in Biotechnology Program.
Audience: Graduate

5. Identify a company to implement your proposed solution to augment the company's current portfolio.
Audience: Graduate

6. Identify key regulatory, intellectual property, manufacturing, social, or political issues that could impact the success of the solution.
Audience: Graduate

7. Critique both technical and business considerations in a clear, concise, and logical manner to make credible technical and business solutions and recommendations.
Audience: Graduate

CRB 850 – FUNDAMENTALS OF STEM CELL AND REGENERATIVE BIOLOGY

1 credit.

Gain in-depth knowledge of the fundamentals of stem cell and regenerative biology. This knowledge forms the basis for novel translational research and both diagnostic and therapeutic options. Topics to be covered include the origins of embryonic stem cells (ESCs) and induced pluripotent stem cells (iPSCs) and how they are being used for both research and for clinical applications. Read, discuss, and present cutting-edge literature on how iPSCs are being used to model a variety of human diseases and how stem cell therapies are being used to treat autoimmune disorders such as Lupus Erythematosus, Multiple Sclerosis, and Crohn's disease. Participate in the Stem Cell and Regenerative Medicine Center weekly seminar, and hear from top UW researchers about how they are using stem cells to develop therapies for bone and vascular repair.

Requisites: MED SC-M 810, 811, 812, and 813

Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement

Repeatable for Credit: No

Learning Outcomes: 1. Describe the fundamentals of stem cell biology, including the derivation of embryonic and induced pluripotent stem cells
Audience: Graduate

2. Describe the ethical considerations for using stem cells in research
Audience: Graduate

3. Describe the ethical considerations for using stem cells in the clinic
Audience: Graduate

4. Discuss how induced pluripotent stem cells can be used to model human diseases
Audience: Graduate

5. Discuss translational approaches to use of stem cells for bone and vascular regeneration
Audience: Graduate

6. Discuss the current status of stem cell transplantation for treatment of autoimmune disorders
Audience: Graduate

CRB 860 – THE BEAT GOES ON: GENERATION AND REGENERATION OF THE HEART

2 credits.

The molecular and cellular development of the heart and of its regenerative potential. This knowledge forms the basis for novel translational research and both diagnostic and therapeutic options. Topics to be covered include the genetics underlying normal heart development as well as cardiac tissue specification and differentiation with a focus on molecular signals, associated signal transduction pathways, and transcriptional regulation. Read, discuss, and present cutting-edge literature on the genetic contributions to congenital heart defects and adult heart disease and on cardiac stem cells and the regenerative capacity of the heart. Participate in Adult and Pediatric Cardiology Grand Rounds, the Madison Perinatology Conference, learn about cutting-edge molecular diagnostics for fetal, pediatric and adult cardiac disease, and learn when and how to perform an adult echocardiogram.

Requisites: MED SC-M 810, 811, 812, and 813

Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement

Repeatable for Credit: No

Learning Outcomes: 1. Describe the fundamentals of cardiac development, including the transcription factors and signaling pathways that regulate normal cardiac morphogenesis
Audience: Graduate

2. Describe the genetic factors underlying normal and pathological cardiac development
Audience: Graduate

3. Provide examples of fetal, neonatal and adult cardiac defects that have genetic etiologies
Audience: Graduate

4. Discuss animal models and tissue-engineering systems used to investigate cardiac developmen
Audience: Graduate

5. Discuss the current status of cardiac regeneration using stem cells and resident cardiac cells
Audience: Graduate

6. Describe state of the art molecular and imaging tools used to diagnose cardiac defects
Audience: Graduate

7. Explain when each of these tools should be applied
Audience: Graduate

CRB 990 – RESEARCH AND THESIS
1-9 credits.

Research and Thesis.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Exhibit a broad understanding of general cell and regenerative biology principles.
Audience: Graduate

2. Conduct independent research using a variety of approaches.
Audience: Graduate

3. Think critically to address research challenges.
Audience: Graduate

4. Exhibit and foster professional and ethical conduct in their research.
Audience: Graduate

5. Collaborate with other investigators within or outside the thesis lab.
Audience: Graduate

CHEMICAL AND BIOLOGICAL ENGINEERING (CBE)

CBE 1 – COOPERATIVE EDUCATION PROGRAM
1 credit.

Work experience which combines classroom theory with practical knowledge of operations to provide students with a background upon which to base a professional career.
Requisites: Sophomore standing
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and respond appropriately to real-life engineering ethics cases relevant to co-op work
Audience: Undergraduate

2. Synthesize and apply appropriate technical education to real world technical work
Audience: Undergraduate

3. Communicate effectively in writing and speaking with a range of audiences in the workplace, including those without disciplinary expertise
Audience: Undergraduate

4. Develop professional and transferable habits like time management skills, collaborative problem-solving skills, and research skills for learning new information
Audience: Undergraduate

CBE 150 – INTRODUCTION TO CHEMICAL ENGINEERING
1 credit.

Overview of the field of chemical engineering, including types of careers, industries, and skills required for successful completion of the degree and entry into the chemical engineering profession.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. describe industries and career paths available to B.S. chemical engineers
Audience: Undergraduate

2. describe skills required for successful completion of the chemical engineering degree program, and entry into the chemical engineering profession
Audience: Undergraduate

CBE 250 – PROCESS SYNTHESIS
3 credits.

An introduction to the invention of processes for the large scale, low cost processing of materials such as water, chemicals, petroleum products, food, drugs and wastes.
Requisites: CHEM 116, 329, or concurrent enrollment
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Create and interpret simplified chemical process flowsheets
Audience: Undergraduate

2. Apply mass and energy balances to chemical processes and unit operations
Audience: Undergraduate

3. Use phase equilibrium data and equations to calculate performance of simple separation processes
Audience: Undergraduate

4. Use reaction equilibrium concepts to calculate the performance of simple chemical reactors
Audience: Undergraduate

CBE 255 – INTRODUCTION TO CHEMICAL PROCESS MODELING
3 credits.

Introduction to modeling of chemical processes and introduction to using modern computational tools to analyze the models.
Requisites: (CBE 250 or concurrent enrollment) and (MATH 319, 320, 376, or concurrent enrollment)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use modern computational software for numerical problem solving
Audience: Undergraduate

2. Explain concepts for numerical problem-solving strategies including logic statements and DO loops
Audience: Undergraduate

3. Use programming tools to solve systems of equations relevant to chemical engineering
Audience: Undergraduate

CBE 310 – CHEMICAL PROCESS THERMODYNAMICS
3 credits.

Introduction to thermodynamics, energy balances, applications to steady state and unsteady state processes, behavior of pure fluids, chemical reaction equilibria.
Requisites: (MATH 234 or 376), (PHYSICS 201, 207, 247, E M A 202 or M E 240), CBE 250, and (CBE 255 or concurrent enrollment), or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the relationship between heat and work through the first law of thermodynamics
Audience: Undergraduate

2. Determine limitations imposed by the second law of thermodynamics on the conversion of heat to work
Audience: Undergraduate

3. Describe the definitions and relationships among the thermodynamic properties of pure materials, such as internal energy, enthalpy, and entropy

Audience: Undergraduate

4. Obtain or estimate the thermal and volumetric properties of real fluids
Audience: Undergraduate

5. Employ energy balances in the analysis of batch, flow, and cyclical processes, including power cycles and refrigeration
Audience: Undergraduate

CBE 311 – THERMODYNAMICS OF MIXTURES
3 credits.

Properties of ideal and non-ideal vapors and liquids, ideal and non-ideal multicomponent vapor-liquid and liquid-liquid equilibria, complex chemical reaction equilibria, electrolytic solutions, surface thermodynamics, solid phase thermodynamics.
Requisites: CBE 310
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the terminology, theory and models that describe multicomponent, multiphase systems at equilibrium
Audience: Undergraduate

2. Explain the terminology, theory and models that describe chemical reacting systems at equilibrium
Audience: Undergraduate

3. Apply chemical thermodynamic principles to describe, analyze data, and predict properties of multicomponent systems at phase and/or chemical reaction equilibrium
Audience: Undergraduate

CBE 320 – INTRODUCTORY TRANSPORT PHENOMENA
4 credits.

Mass, momentum, and energy transport; calculation of transport coefficients; solution to problems in viscous flow, heat conduction, and diffusion; dimensional analysis; mass, momentum, and heat transfer coefficients; over-all balances; elementary applications.
Requisites: (PHYSICS 201, 207, 247, or E M A 201) and (MATH 319, 320 or 376), or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Setup and solve shell balances for conservation of momentum, energy, and mass
Audience: Undergraduate

2. Reduce and solve the appropriate equations of change to obtain desired profiles for velocity, temperature and concentration
Audience: Undergraduate

3. Reduce and solve appropriate macroscopic balances for conservation of momentum, energy and mass
Audience: Undergraduate

4. Utilize information obtained from solutions of the balance equations to obtain engineering quantities of interest
Audience: Undergraduate

CBE 324 – TRANSPORT PHENOMENA LAB
3 credits.

Determination of thermodynamic properties, transport properties, and transfer coefficients; study of related phenomena.
Requisites: CBE 310, (CBE 320 or concurrent registration), and STAT 324
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Conduct laboratory experiments using engineering lab practices
Audience: Undergraduate

2. Communicate experimental results through written and visual methods
Audience: Undergraduate

3. Apply macroscopic balances of mass, energy, and chemical species to analyze experimental data
Audience: Undergraduate

4. Design experiments for measuring transport properties
Audience: Undergraduate

CBE 326 – MOMENTUM AND HEAT TRANSFER OPERATIONS
3 credits.

Analysis of chemical engineering operations involving fluid flow and heat transfer. Flow of fluids through ducts and porous media; motion of particulate matter in fluids; general design and operation of fluid-flow equipment. Conductive, convective and radiative heat exchange with and without phase change; general design and operation of heat-exchange equipment.
Requisites: (CBE 310 and 320) or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply thermodynamics and transport phenomena to analyze and design process equipment used for fluid transport and heat transfer
Audience: Undergraduate

2. Explain the theory and design equations that describe common process equipment used for fluid transport and heat transfer
Audience: Undergraduate

CBE 355 – STATISTICS FOR CHEMICAL ENGINEERS
3 credits.

Concepts and techniques from statistics, data science, and machine learning applied to problems in chemical engineering. Random variables, estimation, statistical data analysis and learning, and decision-making under uncertainty.
Requisites: (MATH 234 or 375) and CBE 255
Repeatable for Credit: No
Learning Outcomes: 1. Identify, formulate, and solve chemical engineering problems by applying principles and methods of statistics, data science, and machine learning
Audience: Undergraduate

2. Use principles of statistics, data science, and machine learning to analyze chemical engineering data, to develop models from data, to quantify uncertainty, and to make decisions under uncertainty
Audience: Undergraduate

CBE 424 – OPERATIONS AND PROCESS LABORATORY
5 credits.

Experiments in unit operations, and supervised individual assignments selected from areas such as: fluid dynamics, analytical methods, reaction kinetics, plastics technology, and use of computers in data processing and simulation.
Requisites: CBE 324, 326, 426, and 430
Course Designation: Gen Ed - Communication Part B
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Demonstrate knowledge of operation of common chemical engineering process equipment by conducting experiments on pilot-scale apparatus and analyzing data
Audience: Undergraduate

2. Take a novel project assignment, define an investigation, design and construct experimental apparatus, collect and analyze data, and present conclusions and recommendations in oral or written formats
Audience: Undergraduate

CBE 426 – MASS TRANSFER OPERATIONS
3 credits.

Analysis of chemical engineering operations involving mass transfer. Differential and stagewise separation processes; simultaneous heat and mass transfer; mass transfer accompanied by chemical reaction; general design and operation of mass-transfer equipment.
Requisites: CBE 311 and 320
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe major chemical process separations units
Audience: Undergraduate

2. Apply appropriate criteria for selecting among alternative separation technologies
Audience: Undergraduate

3. Complete design calculations for equilibrium staged separation processes (e.g., distillation, absorption)
Audience: Undergraduate

4. Complete design calculations for differential contactors
Audience: Undergraduate

5. Apply mass transfer fundamentals to calculate rates of mass transfer for practical situations and to identify rate-limiting processes
Audience: Undergraduate

CBE 430 – CHEMICAL KINETICS AND REACTOR DESIGN
3 credits.

Analysis and interpretation of kinetic data and catalytic phenomena; application of basic engineering principles to chemical reactor design.
Requisites: CBE 311 and 320
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze kinetic data and determine rate laws
Audience: Undergraduate

2. Apply ideal reactor models to solve mass and energy balances for chemical reactors
Audience: Undergraduate

3. Analyze the performance of reactors in which multiple reactions are occurring
Audience: Undergraduate

4. Analyze non-ideal flow conditions in reactors and utilize simple models to characterize the performance of such reactors
Audience: Undergraduate

5. Analyze data for heterogeneous catalytic reactions and employ the results of such analyses in designing simple reactors
Audience: Undergraduate

CBE 440 – CHEMICAL ENGINEERING MATERIALS
3 credits.

Structure and properties of metallic and nonmetallic materials of construction; interrelations between chemical bonding, structure, and behavior of materials.
Requisites: CBE 310 and CHEM 345, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe how atomic-level composition, structure, and chemical bonding determine macroscopic properties of a material
Audience: Undergraduate

2. Explain the differences in functional properties among classes of materials
Audience: Undergraduate

3. Interpret the results of common materials characterization techniques
Audience: Undergraduate

4. Analyze phase diagrams and explain effects of processing conditions on material properties
Audience: Undergraduate

CBE 450 – PROCESS DESIGN
3 credits.

Analysis and design of chemical processing systems and equipment.
Requisites: CBE 326, 426, and 430
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate integrated application of chemical engineering knowledge acquired in prior courses
Audience: Undergraduate

2. Solve a complex engineering design problem using modern computational tools
Audience: Undergraduate

3. Perform an economic evaluation of a chemical process and capital projects
Audience: Undergraduate

4. Use professional conventions and formats for representing engineering results
Audience: Undergraduate

CBE 470 – PROCESS DYNAMICS AND CONTROL
3 credits.

A systematic introduction to dynamic behavior and automatic control of industrial processes; lab includes instrumentation, measurement and control of process variables by using conventional hardware and real-time digital computers.
Requisites: CBE 326 and (CBE 430 or concurrent enrollment)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify, formulate, and solve linear chemical process dynamics problems
Audience: Undergraduate

2. Use techniques, skills, and modern engineering tools necessary for the practice of chemical engineering
Audience: Undergraduate

3. Design and conduct laboratory experiments, as well as analyze and interpret data, in particular to determine the efficacy of control designs
Audience: Undergraduate

4. Design a control system to meet desired needs for a given process
Audience: Undergraduate

5. Communicate effectively, through laboratory experiences
Audience: Undergraduate

CBE 489 – HONORS IN RESEARCH
1-3 credits.

Undergraduate honors research projects supervised by faculty members. Declared in Chemical Engineering Honors in Research Program
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

CBE/CHEM 505 – ASPECTS OF INDUSTRIAL CHEMISTRY AND BUSINESS FUNDAMENTALS
3 credits.

Learn the chemistry and chemical engineering that defines societies' standard of living. Commercial chemical processes will be reviewed. Practical realities of how a discovery moves from research to commercial product will be taught through examples and case studies. Financial concepts that guide investment will be reviewed.
Requisites: Junior standing and CHEM 345, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the most important value-chains in the chemical industry
Audience: Undergraduate

2. Connect the fundamental chemistry and chemical engineering principles learned in other courses with real-world applications
Audience: Undergraduate

3. Evaluate how laboratory discoveries can be legally protected and successfully commercialized
Audience: Undergraduate

4. Assess and compare alternative technologies against current state-of-the-art technologies
Audience: Undergraduate

CBE 512 – ENERGY TECHNOLOGIES AND SUSTAINABILITY
3 credits.

Chemical engineering principles of material and energy balances, chemical process design, and chemical engineering economics are used to analyze a wide variety of energy systems and their impact on the economy, the environment, society, and the chemical process industry.
Requisites: CBE 310, CIV ENGR 324, M E 361, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Describe present and future technologies for energy production and use
Audience: Both Grad & Undergrad

2. Use mass and energy balances to evaluate energy options, understand historical progression and development of energy sources
Audience: Both Grad & Undergrad

3. Evaluate technical issues, scale, and economic practicality of energy alternatives
Audience: Both Grad & Undergrad

4. Critique popular media descriptions with quantitative, factual analyses
Audience: Both Grad & Undergrad

5. Propose research to improve existing energy technologies
Audience: Graduate

CBE 535 – HETEROGENEOUS CATALYSIS: PRINCIPLES AND APPLICATIONS
3 credits.

Discusses catalytic phenomena, with extensions to reactor design and catalyst characterization. Examples will be drawn from current problems in catalysis.
Requisites: CBE 430, graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Describe catalytic phenomena
Audience: Undergraduate

2. Describe catalytic design
Audience: Undergraduate

3. Explain methods of catalyst characterization
Audience: Undergraduate

CBE 538 – PROCESSES FOR THE PRODUCTION OF RENEWABLE FUELS AND CHEMICALS FROM BIOMASS
3 credits.

Various options for conversion of biomass into fuels and chemicals. Evaluation of different biofuel technologies from a chemical engineering perspective, and a holistic overview of the current technical, legal, business, and financial challenges, and opportunities for the production of fuels and chemicals from biomass. Several case studies on biomass conversion provide an overview of how technology is developed.
Requisites: CBE 250 and 310, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand processes and process flowsheets for chemical processes for converting biomass to fuels and chemicals
Audience: Both Grad & Undergrad

2. Describe and utilize the chemical engineering tools for designing the processes including material balances, energy balances, and economic models
Audience: Both Grad & Undergrad

3. Create quantitative reactor models of a process for converting biomass to fuels and chemicals
Audience: Graduate

CBE 540 – POLYMER SCIENCE AND TECHNOLOGY
3 credits.

Synthesis, properties, and fabrication of plastic materials of industrial importance.
Requisites: CHEM 345, graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain factors that influence the synthesis and structure of polymers
Audience: Undergraduate

2. Describe methods used to analyze and characterize polymer properties
Audience: Undergraduate

3. Describe the breadth of polymer properties and applications
Audience: Undergraduate

4. Explain in depth the use of polymers in a particular application area
Audience: Undergraduate

CBE 547 – INTRODUCTION TO COLLOID AND INTERFACE SCIENCE
3 credits.

Introduction to topics in colloid and interface science, including sedimentation and diffusion, solution thermodynamics, rheology, light scattering, surface tension and contact angle, adsorption, association colloids, particle interactions, electrokinetics, and colloidal stability.
Requisites: (CBE 311, CHEM 561, or 562), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the various colloidal forces and phenomena
Audience: Both Grad & Undergrad

2. Employ standard mathematical models of colloidal forces and phenomena
Audience: Both Grad & Undergrad

3. Critically evaluate the interpretation of colloidal phenomena and the application of mathematical models in published literature
Audience: Graduate

CBE 554 – CHEMICAL ENGINEERING AND THE COMMUNITY
1 credit.

Connect with a local community through the development and implementation of two research based hands-on inquiry engineering demonstrations for middle school level after-school science programs.
Requisites: CBE 250
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Communicate complex science and engineering topics
Audience: Undergraduate

2. Work with a diverse group of middle school students
Audience: Undergraduate

3. Use best practices for the development and implementation of after-school STEM lessons
Audience: Undergraduate

CBE 555 – SEMINAR-CHEMICAL ENGINEERING CONNECTIONS
1 credit.

Considers a variety of current engineering applications and problems. Investigate background information on topics of their choice, and present seminars to describe how engineering fundamentals interact with societal impact and how chemical engineering is relevant to societal concerns at large.
Requisites: Senior standing or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe how engineering fundamentals interact with societal impact and how our undergraduate education in chemical engineering is relevant to societal concerns at large
Audience: Undergraduate

CBE/B M E 560 – BIOCHEMICAL ENGINEERING
3 credits.

Properties of biological molecules; enzyme kinetics, enzyme reactors, and enzyme engineering; metabolic engineering; microbial growth kinetics; bioreactor design; bioseparations.
Requisites: Junior standing and (ZOOLOGY/BIOLOGY 101 and 102, ZOOLOGY/BIOLOGY/BOTANY 151, ZOOLOGY 153, or BIOCORE 383), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply principles of chemical engineering in the analysis and design of industrial biochemical processes
Audience: Both Grad & Undergrad

2. Describe the role chemistry plays in understanding how bio-molecules and bio-molecular systems work
Audience: Both Grad & Undergrad

3. Extract, communicate and critique key idea(s) from any work of the current technical literature
Audience: Both Grad & Undergrad

4. Identify opportunities for biochemical engineering to address societal needs (e.g., energy, health, materials, food, and the environment)
Audience: Both Grad & Undergrad

5. Demonstrate how chemical engineering principles can be applied to alter the molecular properties of a biological system
Audience: Graduate

CBE 562 – SPECIAL TOPICS IN CHEMICAL ENGINEERING
1-3 credits.

Topics of specialized interest to majors in chemical engineering. Given on demand.
Requisites: Junior standing or member of Engineering Guest Students
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and describe key theories, concepts, and methods in chemical engineering
Audience: Undergraduate

CBE/M E 567 – SOLAR ENERGY TECHNOLOGY
3 credits.

Radiant energy transfer and its application to solar exchangers; energy balances for solar exchangers, review of theory, economics, and practice of solar energy applications.
Requisites: (M E 364, CBE 326, or concurrent enrollment), or graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Predict available solar radiation at a given location and time, for a given surface orientation
Audience: Undergraduate

2. Predict and model thermal and optical losses for solar thermal systems
Audience: Undergraduate

3. Calculate the load on a solar system
Audience: Undergraduate

4. Predict and model long term performance of solar thermal systems
Audience: Undergraduate

CBE 575 – INSTRUMENTAL ANALYSIS FOR CHEMICAL ENGINEERS
3 credits.

Instrumental methods as applied to chemical and physical processes in chemical engineering. Spectroscopic, optical, and electrochemical methods; chromatography, differential thermal analysis, and microscopy.
Requisites: CBE 324 or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze measurement devices and circuits
Audience: Undergraduate

2. Interface sensors to electronic systems
Audience: Undergraduate

3. Use electromechanical devices to automate chemical engineering equipment
Audience: Undergraduate

4. Fabricate instrumentation for processes and research
Audience: Undergraduate

CBE 599 – SPECIAL PROBLEMS
1-4 credits.

Research or independent study.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Conduct and report on independent chemical engineering research
Audience: Undergraduate

CBE 620 – INTERMEDIATE TRANSPORT PHENOMENA
3 credits.

Mass, momentum, and energy transport; kinetic theory of transport properties; analytical and approximate solutions to the equations of change; boundary layer theory; turbulence; simultaneous heat and mass transfer; multicomponent diffusion.
Requisites: Declared in a Chemical Engineering graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain the mechanisms of diffusion and convection of momentum, energy and mass
Audience: Graduate

2. Describe the concepts of conservation of momentum, energy, and mass

Audience: Graduate

3. Reduce and solve the appropriate equations of change and/or use dimensional analysis and scaling arguments to predict desired features (fluxes and/or distributions) of velocity, temperature and concentration
Audience: Graduate

CBE 648 – SYNTHETIC ORGANIC MATERIALS IN BIOLOGY AND MEDICINE
2-3 credits.

Introduction to topics relevant to the design, synthesis, fabrication, engineering, and characterization of organic materials currently used in or being designed for use in medical and biotechnological applications.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the physical, chemical, and engineering principles that form the foundation for the design of advanced organic materials for medical applications.
Audience: Graduate

2. Describe the structure and function or selection of a material required for the specific requirements of different applications
Audience: Graduate

3. Read the scientific literature critically, think creatively, and present and discuss scientific ideas in both written and verbal formats
Audience: Graduate

CBE 660 – INTERMEDIATE PROBLEMS IN CHEMICAL ENGINEERING
3 credits.

Illustrations of solving chemical engineering problems by using a variety of mathematical topics such as ordinary and partial differential equations, Laplace transform, Bessel functions, matrices, and tensor analysis. Problem formulation and interpretation of results emphasized.
Requisites: Declared in a Chemical Engineering graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Formulate chemical engineering problems in appropriate mathematical frameworks
Audience: Graduate

2. Solve chemical engineering problems involving linear algebra
Audience: Graduate

3. Solve chemical engineering problems involving differential equations
Audience: Graduate

CBE 699 – ADVANCED INDEPENDENT STUDIES
1-6 credits.

Research on assigned topics under the guidance of a qualified instructor.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024
Learning Outcomes: 1. Conduct and report on independent chemical engineering research
Audience: Graduate

2. Independently develop researchable chemical engineering questions
Audience: Graduate

3. Appropriately utilize online and library resources
Audience: Graduate

4. Connect their research clearly to other research in their field of study
Audience: Graduate

CBE 702 – GRADUATE COOPERATIVE EDUCATION PROGRAM
1-2 credits.

Work experience that combines classroom theory with practical knowledge of operations to provide students with a background on which to develop and enhance a professional career. The work experience is tailored for MS students from within the U.S. as well as eligible international students.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and respond appropriately to real-life engineering ethics cases relevant to co-op work
Audience: Graduate

2. Synthesize and apply appropriate technical education to real world technical work
Audience: Graduate

3. Communicate effectively in writing and speaking with a range of audiences in the workplace, including those without disciplinary expertise
Audience: Graduate

4. Develop professional and transferable habits like time management skills, collaborative problem-solving skills, and research skills for learning new information
Audience: Graduate

CBE 710 – ADVANCED CHEMICAL ENGINEERING THERMODYNAMICS
3 credits.

Application of thermodynamic principles to selected topics, including equations of state, non-ideal solutions, and complex physical and chemical equilibria.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain molecular-level descriptions of thermodynamics
Audience: Graduate

2. Explain how to obtain thermodynamic properties using molecular simulation
Audience: Graduate

3. Explain continuum-level descriptions of thermodynamics
Audience: Graduate

CBE 720 – MICROHYDRODYNAMICS, BROWNIAN MOTION, AND COMPLEX FLUIDS
3 credits.

Foundations for understanding microscale flow and transport phenomena in multiphase and complex fluids, as well as tools for modeling and simulation of their dynamics.
Requisites: CBE 620 and 660
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021
Learning Outcomes: 1. Analyze transport phenomena in complex fluids
Audience: Graduate

2. Describe motions of particles and macromolecules in flow
Audience: Graduate

3. Formulate mathematical models of flows of complex fluids
Audience: Graduate

4. Analyze the relationship between structure and rheology for complex fluids
Audience: Graduate

CBE 735 – KINETICS AND CATALYSIS
2-3 credits.

Survey of kinetic principles and factors which influence reaction rates, with particular emphasis on catalysts and catalytic reactions. May include a seminar on modern catalytic research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe kinetic principles and factors that influence reaction rates
Audience: Graduate

2. Describe common catalysts
Audience: Graduate

3. Explain the principles of and factors that influence catalysis
Audience: Graduate

CBE 750 – ADVANCED CHEMICAL PROCESS SYNTHESIS AND OPTIMIZATION
3 credits.

Methodologies for synthesis and optimization of chemical process systems. Application of linear, nonlinear, and mixed integer programming to steady state process optimization, production planning, and flowsheet synthesis.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain topics from the recent and classic literature on the analysis, synthesis, design, and optimization of chemical engineering systems
Audience: Graduate

2. Apply advanced techniques and algorithms for the synthesis, design, and optimization of chemical engineering systems
Audience: Graduate

CBE 781 – BIOLOGICAL ENGINEERING: MOLECULES, CELLS & SYSTEMS
3 credits.

Protein engineering and protein-protein interactions, receptor-ligand binding, cell metabolism and signaling, metabolic engineering and synthetic biology, tissue engineering. Additional topics may be covered such as: regenerative medicine, biomaterials, microbe-host interactions.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Employ quantitative perspectives and approaches to enhance the engineering of biomolecular, cellular and tissue-level systems
Audience: Graduate

2. Explain the primary biological, biomedical and bioengineering literature
Audience: Graduate

CBE/B M E 783 – DESIGN OF BIOLOGICAL MOLECULES
3 credits.

Introduction to the methodologies for engineering the structure and function of biological molecules, especially proteins. Develop an understanding for the integration of computation and experiment to address biological molecular engineering problems. Knowledge of biochemistry and cell biology [such as BIOCHEM 501 or ZOOLOGY 570] required.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019

CBE 790 – MASTER'S RESEARCH OR THESIS
1-9 credits.

Directed study projects arranged with instructor.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

CBE 890 – PRE-DISSERTATOR'S RESEARCH
1-9 credits.

Directed study projects arranged with instructor.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

CBE/B M E/B M I/BIOCHEM/COMP SCI/GENETICS 915 – COMPUTATION AND INFORMATICS IN BIOLOGY AND MEDICINE
1 credit.

Participants and outside speakers will discuss current research in computation and informatics in biology and medicine. This seminar is required of all CIBM program trainees.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss how methods from computer science, statistics, information science and engineering are applied to problems in biology, medicine and population health
Audience: Graduate

2. Recognize and be able to define applications in translational bioinformatics, clinical informatics and public health informatics
Audience: Graduate

CBE/BIOCHEM 932 – BIOTECHNOLOGY TRAINING PROGRAM SEMINAR
1 credit.

Biotechnology Training Program trainees will present their research for critical review by audience.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss research conducted by Biotechnology Training Program trainee peers' labs and the biotechnological applications thereof
Audience: Graduate

2. Examine industrial applications of biotechnology through internship presentations
Audience: Graduate

3. Communicate with a broad scientific audience
Audience: Graduate

CBE 961 – SEMINAR-CHEMICAL ENGINEERING
0-1 credits.

Seminar in Chemical Engineering.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

CBE 990 – THESIS-RESEARCH
1-12 credits.

Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

CBE 999 – ADVANCED INDEPENDENT STUDIES
1-6 credits.

Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 1997

CHEMISTRY (CHEM)

CHEM 101 – GENERAL CHEMISTRY I LABORATORY
1 credit.

Stoichiometry and the mole concept, chemical reactions, thermochemistry, electronic structure of atoms, periodic properties, chemical bonding, intermolecular forces, and the behavior of gases, liquids and solids. Equivalent to laboratory-only part of CHEM 103. Provides a mechanism for awarding credit for experiences with no lecture component. The combination of CHEM 101 and CHEM 105 is equivalent to CHEM 103.
Requisites: Consent of instructor
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Conduct, modify, and analyze experiments in the laboratory pertaining to stoichiometry, thermochemistry, and spectroscopy while developing fundamental safety, measurement, and sample isolation techniques.
Audience: Undergraduate

2. Articulate the rationale behind experimental results in verbal communications and written assessments.
Audience: Undergraduate

CHEM 102 – GENERAL CHEMISTRY II LABORATORY
1 credit.

Principles and applications of chemical equilibrium, electrochemistry, thermodynamics, kinetics, organic chemistry and other topics that may include nuclear chemistry, biological chemistry and coordination chemistry. Equivalent to laboratory-only part of CHEM 104. Provides a mechanism for awarding credit for experiences with no lecture component. The combination of CHEM 102 and CHEM 106 is equivalent to CHEM 104.
Requisites: Consent of instructor
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Conduct, modify, and analyze experiments in the chemistry laboratory pertaining to relevant course concepts (e.g., simple organic synthesis, reaction kinetics, acid/base chemistry, and electrochemistry) while continuing to develop safety, measurement, and sample isolation techniques.
Audience: Undergraduate

2. Articulate the rationale behind experimental results in verbal communications and written assessments.
Audience: Undergraduate

CHEM 103 – GENERAL CHEMISTRY I
4 credits.

Stoichiometry and the mole concept, the behavior of gases, liquids and solids, thermochemistry, electronic structure of atoms and chemical bonding, descriptive chemistry of selected elements and compounds, intermolecular forces, and chemistry laboratory skills.
Requisites: MATH 112, 114, 171, 221, or placement into MATH 211 or 221. Not open to students with credit for CHEM 109 or 115
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Construct models of atomic, ionic, and molecular substances that account for interactions between particles and energy flows between system and surroundings and use these models to explain trends in physical properties.
Audience: Undergraduate

2. Construct models for atoms or ions that highlight the probable locations and energies of all electrons and use them to explain atomic-level phenomena (e.g., periodic properties or light-matter interactions).
Audience: Undergraduate

3. Construct and use appropriate three-dimensional bonding models that describe the probable valence electron distribution in a molecule and use these models to explain structural observations and chemical behavior.
Audience: Undergraduate

4. Conduct, modify, and analyze experiments in the laboratory pertaining to stoichiometry, thermochemistry, and spectroscopy while developing fundamental safety, measurement, and sample isolation techniques.
Audience: Undergraduate

5. Articulate the rationale behind experimental results in verbal communications and written assessments.
Audience: Undergraduate

6. Calculate, evaluate, and rationalize quantities relevant to stoichiometry and thermodynamics, e.g., amounts in moles, mass, concentration, energy changes.
Audience: Undergraduate

CHEM 104 – GENERAL CHEMISTRY II
5 credits.

Principles and application of chemical equilibrium, coordination chemistry, oxidation-reduction and electrochemistry, kinetics, nuclear chemistry, introduction to organic chemistry, and chemistry laboratory skills.
Requisites: CHEM 103 and (MATH 112, 114, 171, or 221). Not open to students with credit for CHEM 109 or 115
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Construct and use appropriate three-dimensional bonding models that describe the probable valence electron distribution in the molecule and use these models to explain structural observations and chemical behavior.
Audience: Undergraduate

2. Construct and use particle-level models of structure and energy to describe how systems undergo chemical and/or physical changes toward achieving equilibrium (e.g., predict or explain the outcome of a reaction, the temperature dependence, and/or how energy is harnessed from the reaction).
Audience: Undergraduate

3. Use particle-level models of chemical reactions along with kinetic data to explain or predict how a chemical reaction occurs.
Audience: Undergraduate

4. Conduct, modify, and analyze experiments in the chemistry laboratory pertaining to relevant course concepts (e.g., simple organic synthesis, reaction kinetics, acid/base chemistry, and electrochemistry) while continuing to develop safety, measurement, and sample isolation techniques.
Audience: Undergraduate

5. Articulate the rationale behind experimental results in verbal communications and written assessments.
Audience: Undergraduate

CHEM 105 — GENERAL CHEMISTRY I
3 credits.

Stoichiometry and the mole concept, chemical reactions, thermochemistry, electronic structure of atoms, periodic properties, chemical bonding, intermolecular forces, and the behavior of gases, liquids and solids. Equivalent to lecture-only part of CHEM 103. Provides a mechanism for awarding credit for experiences with no laboratory component. The combination of CHEM 101 and CHEM 105 is equivalent to CHEM 103.
Requisites: Consent of instructor
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Construct models of atomic, ionic, and molecular substances that account for interactions between particles and energy flows between system and surroundings and use these models to explain trends in physical properties.
Audience: Undergraduate

2. Construct models for atoms or ions that highlight the probable locations and energies of all electrons and use them to explain atomic-level phenomena (e.g., periodic properties or light-matter interactions).
Audience: Undergraduate

3. Construct and use appropriate three-dimensional bonding models that describe the probable valence electron distribution in a molecule and use these models to explain structural observations and chemical behavior.
Audience: Undergraduate

4. Calculate, evaluate, and rationalize quantities relevant to stoichiometry and thermodynamics, e.g., amounts in moles, mass, concentration, energy changes.
Audience: Undergraduate

CHEM 106 — GENERAL CHEMISTRY II
4 credits.

Principles and applications of chemical equilibrium, electrochemistry, thermodynamics, kinetics, organic chemistry and other topics that may include nuclear chemistry, biological chemistry and coordination chemistry. Equivalent to lecture-only part of CHEM 104. Provides a mechanism for awarding credit for experiences with no laboratory component. The combination of CHEM 102 and CHEM 106 is equivalent to CHEM 104.
Requisites: Consent of instructor
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Construct and use appropriate three-dimensional bonding models that describe the probable valence electron distribution in the molecule and use these models to explain structural observations and chemical behavior.
Audience: Undergraduate

2. Construct and use particle-level models of structure and energy to describe how systems undergo chemical and/or physical changes toward achieving equilibrium (e.g., predict or explain the outcome of a reaction, the temperature dependence, and/or how energy is harnessed from the reaction).
Audience: Undergraduate

3. Use particle-level models of chemical reactions along with kinetic data to explain or predict how a chemical reaction occurs.
Audience: Undergraduate

CHEM 108 — CHEMISTRY IN OUR WORLD
5 credits.

Selected topics in inorganic and organic chemistry. Emphasis is on relevance to biological, environmental and social issues.
Requisites: Not open to students with credit for CHEM 104, 109, or 115
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply appropriate chemical concepts to describe contemporary scientific issues and evaluate proposed solutions to these issues.
Audience: Undergraduate

2. Identify the chemical concepts and principles needed to solve a chemistry problem and evaluate the validity of an answer to a given problem.
Audience: Undergraduate

3. Apply models of atoms, molecules, and their interactions to explain the physical and chemical macroscopic properties of gasses, liquids, and solids.
Audience: Undergraduate

4. Visualize and apply chemical and mathematical models to link atomic and molecular structure to macroscopic properties (e.g., to predict the outcome of selected chemical reactions).
Audience: Undergraduate

5. Conduct, modify, and analyze experiments in the laboratory pertaining to product-generation, thermochemistry, and spectroscopy while developing fundamental safety, measurement, and sample isolation techniques.
Audience: Undergraduate

6. Articulate the rationale behind experimental results in verbal communications and written assessments.
Audience: Undergraduate

CHEM 109 — ADVANCED GENERAL CHEMISTRY
5 credits.

Accelerated coverage of topics in general chemistry, including introduction to laboratory techniques. Topics include atomic and molecular structure, chemical equilibrium, acid-base chemistry, thermodynamics, kinetics, and electrochemistry.
Requisites: MATH 113, 114, 171, or placement into MATH 221. Not open to students with credit for CHEM 104 or 115
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Construct models for atoms or ions that highlight the probable locations and energies of all electrons and use them to explain atomic-level phenomena (e.g., periodic properties, entropy, or light-matter interactions).
Audience: Undergraduate

2. Construct and use geometrically accurate three-dimensional bonding models that describe the probable valence electron distribution in the molecule and use these models to explain structural observations or parameters.
Audience: Undergraduate

3. Construct models of atomic, ionic, metallic, and molecular substances (including polymers and biomolecules) that include interactions between particles and energy flows between system and surroundings and use these models to explain trends in physical properties.
Audience: Undergraduate

4. Use models of structure and energy to describe how systems undergo chemical and/or physical changes toward achieving equilibrium (e.g., predict or explain the outcome of a reaction, the temperature dependence, and/or how energy is harnessed from the reaction).
Audience: Undergraduate

5. Use particle-level models of chemical reactions along with kinetic data to explain or predict how a chemical reaction occurs.
Audience: Undergraduate

6. Conduct, modify, and analyze experiments in the chemistry laboratory pertaining to relevant course concepts (e.g., simple organic synthesis, reaction kinetics, acid/base chemistry, and electrochemistry) while continuing to develop safety, measurement, and sample isolation techniques.
Audience: Undergraduate

7. Articulate the rationale behind experimental results in verbal communications and written assessments.
Audience: Undergraduate

CHEM 115 — CHEMICAL PRINCIPLES I
5 credits.

Explores a detailed atomic and molecular view of matter and its interactions, with a specific focus on quantum theory, molecular structure, and chemical bonding. Application required for enrollment.
Requisites: Consent of instructor
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply a qualitative and quantitative understanding of quantum mechanics to fundamental chemical concepts to rationalize the structure of the atom and molecules, bond formation, and chemical and physical properties.
Audience: Undergraduate

2. Apply mathematical models such as elementary quantum mechanics eigenvalue problems, including the "particle in a box" and "harmonic oscillator" to describe chemical phenomena.
Audience: Undergraduate

3. Apply models of atoms, molecules, and their interactions to explain the physical and chemical macroscopic properties of gasses, liquids and solids.

Audience: Undergraduate

4. Perform chemical measurements, adapt analytical methods (e.g., titrations, separations, electrochemical measurements, and spectroscopy), and interpret results for the purpose of quantitative and qualitative analysis.
Audience: Undergraduate

5. Evaluate laboratory data by applying statistical methods (e.g. statistical uncertainty, confidence intervals, propagation of error).
Audience: Undergraduate

CHEM 116 — CHEMICAL PRINCIPLES II
5 credits.

A quantitative treatment of macroscopic phenomena including thermodynamics, chemical equilibria, solution behavior, electrochemistry, and chemical kinetics.
Requisites: CHEM 115
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Accelerated Honors (!)
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply a qualitative and quantitative understanding of aqueous equilibria and electrochemistry using fundamental chemical concepts, founded in the laws of thermodynamics.
Audience: Undergraduate

2. Model the rate mechanisms of chemical reactions in terms of elementary reaction states and associated rate laws to explain chemical phenomena.
Audience: Undergraduate

3. Locate, evaluate, and use information in the chemical literature.
Audience: Undergraduate

4. Design and analyze experiments pertaining to the covered chemical concepts while developing fundamental skills in safe laboratory practices and analysis techniques.
Audience: Undergraduate

5. Participate in a research project in an active campus research group, which formulating hypotheses informed by scientific literature, designing and performing experiments, processing data, and communicating results.
Audience: Undergraduate

6. Communicate scientific knowledge effectively through written reports and oral presentations with visual aids.
Audience: Undergraduate

CHEM 155 — STUDY ABROAD IN INTRODUCTORY CHEMISTRY
1-6 credits.

Study abroad equivalency for introductory chemistry. Enrollment in a UW-Madison resident study abroad program.
Requisites: None
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No

CHEM 175 — INTRODUCTORY TOPICS IN CHEMISTRY
1-3 credits.

Various topics in chemistry at the introductory level.
Requisites: None
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024
Learning Outcomes: 1. Explore the relationships among chemical knowledge, the discipline and practice of chemistry, and related interdisciplinary areas of study.
Audience: Undergraduate

2. Identify applications of chemistry to the world around us.
Audience: Undergraduate

3. Synthesize scientific information and practice oral or written communications about scientific content.
Audience: Undergraduate

CHEM 260 — ENTERING RESEARCH I
1 credit.

Introduction to skills that support conducting research in chemistry.
Requisites: CHEM 103, 109, or 115
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Find, analyze, and evaluate relevant primary literature and background information related to a scientific research project.
Audience: Undergraduate

2. Obtain, analyze, evaluate, and effectively communicate scientific research findings orally and in written form.
Audience: Undergraduate

3. Explain the main scientific focus of a research group, how members and projects of the research group are connected, and how the research contributes to new knowledge in the discipline.
Audience: Undergraduate

4. Describe and engage in safe, ethical, and responsible scientific research practices.
Audience: Undergraduate

CHEM 299 — DIRECTED STUDY
1-4 credits.

Mentored research project as arranged with a faculty or academic staff member.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

CHEM 311 — CHEMISTRY ACROSS THE PERIODIC TABLE
4 credits.

Explores the properties, reactions and uses of elements and compounds, with emphasis on coordination chemistry of transition-metal ions, bioinorganic chemistry, solid-state structure and main-group elements. Introduces the synthesis and characterization of inorganic compounds.
Requisites: CHEM 104, 109, or 116
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Construct and use appropriate chemical models and structural representations to explain observed differences in the physical and chemical properties of substances in terms of electrostatics, orbital overlap and energy.
Audience: Undergraduate

2. Construct and use appropriate models of chemical bonding and reactivity (e.g., acids/bases, redox, complexation) and relative energies to justify why a particular reaction system is likely to produce the product formed most quickly or which is most stable.
Audience: Undergraduate

3. Identify and use molecular symmetry to predict a molecule's chemical and physical properties (e.g., chirality, polarity, and vibrational spectroscopy).
Audience: Undergraduate

4. Describe the nature of solid-state compounds and their atomic arrangements and use their structures to predict and rationalize their chemical and physical properties.
Audience: Undergraduate

5. Conduct, modify, and analyze experiments for the synthesis and characterization of inorganic compounds, using inorganic laboratory techniques, apparatus, and instrumentation.
Audience: Undergraduate

6. Obtain, analyze, evaluate, and effectively communicate scientific research findings orally and in written form (ex: abstract, introduction, procedure, results, discussion, and references).
Audience: Undergraduate

CHEM 327 — FUNDAMENTALS OF ANALYTICAL SCIENCE
4 credits.

Fundamentals of chemical measurement in chemistry, biology, engineering, geology, and the medical sciences. Topics include equilibria of complex systems, spectroscopy, electrochemistry, separations, and quantitative laboratory technique.
Requisites: CHEM 104 or 109. Not open to students with credit for CHEM 329.
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Perform chemical measurements, adapt analytical methods (e.g., titrations, separations, electrochemical measurements, and spectroscopy), and interpret results for the purpose of quantitative analysis.
Audience: Undergraduate

2. Evaluate laboratory data by applying statistical methods (e.g. statistical uncertainty, confidence intervals, propagation of error).
Audience: Undergraduate

3. Develop quantitative chemical models involving thermodynamics, equilibrium concentrations, separation performance, and electrochemical potentials and compare them to experimental results.
Audience: Undergraduate

4. Solve chemistry problems that connect concepts from across the curriculum and apply them to real world situations.
Audience: Undergraduate

5. Effectively communicate experimental outcomes through written reports, oral presentations, and/or visual aids.
Audience: Undergraduate

CHEM 329 — FUNDAMENTALS OF ANALYTICAL SCIENCE
4 credits.

Fundamentals of chemical measurement in chemistry, biology, engineering, geology, and the medical sciences. Topics include equilibria of complex systems, spectroscopy, electrochemistry, separations, and quantitative laboratory technique. Covers chemical equilibria in greater depth and with greater mathematical rigor than CHEM 327.
Requisites: CHEM 104 or 109. Not open to students with credit for CHEM 327.
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Accelerated Honors (!)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Perform chemical measurements, adapt analytical methods (e.g., titrations, separations, electrochemical measurements, and spectroscopy), and interpret results for the purpose of quantitative analysis.
Audience: Undergraduate

2. Evaluate laboratory data by applying statistical methods (e.g. statistical uncertainty, confidence intervals, propagation of error).
Audience: Undergraduate

3. Develop quantitative chemical models involving thermodynamics, equilibrium concentrations, separation performance and electrochemical potentials and compare them to experimental results.
Audience: Undergraduate

4. Solve chemistry problems that connect concepts from across the curriculum and apply them to real world situations.
Audience: Undergraduate

5. Design and execute independent analytical chemistry experiments using methods sourced from the scientific literature.
Audience: Undergraduate

6. Effectively communicate experimental outcomes through written reports, oral presentations, and/or visual aids.
Audience: Undergraduate

CHEM 341 – ELEMENTARY ORGANIC CHEMISTRY
3 credits.

Core organic chemistry concepts of structure, reactivity, and synthesis with regards to the functional groups commonly found in commercial and biological substances. Covers a selection of topics from CHEM 343 and 345.
Requisites: CHEM 104, 109, or 116. Not open to students with credit for CHEM 343 or 345
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Construct and use an electron pushing mechanism or reaction energy profile to evaluate the validity of claims as to the outcome of a chemical process.
Audience: Undergraduate

2. Construct and use appropriate structural representations to explain observed differences in the physical and chemical properties of substances in terms of electrostatics, orbital overlap and energy.
Audience: Undergraduate

3. Construct and use a reaction energy profile to justify why a particular reaction system is likely to produce the product formed most quickly or which is most stable.
Audience: Undergraduate

4. Design and justify a multi-step synthetic route capable of feasibly generating a molecular target from specified starting materials.
Audience: Undergraduate

CHEM 342 – ELEMENTARY ORGANIC CHEMISTRY LABORATORY
1 credit.

Introduces organic laboratory techniques in synthesis, purification and spectral interpretation.
Requisites: CHEM 341 or concurrent enrollment. Not open to students with credit for CHEM 344
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Use spectroscopic data to elucidate chemical structures and analyze samples of pure and impure mixtures.
Audience: Undergraduate

2. Safely use basic organic chemistry apparatus, glassware, and techniques for the synthesis, isolation, and purification of organic molecules.
Audience: Undergraduate

3. Obtain and use computational data to support their analysis of a molecular structure and/or reaction outcome.
Audience: Undergraduate

4. Use the electronic and molecular structure of organic molecules to predict and rationalize chemical reactivity.
Audience: Undergraduate

5. Construct and use a reaction energy profile to justify why a particular reaction system is likely to produce the product formed most quickly or which is most stable with an emphasis on the reactions of alcohols, alkyl halides, aromatic compounds, and carbonyl-containing compounds.
Audience: Undergraduate

CHEM 343 – ORGANIC CHEMISTRY I
3 credits.

Principles of molecular structure and bonding applied to predict and explain the reactivity of alkanes, alkenes, alkynes, alkyl halides, alcohols, and thiols. Emphasis placed on rationalizing the stereochemical and regiochemical outcome of chemical processes.
Requisites: CHEM 104, 109, or 116
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Construct and use a transition state rendering to explain how donor-acceptor interactions result in the stereochemical or regiochemical outcome observed for a reaction
Audience: Undergraduate

2. Construct and use an electron pushing mechanism or reaction energy profile to evaluate the validity of claims as to the outcome of a chemical process
Audience: Undergraduate

3. Construct and use appropriate structural representations to explain observed differences in the physical and chemical properties of substances in terms of electrostatics, orbital overlap and energy
Audience: Undergraduate

4. Construct and use a reaction energy profile to justify why a particular reaction system is likely to produce the product formed most quickly or which is most stable
Audience: Undergraduate

5. Design and justify a multi-step synthetic route capable of feasibly generating a molecular target from specified starting materials
Audience: Undergraduate

CHEM 344 – INTRODUCTORY ORGANIC CHEMISTRY LABORATORY
2 credits.

Introduces the basic synthesis, purification, and characterization techniques of organic chemistry, along with critical interpretation of experimental data.
Requisites: (CHEM 345 or concurrent enrollment) and (CHEM 102, 104, 109, or 116)
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use spectroscopic data to elucidate chemical structures and analyze samples of pure and impure mixtures.
Audience: Undergraduate

2. Safely use basic organic chemistry apparatus, glassware, and techniques for the synthesis, isolation, and purification of organic molecules.
Audience: Undergraduate

3. Obtain and use computational data to support their analysis of a molecular structure and/or reaction outcome.
Audience: Undergraduate

4. Use the electronic and molecular structure of organic molecules to predict and rationalize chemical reactivity.
Audience: Undergraduate

5. Construct and use a reaction energy profile to justify why a particular reaction system is likely to produce the product formed most quickly or which is most stable with an emphasis on the reactions of alcohols, alkyl halides, aromatic compounds, and carbonyl-containing compounds.
Audience: Undergraduate

CHEM 345 – ORGANIC CHEMISTRY II
3 credits.

Principles of molecular structure and bonding applied to predict and explain the reactivity of aromatic systems, benzylic and allylic systems, aryl and vinyl halides, and carbonyl-containing compounds (e.g., ketones, carboxylic acids, esters, acid chlorides, amides). Emphasis placed on rationalizing the stereochemical and regiochemical outcome of chemical processes as well as arguing reaction outcomes from spectroscopic evidence.
Requisites: CHEM 343
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Construct and use a transition state rendering to explain how donor-acceptor interactions result in the stereochemical or regiochemical outcome observed for a reaction
Audience: Undergraduate

2. Construct and use an electron pushing mechanism or reaction energy profile to evaluate the validity of claims as to the outcome of a chemical process
Audience: Undergraduate

3. Construct and use appropriate structural representations to explain observed differences in the physical and chemical properties of substances in terms of electrostatics, orbital overlap and energy
Audience: Undergraduate

4. Construct and use a reaction energy profile to justify why a particular reaction system is likely to produce the product formed most quickly or which is most stable
Audience: Undergraduate

5. Construct or critique an argument, using spectroscopic evidence, as to the product(s) emergent from a particular reaction process.
Audience: Undergraduate

6. Design and justify a multi-step synthetic route capable of feasibly generating a molecular target from specified starting materials
Audience: Undergraduate

CHEM 346 – INTERMEDIATE ORGANIC CHEMISTRY LABORATORY
1-2 credits.

Multi-step synthetic processes. Advanced experimental techniques such as high-vacuum distillation. Independent research projects.
Requisites: CHEM 344 and 345
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use spectroscopic data to elucidate chemical structures and analyze samples of pure and impure mixtures.
Audience: Undergraduate

2. Safely use basic and advanced organic chemistry apparatus, glassware, and techniques for the synthesis, isolation, and purification of organic molecules.
Audience: Undergraduate

3. Obtain and use computational data to support their analysis of a molecular structure and/or reaction outcome.
Audience: Undergraduate

4. Use the electronic and molecular structure of organic molecules to predict and rationalize chemical reactivity.
Audience: Undergraduate

5. Construct and use a reaction energy profile to justify why a particular reaction system generates certain products with an emphasis on modern organic reactions.
Audience: Undergraduate

6. Plan and conduct independent chemical syntheses and use spectroscopic evidence to evaluate, modify, and implement improvements.
Audience: Undergraduate

7. Communicate results from student-run chemical reactions in writing and oral presentations authentic to professional publications and settings.
Audience: Undergraduate

CHEM 355 – STUDY ABROAD IN INTERMEDIATE CHEMISTRY
1-6 credits.

Study abroad equivalency for intermediate chemistry. Enrollment in a UW-Madison resident study abroad program.
Requisites: None
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No

CHEM 361 – MACHINE LEARNING IN CHEMISTRY
3 credits.

An in-depth introduction to the use of machine learning techniques in Chemistry. Topics will include basics of probability theory and statistics, basics of function fitting and parameter inference, basics of optimization, and machine learning techniques. Discuss a selection of Chemistry topics that are particularly amenable to analysis using machine learning. These might include generative models for organic synthesis, force-fields, application to phase transitions, structure and dynamics of molecular systems, and AI-driven drug discovery.
Requisites: (CHEM 103, 109, or 115) and (MATH 234, 320, 331, 340, or 375)
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Employ statistical and machine learning models to analyze chemical datasets.
Audience: Undergraduate

2. Represent chemical compounds using molecular descriptors.
Audience: Undergraduate

3. Model and predict properties and activities of chemical compounds.
Audience: Undergraduate

4. Apply appropriate machine learning approaches to analyze time-series data for molecular systems.
Audience: Undergraduate

5. Apply machine-learning-based potential functions to describe chemical and biological molecules.
Audience: Undergraduate

6. Be familiar with programming techniques and common tools in machine learning when applied to molecular systems.
Audience: Undergraduate

7. Assess the quality of machine learning approaches in the chemistry literature.
Audience: Undergraduate

CHEM 375 – INTERMEDIATE TOPICS IN CHEMISTRY
1-4 credits.

Various topics in chemistry at the intermediate level.
Requisites: CHEM 104, 109, or 116
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

CHEM/M S & E 421 – POLYMERIC MATERIALS
3 credits.

Polymer chemistry and physics terminologies, structure-property relationship, polymer characterization, polymer synthesis, material requirements for optoelectronics including conjugated polymers, thin film transistors, light emitting diodes, non-linear optical materials, holographic data storage and liquid crystal polymers.
Requisites: CHEM 341, 343, or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Classify, identify, and write the structure of different types of common polymers
Audience: Undergraduate

2. Characterize the molecular weights of polymers, their microstructure, and morphology
Audience: Undergraduate

3. Describe the common methods for the synthesis of polymers
Audience: Undergraduate

4. Demonstrate quantitative understanding of the kinetics of polymerization
Audience: Undergraduate

5. Characterize the principle thermal transitions that occur in polymers
Audience: Undergraduate

6. Analyze the interrelationships among structure, properties, processing and applications of polymers
Audience: Undergraduate

CHEM/CBE 505 – ASPECTS OF INDUSTRIAL CHEMISTRY AND BUSINESS FUNDAMENTALS
3 credits.

Learn the chemistry and chemical engineering that defines societies' standard of living. Commercial chemical processes will be reviewed. Practical realities of how a discovery moves from research to commercial product will be taught through examples and case studies. Financial concepts that guide investment will be reviewed.
Requisites: Junior standing and CHEM 345, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the most important value-chains in the chemical industry
Audience: Undergraduate

2. Connect the fundamental chemistry and chemical engineering principles learned in other courses with real-world applications
Audience: Undergraduate

3. Evaluate how laboratory discoveries can be legally protected and successfully commercialized
Audience: Undergraduate

4. Assess and compare alternative technologies against current state-of-the-art technologies
Audience: Undergraduate

CHEM 509 – SENIOR SEMINAR
2 credits.

Synthesize and integrate advanced chemistry knowledge and skills. Through a series of seminars, specific research problems will be identified. Work in groups utilizing the chemical literature to identify routes to the solutions of these problems.
Requisites: (CHEM 561 or 565) and CHEM 563 or concurrent enrollment in CHEM 563
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2019
Learning Outcomes: 1. Synthesize knowledge and skills that have been introduced across the chemistry curriculum to understand complex chemical problems.
Audience: Undergraduate

2. Identify and discuss current research challenges based on faculty research presentations.
Audience: Undergraduate

3. Critically evaluate the scientific literature to identify possible ways to solve a specific research challenge.
Audience: Undergraduate

4. Collaborate with peers to discuss and propose solutions to current research problems.
Audience: Undergraduate

5. Explain findings in oral presentations and written assignments.
Audience: Undergraduate

CHEM 511 – ADVANCED INORGANIC CHEMISTRY
3 credits.

Emphasizes the symmetry, structure and bonding of inorganic compounds. Selected topics may include applications in transition metal chemistry, organometallic chemistry, industrial catalysis, advanced bioinorganic chemistry, solid-state chemistry or main group chemistry.
Requisites: (CHEM 345 or concurrent enrollment and junior standing) or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Accelerated Honors (!)
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply group theory to solve problems dealing with molecular vibrations and chemical bonding.
Audience: Undergraduate

2. Analyze experimental spectroscopic data quantitatively within the theoretical frameworks of molecular orbital theory or ligand field theory.
Audience: Undergraduate

3. Explain the role of organometallic complexes and metalloenzymes in the key steps of catalytic cycles.
Audience: Undergraduate

4. Perform electronic structure calculations (e.g., density functional theory) for small molecules and transition metal complexes and validate the computational results using experimental observables (e.g., structural and spectroscopic data).
Audience: Undergraduate

CHEM 512 – ADVANCED SYNTHESIS AND LABORATORY TECHNIQUES
1-2 credits.

Synthesis, purification, and characterization of compounds spanning the sub-disciplines of inorganic chemistry, including main-group, transition metal, bioinorganic, organometallic, and solid-state compounds. Laboratory skills developed include Schlenck techniques, glovebox methods, and high-temperature methods, all with an emphasis on chemical safety. Characterization methods may include UV-visible and IR spectroscopy, multi-nuclear NMR spectroscopy, magnetic susceptibility, cyclic voltammetry, mass spectrometry, X-ray diffraction, and chromatographic methods.
Requisites: CHEM 311
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Use the chemical literature to identify methods of synthesis for specific compounds
Audience: Undergraduate

2. Interpret published synthetic procedures to come up with a plan to reproduce the synthesis of the desired compounds
Audience: Undergraduate

3. Apply the theoretical synthetic principles, including and understanding of how and why reactions work, by performing laboratory experiments
Audience: Undergraduate

4. Apply synthetic techniques/skills, and demonstrate scientific/information literacy, critical and creative thinking, quantitative reasoning, and communication
Audience: Undergraduate

5. Apply the fundamentals of synthetic inorganic chemistry, including laboratory safety, handling of air-sensitive and water-sensitive reagents and products, and commonly used characterization techniques
Audience: Undergraduate

6. Use Schlenck techniques and glovebox methods to synthesize and manipulate air-sensitive compounds
Audience: Undergraduate

7. Use hydrothermal and tube-furnace methods to synthesize materials
Audience: Undergraduate

8. Assess compound purity using reported and measured magnetic moments of compounds synthesized in the laboratory
Audience: Undergraduate

9. Assess compound purity using the spectroscopic techniques of nuclear magnetic resonance, infrared and UV/Visible spectroscopy
Audience: Undergraduate

10. Troubleshoot experiments that do not yield anticipated results
Audience: Undergraduate

CHEM 524 – CHEMICAL INSTRUMENTATION
3 credits.

Basic principles for designing, developing, and using chemical instrumentation and applying these principles in the laboratory. Spectroscopy, separations, and mass spectrometry instruments are emphasized.
Requisites: (CHEM 116, 327, or 329), CHEM 343, MATH 222, and (PHYSICS 202, 208, or 248)
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Accelerated Honors (!)
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate knowledge of the fundamental principles for the design of chemical instrumentation.
Audience: Undergraduate

2. Apply knowledge of chemical instrumentation to make effective chemical measurements.
Audience: Undergraduate

3. Critically analyze and evaluate results of measurements made with chemical instrumentation
Audience: Undergraduate

CHEM 547 – ADVANCED ORGANIC CHEMISTRY
3 credits.

Modern principles of synthetic and mechanistic organic chemistry.
Requisites: CHEM 345
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Accelerated Honors (!)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Design, justify, and evaluate multi-step synthetic routes capable of efficiently generating a molecular target from specified starting materials, with an emphasis on modern organic chemistry and natural product synthesis.
Audience: Undergraduate

2. Construct and use appropriate structural representations to rationalize observed differences in the physical and chemical properties of substances in terms of electrostatics, constructive orbital overlap, and energy differences.
Audience: Undergraduate

3. Construct and use an electron-pushing mechanism or potential energy surface to evaluate the validity of claims as to the outcome of a chemical process (e.g., pericyclic reactions and carbonyl reactions).
Audience: Undergraduate

4. Construct and use catalytic cycles to rationalize and predict the outcome of simple organometallic reactions.
Audience: Undergraduate

CHEM 555 – STUDY ABROAD IN ADVANCED CHEMISTRY
1-6 credits.

Study abroad equivalency for advanced chemistry. Enrollment in a UW-Madison resident study abroad program.
Requisites: None
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No

CHEM 561 – PHYSICAL CHEMISTRY I
3 credits.

Macroscopic theory: laws and fundamental equations of thermodynamics, chemical equilibria, phase equilibria, and kinetic theory of gases.
Requisites: (CHEM 116, 327, or 329), MATH 222, and (PHYSICS 201, 207, or 247), or graduate/professional standing. Not open to students with credit for CHEM 565 or 665.
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Accelerated Honors (!)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Derive, interpret, and explain important thermodynamic relationships from the three laws of thermodynamics.
Audience: Undergraduate

2. Explain how thermodynamics and kinetics govern observable physical and chemical properties of matter and their transformations.
Audience: Undergraduate

3. Apply the laws of thermodynamics and kinetic theories to solve quantitative problems involving chemical and physical processes.
Audience: Undergraduate

CHEM 562 – PHYSICAL CHEMISTRY II
3 credits.

Molecular theory: quantum chemistry, molecular structure and spectra, statistical mechanics, selected topics in the molecular theory of matter in bulk.
Requisites: MATH 222, (PHYSICS 202, 208, or 248), and (CHEM 561, 665, CBE 310, or M S & E 330)
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Accelerated Honors (!)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe fundamental quantum mechanics concepts, including operators, wave functions, and uncertainty principle.
Audience: Undergraduate

2. Use quantum chemistry models to describe translational, rotational, and vibrational motion of particles, the microscopic details of atomic and molecular structures, and the basis of rotational, vibrational, and electronic spectroscopies.
Audience: Undergraduate

3. Apply quantum chemistry and statistical thermodynamic models to describe bulk thermodynamic properties, chemical equilibrium, and chemical reaction dynamics.
Audience: Undergraduate

CHEM 563 – PHYSICAL CHEMISTRY LABORATORY I
1 credit.

Principles of experimental physical chemistry applied to the acquisition of thermodynamic and kinetic data; use of basic physical laboratory equipment; related computations, analysis of errors, interpretation of results.
Requisites: (CHEM 116, 327 or 329) and (CHEM 561 or concurrent enrollment, CHEM 665 or concurrent enrollment, CBE 310, or M S & E 330)
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Characterize the quality and information content of experimental measurements in the physical sciences.
Audience: Undergraduate

2. Develop experimental procedures that provide quantitative information about physical properties.
Audience: Undergraduate

3. Articulate course content (e.g., background theory, instrumentation, experimental design, and data analysis) in oral conversation.
Audience: Undergraduate

CHEM 564 – PHYSICAL CHEMISTRY LABORATORY II
1 credit.

Principles of experimental physical chemistry applied to the acquisition and interpretation of basic data on molecular structure and dynamics, and properties of macromolecules; principles and use of spectroscopic and other electronic instrumentation.
Requisites: (CHEM 562 or concurrent enrollment) and CHEM 563
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the fundamentals of spectroscopic techniques.
Audience: Undergraduate

2. Explain the basic components of spectroscopic instruments.
Audience: Undergraduate

3. Articulate course content (e.g., classical and quantum mechanical descriptions of background theory, instrumentation, and data analysis) in oral conversation.
Audience: Undergraduate

CHEM 575 – ADVANCED TOPICS IN CHEMISTRY
1-4 credits.

Various topics in chemistry at the advanced level.
Requisites: CHEM 311, 327, 329, or 343
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

CHEM 605 – SPECTROCHEMICAL MEASUREMENTS
3 credits.

Determination of organic structures and reaction mechanisms using mass spectrometry and nuclear magnetic resonance techniques.
Requisites: CHEM 344 and 345, or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Analyze, interpret, and assign a variety of spectroscopic data (NMR, IR, MS) to structural features of known compounds or reaction mixtures.
Audience: Undergraduate

2. Deduce the chemical structure of an unknown compound using a variety of spectroscopic data (NMR, IR, MS) and justify the structural assignment.
Audience: Undergraduate

3. Choose the appropriate spectroscopic experiment(s) to determine the structure and/or dynamic behavior of a known or unknown compound.
Audience: Undergraduate

4. Critically evaluate the spectroscopic data and analyses provided in primary literature with an emphasis on the spectroscopic techniques relevant to the students' own research.
Audience: Graduate

CHEM 606 – PHYSICAL METHODS FOR STRUCTURE DETERMINATION
1-3 credits.

A survey of spectroscopic methods for inorganic structure determination. Introduces major non-crystallographic techniques with an emphasis on the application to structural analysis. The basic theory and methodology of each form of spectroscopy will be presented. Topics covered include: ligand field theory, electronic absorption, Raman, Mossbauer and EPR stectroscopies, and magnetic susceptibility.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

CHEM 607 – LABORATORY SAFETY
1 credit.

Aspects of laboratory safety relating to chemical, electrical, optical, mechanical, cryogenic and radiological hazards will be discussed. Safety equipment, techniques (including first aid), and facilities will be introduced.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

CHEM 608 – SYMMETRY, BONDING, AND MOLECULAR SHAPES
1-3 credits.

Elementary bonding theory and its application to understanding molecular geometry and reactivity. Emphasizes qualitative methods applied to the bonding of elements from throughout the periodic table.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CHEM 613 – CHEMICAL CRYSTALLOGRAPHY
3 credits.

Theory of structural chemistry, experimental methods involved, applications to problems of chemical interest; use of diffractometric equipment and computer data analysis for an actual structure determination.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

CHEM 622 – ORGANIC ANALYSIS
2 credits.

Biological Mass Spectrometry: Fundamentals and Applications.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CHEM 623 – EXPERIMENTAL SPECTROSCOPY
2-3 credits.

Current spectroscopic methods employed in chemical analysis with applications in atomic and molecular absorption spectroscopy, infrared and Raman vibrational spectroscopy, fluorescence and light scattering; lecture and laboratory projects.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

CHEM 624 – ELECTROCHEMISTRY
2-3 credits.

Interfacial electron transfer and mass transport processes in electrochemistry, with applications to electroanalysis, electrodeposition and electrochemical separations.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CHEM/GENETICS 626 – GENOMIC SCIENCE
2 credits.

Brings cutting-edge topics in the genomic sciences into the reach of those in chemistry, biology, engineering, computer science statistics fields. Enables biologically-oriented students to deal with advances in analytical science so that they may incorporate new genomic science concepts into their own scientific repertoires.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

CHEM 629 – ATMOSPHERIC CHEMICAL MECHANISMS
3 credits.

Focuses on the chemical mechanisms and kinetics of reactive gases and aerosol in Earth's atmosphere. Fundamental concepts from analytical, physical, and organic chemistry will be used as tools to describe atmospheric processes occurring in both the troposphere and the stratosphere. Specific topics include: Evolution and chemical composition of Earth's atmosphere; applications of the steady-state approximation; residence and renewal time; sources, transformation, transport and deposition of trace gases in the troposphere; air pollution control strategies; stratospheric chemistry.
Requisites: CBE 310 or concurrent enrollment in CHEM 561 or 565; or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop a deep chemical intuition for atmospheric chemical mechanisms and processes operating over wide ranges of time and length scales.
Audience: Both Grad & Undergrad

2. Construct photochemical box models of atmospheric processes (e.g., smog formation) to determine the response of criteria air pollutants to changes in atmospheric emissions.
Audience: Both Grad & Undergrad

3. Articulate and synthesize complex chemical knowledge and understanding in both written and oral formats.
Audience: Graduate

CHEM 630 – SELECTED TOPICS IN ANALYTICAL CHEMISTRY
1-3 credits.

Lectures of a specialized nature in advanced analytical chemistry.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

CHEM 635 – TOPICS IN COMPUTATIONAL CHEMISTRY
1 credit.

An introduction to computational chemistry. Covers new techniques and developments in the literature, and specific types of calculations that are relevant to current research and needs.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

CHEM 636 – TOPICS IN CHEMICAL INSTRUMENTATION: INTRODUCTION TO NMR
2 credits.

Theory and practice of nuclear magnetic resonance (NMR) spectroscopy.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CHEM 637 – TOPICS IN CHEMICAL INSTRUMENTATION: ADVANCED METHODS IN NMR
1-2 credits.

Advanced methods of nuclear magnetic resonance (NMR) spectroscopy.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

CHEM 641 – ADVANCED ORGANIC CHEMISTRY
3 credits.

Topics in physical organic chemistry.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CHEM 652 – CHEMISTRY OF INORGANIC MATERIALS
3 credits.

Materials chemistry of inorganic solids. Focuses on the application of chemical concepts to an understanding of properties of solids and how these properties are manifested in practical applications.
Requisites: Graduate/professional standing
Repeatable for Credit: No
Last Taught: Fall 2025

CHEM 653 – CHEMISTRY OF NANOSCALE MATERIALS
3 credits.

Introduction to solid state materials chemistry, with an emphasis on contemporary topics in the chemistry of nanomaterials. Incorporates fundamental knowledge of solid-state chemistry and traditional materials chemistry with current nanoscale and nanostructural materials research.
Requisites: (CHEM 311 and 561) or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Describe and compare various synthetic methods used in the synthesis of single crystals, polycrystalline, thin film materials, and nanomaterials.
Audience: Undergraduate

2. Identify and analyze crystal structures, integrating concepts of lattice and reciprocal lattices, symmetry, and space groups.
Audience: Undergraduate

3. Interpret and describe crystal structures of solid-state materials using crystallographic tables.
Audience: Undergraduate

4. Describe the impact of defects and non-stereometry.
Audience: Undergraduate

5. Interpret and analyze phase diagrams and use them to rationally design the synthesis of solid state materials.
Audience: Undergraduate

CHEM 654 – MATERIALS CHEMISTRY OF POLYMERS
2-3 credits.

Polymer classification, synthesis, and molecular architecture; solid state structure and characterization; glassy state and glass transition; polymer rheology in solids and gels; transport, dielectric and optical properties.
Requisites: CHEM 345 and (CHEM 561, 565 or CBE 310), or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and describe structural features of polymers, including connections to reactivity and function.
Audience: Undergraduate

2. Propose and critique syntheses for target polymer structures.
Audience: Undergraduate

3. Compare and critique disparate mechanistic approaches for polymer syntheses.
Audience: Undergraduate

4. Identify strengths and weaknesses of classic polymer synthetic methods.
Audience: Undergraduate

5. Propose polymer targets that would provide desired, currently unavailable function or capability.
Audience: Graduate

CHEM 661 – CHEMICAL AND STATISTICAL THERMODYNAMICS
3 credits.

Basic chemical thermodynamics with applications to chemical and phase equilibria and the study of solutions; introduction to statistical mechanics and calculation of thermodynamic quantities from molecular models; stability and fluctuations.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

CHEM 664 – PHYSICAL CHEMISTRY OF MACROMOLECULES
2-3 credits.

Structure, thermodynamics, and dynamics of polymers in solution and in the bulk; theoretical models and experimental methods; polymer characterization.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

CHEM 665 — BIOPHYSICAL CHEMISTRY
3 credits.

Equilibrium thermodynamics and chemical kinetics with emphasis on solution behavior and applications to biological macromolecules in solution. Focus on biological applications of physical chemistry.
Requisites: (CHEM 116, 327, or 329), MATH 222, (PHYSICS 201, 207, or 247), and (BIOCHEM 501, 507, BIOCORE 383, or concurrent enrollment), or graduate/professional standing. Not open to students with credit for CHEM 561 or 565.
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Honors - Accelerated Honors (!)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand and apply fundamental principles of thermodynamics to biological systems.
Audience: Both Grad & Undergrad

2. Understand and apply fundamental principles of kinetics to biological systems.
Audience: Both Grad & Undergrad

3. Rationally interpret the results of experiments performed on biological systems in terms of energetics and outcome probabilities
Audience: Both Grad & Undergrad

4. Predict the outcome of biological processes, once experimentally or theoretically derived thermodynamic/kinetic parameters are known
Audience: Both Grad & Undergrad

5. Design new experiments on biological systems based on appropriate thermodynamic and kinetic criteria
Audience: Both Grad & Undergrad

6. Explain a selected topic related to the course material to other students

Audience: Graduate

CHEM 668 — BIOPHYSICAL SPECTROSCOPY
2-3 credits.

Focuses on the underlying principles and applications of spectroscopic and microscopy methods employed to solve biological problems at the atomic and molecular level. Techniques covered include electronic absorption and fluorescence spectroscopy, circular dichroism, light scattering, fluorescence microscopy, multidimensional nuclear magnetic resonance and electron spin resonance.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CHEM 675 — INTRODUCTORY QUANTUM CHEMISTRY
3 credits.

Basic principles of quantum chemistry, exactly solvable problems, angular momentum, approximation methods, applications to electronic structure.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CHEM 681 — SENIOR HONORS THESIS
2-4 credits.

Mentored research for students completing a thesis in an Honors program.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

CHEM 682 — SENIOR HONORS THESIS
2-4 credits.

Mentored research for students completing a thesis in an Honors program.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

CHEM 691 — SENIOR THESIS
2-6 credits.

Mentored research for students completing a senior thesis.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

CHEM 692 — SENIOR THESIS
2-6 credits.

Mentored research for students completing a senior thesis.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

CHEM 699 — DIRECTED STUDY
1-6 credits.

Advanced mentored research project as arranged with a faculty or academic staff member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

CHEM 701 – RESPONSIBLE CONDUCT OF RESEARCH IN THE CHEMICAL SCIENCES
1 credit.

Scientific integrity and professional behavior in the chemical sciences. Topics include conflict of interest, human and animal subjects in research, mentor and mentee responsibilities, collaborative research, peer review, data acquisition and management, research misconduct, responsible authorship and publication, and societal impacts.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 3 number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Articulate basic principles of moral/ethical reasoning
Audience: Graduate

2. Articulate basic principles of universal design
Audience: Graduate

3. Articulate how they contribute to diversity, equity and inclusion in their workplaces
Audience: Graduate

4. Articulate their social responsibility in research, including societal and environmental impacts
Audience: Graduate

5. Identify best practices in job searches and interviews, generating and managing data, writing and reviewing publications and grant applications
Audience: Graduate

6. Identify best practices in networking, collaboration, giving and receiving feedback, setting expectations, effective communication with mentors and peers
Audience: Graduate

7. Identify best practices in animal and human welfare in research
Audience: Graduate

8. Recognize ethical breaches and articulate how to handle them, including conflicts of interest, research misconduct, inappropriate behavior

Audience: Graduate

CHEM/BIOCHEM 704 – CHEMICAL BIOLOGY
3 credits.

Chemistry and biology of proteins, nucleic acids and carbohydrates; application of organic chemistry to problems in cell biology, biotechnology, and biomedicine.
Requisites: Declared in Biochemistry or Chemistry graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Be able to describe the chemical basis for replication, transcription, translation and how each of these central processes can be expanded to include new chemical matter.
Audience: Graduate

2. Develop skills to critically read the literature and effectively communicate research in a peer setting.
Audience: Graduate

3. Describe the substance and importance of chemical biology research in the format of a cover letter to a journal editor, and an original figure.
Audience: Graduate

4. Demonstrate knowledge of chemical biology by designing an original research project that focuses on answering a biological question or solving a biomedical problem.
Audience: Graduate

CHEM 713 – INORGANIC AND ORGANOMETALLIC CHEMISTRY OF THE MAIN GROUP ELEMENTS
1-3 credits.

Descriptive inorganic chemistry, organometallic chemistry of main-group elements, and organosilicon chemistry.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply concepts of chemical reactivity important to creating new knowledge in synthetic chemistry research.
Audience: Graduate

2. Interpret content from chemical literature and summarize in writing the key ideas.
Audience: Graduate

3. Discuss and debate ideas from the chemical literature with a team to collaboratively articulate key concepts.
Audience: Graduate

4. Locate, evaluate, and adapt tools and techniques described in the chemical literature to conduct research.
Audience: Graduate

CHEM 714 – ORGANOMETALLIC CHEMISTRY OF THE TRANSITION ELEMENTS
2-3 credits.

Fundamental and applied aspects of organotransition-metal chemistry, including structure and bonding, reactivity, and catalytic applications of organometallic complexes.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CHEM 721 – INSTRUMENTAL ANALYSIS
3-4 credits.

Chemical instrumentation and instrumental methods of analysis.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate a deep knowledge of the fundamental principles for the design, development, and use of chemical instrumentation
Audience: Graduate

2. Apply this knowledge to effectively use chemical instrumentation for your research.
Audience: Graduate

3. Demonstrate skill in building and using chemical instrumentation (lab learning outcome.)
Audience: Graduate

CHEM 725 – SEPARATIONS IN CHEMICAL ANALYSIS
2-3 credits.

Basic principles of chemical and biochemical separations by chromatography and electrophoresis.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Lecture outcome - gain solid knowledge of the basic principles and terminology of chemical separations and demonstrate the ability to read and comprehend the scientific literature in the field.
Audience: Graduate

2. Laboratory outcome- acquire the hands-on experience necessary to apply the theory of separations to its practical implementation.
Audience: Graduate

CHEM 728 – ELECTRONICS FOR CHEMICAL INSTRUMENTATION
3 credits.

Learn and apply the principles of analog and digital electronics and computer interfaces for controlling and monitoring components of importance to chemical instrumentation.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify the working principles of the electronics behind modern chemical instrumentation
Audience: Graduate

2. Interconnect and modify commercial instrumental modules for use in new applications
Audience: Graduate

3. Build new instrumental modules based on operational amplifiers, microcontrollers, and other integrated circuits
Audience: Graduate

CHEM 738 – INTRODUCTION TO MASS SPECTROMETRY
1 credit.

Introduction to the theory and practice of mass spectrometry. Topics include gas chromatography/mass spectrometry (GCMS), electrospray ionization (ESI), matrix assisted laser-desorption ionization (MALDI), liquid chromatography/mass spectrometry (LCMS), imaging mass spectrometry, and ion mobility mass spectrometry.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Read and interpret mass spectra.
Audience: Graduate

2. Match ionization methods to compound types.
Audience: Graduate

3. Understand the coupling of separation techniques to mass spectrometers.
Audience: Graduate

4. Recognize how mass spectrometry could be used in one's own research.

Audience: Graduate

CHEM/B M E/MED PHYS 750 – BIOLOGICAL OPTICAL MICROSCOPY
3 credits.

Covers several aspects of state-of-the-art biological and biophysical imaging with an emphasis on instrumentation, beginning with an overview of geometrical optics and optical and fluorescence microscopy. The bulk of the course will focus on advanced imaging techniques including nonlinear optical processes (multi-photon excitation, second harmonic generation, and stimulated Raman processes) and emerging super-resolution methods. Special emphasis will be given to current imaging literature and experimental design. Knowledge of physics-based optics [such as PHYSICS 202] strongly recommended.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Provide a clear, concise oral presentation critiquing a paper in the literature
Audience: Graduate

2. Write a hypothesis driven research proposal and present an oral defense
Audience: Graduate

3. Write a critical written assessment of literature papers
Audience: Graduate

4. Use course concepts to better design experiments and extract quantitative information
Audience: Graduate

5. Articulate a fundamental understanding of the function of a microscope

Audience: Graduate

CHEM 758 – CHEMISTRY EDUCATION RESEARCH
2 credits.

An introduction to chemistry education research and the theories that underpin it. Develop and refine models of learning on the basis of primary literature. Explore how theories of cognition could and should inform learning objectives and assessments in college chemistry learning environments. Substantial emphasis placed on critically reading and analyzing studies in the chemistry education research literature with an eye toward the implicit and explicit theories of cognition informing the work.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Develop and refine a model of learning based on discussion and analysis of the primary chemistry education and science education literature
Audience: Graduate

2. Design assessible learning objectives describing what students should know and be able to do at the conclusion of a college chemistry course
Audience: Graduate

3. Assess the validity of conclusions in the literature on the basis of theories of cognition underpinning assessments
Audience: Graduate

4. Design assessments with the capacity to measure aspects of learning objectives using evidence-centered-design
Audience: Graduate

CHEM 763 – INTRODUCTION TO MOLECULAR SPECTROSCOPY
2-3 credits.

Quantum mechanics of molecular rotation and vibration; principles of group theory; electronic, vibrational, and magnetic resonance spectroscopy in gas and condensed phases.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023

CHEM/PHM SCI 766 – MOLECULAR RECOGNITION
2-3 credits.

Origin, nature, classification, and description of intermolecular forces. The hydrophobic effect. Molecular complexes, binding constants, and their measurements. General principles of self-assembly, molecular recognition, complex formation, host design. Supramolecular systems and their dynamics. Micelles, bilayers, vesicles, biological membranes.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

CHEM 775 – ELECTRONIC STRUCTURE OF MOLECULES
2-3 credits.

Applications of quantum mechanics to the electronic structure and properties of molecules.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

CHEM 777 – PHYSICAL CHEMISTRY OF SURFACES
2-3 credits.

Structure, thermodynamics, kinetics, and reactivity of molecules at the interfaces between gases, liquids and solids, with applications to catalysis, atmospheric chemistry, monolayers, and thin films.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

CHEM 801 – SELECTED TOPICS IN INORGANIC CHEMISTRY
1-3 credits.

Various selected topics in contemporary inorganic chemistry.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

CHEM 840 – ADVANCED TOPICS IN ORGANIC CHEMISTRY
1-4 credits.

Various selected topics in contemporary organic chemistry.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024
Learning Outcomes: 1. Engage with, understand, and critique the primary research literature describing contemporary advances and historical topics in organic chemistry
Audience: Graduate

2. Acquire a deep and sophisticated understanding of important topics and research areas associated with the practice of organic chemistry
Audience: Graduate

CHEM 841 – ADVANCED ORGANIC CHEMISTRY
3 credits.

Synthesis of simple and complex organic compounds.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Interpret and apply the concepts, models, and terminology essential to contemporary organic synthesis.
Audience: Graduate

2. Plan logical, stereocontrolled syntheses of complex organic structures using retrosynthetic analysis as a strategic tool.
Audience: Graduate

3. Predict and rationalize the stereochemical outcomes of common organic reactions using three-dimensional transition state models.
Audience: Graduate

4. Read and critically analyze the scholarly literature of synthetic organic chemistry.
Audience: Graduate

5. Describe the importance and implications of modern organic synthesis techniques in pharmaceutical and medicinal chemistry.
Audience: Graduate

6. Use the peer review process to provide constructive, supportive feedback on colleagues' research proposals.
Audience: Graduate

CHEM 843 – ADVANCED ORGANIC CHEMISTRY
1-3 credits.

Fundamental concepts in organic chemistry reactions and mechanisms.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

CHEM 845 – MACROMOLECULAR CHEMICAL BIOLOGY
2 credits.

Critically read, analyze and discuss the primary literature in chemical biology by focusing on topics associated with macromolecules (largely proteins and nucleic acids).
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Critically read, analyze and discuss primary scientific literature in macromolecular chemical biology.
Audience: Graduate

2. Evaluate the literature from the perspective of the scientific method.
Audience: Graduate

3. Incorporate primary scientific literature into the student's research and scholarship.
Audience: Graduate

4. Apply effective methods of scientific communication.
Audience: Graduate

CHEM 858 – SPECIAL TOPICS IN CHEMISTRY EDUCATION
1-3 credits.

Various selected topics in contemporary chemistry education.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024
Learning Outcomes: 1. Engage with, understand, and critique the primary research literature describing contemporary advances and historical topics in chemistry education
Audience: Graduate

2. Acquire a deep and sophisticated understanding of important topics, research areas, and research methods associated with chemistry education.
Audience: Graduate

CHEM 860 – SELECTED TOPICS IN PHYSICAL CHEMISTRY
1-3 credits.

Various selected topics in contemporary physical chemistry.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

CHEM 864 – STATISTICAL MECHANICS
2-3 credits.

Fundamentals of statistical mechanics; applications to equilibrium and non-equilibrium properties of gases and condensed phases.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

CHEM/BIOCHEM 872 – SELECTED TOPICS IN MACROMOLECULAR AND BIOPHYSICAL CHEMISTRY
1-3 credits.

Various selected topics in contemporary macromolecular or biophysical chemistry.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss current topics of active interest in molecular biophysics
Audience: Graduate

2. Evaluate primary research literature in molecular biophysics
Audience: Graduate

3. Design and interpret experiments in molecular biophysics
Audience: Graduate

4. Conduct rigorous research in molecular biophysics
Audience: Graduate

CHEM 890 – HIGHLIGHTS AT THE CHEMISTRY-BIOLOGY INTERFACE
1 credit.

Oral presentations on thesis research at the chemistry-biology interface. Includes discussions of reproducibility, rigor, and the responsible conduct of research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and clearly present key background concepts relating to their research
Audience: Graduate

2. Explain experiments leading to research conclusions
Audience: Graduate

3. Analyze the results of each experiment with the appropriate scientific rigor, and develop skills to justify their analytical choices
Audience: Graduate

4. Identify short-term and long-term research steps and goals
Audience: Graduate

5. Provide feedback to other trainees on presentation style and clarity, data analysis, and scientific rigor and responsible conduct of research
Audience: Graduate

CHEM 900 – SEMINAR-INORGANIC CHEMISTRY
0 credits.

Presentations of recent research in inorganic chemistry and related areas by external and internal speakers.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

CHEM 901 – SEMINAR-TEACHING OF CHEMISTRY
0-1 credits.

The role of the teaching assistant in undergraduate chemistry instruction. Effective utilization of instructional aids. Innovations for better teaching.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

CHEM/BIOCHEM 918 – SINGLE MOLECULE APPROACHES TO BIOLOGY
1 credit.

A combination of recent literature and original research presentations relating to the use of single molecule techniques in biochemistry including fluorescence microscopy, tethered particle motion, patch-clamping, cryo-electron microscopy, optical trapping, magnetic tweezers, and super resolution microscopy.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024
Learning Outcomes: 1. Discuss state-of-the-art research in single molecule biophysics
Audience: Graduate

2. Communicate and critically evaluate experimental results
Audience: Graduate

CHEM 920 – SEMINAR-ANALYTICAL CHEMISTRY
0 credits.

Presentations of recent research in analytical sciences and related areas by external and internal speakers.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

CHEM 923 – GENOMIC SCIENCES PROGRAM SEMINAR
1 credit.

Cross-disciplinary exposure to cutting edge research in genomic sciences. Seminars presented by trainees and other scientists who study genomics using approaches based in chemistry, computer science, biostatistics, engineering and biological and biomedical sciences. Research objectives, findings and future directions are discussed.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and summarize background information and key concepts important for the diverse audience to understand their research topic and aims.
Audience: Graduate

2. Describe their experimental approach to answer the genomic questions poised in their research aims, paying attention to making their presentation accessible to the broad audience.
Audience: Graduate

3. Analyze and provide critical guidance for interpreting the experimental results; describe issues of reproducibility and rigor.
Audience: Graduate

4. Describe their new, proposed invention that pushes past the envelope of current investigations in genomic sciences
Audience: Graduate

5. Apply knowledge of new concepts and systems in the genomic sciences by providing feedback and suggestions to help other trainees further their experimental aims.
Audience: Graduate

CHEM 940 – SEMINAR-ORGANIC CHEMISTRY
0 credits.

Presentations of recent research in organic chemistry and related areas by external and internal speakers.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

CHEM/BIOCHEM 945 – SEMINAR-CHEMICAL BIOLOGY (ADVANCED)
1 credit.

Presentations and discussions of recently published research in chemical biology and related areas.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss recent published research in chemical biology and related areas
Audience: Graduate

2. Apply tools used in research at the chemistry–biology interface
Audience: Graduate

3. Demonstrate professional and ethical responsibility in research
Audience: Graduate

4. Communicate and critically evaluate published research with scientists with diverse backgrounds and interests
Audience: Graduate

CHEM 960 – SEMINAR-PHYSICAL CHEMISTRY
0-2 credits.

Presentations of recent research in physical chemistry and related areas by external and internal speakers.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

CHEM 980 – SEMINAR: REVIEW OF CURRENT RESEARCH
1 credit.

Research discussions facilitated by individual faculty members and occurring between all members of the research group.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Develop new and novel directions in research.
Audience: Graduate

2. Evaluate rigor and accuracy of current scientific literature.
Audience: Graduate

3. Analyze and communicate key background concepts relating to current research succinctly and clearly.
Audience: Graduate

4. Analyze and communicate experimental results with the appropriate scientific rigor.
Audience: Graduate

5. Develop skills to justify experimental, theoretical, and analytical interpretations of data.
Audience: Graduate

CHEM 990 – RESEARCH
1-15 credits.

Research supervised by individual faculty members.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Exhibit a broad understanding of general chemical principles.
Audience: Graduate

2. Conduct independent research using a variety of approaches.
Audience: Graduate

3. Think critically to address research challenges.
Audience: Graduate

4. Exhibit and foster professional and ethical conduct in their research.
Audience: Graduate

5. Collaborate with other investigators within or outside the thesis lab.
Audience: Graduate

CHICANA/O AND LATINA/O STUDIES (CHICLA)

CHICLA/AFROAMER/AMER IND/ASIAN AM/FOLKLORE 102 – INTRODUCTION TO COMPARATIVE US ETHNIC AND AMERICAN INDIAN STUDIES
3 credits.

Introduction to comparative ethnic studies, examining race, ethnicity, and indigeneity within the United States. Includes perspectives from African American, American Indian, Asian American, and Chican@ and Latin@ studies.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize the multicultural history of the United States of America and the essential role of Indigenous, African, Asian and Chicanx/e & Latinx/e peoples in the American story.
Audience: Undergraduate

2. Identify the creation, development and legacies of race-based discrimination in the United States.
Audience: Undergraduate

3. Explain the role of race in the creation of value systems in American society.
Audience: Undergraduate

4. Explore the heterogeneity and complexity within persistently marginalized groups as well as their relations to each other.
Audience: Undergraduate

5. Reflect on their learning experience so that they may develop as well-rounded, informed, and educated members of society who can effectively and successfully participate in a multicultural society.
Audience: Undergraduate

CHICLA/HISTORY 151 – THE NORTH AMERICAN WEST TO 1850
3-4 credits.

Explores the history of places that have been called the American West before 1850. We start with Indigenous occupation; continue with European invasion and the creation of two new nations, Mexico and the U.S.; and end with U.S. conquest. We watch Indian lands becoming the object of Spanish, French, and English empires, and then see European incursions giving way to the hopes of new nation-states and newly empowered Indian peoples like Lakotas and Comanches. After studying the trails and trades that brought newcomers west, we reach key converging events: U.S. seizure of the Mexican North, resolution of the Oregon boundary dispute, discovery of western gold, West Coast arrival of Chinese immigrants, and Mormon exodus to the Great Basin. We use economic, environmental, political, cultural, and social analyses, and we attend to the dreams of many westerners: of North American, Latin American, European, African, and Asian origin or descent, and of all genders and class statuses.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the various peoples who occupied the North American West before the 16th century, how they lived in their respective environments and vis-à-vis one another, and how scholars and Native communities themselves have made sense of that occupation
Audience: Undergraduate

2. Identify and analyze the relationships among the political, social, cultural, economic, and environmental factors that brought Europeans and enslaved Africans to places that came to be called the West from the 16th through the 18th centuries
Audience: Undergraduate

3. Identify and analyze the political, social, cultural, economic, and environmental factors that gave rise to two new occupying nations in places that came to be called the West in the late 18th and early 19th centuries, as well as increasingly powerful Indigenous peoples
Audience: Undergraduate

4. Identify and analyze the political, social, cultural, economic, and environmental factors that paved the way for U.S. conquest of various parts of the North American West by the middle of the 19th century
Audience: Undergraduate

5. Identify and analyze the political, social, cultural, economic, and environmental factors that brought increasing numbers of Americans, Europeans, and Asians to the West by the middle of the 19th century
Audience: Undergraduate

6. Explain the how the history of places that came to be called the West demonstrates the workings of imperialism and colonialism
Audience: Undergraduate

7. Identify and analyze the ways in which westerners of various genders navigated their lives; the forces that created hierarchies among and within human communities; and the means by which various westerners either maintained or challenged those hierarchies
Audience: Undergraduate

8. Explain the significance of the West for the development of the U.S. nation-state and for the fate of those who lived in the West before the U.S. claimed it

CHICLA/HISTORY 152 – THE UNITED STATES WEST SINCE 1850
3-4 credits.

Introduction to histories of places that have been called the American West, focusing on the period since 1850. Beginning in the mid nineteenth century, the United States sought to establish power over vast western regions that it claimed on maps but did not in fact control. Moving through the twentieth century to the present day, considers how attention to the American West allows us to reimagine US history more broadly - and how the United States represents just one facet the region's pasts. Learn to think like a historian by analyzing primary sources, evaluating competing narratives, and formulating arguments about the past. Investigate how people, ideas, and infrastructures have transformed a region repeatedly redrawn and consider the ongoing legacies of the past - and the stories we tell about it - in the American West today.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Challenge common myths that distort our understanding of the modern U.S. West
Audience: Undergraduate

2. Understand how historians make history and why our understandings of the past change over time
Audience: Undergraduate

3. Use primary sources to ask and answer questions about the modern North American West
Audience: Undergraduate

4. Evaluate arguments about history and weigh in on existing historical debates
Audience: Undergraduate

5. Identify how the past has affected present day circumstances regarding race and racial inequalities in the U.S.
Audience: Undergraduate

CHICLA/HISTORY 153 – LATINA/LATINO/LATINX HISTORY
3-4 credits.

Examines the historical, social, and legal experiences of Latinas/Latinos/Latinxs in the US since the mid-1800s with emphasis on Mexican migrations. Latinxs became an important part of the US population through western expansion, conquest, and immigration. We will learn about the 3 main Latinx groups in the US: Mexicans, Puerto Ricans, and Cubans, but will also learn about other Latinx communities. We begin with an examination of conquest by studying the Treaty of Guadalupe Hidalgo that annexed roughly half of former Mexican territory and the Spanish-American War that resulted in the possession of Puerto Rico. Then, we examine the history of Latinx immigration to understand the experiences of Mexicans, Central Americans, South Americans, and people from the Caribbean who have immigrated to the US in search of economic opportunities and political asylum. This course serves as an introduction to the varied experiences of Latinxs in the US in order to understand their unique histories.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop a critical understanding of the diverse experiences of Latinas/Latinos/Latinxs in the U.S. by conducting a close examination of assigned readings through assignments, lectures, presentations, and in-class discussions.
Audience: Undergraduate

2. Build a critical lens of race, ethnicity, gender, sexuality, and class by engaging in analytical essay writing that incorporates the assigned readings and primary research in the archives at the Wisconsin Historical Society.
Audience: Undergraduate

3. Develop sociological tools and perspectives to discuss the experiences of Latinas/Latinos/Latinxs in the U.S. through in-class oral presentations based on the research conducted for the final paper.
Audience: Undergraduate

4. Critically engage in public debates about policies pertaining to Latinas/Latinos/Latinxs in the U.S. and be able to make informed decisions by learning about historical social and legal issues surrounding Latina/Latino/Latinx communities that continue to impact Latinxs today. This, through the assigned readings, original research, and data presented in lectures.
Audience: Undergraduate

CHICLA 201 – INTRODUCTION TO CHICANA/O AND LATINA/O STUDIES
3 credits.

Introduction to the interdisciplinary study of Chicanas/os in the United States. Become acquainted with recent scholarly literature, paradigms, theories, and debates within Chicana/o studies pertaining to the historical, economic, cultural, and sociopolitical dimensions of the Chicana/o experience in the United States.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate how the historical processes by which Chicanas/os/xs and Latinas/os/xs have been socially, politically, and legally constructed in the United States affect present-day circumstances regarding race and racial inequalities in the US today.
Audience: Undergraduate

2. Recognize and question your own assumptions and knowledge claims regarding race and ethnicity in the US in relation to communities of Latin American descent.
Audience: Undergraduate

3. Identify and analyze the interlocking issues of race, class, gender, migration status, and power relations as they relate to Chicana/o and Latina/o lives and communities in the United States.
Audience: Undergraduate

4. Apply concepts from the course to your life outside the classroom.
Audience: Undergraduate

5. Demonstrate comprehension of interdisciplinarity as it pertains to Chicana/o and Latina/o studies.
Audience: Undergraduate

CHICLA 210 – CHICANA/O AND LATINA/O CULTURAL STUDIES
3 credits.

Introduction to the cultural worlds of Chicana/os and Latina/os in the U.S. Examines how diverse peoples came to understand themselves as members of a racial, ethnic, and cultural community by exploring the production of music, art, theater, film, television, and literature.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2024
Learning Outcomes: 1. Use interdisciplinary cultural studies theories and methods to analyze examples of Chicanx and Latinx/e cultural expression.
Audience: Undergraduate

2. Critically examine the ways Chicanx/e and Latinx/e cultural expression relates to the way Chicanx and Latinx/e communities have been imagined and imagine themselves in local and national contexts, including attention to nation, race, gender, and sexuality.
Audience: Undergraduate

3. Recognize and question assumptions related to course material and demonstrate consciousness of your own identity in relation to course material.
Audience: Undergraduate

4. Conduct research on an example of Chicanx and Latinx/e cultural expression and communicate this research to a broad audience.
Audience: Undergraduate

CHICLA/SPANISH 215 – BORDER AND MIGRATION STUDIES OF LATINX AMERICA
3 credits.

Drawing from cultural studies, border studies, migration and race theory, explores through cultural and literary texts the social and political issues regarding migration, contact zones, transculturation, and/or diaspora. Considers the various meanings of the word "border" or "frontera". What is a border geographically speaking? What does it mean in political and legal terms? How do we conceive the border in cultural, literary, linguistic, political, judicial, and personal ways? What is like to live on the border or on the margins? It is said that the border is a contact zone, a meeting point, a way to transfer and share information, an invitation to (in)tolerance and ex/inclusion. Read texts from history, politics, cultural anthropology, literature, and theatre to grasp the vast understanding of what is life on the border. Focus on the humanities, paying close attention to how visual artists (theater, performance, documentaries) understand and confront life on the border.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and analyze the historical and political impact of the U.S.-Mexico border zone and Latin America.
Audience: Undergraduate

2. Demonstrate empathy for those impacted by border interventions.
Audience: Undergraduate

3. Explain the importance of speaking about borders and how borders have impacted present day circumstances regarding race and racial inequalities in the U.S.
Audience: Undergraduate

4. Recognize and question previously held assumptions about the border and migration.
Audience: Undergraduate

5. Demonstrate knowledge of artistic and literary interventions on and about the border.
Audience: Undergraduate

6. Explore the contemporary political and economic effects of border policy through a humanistic approach
Audience: Undergraduate

7. Apply important historical concepts and terms to draw conclusions on and about border literature, art, and theater.
Audience: Undergraduate

8. Interpret how literature, theatre, and performance explore a humanistic approach to a geopolitical dilemma.
Audience: Undergraduate

CHICLA/SPANISH 222 – INTRODUCTION TO LATINX CULTURES
3 credits.

Offers an introduction to the culture and history of the Mexican and Latin American origin people in the United States. Emphasis on diversity, emergence of new imagined communities, and cultural hybridity. Focusing on key issues such as U.S. imperial expansion, colonialism, nation and community formations, migration, urban spaces, and the dynamics of race, class, gender, ethnicity, and sexuality, study a range of socio-political, historical, literary, and artistic expressions that inform the whole process of culture and reveal the way Latinos and Latinas negotiate their presence, cultural difference, and creativity in the U.S.
Requisites: SPANISH 226 or concurrent enrollment, or SPANISH 311 or concurrent enrollment
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and analyze the factors that have shaped the presence of Mexican and Latin American origin peoples in the U.S., and the historical processes by which Latinos/as have been culturally, politically, and legally constructed in the United States.
Audience: Undergraduate

2. Demonstrate knowledge of the varied make-up of Latinos and the role that race, ethnicity, gender, class, and migration have played in their own histories.
Audience: Undergraduate

3. Demonstrate an understanding of how Latinidad is constructed and contested in the United States by various communities, institutions, and individuals.
Audience: Undergraduate

4. Demonstrate knowledge on how Latinos/as negotiate or respond to situations of internal colonialism, social disparities, lack of political representation, migration, generational conflicts, assimilation and transcultural issues, gender roles, and transnational situations.
Audience: Undergraduate

5. Learn and employ diverse tools and critical thinking in the analysis of Latinx cultural production.
Audience: Undergraduate

6. Demonstrate further mastering of Spanish speaking and writing skills necessary for articulating arguments in field of study.
Audience: Undergraduate

CHICLA/POLI SCI 231 – POLITICS IN MULTI-CULTURAL SOCIETIES
3-4 credits.

Race, ethnicity, and religion as political factors; cultural pluralism, politics, and policy in the United States and selected other multi-cultural politics.
Requisites: Freshman or sophomore standing only
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate how events of the past gave rise to racial and ethnic hierarchies in the United States today and how those hierarchies manifest themselves in politics.
Audience: Undergraduate

2. Recognize and question assumptions about race and ethnicity that are embedded in discussions of U.S. politics.
Audience: Undergraduate

3. Apply concepts raised in class to life in a multi-cultural society.
Audience: Undergraduate

4. Describe the ways that racial and ethnic worldviews are shaped and how they change.
Audience: Undergraduate

CHICLA/GEN&WS/HISTORY 245 – CHICANA AND LATINA HISTORY
3 credits.

Introduces the cultural, economic, social, and political history of Chicanas and Latinas in the U.S. and focuses on four major themes: contact between different ethnic/racial groups; ideas of nation and nationalism; constructions of identity; and struggles for social justice.
Requisites: None
Course Designation: Gen Ed - Communication Part B
Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Critically analyze the presence or absence of Chicanas and Latinas in US history.
Audience: Undergraduate

2. Use methods and vocabularies of history to analyze primary and secondary sources.
Audience: Undergraduate

3. Consider the relevance of Chicana and Latina history to present-day issues.
Audience: Undergraduate

4. Write and revise research aimed at an audience beyond the classroom.
Audience: Undergraduate

CHICLA/HISTORY/LACIS/POLI SCI 268 – THE U.S. & LATIN AMERICA FROM THE COLONIAL ERA TO THE PRESENT: A CRITICAL SURVEY
3 credits.

A critical examination of US-Latin American relations from the colonial era to the present, tracing the emergence and evolution of the United States as a hemispheric and global power and its political and economic impact on Latin America. Primary attention will be focused on US relations with Mexico, Central America and the Caribbean, but other Latin American countries will figure prominently during certain episodes.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2020
Learning Outcomes: 1. Critically examine US-Latin American relations from the colonial era to the present.
Audience: Undergraduate

2. Examine tracing the evolution of the United States as a hemispheric and global power and its political and economic impact on Latin America.
Audience: Undergraduate

3. Discuss US relations with Mexico, Central America and the Caribbean.
Audience: Undergraduate

CHICLA 299 – DIRECTED STUDY
1-3 credits.

Introductory independent research, readings or projects mentored by faculty.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2012

CHICLA 301 – CHICANA/O AND LATINA/O HISTORY
3 credits.

Examines the history of the making of a people from pre-hispanic time to the present. Examines how people of Mexican and Latin American descent in the United States have come to think of themselves as constituting a collectivity by examining the social, cultural, and political worlds of Chicana/os and Latina/os.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

CHICLA/POLI SCI 302 – MEXICAN-AMERICAN POLITICS
3-4 credits.

This class examines the major problems and issues in Mexican-American politics since World War II. An emphasis will be placed on the ways in which race, class and culture have structured politics for the Mexican origin people. Not open to students with credit for POLI SCI 464 prior to fall 2017
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop an analytical framework for understanding the political dynamics of multi-cultural societies.
Audience: Undergraduate

2. Understand how the dynamics of race, class, and ethnicity shape Mexican American politics and Latino politics.
Audience: Undergraduate

3. Examine the historical conflict between Mexican and Anglo Americans.
Audience: Undergraduate

4. Understand the politics of cultural pluralism in the United States.
Audience: Undergraduate

5. Assess the state of a body of scholarly literature related to course themes, identify gaps in that literature, and formulate an original research question in the context of those gaps.
Audience: Graduate

CHICLA/CURRIC 306 – LATINX LITERACIES
3 credits.

Addresses how members of Latinx communities have used writing for both personal and social change. Develop a deeper understanding of the political, family, and school contexts in which Latinx peoples in the United States write and read.
Requisites: Satisfied Communications A requirement
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop a theoretical understanding of literacy studies, homing in on concepts, such as “reading the word and reading the world,” “funds of knowledge,” “mestiz@ scripts,” relevant to many Latinx literacy traditions.
Audience: Undergraduate

2. Identify and analyze key social, political, and historical pressures on many Latinx literacies, including the relationship between racism and literacy, legal status and literacy, and linguistic discrimination.
Audience: Undergraduate

3. Identify and analyze central ways that Latinx communities have used and use writing for social change through close readings of ethnographic and literary accounts.
Audience: Undergraduate

4. Create a portfolio of creative, scholarly, and reflective writing connected to course themes, deepening understandings of Latinx literacies, and developing writing and revision techniques that will transfer to other contexts.
Audience: Undergraduate

CHICLA/GEN&WS/GEOG 308 – LATINX FEMINISMS: WOMEN'S LIVES, WORK, AND ACTIVISM
3 credits.

An examination of Latinx women's lives, experiences, and activism through the lens of testimonio, life histories, and feminist writings rooted in social justice movements and critical pedagogies.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Identify and describe key theoretical concepts and frameworks used in interdisciplinary studies of Latinas/xs and other women of color in the U.S.
Audience: Undergraduate

2. Explain the historical origins of Chicanx and Latinx feminisms and their relationship with social justice movements.
Audience: Undergraduate

3. Critically analyze the works of leading Latinx feminist scholars and theorists, who have written on issues of race, ethnicity, gender, LGBTQ identities, labor, color, citizenship status, and generation.
Audience: Undergraduate

4. Explore different writing genres and methodologies used in the study of women's lives, experiences, and activism.
Audience: Undergraduate

5. Apply the framework of testimonio to complete a digital storytelling project, examining a key theme or issue in women's lives.
Audience: Undergraduate

CHICLA/ED POL 310 – LATINE STUDENTS IN THE U.S. HIGHER EDUCATION SYSTEM
3 credits.

Develop a deeper understanding of U.S. higher education by examining connections between historical and present-day circumstances for a group of students often called the key to the sector's future. Latine students are the fastest growing population in postsecondary education today. Why did this growth happen? How has it impacted colleges and universities? How are Latine college students dealing with varying levels of institutional support? And what strengths do they bring to their education and future careers? By studying research from sociologists, historians, and education scholars, develop informed critiques of higher education and reimagine a better system for all.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Identify the major players in the U.S. higher education system, along with their relationships to one another.
Audience: Undergraduate

2. Summarize the development of this system - especially its early treatment of People of Color - and identify the historical roots of modern educational trends.
Audience: Undergraduate

3. Describe the strengths Latine students bring to their own educational trajectories and list their contributions to American colleges and universities.
Audience: Undergraduate

4. Apply social science theories and methods to understanding inequality in college enrollment, experiences, and outcomes for underrepresented minority students, especially Latines.
Audience: Undergraduate

5. Evaluate new ideas for improving the productivity, diversity, stability, and/or innovativeness of the higher education system.
Audience: Undergraduate

6. Assess and synthesize existing education research to formulate new arguments about the U.S. higher education system.
Audience: Undergraduate

7. Participate in informed and respectful conversations about higher education with a variety of people - taking into consideration the cultural perspectives and worldview of others.
Audience: Undergraduate

CHICLA 315 – RACIAL FORMATION AND WHITENESS
3 credits.

Examines the construction of whiteness in the United States from the colonial period to the present with an eye to the ways in which Chicanx Latinx communities have engaged with whiteness. Learn and apply a variety of relevant racial theories to historical cases, exploring the process of racialization through specific racial projects in time and space. Evaluate theories about identity, citizenship, and justice that influence contemporary anti-racist praxis and develop writing skills through essays that take positions on debates within Chicanx Latinx studies.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe processes of racial formation in the United States from the colonial period to the present.
Audience: Undergraduate

2. Discuss historical, economic, and political forces behind the social construction and maintenance of whiteness in the United States.
Audience: Undergraduate

3. Analyze Chicanx & Latinx identity in the United States in relation to processes of racialization and the construct of whiteness.
Audience: Undergraduate

4. Students will learn and apply various racial theories to concrete cases from the history of the United States and to their own lives.
Audience: Undergraduate

5. Develop written, spoken, and graphic communication and argumentation skills.
Audience: Undergraduate

CHICLA/CURRIC 321 – CHICANO/LATINO EDUCATIONAL JUSTICE
3 credits.

Addresses the ways Chican@s/Latin@s in contemporary U.S. society have engaged in social, cultural, political, and ideological struggles for educational justice. Begins with a broad overview of educational issues and examines major social movements, legal cases, and local and national efforts that have established important precedents. Focus on different enactments of resistance, struggle, resilience, self-determination, and educational justice and focus on how these precedents and enactments pertain to teaching, learning, and curriculum practices that reflect key tenets of educational justice for Chican@/Latin@ students.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Summarize substantive educational issues and inequities that pertain to Chicana/o/x and Latina/o/x pupils in schools.
Audience: Undergraduate

2. Analyze underlying social, cultural, historical, and political, ideological dimensions that affect Chicana/o/x and Latina/o/x schooling.
Audience: Undergraduate

3. Apply knowledge about schooling for Chicana/o/x and Latina/o/x pupils to how organizations/entities outside of school advance notions of educational justice
Audience: Undergraduate

4. Identify concrete ways to improve Chicana/o/x and Latina/o/x pupils' learning opportunities, educational advancement, and academic achievement
Audience: Undergraduate

CHICLA 327 – TOPICS IN CHICANX/E AND LATINX/E LITERATURES
3 credits.

An examination of specific themes in Chicanx/e and Latinx/e literature that address persistent marginalization due to race/ethnicity, gender, sexuality, and class.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, for 10 number of completions
Learning Outcomes: 1. History of literature and language: Recognize and identify the forms, techniques, social conditions, values, and genres, as well as cultural, aesthetic, philosophical, and ideological factors that are relevant to a particular topic or theme in Chicanx and Latinx literatures.
Audience: Undergraduate

2. Awareness of history's impact on the present: Appraise and contrast literary approaches to depicting a variety of social, cultural, and historical events and experiences.
Audience: Undergraduate

3. Critical thinking / Ability to recognize and question assumptions: Assess textual evidence leading to interpretation and discern multiple (and even contradictory) interpretations while querying textual meaning and significance.
Audience: Undergraduate

4. Creativity: Generate original ideas and texts, experimenting and taking risks, solving problems, and answering questions in a range of genres and media.
Audience: Undergraduate

5. Critical writing and communication: Write and present original, coherent, and compelling arguments that push beyond summary to analysis; are grounded in textual evidence; and offer independent and original thinking clear prose that meets expectations for grammatical correctness.
Audience: Undergraduate

6. Citizenship / A consciousness of self and other: Develop empathy by learning about the experiences of others and develop self-awareness of one's own positionality and views, and employ this consciousness in participating with others in the classroom while also creating productive patterns of study and work for yourself based on this growing self-awareness.
Audience: Undergraduate

CHICLA 328 – CULTURES AND HISTORIES TOPICS IN CHICANA/O & LATINA/O STUDIES
3 credits.

Topics in Chicano/a Studies: An examination of specific themes in Chicano/a life, ways and culture, with readings drawn primarily from the arts and humanities.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, for 10 number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Comprehend, and employ various approaches to interpreting and creating cultural artifacts such as works of art, literature, music, architecture, philosophy, film, etc.
Audience: Undergraduate

2. Demonstrate knowledge of major movements, trends, or events in the development of one or more U.S. Latinx culture
Audience: Undergraduate

3. Demonstrate an appreciation of the complexities of the interpretative process within historical and cultural contexts
Audience: Undergraduate

4. Apply critical approaches to works and alternative ways of considering them
Audience: Undergraduate

5. Think critically about and appreciate the complex histories of U.S. Latinx cultures and larger global communities
Audience: Undergraduate

CHICLA 329 – EDUCATION AND SERVICE TOPICS IN CHICANA/O & LATINA/O STUDIES
3 credits.

An examination of specific themes in Chicano/a life, ways and culture, with readings drawn primarily from fields related to education, social service, and applied social science.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Think critically about U.S. Latinx communities and the larger global community
Audience: Undergraduate

2. Demonstrate knowledge of one or more methodologies for the study of Latinx populations in relation to education and social services
Audience: Undergraduate

3. Synthesize and apply social science concepts to the study of communities of Latin American descent in the USA
Audience: Undergraduate

4. View issues related to communities of Latin American descent in the USA from multiple perspectives
Audience: Undergraduate

CHICLA 330 – TOPICS IN CHICANO/A STUDIES
3-4 credits.

An examination of specific themes in Chicano/a life, ways and culture. Topics may include border culture, Chicano/a ethnicity and identity, and Mexican immigration to the United States.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Explain core social science concepts within the topic area of Chicanx/e & Latinx/e Studies.
Audience: Undergraduate

2. Discuss U.S. Latinx/e communities and the larger global community.
Audience: Undergraduate

3. Demonstrate knowledge of one or more social science methodologies for the study of Latinx populations.
Audience: Undergraduate

4. Synthesize and apply social science concepts to the study of communities of Latin American descent in the USA.
Audience: Undergraduate

5. Explain issues related to communities of Latin American descent in the USA from multiple perspectives.
Audience: Undergraduate

CHICLA/COUN PSY 331 – IMMIGRANT HEALTH AND WELLBEING
3 credits.

Develop an understanding of immigrant health in the United States from the perspective of social and structural determinants. Applies concepts to a comprehensive framework for the development of health. Describes health assets and risks for specific vulnerable immigrant groups, such as women, children, and undocumented individuals and mixed immigration status families. Provides guidelines for improving immigrant access to quality health care, including language services, provider competence, policy and organizational supports, and community-based collaboration, advocacy, and research.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge of nature of health and well-being as well as concomitant risks for immigrant populations
Audience: Undergraduate

2. Examine the nature of social determinants and the pathways by which they influence health and well-being among immigrant populations
Audience: Undergraduate

3. Synthesize academic and public health data to provide an informed summary of health status of immigrants across domains of mental and physical health and disorders
Audience: Undergraduate

4. Survey personal, interpersonal, familial, and community contributors to health, well-being, resilience, healing/recovery, and disability across sociological contexts of immigrants
Audience: Undergraduate

5. Analyze public policy and health initiatives that address the health concerns specific to immigrant populations
Audience: Undergraduate

6. Identify skills, experiences, training, qualifications, and personal/ethical/professional standards involved in careers supporting health and well-being of immigrant populations
Audience: Undergraduate

CHICLA/GEN&WS 332 – LATINAS: SELF IDENTITY AND SOCIAL CHANGE
3 credits.

Explores the multiracial and multicultural reality of Latina societies by becoming familiar with the history and cultures of Chicana, Cuban-American, and Puerto Rican women. Interdisciplinary readings in law, journalism, public policy, history, and self-reflective literature.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

CHICLA/GEN&WS 334 – FEMINIST SOCIAL MOVEMENTS ACROSS THE AMERICAS
3 credits.

Explores feminist activism in the United States, Canada, the Caribbean, and Latin America. Feminist activism, broadly construed, will be explored through ethnography, interviews, documentaries, public facing scholarship, among other forms of intellectual production. Applies transdisciplinary perspectives to consider work from a range of academic fields and topics to understand the major political, economic, and social issues framing feminist social movements across the Americas.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and recognize key themes and issues of feminist social movements across the Americas
Audience: Both Grad & Undergrad

2. Increase awareness of the histories of various social movements across the Americas and their impact in the present
Audience: Both Grad & Undergrad

3. Understand and analyze transnational connections among feminist social movements
Audience: Both Grad & Undergrad

4. Identify and critically analyze the theoretical frameworks that undergird feminist activist scholarship across the Americas
Audience: Both Grad & Undergrad

5. Engage more deeply with course materials with stronger written and analytical skills
Audience: Graduate

6. Develop critical thinking skills to identify and question the impact of power dynamics and institutionalized oppression on feminist social movements in the U.S and across the Americas.
Audience: Both Grad & Undergrad

CHICLA/ED POL/LACIS 342 – EDUCATION ACROSS THE AMERICAS: EMPIRE, CAPITALISM, AND RESISTANCE
3 credits.

Examines educational inequality across the Americas through the lens of imperialism, different forms of colonialism, and capitalism. By exploring the logics and actions of different education stakeholders, critically examine how educational policy across the hemisphere has a shared history of oppression and contestation.
Requisites: Sophomore standing
Course Designation: Gen Ed - Communication Part B
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Draw from different sources to evaluate the transnational contexts of education policy and pose relevant questions about hemispheric educational issues
Audience: Undergraduate

2. Use clear understandings of terms such as imperialism, colonialism, capitalism, racism, and transnationalism to explain unequal educational processes
Audience: Undergraduate

3. Formulate and communicate research-based arguments on topics in education policy using academic literature, including primary and secondary sources
Audience: Undergraduate

4. Produce expository and argumentative texts and draw from this work to produce a podcast
Audience: Undergraduate

CHICLA/COM ARTS 347 – RACE, ETHNICITY, AND MEDIA
3 credits.

Introduction to the changing images of race and ethnicity in U.S. entertainment media and popular culture. Surveys history, key concepts and contemporary debates regarding mediated representation of ethnic minorities. Critical and cultural studies approaches are emphasized.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Connect the way that racial minorities have historically been represented in mainstream media to the way that they are represented in contemporary media
Audience: Undergraduate

2. Analyze the representation of race/ethnicity in contemporary media in a sophisticated way
Audience: Undergraduate

3. Point to evidence of the way that racism is upheld systemically in society, and the ways racism has been and is currently being challenged
Audience: Undergraduate

4. Reflect on and articulate your own participation in contributing to or fighting against racial inequalities
Audience: Undergraduate

5. Increase your ability to understand different perspectives on race in your everyday life, and respectfully engage in discussions of race with colleagues and peers
Audience: Undergraduate

6. Articulate some of the effects the past has had on present day circumstances, perceptions of, and disparities in, race in the U.S.
Audience: Undergraduate

7. Recognize and question cultural assumptions, rules, biases, and knowledge claims as they relate to race and ethnicity
Audience: Undergraduate

CHICLA/CURRIC 354 – RACE AND LANGUAGE IN STEM AND ENVIRONMENTAL EDUCATION
3 credits.

Explores the contestation of ongoing histories of injustice, exclusion, and raciolinguistic hierarchies across science, mathematics, and environmental education. Scholarship from Chicane/Latine Studies, raciolinguistic perspectives, and post/de/anticolonial studies will be examined to critically analyze these school subjects and related hierarchies of knowing, languaging, and being. Applies transdisciplinary perspectives to consider how students, educators, and community activists have challenged those hierarchies and worked to repurpose science, mathematics, and environmental pedagogies toward aims of linguistic, racial, educational, and environmental justice.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Articulate how the past has affected present day circumstances regarding race/ethnicities and related inequities in the U.S., with a focus on histories of science, mathematics, and environmental education in relation to colonial, racializing, linguistic, and curricular hierarchies.
Audience: Undergraduate

2. Demonstrate self-awareness and empathy toward the cultural perspectives and worldviews of others by analyzing how students, educators, or community activists have contested hierarchies of science, mathematics, or environmental education and repurposed pedagogies toward aims of linguistic, racial, or environmental justice.
Audience: Undergraduate

3. Critically evaluate contemporary media (e.g., film) related to STEM or environmental education and draw upon raciolinguistic, Chicane/Latine, or post/de/anticolonial perspectives.
Audience: Both Grad & Undergrad

4. Synthesize course concepts by investigating and developing a critical contribution to contemporary dialogue concerning issues of racial, linguistic, educational and/or environmental justice.
Audience: Undergraduate

5. Recognize and appraise the histories of science, mathematics, and environmental education in relation to colonial, racializing, linguistic, and curricular hierarchies
Audience: Graduate

6. Analyze how students, educators, or community activists have contested hierarchies of science, mathematics, or environmental education and repurposed pedagogies toward aims of linguistic, racial, or environmental justice
Audience: Graduate

7. Demonstrate graduate-level research knowledge of raciolinguistic perspectives, Chicane/Latine Studies, or post/de/anticolonial theories in STEM or environmental education.
Audience: Graduate

CHICLA/HISTORY/LACIS/POLI SCI 355 – LABOR IN THE AMERICAS: US & MEXICO IN COMPARATIVE & HISTORICAL PERSPECTIVE
3 credits.

Provides a critical examination of the history of labor and working people in the Americas, from the colonial era to the present. It focuses on the experience of the United States and Mexico, offering a comparative perspective on their distinct but also shared (and increasingly linked) histories. The seminar proceeds chronologically, highlighting major episodes in the evolution of labor systems in the two countries, beginning with the colonial labor systems implemented by the Spanish and British empires following the European conquest of the Western Hemisphere. Among other topics, we will examine the pivotal role of slavery and other forms of forced labor, the impact of the industrial revolution, the emergence and expansion of corporate capitalism and the labor unrest it provoked in the post-civil war U.S., the role of labor in the Mexican Revolution and its aftermath, the impact of the Great Depression and labor incorporation on the post-WWII social and political order of both countries, the breakdown of that order and the move to neo-liberalism in the 1970s and 1980s, and the emergence of an increasingly integrated North American production system and its consequences for labor and working people on both sides of the US-Mexico border.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2021

CHICLA/SPANISH 364 – SURVEY OF LATINX/E POPULAR CULTURE
3 credits.

Analysis of Latinx/e popular culture to consider the varied make-up of Latinx/e populations, their specific histories, social dynamics, and politics through their creative expressions, performances, and cultural contestations. Covers key terms and concepts, cultural developments, and diverse interpretations while focusing in the analysis of Latinx/e music, performance art, film and media, sports, food, and car culture. Other topics include the production, circulation, and reception of Latinx/e popular culture, the use of Spanish and English languages, issues of identity, migration, and interculturality, the role of the cultural industry, and the context of globalization. Broadly explores the intersectionality of race, ethnicity, class, gender, sexuality, and nation regarding Latinx/e populations. Taught in Spanish.
Requisites: (CHICLA/SPANISH 222 or SPANISH 223) and SPANISH 224
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the varied make-up of Latinx/e populations and their place and political positions in the United States.
Audience: Undergraduate

2. Analyze the dilemmas, debates, and creativity reflected in Latinx/e popular culture.
Audience: Undergraduate

3. Employ tools and critical perspectives in analyzing Latinx/e popular culture and the intersection of nation, ethnicity, race, gender, and sexuality.
Audience: Undergraduate

4. Explain how Latinidad is constructed and contested in the United States by various communities, institutions, and individuals.
Audience: Undergraduate

5. Engage in cross-disciplinary conversations relevant to the current field of Latinx/e studies.
Audience: Undergraduate

CHICLA/ENGL 368 – CHICANA/O AND LATINA/O LITERATURES
3 credits.

Historical, political, and aesthetic roots and directions of Latin@ and Chican@ short stories, novels, poetry, music, plays, films, and essays.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. History of literature and language: Recognize and demonstrate knowledge of major forms, techniques, social conditions, values, genres, as well as cultural, aesthetic, philosophical and ideological factors that are relevant to the history of Chicanx and Latinx literatures.
Audience: Undergraduate

2. Awareness of history's impact on the present: Appraise and contrast literary approaches to depicting a variety of social, cultural, and historical events and experiences.
Audience: Undergraduate

3. Critical thinking / Ability to recognize and question assumptions: Assess textual evidence leading to interpretation and discern multiple (and even contradictory) interpretations while querying textual meaning and significance.
Audience: Undergraduate

4. Creativity: Generate original ideas and texts, experimenting and taking risks, solving problems, and answering questions in a range of genres and media.
Audience: Undergraduate

5. Critical writing and communication: Write and present original, coherent, and compelling arguments that push beyond summary to analysis; are grounded in textual evidence; and offer independent and original thinking clear prose that meets expectations for grammatical correctness.
Audience: Undergraduate

6. Citizenship/ A consciousness of self and other: Develop empathy by learning about the experiences of others and develop self-awareness of one's own positionality and views, and employ this consciousness in participating with others in the classroom while also creating productive patterns of study and work for yourself based on this growing self-awareness.
Audience: Undergraduate

CHICLA/COM ARTS 419 – LATINO/AS AND MEDIA
3 credits.

Critical and historical survey of the participation and representation of Latino/as in U.S. film, television, and popular culture, with a primary focus on Hispanic representation in Hollywood-produced imagery. The counter-images of Latino and Latina media producers also will be explored.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Connect the way that Latinx people have historically been represented in mainstream media to the way that they are represented in contemporary media and to their treatment in contemporary society more
Audience: Both Grad & Undergrad

2. Define anti-Latinx racism and its connections to other forms of oppression, including sexism, heteronormativity, classism, colonization, and ableism
Audience: Both Grad & Undergrad

3. Analyze the different constraints and possibilities for how Latinx people produce and consume media texts
Audience: Both Grad & Undergrad

4. Respectfully engage in nuanced discussions about race and reflect on the cultural perspectives and worldviews of others
Audience: Both Grad & Undergrad

5. Demonstrate advanced analysis of Latinx media texts that rigorously engages with scholarship in Latinx media studies
Audience: Graduate

CHICLA/HISTORY/POLI SCI 422 – LATINO HISTORY AND POLITICS
3 credits.

Students will examine the historical, social, political, economic, and cultural experiences and conditions of Latinos, one of the largest US racial/ethnic minority groups. Course focus is on people who trace their origins to Mexico, the Caribbean, and countries of Latin America.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss the complexity of the Latino population and divergent political agendas of various subgroups.
Audience: Undergraduate

2. Develop an understanding of the historical origins of how Latino social/political movements have emerged and changed.
Audience: Undergraduate

3. Evaluate the role of movements and activists in policy reform and social/political change.
Audience: Undergraduate

4. Examine the impact of the Latino vote on contemporary politics.
Audience: Undergraduate

5. Explore contemporary policy issues affecting the Latino population.
Audience: Undergraduate

CHICLA/HISTORY 435 – COLONY, NATION, AND MINORITY: THE PUERTO RICANS' WORLD
3 credits.

A historical introduction to the Puerto Rican experience, from island to mainland. Varieties of colonial rule, social institutions, cultural processes, and ethnic and national identity. Migration to the U.S. and social dynamics of stateside communities.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify major trends and debates in the historical studies about Puerto Rico and its global diaspora.
Audience: Both Grad & Undergrad

2. Explain how those who have inhabited the Puerto Rican archipelago have resisted and navigated colonialism.
Audience: Both Grad & Undergrad

3. Compare and contrast Spanish and United States colonialism in Puerto Rico.
Audience: Both Grad & Undergrad

4. Analyze the complex realities of Puerto Rican communities in the archipelago and abroad.
Audience: Both Grad & Undergrad

5. Evaluate colonial violence in present-day Puerto Rico
Audience: Both Grad & Undergrad

6. Analyze the history of Puerto Rico through the lens of three key concepts: la brega, coloniality, and nationhood.
Audience: Both Grad & Undergrad

7. Demonstrate advanced written and analytic skills through engagement with course materials.
Audience: Graduate

CHICLA/LEGAL ST/SOC 440 – ETHNICITY, RACE, AND JUSTICE
3-4 credits.

An examination of ethnicity, race, and justice, with a specific emphasis on US Latinos, the largest minority group in the United States.
Requisites: C&E SOC/SOC 140, 210, 211, SOC 181, FOLKLORE/AFROAMER/AMER IND/ASIAN AM/CHICLA 102, CHICLA 201, CHICLA 210, CHICLA 230, POLI SCI/CHICLA 231, HISTORY/CHICLA/GEN&WS 245, LEGAL ST/SOC 131, or POLI SCI/LEGAL ST 217
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Discuss ethnic and racial differences in crime and criminal justice outcomes and analyze these patterns through the application of theory and empirical data in the social sciences.
Audience: Undergraduate

2. Engage major theoretical debates in social and legal scholarship. Why are there racial/ethnic disparities in crime and violence? How and why have these disparities changed over time? Are minorities treated differently by legal officials? Has mass incarceration mitigated or exacerbated racial and ethnic inequality? How has the Supreme Court viewed issues of ethnicity, race, and the law?
Audience: Undergraduate

3. Competently interpret representations of data and critically analyze study design in published research on ethnicity, race, and justice.
Audience: Undergraduate

4. Critically assess the often-controversial issues surrounding ethnicity, race, crime, and the law in society, drawing on readings and class discussion.
Audience: Undergraduate

CHICLA/LEGAL ST/SOC 443 – IMMIGRATION, CRIME, AND ENFORCEMENT
3-4 credits.

A study of immigration, crime, and border enforcement, engaging both historical and present-day debates, focusing on Latino immigration and the U.S.-Mexico border.
Requisites: C&E SOC/SOC 140, 210, 211, SOC 181, FOLKLORE/AFROAMER/AMER IND/ASIAN AM/CHICLA 102, CHICLA 201, CHICLA 210, CHICLA 230, POLI SCI/CHICLA 231, HISTORY/CHICLA/GEN&WS 245, LEGAL ST/SOC 131, or POLI SCI/LEGAL ST 217
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Discuss trends in immigration, crime, and border enforcement in recent decades and analyze these patterns through the application of theory in the social sciences and empirical data.
Audience: Undergraduate

2. Engage major theoretical debates in migration scholarship. Why do people (not) move? How are migration decisions made? What effect does migration have on (a) receiving societies, (b) sending societies, and (c) migrants themselves? How is migration organized by gender? What differentiates forced and unforced migration? How are immigrants incorporated into new societies?
Audience: Undergraduate

3. Develop a broader understanding of border enforcement through critical analysis of immigration policies and practices from an international perspective. That is, are recent trends in border enforcement unique to the United States?
Audience: Undergraduate

4. Critically assess the often-controversial issues surrounding ethnicity, race, crime, and the law in society, drawing on readings and class discussion.
Audience: Undergraduate

CHICLA/ENGL 460 – BLACK AND LATINX IN LITERATURE AND VISUAL CULTURE
3 credits.

Chicanxs and Latinxs are frequently imagined in ways that erase the history, presence, and influence of African-descended peoples within these groups. However, this anti-Blackness does not go unanswered in Chicanx and Latinx cultural production. Covers literature, life-writing/autoethnography, visual culture, philosophy/theory, and history that takes up Black Latinx experience and/or that comparatively explores the African American and Latinx convergences, exploring a rich vein of thought and representation in U.S. literatures that is often more transamerican than American and that offers new definitions of both Latinx and Black. Readings on racial paradigms in the Americas, paying attention to the differences between US and Latin American contexts, as well readings on decoloniality, intersectional feminisms, borderlands, and diaspora.
Requisites: Declared in Chicana/o and Latina/o Studies (major or certificate) or English major, and sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Know major forms, techniques, social conditions, values, genres, as well as cultural, aesthetic, philosophical and ideological factors that have shaped the history of Black and Latinx literatures.
Audience: Undergraduate

2. Appraise and contrast literary approaches to depicting a variety of social, cultural, and historical events and experiences.
Audience: Undergraduate

3. Understand multiple interpretations, question textual meanings and significance, discern and integrate divergent and contradictory perspectives, identify and question assumptions, and assess evidence and methods.
Audience: Undergraduate

4. Generate original ideas and texts, conduct thought experiments, and answer critical questions about and in a range of genres and media.
Audience: Undergraduate

5. Write original, coherent, and compelling arguments that push beyond summary to analysis that is grounded in textual evidence and offer independent and critical thinking in clear prose that meets expectations for grammatical correctness.
Audience: Undergraduate

6. Develop empathy by learning about the experiences of others and develop self-awareness of one's own positionality and views, and to employ this consciousness in participating with others in the classroom. Create productive patterns of study and work for yourself based on this growing self-awareness.
Audience: Undergraduate

CHICLA/SPANISH 467 – US LATINX/E LITERATURE
3 credits.

Study the literature of Latinx/e populations in the United States, particularly of writers of Mexican, Puerto Rican, Cuban, Dominican, and Central American descent. Examines the impact of race and how individuals and communities negotiate situations of internal colonialism, migration, generational conflicts, tensions between assimilation and cultural preservation, gender roles, literary traditions, and transnational situations. Considers the linguistic, cultural, and formal singularity of Latinx/e literature, the use of Spanish and English languages, the advent of feminist and queer writing, and the vision of the United States in their works regarding its past, present, and future. Explores the intersectionality of race, ethnicity, class, gender, sexuality, and literary forms. Diverse theories and ways to read literary texts will be explored. Literary texts - novels, short stories, poetry, and essays - will be read in English or Spanish, or a combination of both. Taught in Spanish.
Requisites: (CHICLA/SPANISH 222 or SPANISH 223) and SPANISH 224
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Achieve an understanding of how the past affected present day circumstances to Latinx people regarding race and racial inequalities and patterns of oppression in the U.S.
Audience: Undergraduate

2. Develop critical thinking skills to recognize and question cultural assumptions, situations of privilege, and knowledge claims as they relate to race and ethnicity.
Audience: Undergraduate

3. Demonstrate self-awareness about their own racial and ethnic identities and empathy towards the perspectives and histories of others
Audience: Undergraduate

4. Apply key cultural concepts to a diverse array of literary texts in relation to lives outside the classroom
Audience: Undergraduate

CHICLA/SPANISH 469 – TOPICS IN LATINX CULTURE
3 credits.

Focuses on the cultural evolution of Chicanos, Puerto Ricans, Cuban-Americans, and other U.S. Latinos in relation to their countries of origin. Topics vary.
Requisites: (CHICLA/SPANISH 222 and SPANISH 224), (SPANISH 223 and 224), SPANISH 361, 363, or CHICLA/SPANISH 364
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize the place of migration in the development of the U.S. as a nation, of migration as an integral social phenomena, and of Mexican migration in particular.
Audience: Undergraduate

2. Apply various analytical tools and perspectives to grasp diverse practices of cultural retention, cultural transformation, hybridity, transnationalism, and plural identities.
Audience: Undergraduate

3. Recognize the intersectionality of ethnicity, race, gender, nation, and sexuality.
Audience: Undergraduate

4. Identify various cultural expressions in critical dialogue with hegemonic/dominant cultures.
Audience: Undergraduate

CHICLA/SOC 470 – SOCIODEMOGRAPHIC ANALYSIS OF MEXICAN MIGRATION
3 credits.

Introduces students to social and demographic analysis and explanations of the historical and present day causes and consequences of migration of the largest immigrant group to the United States in the 20th century.
Requisites: SOC 134, 170, 181, SOC/ASIAN AM 220, SOC/C&E SOC 140, 210, 211, CHICLA 201, CHICLA 210, or POLI SCI/CHICLA 231; or graduate/professional standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2020
Learning Outcomes: 1. Describe micro-level and macro-level patterns in Mexico-U.S. migration and analyze these patterns through the application of theory and empirical data in the social sciences.
Audience: Undergraduate

2. Examine major theoretical debates in migration scholarship. Why do people (not) move? How are migration decisions made? What effect does migration have on (a) receiving societies, (b) sending societies, and (c) migrants themselves? How is migration organized by gender? What differentiates forced and unforced migration? How are immigrants incorporated into new societies?
Audience: Undergraduate

3. Apply empirical findings on Mexico-U.S. migration to evaluate theories in migration scholarship.
Audience: Undergraduate

4. Competently interpret representations of social science data on Mexico-U.S. migration.
Audience: Undergraduate

5. Critically analyze study design in published social science research on Mexico-U.S. migration.
Audience: Undergraduate

CHICLA/LAND ARC 475 – LATINO URBANISM: DESIGN AND ENGAGEMENT IN THE AMERICAN CITY
3 credits.

Urban design in the 21st century American city explores a new understanding of urban placemaking and development. Explores the intersections of culture, place, and design to critically address how the socioeconomic dynamics that underlie demographic shifts in the U.S. are influencing urban change in the American landscape. Focuses on the evolution and ways by which Latinos shape the built environment, both in the public realm and in the home.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze the role that design, planning, and public engagement have in addressing the needs of Latino communities in the U.S
Audience: Undergraduate

2. Evaluate through a historical lens how socio-economic conditions of Latinos influence choices in the contemporary American city
Audience: Undergraduate

3. Use real world examples to demonstrate how diversity and culture can impact regions, governments, and economies for producing a just city
Audience: Undergraduate

4. Understand the concept of justice in the city through both qualitative and quantitative measure
Audience: Undergraduate

5. Explain the social, economic, and/or environmental dimensions of the sustainability challenges as they relate to planning for Latino communities.

Audience: Undergraduate

6. Analyze the causes of and solutions for the sustainability challenge of marginalized population groups.
Audience: Undergraduate

CHICLA/SPANISH 478 – BORDER AND RACE STUDIES IN LATIN AMERICA
3 credits.

Drawing from cultural studies, border studies and/or critical race theory, this course explores through cultural and literary texts the social and political issues regarding migration, contact zones, transculturation, and/or diaspora.
Requisites: (CHICLA/SPANISH 222 or SPANISH 223) and SPANISH 224. Not open to students with credit for CHICLA/SPANISH 215.
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain political and historical issues between the U.S. and Latin America.
Audience: Undergraduate

2. Analyze the ways in which literature, theatre, and performance represent a humanistic approach to a geopolitical dilemma
Audience: Undergraduate

3. Recognize the visual arts (theatre and performance) as a way to explore issues of and about immigration.
Audience: Undergraduate

CHICLA 501 – CHICAN@ AND LATIN@ SOCIAL MOVEMENTS IN THE U.S.
3 credits.

Explores Chicana/o and Latina/o social movement participation and collective action from the 1940s to the contemporary moment. Using interdisciplinary scholarship and mixed media, analyze paradigms, theories, and debates pertaining to the historical and contemporary economic, cultural, and sociopolitical dimensions of the Latina/o position in the United States. Focuses on social movements and collective action (rooted in labor, community, civil and human rights organizing) and the topics of race and racialization, power and powerlessness, migration, community development, and gender. Compares the experiences of different Latin@ groups.
Requisites: CHICLA 201, 230, FOLKLORE/AFROAMER/AMER IND/ASIAN AM/CHICLA 102, POLI SCI/CHICLA 231, or HISTORY/CHICLA/GEN&WS 245
Course Designation: Gen Ed - Communication Part B
Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply Chicana/o and Latina/o studies concepts and vocabulary to the topics of social movements, race, organized labor, migration and immigration.
Audience: Undergraduate

2. Demonstrate familiarly with the basic literature on Latina/o social movements and migration.
Audience: Undergraduate

3. Analyze the connections between contemporary social movements and groups organized around such issues as labor, migration, and citizenship.
Audience: Undergraduate

4. Relate issues faced by contemporary immigrant and non-immigrant Latina/a workers face today to those faced by earlier generations.
Audience: Undergraduate

5. Write well-organized, coherent arguments about Latina/o social movements.
Audience: Undergraduate

6. Collect, evaluate, and use information from resources in the University of Wisconsin libraries in their writing.
Audience: Undergraduate

7. Give clear, engaging formal oral presentations on topics related to the course.
Audience: Undergraduate

CHICLA 520 – LATINX DIGITAL PUBLICS
3 credits.

Study and reflect on Latinx unequal access to media and the political and social context of media in Latinx communities. Develop research, writing, editing and copyediting, collaboration, and project management skills while contributing to Latinx Studies research. Create content for such online outlets as Latinx Talk, La Bloga, Latinx Project, Wikipedia and UW-Madison publications.
Requisites: CHICLA 201
Course Designation: Gen Ed - Communication Part B
Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Recognize and appraise the histories, experiences, and perspectives of Latinx people in creating, participating in, and influencing media, journalism, and digital/online information.
Audience: Both Grad & Undergrad

2. Identify links between media created by Latinx and minoritized peoples and their audiences, evaluate the effectiveness of these media for those audiences, and examine the significance of particular media forms.
Audience: Both Grad & Undergrad

3. Critically evaluate contemporary Latinx digital/online humanities and arts projects, scholarly publications, journalism, and community-based knowledge projects.
Audience: Both Grad & Undergrad

4. Create digital/online Latinx studies content and make convincing spoken presentations about their work, using appropriate style and disciplinary conventions and drawing on core Latinx studies library resources.
Audience: Both Grad & Undergrad

5. Evaluate the contributions of peers and provide useful feedback
Audience: Both Grad & Undergrad

6. Engage in best practices for collaborative work.
Audience: Both Grad & Undergrad

7. Demonstrate graduate-level research knowledge of Latinx Studies in the digital sphere in additional final research paper.
Audience: Graduate

CHICLA/COUN PSY 525 – DIMENSIONS OF LATIN@ MENTAL HEALTH SERVICES
3 credits.

Provides training for students who aspire to one of the helping, health, or mental health professions and who currently work or who envision themselves working with Latin@ populations. Provides important frameworks for working with Latin@s, including cultural, spiritual, linguistic and historical features relevant to this population and begin to apply their knowledge in service learning placements.
Requisites: Junior standing or 6 credits of CHICLA
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Acquire knowledge of the social, cultural, linguistic, spiritual, ethnic, and racial diversity within Latinx communities
Audience: Undergraduate

2. Develop sensitivity to the forms of bias and discrimination that have historically and continue to impact Latinx communities
Audience: Undergraduate

3. Increase awareness of the strengths and barriers in social services for the Latinxs communities
Audience: Undergraduate

4. Increase skills to address social justice, advocacy, and cultural responsiveness in the context of Latinx communities
Audience: Undergraduate

5. Reflect on students' own social identities and the implications of those identities and identity intersections when serving in Latinx communities
Audience: Undergraduate

CHICLA 530 – ADVANCED TOPICS IN CHICANA/O AND LATINA/O STUDIES
1-4 credits.

Topics vary each semester, but may include history, literature, media, political science, culture, social work, etc., as they relate to Chicana/os and Latina/os in the United States.
Requisites: Junior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Explain advanced social science concepts within the topic area of Chicanx/e & Latinx/e Studies.
Audience: Undergraduate

2. Discuss U.S. Latinx/e communities and the larger global community.
Audience: Undergraduate

3. Demonstrate advanced knowledge of one or more social science methodologies for the study of Latinx/e populations.
Audience: Undergraduate

4. Synthesize and apply social science concepts to the study of communities of Latin American descent in the USA at an advanced level.
Audience: Undergraduate

5. View issues related to communities of Latin American descent in the USA from multiple perspectives.
Audience: Undergraduate

6. Assess the state of a body of scholarly literature related to course themes, identify gaps in that literature, and formulate an original research question in the context of those gaps.
Audience: Undergraduate

CHICLA/COUN PSY 590 – ESPERANZA COMMUNITY-ENGAGED RESEARCH WITH LATINES
3 credits.

Introduction to the development and implementation of community-engaged research and programming for Latine populations with "Esperanza," an innovative university-community partnership with Centro Hispano of Dane County. Community-engaged research draws on interdisciplinary research and practice across education, psychology and public health that seeks to disrupt, mitigate, and eliminate mental health disparities among local Latine populations. Learn the principles of community-engaged research and apply them through the development of mutually beneficial, reciprocal, effective, equitable, and justice-oriented community-university projects.
Requisites: CHICLA/COUN PSY 525 or graduate/professional standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 2 number of completions
Learning Outcomes: 1. Identify guiding principles of community-engaged research with Latines based on the social, cultural, linguistic, and historical influences on this population.
Audience: Both Grad & Undergrad

2. Develop equitable, effective, and culturally informed collaborations with Latine-serving community partners.
Audience: Both Grad & Undergrad

3. Apply principles of community-engaged scholarship to develop and implement projects that promote health equity and justice through a strengths-based approach for local Latine communities.
Audience: Both Grad & Undergrad

4. Relate the content and course skills to an interdisciplinary health profession role of scientist-practitioner-advocates to promote effective research with culturally diverse populations.
Audience: Both Grad & Undergrad

5. Integrate trauma-informed scholarly peer-reviewed publication with healing-centered Latine and indigenous epistemologies
Audience: Graduate

CHICLA 699 – DIRECTED STUDY
1-3 credits.

Advanced independent research, readings or projects mentored by faculty.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023

CHICLA 902 – INTERDEPARTMENTAL SEMINAR IN CHICANX/E & LATINX/E STUDIES TOPICS
3 credits.

Interdisciplinary inquiry in communities of Latin American descent in the United States.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 10 number of completions
Learning Outcomes: 1. Discuss, analyze, and evaluate major theories, approaches, concepts, currently informing Chicanx/e and Latinx/e studies.

Audience: Graduate

2. Synthesize research in Chicanx/e and Latinx/e studies, applying methods and theories from more than one discipline to a research question.
Audience: Graduate

3. View issues related to communities of Latin American descent in the USA from multiple perspectives.
Audience: Graduate

4. Develop an extended original research project that can be submitted for publication, engaging with interdisciplinary scholarship in Chicanx/e and Latinx/e studies.
Audience: Graduate

CIVIL AND ENVIRONMENTAL ENGINEERING (CIV ENGR)

CIV ENGR 1 – COOPERATIVE EDUCATION PROGRAM
1 credit.

Work experience which combines classroom theory with practical knowledge of operations to provide students with a background upon which to base a professional career.
Requisites: Sophomore standing
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and respond appropriately to real-life engineering ethics cases relevant to co-op work
Audience: Undergraduate

2. Synthesize and apply appropriate technical education to real world technical work
Audience: Undergraduate

3. Communicate effectively in writing and speaking with a range of audiences in the workplace, including those without disciplinary expertise
Audience: Undergraduate

4. Develop professional and transferable habits like time management skills, collaborative problem-solving skills, and research skills for learning new information
Audience: Undergraduate

CIV ENGR 121 – SUSTAINABILITY ENGINEERING FOR NON-ENGINEERS
3 credits.

Interdisciplinary contexts of sustainability, including environment, economy, and society. History of sustainability in engineering, sustainability engineering tools, and contemporary applications of sustainability in a wide range of fields.
Requisites: Satisfied Quantitative Reasoning (QR) A requirement
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Synthesize how the evolution of sustainability engineering has influenced its application today
Audience: Undergraduate

2. Apply the concepts and tools of sustainability engineering to a modern-day problem or challenge
Audience: Undergraduate

CIV ENGR 150 – INTRODUCTION TO ARCHITECTURAL THEORY
3 credits.

A survey of architectural design theory through research analysis and criticism of works and ideas of significant architects and architectural theorists.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Examine architectural design as a theoretical practice and the use of visual representation to successfully communicate ideas.
Audience: Undergraduate

2. Effectively communicate in a group and participate in constructive criticism and discussion about the presented ideas and work.
Audience: Undergraduate

3. Demonstrate comprehension of historical, philosophical, theoretical, and an aesthetic perspective commonly used in the discussion of architecture.
Audience: Undergraduate

4. Apply knowledge of artistic/design principles, conventions, methods, and practices through the creation of works of art/design.
Audience: Undergraduate

5. Compare and contrast the expressive and formal features of different artistic media and/or cultural traditions through both analytical studies and original artistic/design work.
Audience: Undergraduate

CIV ENGR 151 – ARCHITECTURAL MAKING I
3 credits.

Introduction to architecture and architectural making. 2D and 3D form and space tested through the theoretical, pragmatic, and contextual issues that influence architecture.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge of basic concepts in architecture and related disciplines.
Audience: Undergraduate

2. Strategize a solution to a fundamentally simple design problem based on a design precedent.
Audience: Undergraduate

3. Research design methodology for proposed a program and employ skills in scale and proportion, composition and form in 2D imagery.
Audience: Undergraduate

4. Employ skills in scale and proportion, composition and form in 3D.
Audience: Undergraduate

5. Demonstrate diagramming and journaling skills based on course content.
Audience: Undergraduate

CIV ENGR 152 – ARCHITECTURAL MAKING II
3 credits.

Survey and application of twentieth century design techniques in architecture.
Requisites: None
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate knowledge of basic concepts in architecture and related disciplines.
Audience: Undergraduate

2. Strategize a solution to a fundamentally simple design problem based on a design precedent.
Audience: Undergraduate

3. Research design methodology for a proposed program and employ skills in scale and proportion, composition and form in 2D imagery.
Audience: Undergraduate

4. Employ skills in scale and proportion, composition and form in 3D.
Audience: Undergraduate

5. Demonstrate diagramming and journaling skills based on course content.
Audience: Undergraduate

CIV ENGR 155 – ARCHITECTURAL THINKING
3 credits.

Canonical buildings since 1800 alongside their accompanying theoretical texts are evaluated within the discipline and allied fields of inquiry.
Requisites: None
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Visually recognize and identify major architectural modes of representation.
Audience: Undergraduate

2. Using formal and technical vocabulary, describe the defining characteristics of buildings.
Audience: Undergraduate

3. Distinguish and develop a working knowledge of significant developments in architectural thinking across time and in a cross-cultural context.
Audience: Undergraduate

4. Apply critical thinking to ideas and theories in the history of architecture.
Audience: Undergraduate

CIV ENGR 159 – CIVIL ENGINEERING GRAPHICS
2 credits.

Graphical communication including lettering, drawing equipment and techniques; geometric constructions, orthographic projections, technical sketching, isometric views, descriptive geometry, and computer-aided design drawing, with applications specific to civil engineering.
Requisites: Not open to students with credit for M E 170.
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use basic drafting tools to create scaled images of civil and environmental engineering designs
Audience: Undergraduate

2. Use computer-aided design tools to create scaled images of civil and environmental engineering designs
Audience: Undergraduate

CIV ENGR 250 – ARCHITECTURAL VISUALIZATION
3 credits.

Development of precise standards of drawing and the history and techniques of descriptive and analytical drawing.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Strategically deploy representational strategies with a range of tools available.
Audience: Undergraduate

2. Explain techniques of 2D and 3D representation.
Audience: Undergraduate

3. Explain history, theory, and contemporary application of representation strategies.
Audience: Undergraduate

4. Explain the techniques and tools available to produce them.
Audience: Undergraduate

CIV ENGR/G L E 291 – PROBLEM SOLVING USING COMPUTER TOOLS
4 credits.

Introduction to engineering computations with emphasis on computer tools and computer based measurement, data collection, and processing. Tools will include computer aided design, spreadsheets, other engineering computation tools, and hardware and software for laboratory and spatial measurements.
Requisites: MATH 222 or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use spreadsheet software to perform fundamental civil, environmental, and geological engineering calculations, analyze datasets using logical filters, and interpret numeric data meant to represent time and text values
Audience: Undergraduate

2. Use computer programming as a tool to streamline engineering data analysis tasks, create visualizations, obtain numerical approximations, and retrieve data from local and remote (web-based) data sources
Audience: Undergraduate

3. Use automatic levels, total stations, and aerial photography to conduct land surveying operations and collect the type of geospatial data required for creating drawings that support engineering design
Audience: Undergraduate

4. Explain how measuring devices (data acquisition systems and sensors) work, use measuring devices to record/monitor the physical properties of a system, and use sensor readings as the foundation to control devices in the physical world
Audience: Undergraduate

CIV ENGR 299 – INDEPENDENT STUDY
1-3 credits.

Under faculty supervision.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2016
Learning Outcomes: 1. Conduct and report on independent civil or environmental engineering research
Audience: Undergraduate

CIV ENGR 310 – FLUID MECHANICS
3 credits.

Fluid statics and dynamics, dimensional analysis, flow of an ideal fluid, flow of a real fluid--including laminar and turbulent flow, applications to engineering problems.
Requisites: (MATH 234 or 375) and (E M A 202 or M E 240), graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall properties of fluids in relation to natural and engineered flows
Audience: Undergraduate

2. Explain how pressure varies in static and moving fluids
Audience: Undergraduate

3. Use conservation of mass, momentum, angular momentum, and energy to analyze flows in natural and engineered settings
Audience: Undergraduate

4. Use dimensional analysis to reduce the number of parameters in analysis of flows and to develop prototype-model relationships
Audience: Undergraduate

5. Assess the functioning of natural and engineered flow systems and determine appropriate analysis tools to achieve desired outcomes
Audience: Undergraduate

6. Design and conduct experiments to understand fluid flows and determine quantitative relationships between dimensionless variables
Audience: Undergraduate

CIV ENGR 311 – HYDROSCIENCE
3 credits.

Introduction to the water cycle, its relationship to the environment and human attempts to conserve, control, and utilize water judiciously. Fundamentals of hydrology, hydraulics, coastal engineering and water resources engineering.
Requisites: MATH 222, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. List and explain the fundamental processes of the hydrologic cycle
Audience: Both Grad & Undergrad

2. Explain the importance of hydrology and water resources in society
Audience: Both Grad & Undergrad

3. Use hydrologic principles to address engineering problems related to water supply, flooding, and environmental quality
Audience: Both Grad & Undergrad

4. Derive and use quantitative relationships to describe hydrologic behavior
Audience: Both Grad & Undergrad

5. Examine the causes of and solutions for the sustainability challenge of water availability under conditions of changing land use, climate, and demand and environmental issues.
Audience: Both Grad & Undergrad

6. Describe the social, economic, and environmental dimensions of the sustainability challenges of water management and identify potential tradeoffs and interrelationships among these dimensions
Audience: Both Grad & Undergrad

7. Synthesize the connections to and importance of hydrological processes and methods in broader contemporary interdisciplinary water resources and environmental issues
Audience: Graduate

CIV ENGR 320 – ENVIRONMENTAL ENGINEERING
3 credits.

Fundamental sanitary aspects of environmental engineering. Role of the engineer in the control of the environment; water supply and wastewater problems; solid waste disposal; air pollution; and administration in environmental engineering.
Requisites: CHEM 104, 109, 116, graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify major issues pertaining to water and air quality, and general ecosystem quality
Audience: Undergraduate

2. Describe the roles and responsibilities of environmental engineers and scientists in society
Audience: Undergraduate

3. Carry out material and energy balances within a standard problem solving framework
Audience: Undergraduate

4. Derive and solve mathematical expressions to describe simple transformation and transport process that occur in environmental media
Audience: Undergraduate

5. Perform computations related to concepts and processes within the fields of water supply, wastewater treatment, solid waste, and air quality engineering
Audience: Undergraduate

CIV ENGR 322 – ENVIRONMENTAL ENGINEERING PROCESSES
3 credits.

Combination of theory and laboratory practice to study basic unit operations and processes in environmental engineering. Emphasis on water and wastewater treatment processes, such as coagulation/flocculation, chemical precipitation, filtration, adsorption, activated sludge, anaerobic digestion, and substrate utilization kinetics.
Requisites: CIV ENGR 320, CBE 250, BSE 249, graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Conduct experiments appropriate to environmental engineering
Audience: Undergraduate

2. Use statistics to analyze uncertainties and interpret experimental results
Audience: Undergraduate

3. Design an experiment to test a specific hypothesis
Audience: Undergraduate

4. Design an experiment to establish engineering design criteria (e.g., estimate a required chemical dose, estimate a required reactor size)
Audience: Undergraduate

5. Function in an environmental engineering team to conduct experiments and interpret results
Audience: Undergraduate

6. Organize and deliver effective written and graphical communications
Audience: Undergraduate

CIV ENGR 324 – ENVIRONMENTAL ENGINEERING THERMODYNAMICS
3 credits.

A systematic introduction to the application of the first and second laws of thermodynamics to systems relevant to environmental engineering. Energy balances used to solve environmental engineering problems in flowing and non-flowing systems. Examines the relationship between energy, heat and work using theoretical and practical models. Chemical reactions as well as gas and fluid mixing from a thermodynamics perspective. Performance limits imposed by the second law of thermodynamics on devices used in power generation, fluid flow, refrigeration, and air conditioning.
Requisites: (CHEM 104 or 109), MATH 234, and (E M A 201, PHYSICS 201 or 207), or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the first and second laws of thermodynamics and their applications to environmental engineering problems
Audience: Undergraduate

2. Formulate energy balances to solve environmental engineering problems in flowing and non-flowing systems
Audience: Undergraduate

3. Apply the relationship between energy, heat and work to environmental engineering problems
Audience: Undergraduate

4. Conduct performance and design calculations based upon thermodynamic principles
Audience: Undergraduate

CIV ENGR 325 – ENVIRONMENTAL ENGINEERING MATERIALS
3 credits.

Properties and tests of materials used in the treatment and conveyance of water and air. Introduction to laboratory and field measurement techniques to assess material performance capabilities. Technical report preparation.
Requisites: CIV ENGR 320 and E M A 201, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply knowledge of materials behavior to select, specify, and monitor materials used in the treatment and conveyance of water and air
Audience: Undergraduate

2. Conduct and/or monitor standardized testing protocols, interpreting test results, and preparing technical reports
Audience: Undergraduate

3. Conduct forensic studies to determine role of material properties in treatment or conveyance failures
Audience: Undergraduate

4. Practice skills in teamwork and communication relevant to materials selection and monitoring
Audience: Undergraduate

CIV ENGR/G L E 330 – SOIL MECHANICS
3 credits.

Basic principles of soil mechanics and fundamentals of application in engineering practice; soil composition and texture; classification; permeability and seepage; consolidation; settlement; shear strength; lateral earth pressures and retaining structures, shallow and deep foundations, slope stability; subsurface exploration; laboratory characterization of physical and engineering properties of soils.
Requisites: E M A 303 or M E 306, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the physicochemical characteristics of soils and their importance to the engineering behavior of soils.
Audience: Both Grad & Undergrad

2. Define the factors which control the physical, mechanical and hydraulic behavior of soils.
Audience: Both Grad & Undergrad

3. Run the laboratory tests used for the determination of physicochemical properties of soils, the engineering classification of soils, hydraulic properties, and the stiffness and shear strength properties.
Audience: Both Grad & Undergrad

4. Perform analyses in each area described in the course and understand the limitations to these analyses.
Audience: Both Grad & Undergrad

5. List basic problems in Soil Mechanics design and describe how these problems are tackled.
Audience: Both Grad & Undergrad

6. Experimentally assess the interaction of multiple parameters controlling the physical, mechanical and hydraulic behavior of soils; perform more advanced 2D or 3D analyses in one area described in the course and understand the limitations of these analyses; or summarize the state of the art in one research or engineering-applied area described in the course.
Audience: Graduate

CIV ENGR 340 – STRUCTURAL ANALYSIS I
3 credits.

Analysis of statically determinate and indeterminate beams, trusses, and rigid frames; deflections by virtual-work, moment-area; influence lines; force methods; structural design loads, introduction to structural design, approximate methods.
Requisites: (E M A 303 or M E 306) and M E/E M A 307, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Compute the internal forces (axial, shear, and moment) applied to determinate structural systems
Audience: Both Grad & Undergrad

2. Construct shear and moment influence lines for patterned loads
Audience: Both Grad & Undergrad

3. Compute the deflections of a linear elastic structural system
Audience: Both Grad & Undergrad

4. Compute the internal forces (axial, shear, and moment) applied to simple indeterminate structural systems
Audience: Both Grad & Undergrad

5. Compute the internal forces (axial, shear, and moment) applied to any indeterminate structural system by computer code-based matrix method.
Audience: Graduate

CIV ENGR 352 – FRANK LLOYD WRIGHT - DESIGN SEMINAR
3 credits.

Introduction to the design language of Frank Lloyd Wright. Beginning understanding of his architectural design process, his methods, tools and processes in building design and construction.
Requisites: None
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Demonstrate knowledge of Human Cultures and the Natural World by studying the arts and sciences of other cultures.
Audience: Undergraduate

2. Apply Critical and Creative Thinking Skills, including inquiry, problem solving, and qualitative reasoning.
Audience: Undergraduate

3. Demonstrate effective Communication Skills in reading, visual communication, and information literacy.
Audience: Undergraduate

CIV ENGR 360 – CONSTRUCTION SYSTEMS
3 credits.

Introduction to the parts and pieces of a building at the construction level. How a building is built from start to finish, and how the individual building systems affect one another. Systems, how they interact, design and construction, cost implications, schedule implications.
Requisites: E M A 201, PHYSICS 201, 207, 247, graduate/professional standing, or member of Engineering Guest Students. Not open to students with credit in CIV ENGR 290.
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Explain many different design and construction of building systems
Audience: Both Grad & Undergrad

2. Identify types of systems visually on site
Audience: Both Grad & Undergrad

3. Evaluate which type of each system may be best for the design
Audience: Both Grad & Undergrad

4. Evaluate the cost, schedule, and procurement implications of designs
Audience: Both Grad & Undergrad

5. Work effectively in a design team and create an operations plan for a project
Audience: Both Grad & Undergrad

6. Analyze systems more deeply through research
Audience: Graduate

CIV ENGR 370 – TRANSPORTATION ENGINEERING
3 credits.

Characteristics of transportation supply and demand; measuring and estimating demand; social and environmental impacts; planning of transportation systems; characteristics of transportation modes; interaction between modes; mode interfaces; transportation technology; economics; public policy, implementation and management.
Requisites: STAT 311, 324 or concurrent enrollment, graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and describe the basic elements of the transportation delivery system
Audience: Undergraduate

2. Use quantitative and computerized techniques for planning, designing, and operating transportation systems
Audience: Undergraduate

3. Describe and critique theoretical design and operations issues
Audience: Undergraduate

4. Explain the need for highway design standards and how the political process, economics, and new technologies affect transportation decision making
Audience: Undergraduate

5. Explain how travel mode characteristics influence demand and mode choice; and how multiple modes of transportation interact
Audience: Undergraduate

6. Use the principles of transportation engineering and highway design standards to solve a specific problem
Audience: Undergraduate

7. Examine, design, optimize, simulate, and present, in both written and oral formats, a thorough description of their analysis procedure
Audience: Undergraduate

CIV ENGR/BSE/SOIL SCI 372 – ON-SITE WASTE WATER TREATMENT AND DISPERSAL
2 credits.

On-site treatment and dispersal of waste water from homes, commercial sources and small communities. Sources, pretreatment units, nutrient removal units, constructed wetlands, surface and soil dispersal systems, recycle and reuse systems, regulations, alternative collection systems.
Requisites: CHEM 103, 109, or 115
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify, formulate, solve complex wastewater management and engineering problems by applying engineering and science principles to design a complete residential onsite wastewater treatment system.
Audience: Undergraduate

2. Use engineering design to produce wastewater management solutions that meet treatment goals with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
Audience: Undergraduate

3. Communicate effectively with the instructor and other students during in-class discussions.
Audience: Undergraduate

4. Recognize ethical and professional responsibilities in onsite wastewater management and engineering situations and make informed design assumptions/judgments, which must consider the impact of wastewater management solutions in global, economic, environmental, and societal context.
Audience: Undergraduate

5. Analyze and interpret data related to wastewater flow, source, and characteristics, soil/site characteristics, and use engineering judgement to select appropriate design solutions.
Audience: Undergraduate

6. Acquire and apply new knowledge regarding advanced treatment processes for residential wastewater treatment.
Audience: Undergraduate

CIV ENGR/ENVIR ST/GEOG 377 – AN INTRODUCTION TO GEOGRAPHIC INFORMATION SYSTEMS
4 credits.

Design, implementation and use of automated procedures for storage, analysis and display of spatial information. Covers data bases, information manipulation and display techniques, software systems and management issues. Case studies.
Requisites: Sophomore standing, member of Engineering Guest Students, or declared in Capstone Certificate in GIS Fundamentals
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the basic structures, concepts, and theories of GIS.
Audience: Both Grad & Undergrad

2. Conduct daily routines of GIS operations.
Audience: Both Grad & Undergrad

3. Make connections to the broader literature in GIS
Audience: Graduate

CIV ENGR 392 – BUILDING INFORMATION MODELING (BIM)
3 credits.

An introduction to the use of Building Information Modeling (BIM) technology in the construction industry. Gain experience in using 3D 4D modeling software to model and coordinate building designs.
Requisites: CIV ENGR 159, M E 160, 231, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify concepts and principles of building information modeling
Audience: Undergraduate

2. Explain construction management with 3-dimensional (3D) and 4D building information models
Audience: Undergraduate

3. Use computer tools to model a building
Audience: Undergraduate

4. Use communication and teamwork skills in multi-disciplinary building design modeling
Audience: Undergraduate

5. List, examine, and critique modeling challenges
Audience: Graduate

6. Develop innovative solutions to modeling challenges so that construction inefficiencies are minimized
Audience: Graduate

CIV ENGR/E M A 395 – MATERIALS FOR CONSTRUCTED FACILITIES
3 credits.

Properties and tests of materials used in the initial construction or repair of facilities (including buildings, transportation systems, utility systems, and reinforced earth). Introduction to laboratory and field measurement techniques to assess material performance capabilities. Technical report preparation.
Requisites: (E M A 303 or M E 306), graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use knowledge of construction materials behavior to select and specify materials for construction of civil engineering facilities
Audience: Undergraduate

2. Use knowledge of construction materials behavior to monitor construction of civil engineering facilities
Audience: Undergraduate

3. Conduct experiments with standardized testing protocols, interpret test results, and communicate results and interpretation in technical reports
Audience: Undergraduate

4. Design and conduct forensic studies to determine the role of material properties or construction methods in facility failures
Audience: Undergraduate

5. Use teamwork and communication skills relevant to the selection, specification, monitoring, and testing of construction materials
Audience: Undergraduate

CIV ENGR 410 – HYDRAULIC ENGINEERING
3 credits.

Engineering approaches to measurement, control and conveyance of water and wastewater flows, emphasizing analysis, design, characteristics and selection of: measurement devices, distribution and collection pipe systems, and pumps and turbines with consideration of plant, quality, economic, reliability, and security aspects.
Requisites: CIV ENGR 310, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Quantitatively and qualitatively assess, estimate, and communicate the hydraulic performance of pressure-flow conveyance systems, including pumps, pipes, pipe grids, valves, storage tanks, and flow meters
Audience: Both Grad & Undergrad

2. Select a pipe material and pipe diameter to meet a specified objective
Audience: Both Grad & Undergrad

3. Describe the purpose of different valve types and select a valve to meet a specified objective
Audience: Both Grad & Undergrad

4. Select a pump and pump material to meet a specified objective
Audience: Both Grad & Undergrad

5. Estimate the performance of a pump operated at different speeds and against changing resistance to flow
Audience: Both Grad & Undergrad

6. Use hydraulic modeling software to simulate a drinking water distribution grid and to evaluate alternative solutions to meet changing objectives
Audience: Both Grad & Undergrad

7. Describe alternative ways of recovering energy from hydraulic systems and estimate return on investment for such systems
Audience: Graduate

CIV ENGR 411 – OPEN CHANNEL HYDRAULICS
3 credits.

Analysis and characteristics of flow in open channels (natural and artificial); channel design considerations including uniform flow (rivers, sewers), flow measuring devices (weirs, flumes), gradually varied flow (backwater and other flow profiles, flood routing), rapidly varied flow (hydraulic jump, spillways), and channel design problems (geometric considerations, scour, channel stabilization, sediment transport).
Requisites: CIV ENGR 310, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CIV ENGR 412 – GROUNDWATER HYDRAULICS
3 credits.

Engineering fundamentals of groundwater flow. Focus is on developing and implementing 2-D, steady-state, analytical models of groundwater flow. Also introduces transient groundwater flow modeling, hydraulic testing methods, and numerical modeling.
Requisites: CIV ENGR 311, GEOSCI/G L E 627, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Conceptualize groundwater flow systems
Audience: Both Grad & Undergrad

2. Develop and apply 2-D, steady-state, analytical models of groundwater flow
Audience: Both Grad & Undergrad

3. Explain and use equations describing transient groundwater flow
Audience: Both Grad & Undergrad

4. Apply hydraulic testing methods
Audience: Both Grad & Undergrad

5. Develop and use a basic numerical model of groundwater flow
Audience: Both Grad & Undergrad

6. Explain contemporary groundwater issues and their societal relevance
Audience: Graduate

CIV ENGR 414 – HYDROLOGIC DESIGN
3 credits.

An introduction to the design of engineering structures which control and/or utilize runoff, emphasizing the sizing of structures to meet hydrologic uncertainty. Applies principles and techniques from several disciplines, including hydrology, hydraulics, probability and statistics. Specific techniques include flood frequency analysis; risk analysis; design storm and historic storm techniques; rainfall-runoff modeling.
Requisites: G L E/CIV ENGR 291 and CIV ENGR 311, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

CIV ENGR 415 – HYDROLOGY
3 credits.

Water cycle as related to air mass properties and movement, precipitation, evaporation, snowmelt, infiltration, streamflow, watershed dynamics, and hydrologic extremes. Physics-based representations of hydrological processes. Basics of hydrologic modeling including calibration and validation.
Requisites: MATH 221, 217, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Differentiate between representations of runoff, streamflow, evapotranspiration, precipitation, infiltration, soil moisture, and snowpack based on physical principles and empirical simplifications
Audience: Both Grad & Undergrad

2. Derive quantitative relationships describing terrestrial water and energy fluxes
Audience: Both Grad & Undergrad

3. Formulate mathematical models of the water terrestrial water cycle at point and watershed scales
Audience: Both Grad & Undergrad

4. Identify the strengths and weaknesses of hydrologic predictions for addressing real-world water resources challenges, including in a changing climate
Audience: Both Grad & Undergrad

5. Contrast water resources engineering methods with more complex hydrologic and hydraulic methods
Audience: Undergraduate

6. Identify the geophysical conditions under which specific hydrologic assumptions are valid
Audience: Graduate

CIV ENGR 416 – WATER RESOURCES SYSTEMS ANALYSIS
3 credits.

Water supply and demand are increasingly stressed by climate, population, land-use, policy, etc. Presents a variety of systems analysis techniques for water resources planning and management. Deterministic and stochastic optimization and simulation models will be developed and applied. Problems addressed include water supply, water quality, and river basin development.
Requisites: CIV ENGR 311, graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Characterize planning, design, and management objectives in water systems
Audience: Undergraduate

2. Formulate, design and solve optimization models of water systems
Audience: Undergraduate

3. Integrate systems outputs into decision-making models
Audience: Undergraduate

4. Apply basic fundamentals of economic theory to water resources problems
Audience: Undergraduate

5. Articulate current issues in water resource management
Audience: Undergraduate

6. Write codes to perform statistical analyses
Audience: Undergraduate

7. Determine multiple performance metrics and subsequently draw suitable conclusions
Audience: Undergraduate

CIV ENGR/G L E 421 – ENVIRONMENTAL SUSTAINABILITY ENGINEERING
3 credits.

Uses the three paradigms of sustainability (environmental, social, and economic) for strategic environmental initiatives in an engineering setting. Proactive environmental management opportunities, including practices of pollution prevention, industrial ecology, and design for the environment. A systems approach to manufacturing, examining the life cycle of products, incorporating total cost accounting, extended producer responsibility, and design for end-of-life.
Requisites: (MATH 217 or 221) and (CHEM 104 or 109), or graduate/professional standing or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Articulate why sustainability is important and relevant within the practice of engineering
Audience: Both Grad & Undergrad

2. Apply sustainability tools such as industrial ecology, life cycle assessment, economic assessment, material flow analysis, and criticality to inform engineering decisions
Audience: Both Grad & Undergrad

3. Analyze sustainability issues and/or practices using a systems-based approach
Audience: Both Grad & Undergrad

4. Describe the social, economic, and environmental dimensions of engineering and identify potential trade-offs and interrelationships among these dimensions at a level appropriate to the course
Audience: Both Grad & Undergrad

5. Identify and critique recent peer reviewed sustainability literature
Audience: Graduate

CIV ENGR 422 – ELEMENTS OF PUBLIC HEALTH ENGINEERING
3 credits.

Overview of the public health profession and the role of environmental sanitary engineers in public health. Introduction to chemical and microbial contaminants of public health concern - their routes of exposure and development of regulatory standards for drinking water, air, hazardous wastes, and industrial workplaces. Introduction to occurrence, toxicity, and virulence as components of public health risk and the engineer's role in identifying occurrence and design of engineering controls for public health protection.
Requisites: CIV ENGR 320, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Describe methods used to characterize risks associated with chemical toxins and microbial pathogens
Audience: Both Grad & Undergrad

2. Describe the contributions of exposure and potency/virulence to risk and calculate risks
Audience: Both Grad & Undergrad

3. List alternative routes of exposure and estimate the contribution of different sources to overall exposure
Audience: Both Grad & Undergrad

4. Explain how regulatory standards are derived from risk estimates
Audience: Both Grad & Undergrad

5. List the technologies that environmental engineers can design, build, and operate to limit exposure to a specified chemical toxin or microbial pathogen
Audience: Both Grad & Undergrad

6. Connect the topics of this course with their graduate research work
Audience: Graduate

CIV ENGR 423 – AIR POLLUTION EFFECTS, MEASUREMENT AND CONTROL
3 credits.

The influence of man-caused pollution on the atmosphere, globally and locally. Evaluation of human health, economic, and aesthetic effects of air pollution. Techniques for measurement of atmosphere pollutant concentrations and determination of local and regional air quality. Detailed presentation of air pollution sources and methods for their control. The role of local, state and federal government in air pollution control.
Requisites: Senior standing and declared in Biomed, Biological Sys, Chemical, Civil, Computer, Electrical, Environmental, Geological, Industrial, Mechanical or Nuclear Egr, Mat Sci & Egr, Egr Physics, Egr Mechanics, grad/prof standing or member of Egr Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the roles of engineers and scientists in managing air quality
Audience: Both Grad & Undergrad

2. Classify the breadth of air pollution problems into the following scales: indoor residential air quality, indoor industrial air quality, urban air pollution, regional air pollution, and global climate change
Audience: Both Grad & Undergrad

3. Describe the sources, transformations, fates, and impacts of key priority air pollutants at the scales noted above
Audience: Both Grad & Undergrad

4. Derive and use mass balance and reactor model calculations to estimate concentrations, and to identify fates and sources of air pollution at the scales noted above
Audience: Both Grad & Undergrad

5. Estimate transport and thermodynamic properties related to the formation, destruction, and removal of air pollutants
Audience: Both Grad & Undergrad

6. Explain the key technologies and processes used to prevent air pollution formation, transform air pollutants and remove air pollutants
Audience: Both Grad & Undergrad

7. Develop a basic design to mitigate an air pollution problem
Audience: Graduate

CIV ENGR 425 – ENVIRONMENTAL ENGINEERING MICROBIOLOGY
3 credits.

Microbial interactions in soils, water, extreme environments and biofilms. Modern methods for studying microbial ecology. Role of microbes in nutrient cycles and biogeochemistry. Use of microbes for mitigating human-made environmental problems of industrial, agricultural, and domestic origin. Emphasis on engineered systems.
Requisites: MICROBIO 303 or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Predict which kinds of organisms will be found in different ecosystems using quantitative reasoning when possible
Audience: Both Grad & Undergrad

2. Describe research tools and applications in environmental microbiology as well as their limitations
Audience: Both Grad & Undergrad

3. Critically evaluate published research carried out in the field and think creatively about new potential research questions and applications
Audience: Both Grad & Undergrad

4. Work collaboratively in a team to enhance learning and solve complex problems
Audience: Both Grad & Undergrad

5. Synthesize and condense complex concepts into a form that is accessible to peers
Audience: Graduate

CIV ENGR 426 – DESIGN OF WASTEWATER TREATMENT PLANTS
3 credits.

Unit operations in wastewater treatment; physical, chemical, and biological processes for treatment of wastewater; sludge treatment and disposal; design of a wastewater treatment plant; site visits to wastewater treatment plants.
Requisites: Senior standing or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Find regulatory requirements for effluent permits, design, and operation of wastewater treatment plants and incorporate them as constraints when developing design solutions
Audience: Both Grad & Undergrad

2. Develop technically feasible alternative solutions, compare the alternative solutions, and recommend one of the solutions
Audience: Both Grad & Undergrad

3. Create plans and specifications that allow construction of a portion of the recommended solution
Audience: Both Grad & Undergrad

4. Design experiments necessary to gather data and create information for use in design
Audience: Both Grad & Undergrad

5. Implement measures to consider risk, reliability, and uncertainty in wastewater treatment
Audience: Both Grad & Undergrad

6. Use the skills and expertise of multiple disciplines on a design team to address complex engineering problems
Audience: Both Grad & Undergrad

7. Apply sustainability principles and/or frameworks to addressing the challenge of wastewater treatment
Audience: Both Grad & Undergrad

8. Explain the social, economic, and/or environmental dimensions of the sustainability challenge(s) of wastewater treatment
Audience: Both Grad & Undergrad

9. Manage a group of undergraduate students through the design process

Audience: Graduate

CIV ENGR 427 – SOLID AND HAZARDOUS WASTES ENGINEERING
3 credits.

Basic concepts in designing, evaluating, and operating solid wastes storage, collection, and disposal systems; waste reduction, resource recovery, incineration and land disposal methods; hazardous wastes engineering; legal, political, and administrative considerations.
Requisites: Senior standing or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Find regulatory requirements for design and operation in solid and hazardous waste engineering and incorporate them as constraints when developing design solutions
Audience: Both Grad & Undergrad

2. Develop technically feasible alternative solutions, compare the alternative solutions, and recommend one of the solutions
Audience: Both Grad & Undergrad

3. Create plans and specifications that allow construction of a portion of the recommended solution
Audience: Both Grad & Undergrad

4. Address professional and ethical issues in environmental engineering
Audience: Both Grad & Undergrad

5. Implement measures to consider risk, reliability, and uncertainty in hazardous waste management
Audience: Both Grad & Undergrad

6. Use the skills and expertise of multiple disciplines on a design team to address complex engineering problems
Audience: Both Grad & Undergrad

7. Apply sustainability principles and/or frameworks to address energy and resource use in solid and hazardous waste engineering design and operation
Audience: Both Grad & Undergrad

8. Explain the social, economic, and/or environmental dimensions of the sustainability challenge(s) of solid and hazardous wastes engineering
Audience: Both Grad & Undergrad

9. Manage a group of undergraduate students through the design process

Audience: Graduate

CIV ENGR 428 – WATER TREATMENT PLANT DESIGN
3 credits.

Preliminary studies and design of water treatment processes and subordinate plant facilities; project control of design project; unit operations in water treatment; groundwater treatment; preliminary cost estimates; introduction of computer-aided design concept; site visits to water treatment plants.
Requisites: Senior standing or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Find regulatory requirements for water quality, operation, and design, and incorporate them as constraints when developing design solutions
Audience: Both Grad & Undergrad

2. Develop technically feasible alternative solutions, compare the alternative solutions, and recommend one of the solutions
Audience: Both Grad & Undergrad

3. Create plans and specifications that allow construction of a portion of the recommended solution
Audience: Both Grad & Undergrad

4. Implement measures to consider risk, reliability, and uncertainty in water treatment plant design
Audience: Both Grad & Undergrad

5. Apply sustainability principles and/or frameworks to addressing the challenge of drinking water treatment
Audience: Both Grad & Undergrad

6. Explain the social, economic, and/or environmental dimensions of the sustainability challenge(s) of drinking water treatment
Audience: Both Grad & Undergrad

7. Manage a group of undergraduate students through the design process
Audience: Graduate

CIV ENGR/G L E 430 – INTRODUCTION TO SLOPE STABILITY AND EARTH RETENTION
1 credit.

Introduction to theory and approaches commonly used in geotechnical engineering practice for design and analysis of slopes and earth retaining structures.
Requisites: CIV ENGR/G L E 330, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Calculate the factor of safety of natural or engineered slopes
Audience: Both Grad & Undergrad

2. Design simple earth retaining structures
Audience: Both Grad & Undergrad

3. Perform additional design strategies to design complex slope or retaining structures
Audience: Graduate

4. Lead a team of undergraduate students for the final design project exercise
Audience: Graduate

CIV ENGR/G L E 432 – INTRODUCTION TO SHALLOW AND DEEP FOUNDATION SYSTEMS
1 credit.

Introduction to theory and approaches commonly used in geotechnical engineering practice for design and analysis of slopes and earth retaining structures.
Requisites: CIV ENGR/G L E 330, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply methods and requirements of a subsurface investigation program
Audience: Both Grad & Undergrad

2. Collect sufficient information to design basic shallow or deep foundation systems
Audience: Both Grad & Undergrad

3. Fulfill the design criteria for different structures and facilities
Audience: Both Grad & Undergrad

4. Design shallow and deep foundation structures
Audience: Both Grad & Undergrad

5. Perform additional design strategies to design the foundation of a soil retaining structure
Audience: Graduate

CIV ENGR/G L E 434 – INTRODUCTION TO UNDERGROUND OPENINGS ENGINEERING
1 credit.

Subsurface stress; rock failure criteria; openings in competent rock; openings in layered rocks; plastic behavior around openings in weak rock; stereographic projections and stereonet; block theory; rock bolts; stabilization methods and design.
Requisites: CIV ENGR/G L E 330, GEOSCI/CIV ENGR/G L E/ M S & E 474 or concurrent enrollment, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Predict stress concentrations around underground openings
Audience: Both Grad & Undergrad

2. Identify weak points around underground openings in conjunction with the rock mass type information
Audience: Both Grad & Undergrad

3. Design openings to minimize hazard
Audience: Both Grad & Undergrad

4. Design reinforcement strategies
Audience: Both Grad & Undergrad

5. Perform advanced design strategies
Audience: Graduate

CIV ENGR 440 – STRUCTURAL ANALYSIS II
3 credits.

Analysis of structures by displacement methods with computer solutions. Slope deflection and moment distribution methods. Derivation of stiffness matrices for two-dimensional frames. Introduction to commercial structural analysis software. Shear deformations.
Requisites: CIV ENGR 340, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Model a structure, including boundary conditions and loading, for analysis using the stiffness method
Audience: Both Grad & Undergrad

2. Solve for unknown joint displacements, reactions, and member actions using the stiffness method
Audience: Both Grad & Undergrad

3. Use energy concepts for the determination of deflections, member stiffness/flexibility matrices, and equivalent joint loads
Audience: Both Grad & Undergrad

4. Account for material and geometric nonlinearities in the analysis of simple two-dimensional frame structures
Audience: Graduate

CIV ENGR/ENVIR ST/G L E/GEOSCI 444 – PRACTICAL APPLICATIONS OF GPS SURVEYING
2 credits.

Global positioning system surveying for field applications. Signals. Coordinate systems. Datums. Cartographic projections. Satellite orbits. Choosing hardware. Strategies for data collection and analysis. Assessing uncertainty. Geocoding satellite images. Integrating data with Geographic Information Systems. Emerging technologies.
Requisites: MATH 211, 217, 221, or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

CIV ENGR 445 – STEEL STRUCTURES I
3 credits.

Design loads, codes, specifications and standards; philosophies of design; load and resistance factor design (LRFD); allowable stress design (ASD); properties and types of structural steel; residual stresses; behavior and LRFD design criteria for tension members, compression; laterally braced and unbraced beams; essentials of bolted and welded connections.
Requisites: CIV ENGR 340, graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate a working knowledge of the typical strength limit states of a tension member and simple bolted tension connection, including gross yielding, fracture of an effective net section, and block shear
Audience: Undergraduate

2. Demonstrate a working knowledge of the typical strength limit states of a compression member, including gross yielding, elastic and inelastic flexural buckling, and local web buckling
Audience: Undergraduate

3. Demonstrate a working knowledge of the typical strength limit states of a flexural member, including yielding, elastic and inelastic lateral-torsional buckling, and local flange buckling
Audience: Undergraduate

4. Demonstrate a working knowledge of the typical strength limit states of a member subjected to the combined effects of flexure and axial force, including yielding, lateral-torsional buckling, and local buckling
Audience: Undergraduate

5. Check, proportion and design structural steel members subjected to tension, compression, or/and flexure to satisfy the requirements of the AISC Specification for Structural Steel Buildings using the Load and Resistance Factor Design method
Audience: Undergraduate

6. Develop technically feasible alternative solutions to a problem, compare the alternative solutions, and recommended one of the solutions as the preferred option
Audience: Undergraduate

CIV ENGR 447 – CONCRETE STRUCTURES I
3 credits.

Behavior of reinforced concrete structural elements; concepts of design and proportioning sections for strength and serviceability; background of specification requirements; strength design applied to beams, columns, and members under combined axial load and bending; continuous beams.
Requisites: CIV ENGR 340, graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Compute required strengths for flexure, shear, and axial load, as well as moment and shear envelopes of design using the load factors and load combinations specified by the current building code requirements for structural concrete
Audience: Undergraduate

2. Perform a structural analysis and design of reinforced concrete members with rectangular and T-shaped sections subjected to flexure and shear (beams)
Audience: Undergraduate

3. Perform a structural analysis and design of reinforced concrete members subjected to combined flexure and axial loads (columns)
Audience: Undergraduate

4. Develop technically feasible alternative solutions to a problem, compare the alternative solutions, and recommend one of the solutions as the preferred option
Audience: Undergraduate

5. Compute required and design strengths for flexure, shear, and axial load for reinforced concrete members using commonly available structural analysis and design software
Audience: Undergraduate

CIV ENGR 451 – ARCHITECTURAL DESIGN
3 credits.

Introduction to building design, its methods, tools and processes and the interface with other professionals in building design and construction. Buildings as an integrated system of components, assemblies and sub-systems, including: structure, enclosure, internal finish and furnishing, circulation, conveyance and mechanical systems. Pragmatic design elements that make a project sustainable, energy efficient and comfortable, including; fenestration options, daylighting, passive heating and cooling, energy efficiency and other lower impact approaches identified in LEED standards.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the social, formal and spatial context of buildings and urban sites and how they are used to configure building design solutions.
Audience: Undergraduate

2. Use architectural precedent (formal, spatial, organizational, typological and historical) for design direction on current project.
Audience: Undergraduate

3. Identify a building's integrated system of components, assemblies and sub-systems, including: structure, enclosure, internal finishing and furnishing, circulation and conveyance and environmental control and servicing.
Audience: Undergraduate

4. Identify and incorporate in design projects, critical health and life safety concerns and as exemplified in (building and zoning) codes, including; egress / exiting, accessibility, construction type, fire resistance and separation / isolation.
Audience: Undergraduate

5. Apply appropriate software to the architectural design process to develop, assemble, dimension and annotate a comprehensive set of architectural design documents in conventional formats.
Audience: Undergraduate

CIV ENGR 465 – DATA SENSING AND ANALYSIS IN CONSTRUCTION
3 credits.

Introduction to data sensing and analysis technologies for the onsite data capture, analysis and visualization in construction projects. Experience of using close range remote sensors and computing tools to facilitate construction engineering and management tasks. Focus on 1) project 3D as-built modeling and documentation, 2) visual detection, tracking and activity recognition of construction equipment and personnel, and 3) virtual construction inspection and site tour in mixed reality.
Requisites: G L E/CIV ENGR 291, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe challenges related to data sensing and analysis in construction
Audience: Both Grad & Undergrad

2. Use computer tools to analyze and visualize construction project data and models
Audience: Both Grad & Undergrad

3. Identify, formulate and solve construction engineering and management problems with remote sensors
Audience: Both Grad & Undergrad

4. Critically evaluate sensing technologies and actively develop innovative solutions to improve construction safety, productivity and quality
Audience: Graduate

CIV ENGR/G L E/GEOSCI/M S & E 474 – ROCK MECHANICS
3 credits.

Classification of rock masses, stress and strain in rock, linear and non-linear behavior of rock, failure mechanisms, state of stress in rock masses, lab testing, geological and engineering applications.
Requisites: E M A 201, PHYSICS 201, 207, or 247, or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Measure basic index properties for rock mass classification
Audience: Both Grad & Undergrad

2. Describe stress and strain in continuums
Audience: Both Grad & Undergrad

3. Describe the factors which control the mechanical behavior of rocks
Audience: Both Grad & Undergrad

4. Apply basic concepts of rock mechanics and rock physics to analyze basic geomechanical engineering problems
Audience: Both Grad & Undergrad

5. Prepare rock samples for mechanical testing, conduct experiment, and analyze experimental data to obtain rock strength properties
Audience: Both Grad & Undergrad

6. Describe analytically time-dependent rock behaviors
Audience: Graduate

CIV ENGR 489 – HONORS IN RESEARCH
1-3 credits.

Undergrad honors research projects supervised by faculty members.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024
Learning Outcomes: 1. Conduct and report on independent civil or environmental engineering research
Audience: Undergraduate

2. Independently develop civil or environmental engineering research questions
Audience: Undergraduate

3. Appropriately use online and library resources
Audience: Undergraduate

CIV ENGR 491 – LEGAL ASPECTS OF ENGINEERING
3 credits.

Legal principles and institutions germane to engineering practice; formation and performance of engineer-client and owner-contractor relationships; preparation of technical specifications; surety bonds and insurance; construction liens; contract administration; construction contract remedies; intellectual property of engineers; engineers' obligations to society and their fellow engineers.
Requisites: Senior standing or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize the core components of the legal process and describe those components, including the nature of disputes, remedies, rules of law, and rules of contract interpretation affecting performance, termination, and completion of construction projects
Audience: Undergraduate

2. Identify the legal relationships between owners and design professionals
Audience: Undergraduate

3. Identify the legal relationships between owners and construction contractors
Audience: Undergraduate

4. Recognize core contract administration procedures and explain the purpose of each procedure
Audience: Undergraduate

5. Evaluate the procedures for interpreting contracts and contract clauses
Audience: Undergraduate

6. Use basic legal rules to resolve contract disputes
Audience: Undergraduate

CIV ENGR 492 – INTEGRATED PROJECT ESTIMATING AND SCHEDULING
3 credits.

Principles of estimating and scheduling for the construction industry, engineer's preliminary and final estimates' quantity take offs and cost and duration determinations for major items related to a construction project; use manual and computer techniques.
Requisites: Junior standing or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize and describe the core components of construction estimating, planning, and scheduling
Audience: Both Grad & Undergrad

2. List the steps needed to develop a cost estimate for a real-life project, then create a construction cost estimate using industry-appropriate software
Audience: Both Grad & Undergrad

3. List the steps needed to develop a time schedule for a real-life project, then create a construction schedule with a critical path plan using industry-appropriate software
Audience: Both Grad & Undergrad

4. Interpret construction blueprints
Audience: Both Grad & Undergrad

5. Integrate estimating and scheduling as a function of construction planning
Audience: Both Grad & Undergrad

6. Prepare and develop a contractor’s bid document and deliver quantitative information in an organized manner to clients
Audience: Graduate

7. Work in a collaborative environment; lead and guide undergraduate students throughout the development of a scheduling and estimating project
Audience: Graduate

CIV ENGR 494 – CIVIL AND ENVIRONMENTAL ENGINEERING DECISION MAKING
3 credits.

Planning, designing, and managing civil and environmental engineering systems. Fundamentals of the systems approach; marginal analysis; optimization techniques; decision analysis; economic analysis; cost-effectiveness analysis. Case study applications.
Requisites: MATH 217, 221, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Summarize planning, design, and management objectives in civil and environmental systems
Audience: Both Grad & Undergrad

2. Describe and solve fundamental engineering economics problems
Audience: Both Grad & Undergrad

3. Explain optimization concepts and modeling
Audience: Both Grad & Undergrad

4. Formulate, design, and solve linear optimization models
Audience: Both Grad & Undergrad

5. Describe and execute scheduling and critical paths methods
Audience: Both Grad & Undergrad

6. Explain decision theory, methods, and criteria
Audience: Both Grad & Undergrad

7. Define ethical responsibility in engineering
Audience: Both Grad & Undergrad

8. Analyze sustainability issues and/or practices using a systems-based approach
Audience: Both Grad & Undergrad

9. Explain the social, economic, and/or environmental dimensions of the sustainability challenges of engineering decision making
Audience: Both Grad & Undergrad

10. Apply tools and methods to research analysis
Audience: Graduate

CIV ENGR 495 – SUSTAINABLE BUILDING AND MATERIALS
3 credits.

Concepts of sustainability in Civil Engineering with an emphasis on construction materials. Introduction to life-cycle assessment approach to evaluating the impact of infrastructure development. Current sustainable practices in construction projects. Connecting values to clients, stakeholders, and societal needs. Sustainability rating programs, such as LEED, Envision, and INVEST.
Requisites: CIV ENGR 325, E M A/CIV ENGR 395, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain the social, economic, and/or environmental dimensions of the sustainability challenges of building and infrastructure projects to the general public
Audience: Both Grad & Undergrad

2. Describe the social, economic, and environmental dimensions of material use in construction and identify potential trade-offs and interrelationships among these dimensions at a level appropriate to the course
Audience: Both Grad & Undergrad

3. Explain the principles and functions of common sustainability rating programs used for construction projects
Audience: Both Grad & Undergrad

4. Analyze sustainability issues and/or practices using a systems-based approach.
Audience: Graduate

CIV ENGR 496 – ELECTRICAL SYSTEMS FOR CONSTRUCTION
3 credits.

Basic electricity, utility systems, standards and codes, electrical construction materials, branch circuit design, motor branch circuit design, feeder and service design, estimating and management concepts in electrical contracting, grounding, lighting, telecommunications.
Requisites: PHYSICS 202, 208, 248, graduate/professional standing, or member of engineering guest students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Interpret electrical construction documents
Audience: Both Grad & Undergrad

2. Find project-specific requirements in the National Electrical Code and interpret differences between common codes and standards used for electrical design of commercial, industrial, and institutional building systems
Audience: Both Grad & Undergrad

3. Design layouts for lighting and power devices
Audience: Both Grad & Undergrad

4. Size electrical feeders and building services using appropriate calculations, then draft and interpret electrical drawings based on these calculations
Audience: Both Grad & Undergrad

5. Describe key design considerations for fire alarm, telecommunications, and security systems
Audience: Both Grad & Undergrad

6. List advantages and disadvantages of different electrical construction materials according to their intended use
Audience: Both Grad & Undergrad

7. Perform quantity takeoffs and cost estimates of electrical components in construction
Audience: Graduate

CIV ENGR 497 – MECHANICAL SYSTEMS FOR CONSTRUCTION
3 credits.

Introduction to building mechanical systems. Plumbing, heating, ventilation, air conditioning, fire protection, automation/controls and process systems. Introduction to mechanical systems design and cost estimating. Mechanical system management.
Requisites: PHYSICS 202, 208, 248, graduate/professional standing, or member of engineering guest students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explore the Building Information Modeling (BIM) interface and BIM360 interface
Audience: Both Grad & Undergrad

2. Draft a 3D building model to explain how information is inter-related throughout the BIM model
Audience: Both Grad & Undergrad

3. Develop a project which includes stairs and “feature architectural designs”, structural and MEP (Mechanical, Electrical, and Plumbing) components to strengthen BIM modeling skill sets
Audience: Both Grad & Undergrad

4. Integrate architectural, structural and MEP building components into a 3D model and avoid clashes between the building systems
Audience: Both Grad & Undergrad

5. Extract construction document sheets from the 3D model
Audience: Both Grad & Undergrad

6. Collaborate with multiple users across a wide area network and save their work to a central file
Audience: Graduate

7. Streamline data management and work from remote locations using a local server
Audience: Graduate

CIV ENGR 498 – CONSTRUCTION PROJECT MANAGEMENT
3 credits.

Characteristics of Construction Industry; project organizations; the design and construction process; labor, material, and equipment utilization; cost estimation; construction pricing and contracting; construction planning; cost control, monitoring accounting; and management systems construction.
Requisites: Junior standing or member of Engineering Guest Students
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Define "ethical management practice", "personal development" and describe their personal commitment to each
Audience: Undergraduate

2. Define the terms “empathy” and “human capital” and describe their personal commitment to having empathy for human capital
Audience: Undergraduate

3. List and describe the core competencies of leadership and describe their personal commitment to leadership principles
Audience: Undergraduate

4. Identify and manage uncertainty and change in construction project management
Audience: Undergraduate

5. Use fundamentals of construction project management and its processes and/or components to solve real-life complex problems; define and distinguish construction project delivery systems and successful outcomes
Audience: Undergraduate

6. Use basic construction planning, cost management and contracts assessment skills
Audience: Undergraduate

CIV ENGR 500 – WATER CHEMISTRY
3 credits.

Elements of fresh and marine water chemistry; acid-base, precipitation, complexation, oxidation-reduction, adsorption, and biochemical reactions in natural waters and water treatment processes.
Requisites: CHEM 104, 109, 116, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify important types of aqueous-phase chemical reactions
Audience: Both Grad & Undergrad

2. Use thermodynamic concepts to determine whether aqueous-phase chemical reactions can proceed and, if so, the extent to which they can proceed
Audience: Both Grad & Undergrad

3. Use graphical methods to solve ionic equilibrium problems
Audience: Both Grad & Undergrad

4. Use modern numerical tools to solve water chemistry problems
Audience: Both Grad & Undergrad

5. Explain the relevance of water chemistry concepts to their thesis research
Audience: Graduate

CIV ENGR 501 – WATER ANALYSIS-INTERMEDIATE
3 credits.

Principles and applications of chemical and instrumental methods for the chemical analysis of water.
Requisites: CHEM 104, 109, 116, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2020
Learning Outcomes: 1. Explain the need for progressive development of water quality analyses to respond to emerging water quality issues
Audience: Both Grad & Undergrad

2. Describe principles of physical, chemical and biological techniques for assessing water quality and discuss analytical procedures, results, and interpretations of data
Audience: Both Grad & Undergrad

3. Use knowledge of water quality analyses to assess real-world environmental issues
Audience: Both Grad & Undergrad

4. Evaluate raw data to progressively determine factors influencing water quality in contrasting environments
Audience: Both Grad & Undergrad

5. Use appropriate techniques to address drinking water and wastewater engineering issues
Audience: Both Grad & Undergrad

6. Take on leadership roles in group projects and discussions relevant to pertinent water quality issues
Audience: Graduate

CIV ENGR/E M A/M E 508 – COMPOSITE MATERIALS
3 credits.

Physical properties and mechanical behavior of polymer, metal, ceramic, cementitious, cellulosic and biological composite systems; micro- and macro-mechanics; lamination and strength analyses; static and transient loading; fabrication; recycling; design; analytical-experimental correlation; applications.
Requisites: (E M A 303 or M E 306), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. List the different types of composite materials and describe their manufacturing processes
Audience: Both Grad & Undergrad

2. Describe the mechanical behavior of various composite materials under different types of loading conditions
Audience: Both Grad & Undergrad

3. Derive mathematical models and solve them for engineering stresses and deformations in a composite structure
Audience: Both Grad & Undergrad

4. Describe special theories for heterogeneous and non-isotropic materials and solve boundary value problems associated with composite structures
Audience: Both Grad & Undergrad

5. Use the knowledge acquired in this class to design and conduct a complex analysis, design, and/or experiment to address key challenges relevant to composite materials
Audience: Graduate

CIV ENGR/G L E 511 – MIXING AND TRANSPORT IN THE ENVIRONMENT
3 credits.

Application of fluid mechanics to understand the mixing and transport of contaminants, pollutants, and other solutes in the environment. Introduction to chemical and biochemical transformation processes as well as boundary interactions at the air-water and sediment-water interfaces. Transport phenomena: diffusive processes, advective processes, turbulent diffusion, and shear flow dispersion. Introduction to both analytical and computational solutions with applications to mixing and transport in rivers, lakes, the atmosphere, and coastal waters.
Requisites: (CIV ENGR/G L E 291, COMP SCI 220, or E C E 203) and (CIV ENGR 310 or M E 363), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024
Learning Outcomes: 1. Recall the principles of conservation of mass, advective mass flux and Fick's law for diffusive mass flux
Audience: Both Grad & Undergrad

2. Apply the fundamental solution to the diffusion equation and use the principle of superposition to construct new solutions
Audience: Both Grad & Undergrad

3. Calculate the diffusivity given data of concentration distribution over time, and conversely, calculate the concentration distribution over time given the diffusivity
Audience: Both Grad & Undergrad

4. Calculate new solutions to advection-diffusion equation by modifying known solutions to include first-order reactions
Audience: Both Grad & Undergrad

5. Explain the differences between molecular diffusion, turbulent diffusion and shear flow dispersion
Audience: Both Grad & Undergrad

6. Apply models of mass transfer at boundaries to compute interfacial mass exchange between air-water and sediment-water interfaces
Audience: Both Grad & Undergrad

7. Evaluate the importance of mixing and transport processes in environmental processes and assess the utility of different types of solutions.
Audience: Graduate

CIV ENGR 514 – COASTAL ENGINEERING
2-3 credits.

The effect of natural forces associated with storms, hurricanes, and water-level variations on the coastal zone, and efforts made to combat these forces. Wave and storm-surge prediction, the change of waves as they approach shore, and wave forces on the shore; shore erosion and littoral drift; nearshore pollution in lakes and oceans; harbor, breakwater, and revetment design.
Requisites: CIV ENGR 311, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

CIV ENGR 515 – HYDROCLIMATOLOGY FOR WATER RESOURCES MANAGEMENT
3 credits.

Introduction to various strategies for integrating climate science into water resources, specifically addressing climatic influences on hydrologic variables, the prospects for prediction, and the implications on water management and development. Consider both space and time variability of hydrological processes in the context of sub-seasonal, seasonal, and climate change time-scales.
Requisites: CIV ENGR 415 and (STAT 224, 311, or 324), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify present to future and local to global hydroclimatic challenges
Audience: Both Grad & Undergrad

2. Perform diagnostics and attribution regarding the influence of climatic variables and phenomena on hydrologic variables
Audience: Both Grad & Undergrad

3. Design and verify probabilistic statistical and dynamical hydroclimatic forecasts
Audience: Both Grad & Undergrad

4. Explain the complexities of forecast communication
Audience: Both Grad & Undergrad

5. Explain the state and complexities of climate change science and modeling as it relates to water management
Audience: Both Grad & Undergrad

6. Write codes to perform statistical analyses
Audience: Graduate

7. Use multiple performance metrics and subsequently draw suitable conclusions
Audience: Graduate

CIV ENGR 516 – HYDROLOGIC DATA ANALYSIS
3 credits.

Introduction to probability and statistics and application to the analysis and modeling of real-world problems in hydrology, water resources engineering, and environmental data analysis.
Requisites: (MATH 221 or 217) and (STAT 311, 324, 340, MATH/STAT 309, 431, B M E 325, or E C E 331), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Demonstrate data literacy in the context of temporal and geospatial hydrologic and environmental datasets
Audience: Both Grad & Undergrad

2. Employ modern statistical software to analyze and model hydrologic and other environmental phenomena
Audience: Both Grad & Undergrad

3. Detect trends, relationships, and patterns in temporal and spatial hydrologic and environmental datasets using regression, extreme value analyses, and other popular hydrologic statistical techniques
Audience: Both Grad & Undergrad

4. Derive and interpret predictions, parameters, confidence levels, uncertainties, and sensitivities in the context of common hydrologic applications such as rainfall/flood frequency, hydropower, streamflow forecasting, and water quality
Audience: Both Grad & Undergrad

5. Identify applications of data analysis methods to specific water resources engineering and other civil and environmental engineering applications
Audience: Undergraduate

6. Identify and apply appropriate statistical analysis methods to novel environmental datasets and problems
Audience: Graduate

CIV ENGR/G L E 520 – REACTIVE PROCESSES FOR SUSTAINABLE ENERGY AND RESOURCE PRODUCTION
3 credits.

Key scientific concepts related to fossil and renewable energy resources. Apply the fundamentals of thermodynamics and chemical kinetics at solid interfaces to better understand the science behind using fossil and renewable energy resources. Evaluate the impacts of existing and emerging energy technologies on the environment.
Requisites: Senior standing, (MATH 211, 217, or 221), (CHEM 103, 104, or 109), and CIV ENGR 320, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Identify major issues pertaining to energy and environmental science and engineering, and evaluate the sustainability of technologies grounded in the science of material and energy balances and reaction kinetics
Audience: Both Grad & Undergrad

2. Derive and solve mathematical expressions to describe energy and material transformations
Audience: Both Grad & Undergrad

3. Critically evaluate and present their analysis and synthesis of literature in this area of energy and environment
Audience: Both Grad & Undergrad

4. Evaluate and propose novel technological solutions grounded in the fundamentals of thermodynamics of kinetics
Audience: Graduate

5. Analyze and defend emerging technologies in the area of energy and environment
Audience: Graduate

CIV ENGR 521 – MEMBRANE SCIENCE AND TECHNOLOGY
3 credits.

Membrane-based technology used in water/wastewater treatment and seawater/brackish water desalination. Theoretical and practical knowledge of the membrane-based technology applied in a variety of water treatment processes. Specific topics such as membrane transport theory, types and principles of the membrane, process design and operation, and pre- and post-treatment requirements. Challenges and future development of membrane technology.
Requisites: (CIV ENGR 310 and 320), CBE 320, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe membrane separation mechanisms, membrane transport theory, concentration polarization, membrane types and modules, and membrane-based processes
Audience: Both Grad & Undergrad

2. Apply transport models for the calculation of membrane permeability, flux, and the extent of separation for various membrane separation systems
Audience: Both Grad & Undergrad

3. Determine the types of experimental data needed for calculation of membrane permeability parameters
Audience: Both Grad & Undergrad

4. Calculate membrane process performance and analyze membrane separation characteristics
Audience: Both Grad & Undergrad

5. Write Python codes for basic membrane process models and conduct calculations on energy consumption
Audience: Graduate

CIV ENGR 522 – HAZARDOUS WASTE MANAGEMENT
3 credits.

Environmental regulations, remediation site characterization, contaminant characterization, detailed engineering and management considerations related to the design and operation of hazardous waste remediation systems involving water pollution, air pollution, solid waste, and groundwater pollution.
Requisites: Senior standing or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Find regulatory requirements for hazardous waste management, remediation, and water quality, and incorporate them as constraints when developing design solutions
Audience: Both Grad & Undergrad

2. Develop technically feasible alternative solutions, compare the alternative solutions, and recommend one of the solutions
Audience: Both Grad & Undergrad

3. Create plans and specifications that allow construction of a portion of the recommended solution
Audience: Both Grad & Undergrad

4. Design experiments necessary to gather data and create information for use in design
Audience: Both Grad & Undergrad

5. Implement measures to consider risk, reliability, and uncertainty in hazardous waste management
Audience: Both Grad & Undergrad

6. Use the skills and expertise of multiple disciplines on a design team to address complex engineering problems
Audience: Both Grad & Undergrad

7. Apply sustainability principles and/or frameworks to addressing the challenge of energy and resource use in hazardous waste remediation
Audience: Both Grad & Undergrad

8. Explain the social, economic, and/or environmental dimensions of the sustainability challenge(s) of hazardous waste management
Audience: Both Grad & Undergrad

9. Manage a group of undergraduate students through the design process

Audience: Graduate

CIV ENGR 525 – CASE STUDIES EXPLORING INFRASTRUCTURE SUSTAINABILITY AND CLIMATE CHANGE
3 credits.

Critical evaluation of the sustainability of engineering projects, considering roles as designers, citizens, and collaborators in creating the infrastructure of the future. Consider the impact of climate change on sustainability, an urgent topic, through case studies in water supply, flood management, water quality, materials recovery and recycling, mobility, buildings and structures, and energy generation and distribution.
Requisites: Junior standing and (MATH 217 or 221), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Demonstrate a working knowledge of relevant sustainability principles and definitions
Audience: Both Grad & Undergrad

2. Critically evaluate the application and achievement of sustainability goals by real-world project case studies in the context of natural resource capacity and limits
Audience: Both Grad & Undergrad

3. Demonstrate how engineers can apply authentic sustainability goals into both large and small engineered works
Audience: Both Grad & Undergrad

4. Describe how engineers can act as citizens in developing sustainability policy as well as engineers designing a sustainable project
Audience: Both Grad & Undergrad

5. Critically evaluate the sufficiency of the sustainability goals that were defined for a project
Audience: Graduate

CIV ENGR/G L E 530 – SEEPAGE AND SLOPES
3 credits.

Practical aspects of seepage effects and ground water flow. Stability of natural and man-made slopes under various loading conditions. Design and construction of earth dams and embankments. Flow net and its use; wells; filters; total and effective stress methods of slope analysis; selection of pertinent soil parameters.
Requisites: CIV ENGR/G L E 330, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Characterize and classify slope failure
Audience: Both Grad & Undergrad

2. Identify stability risk factors in generalized slope design
Audience: Both Grad & Undergrad

3. Apply soil and rock mechanics and strength principles in the context of slope stability investigation and design
Audience: Both Grad & Undergrad

4. Determine strength parameters of soil materials under saturated and unsaturated conditions
Audience: Both Grad & Undergrad

5. Understand pore fluid pressure in underground environments and its effect on manmade structures integrated within the soil as well as the failure potential of differing geometries
Audience: Both Grad & Undergrad

6. Design slope remedial plans for earth structures subjected to varying physical properties, overburden and pore pressures, and restrictive geometries
Audience: Both Grad & Undergrad

7. Act as leaders of the small groups they have been assigned for the mini design project
Audience: Graduate

CIV ENGR/G L E 532 – FOUNDATIONS
3 credits.

Shallow and deep foundations. Analysis and design of footings, mats, piers and piles, and related fill and excavation operations. Consolidation settlement, time rate of settlement, stress distribution, elastic (immediate) settlement, load bearing capacity; methods to reduce settlements and increase shear strength; the selection of a foundation system.
Requisites: CIV ENGR/G L E 330, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Provide examples of when and where to consider shallow foundation systems in lieu of deep foundation systems and where stone columns or rammed aggregate piers are appropriate
Audience: Both Grad & Undergrad

2. Scope and Prepare a Foundation Investigation, including the equipment and standards used for subsurface exploration and the advantages/disadvantages therein
Audience: Both Grad & Undergrad

3. Calculate Allowable Bearing Pressure using (a) presumptive values, (b) the bearing capacity equation and (c) in situ approaches
Audience: Both Grad & Undergrad

4. Design a safe spread foundation system where structural capacity exceeds demand
Audience: Both Grad & Undergrad

5. Design a drilled shaft and a driven pile for axial loading considering vertical loading and a settlement estimate
Audience: Both Grad & Undergrad

6. Prepare a bid sheet, plan set, and set of specifications for a successful foundation design
Audience: Both Grad & Undergrad

7. Use soil moduli in the application of a laterally loaded deep-foundation system using an appropriate software program with a hand-calculated backcheck
Audience: Graduate

CIV ENGR/G L E 534 – NONDESTRUCTIVE EVALUATION
3 credits.

Practical aspects of nondestructive evaluation (NDE) techniques for identifying physical properties and damage within civil and geologic materials and structures. Data analyses and data science for wave propagation, arrival picking, distributed fiber optic sensing, and visualization tools such as augmented/mixed/virtual reality.
Requisites: E M A 201, PHYSICS 201, 207, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe multiple nondestructive evaluation (NDE) testing methods and their applications
Audience: Both Grad & Undergrad

2. Characterize flaws within Civil and Geological Engineering materials
Audience: Both Grad & Undergrad

3. Determine source locations of flaws or damage within a structure based on NDE data
Audience: Both Grad & Undergrad

4. Characterize both active and passive elastic wave observations in rock
Audience: Both Grad & Undergrad

5. Apply seismological principles to observed acoustic emissions for determining source locations of microcracks and infer the mechanism of failure
Audience: Both Grad & Undergrad

6. Analyze fiber optic distributed acoustic sensing (DAS) to find earthquake events within timeseries data
Audience: Both Grad & Undergrad

7. Apply artificial intelligence techniques to analyze fiber optic sensing data
Audience: Graduate

CIV ENGR/G L E 535 – WIND ENERGY BALANCE-OF-PLANT DESIGN
3 credits.

Wind Energy Development and Balance-of-Plant Design. Up-front coverage includes the science and mechanics of wind energy including turbine basics, wind resource assessment, energy production, and economic return. Balance-of-plant design aspects include site layout and micro-siting, foundation systems, collector systems and interconnection, site civil and electrical infrastructure, and structural tower analysis. Development includes environmental due diligence and permitting, stakeholder engagement, energy policy and markets, and levelized cost of energy (LCOE).
Requisites: PHYSICS 201, 207, 247, E M A 201, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Provide the necessary steps to evaluate the wind resource at a prospective site by characterizing and correlating (vertically and horizontally) the wind speed distribution functions
Audience: Both Grad & Undergrad

2. Translate (forward and backward) wind power: kinetic to mechanical to electrical and select appropriate wind turbine given site wind resource and turbine power curve
Audience: Both Grad & Undergrad

3. Demonstrate knowledge of the mechanics and principles of the tower load document, shallow and deep foundation designs, transportation logistics, geotechnical investigation and reporting, thermal resistivity and collection system design, and interconnection
Audience: Both Grad & Undergrad

4. Develop civil balance-of-plant engineering calculation design bases for access roads, stormwater control, turbine foundations, and crane pads and electrical balance-of-plant engineering calculation design bases for the collection system, grounding, substation design, and interconnection
Audience: Both Grad & Undergrad

5. Analyze sustainability issues and/or practices using a systems-based approach.
Audience: Both Grad & Undergrad

6. Describe the social, economic, and environmental dimensions of wind energy and identify potential tradeoffs and interrelationships among these dimensions at an intermediate level.
Audience: Both Grad & Undergrad

7. Prepare an economic Pro Forma for a successful distributed wind project and calculate Levelized Cost of Energy (LCOE) and environmental Life Cycle Assessments (LCAs) of green-house gasses, water use, and CO2 per kW h.
Audience: Graduate

CIV ENGR 545 – STEEL STRUCTURES II
3 credits.

Composite construction; composite vs. non-composite behavior; shored vs. unshored construction; stability of frames; elastic analysis of frames including second order effects; strength of members subject to combined flexure and axial compression; plate girders; vertical flange buckling; flexural and shear strength; flexure and shear interaction; stiffener requirements.
Requisites: CIV ENGR 445, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Check, proportion, and design structural steel built-up plate girders to satisfy the requirements of the AISC Specification for Structural Steel Buildings using the Load and Resistance Factor Design method
Audience: Both Grad & Undergrad

2. Demonstrate a working knowledge of the Direct Analysis Method and the Advanced Analysis Method in the AISC Specification for Structural Steel Buildings to obtain the capacities of structural steel systems accounting for second order effects, geometric imperfections, and residual stresses
Audience: Both Grad & Undergrad

3. Check, proportion, and design for strength and stability limit states of structural steel braced and moment frames to satisfy the requirements of the AISC Specification for Structural Steel Buildings using the Load and Resistance Factor Design method
Audience: Both Grad & Undergrad

4. Check, proportion, and design composite structural steel and concrete beams to satisfy the requirements of the AISC Specification for Structural Steel Buildings using the Load and Resistance Factor Design method
Audience: Both Grad & Undergrad

5. Check and proportion a steel member subjected to an advanced topic loading which may include torsion, seismic, fire, or advanced topic scenario which may include slender members or connections, or another acceptable advanced topic
Audience: Both Grad & Undergrad

6. Critique current research and issues discussed in the professional literature of the discipline related to course topics
Audience: Graduate

CIV ENGR 547 – CONCRETE STRUCTURES II
3 credits.

Deflections under short duration and sustained loads; compression members with emphasis on stability and secondary bending moments; two-way slab systems; prestressed concrete including prestress losses; design of shear walls, special topics in strut and tie modelling, compression field theory and design for torsion may be covered; flexure analysis; design of sections; and shear strength.
Requisites: CIV ENGR 447, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Compute required strengths for flexure, shear, and axial load using the load factors and load combinations specified by current building code requirements for structural concrete
Audience: Both Grad & Undergrad

2. Compute bar development lengths of straight and hooked bars to determine bar cutoff locations in reinforced concrete beams and slabs
Audience: Both Grad & Undergrad

3. Compute immediate and long-term deflections under sustained loads for beams and slabs of reinforced concrete
Audience: Both Grad & Undergrad

4. Perform a structural analysis and design of slab structural systems of reinforced concrete including flat plates, flat slabs, and two-way slabs
Audience: Both Grad & Undergrad

5. Develop technically feasible alternative solutions to a problem, compare the alternative solutions, and recommend one of the solutions as the preferred option
Audience: Graduate

6. Compute required and design strengths for flexure, shear, and axial load for reinforced concrete members using available structural analysis and design software
Audience: Graduate

CIV ENGR/ENVIR ST/LAND ARC 556 – REMOTE SENSING DIGITAL IMAGE PROCESSING
3 credits.

Techniques of enhancement and quantification of remote sensing imagery. Emphasis on processing and analyzing data gathered by airborne and satellite sensors. Techniques to quantitatively analyze data from photography, electro-optical scanners, satellite systems, and radar and passive microwave systems. Applications to: agriculture and forestry, geology and soils, water quality, and urban and regional planning.
Requisites: LAND ARC/ENVIR ST/F&W ECOL/G L E/GEOG/GEOSCI 371, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CIV ENGR/A A E/ENVIR ST/URB R PL 561 – ENERGY MARKETS
3 credits.

Energy resources are an essential element of the world's business, political, technical and environmental landscape. Analytic tools provided by the discipline of economics expands our understanding of this critical issue. Energy supply markets reviewed include both fossil fuels and renewable resources. Energy demand sectors include residential, commercial, industrial and transportation. Electricity represents an intermediate energy market. The interactions among these markets participants indicate how scarce resources are allocated among competing needs in the world economy.
Requisites: A A E 101 (215 prior to Fall 2024), ECON 101, 111, or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

CIV ENGR 570 – CONNECTED AND AUTOMATED TRANSPORTATION SYSTEMS
3 credits.

Connected vehicle and automated vehicle technologies; comprehensive studies of sensing, trajectory planning, and vehicle control within the context of the automated vehicle; consideration of pertinent development and technologies in this field.
Requisites: CIV ENGR 370 and (STAT 324, E C E 331, STAT/MATH 431, or STAT 311), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Communicate using connected vehicle (CV) and automated vehicle (AV) technology terms and concepts
Audience: Both Grad & Undergrad

2. Design operations of traffic containing connected autonomous vehicles (CAVs)
Audience: Both Grad & Undergrad

3. Incorporate CAVs in planning
Audience: Both Grad & Undergrad

4. Identify policy issues related to connected and automated vehicles
Audience: Both Grad & Undergrad

5. Demonstrate an advanced understanding of the underlying traffic principles and CAVs' implications in real-world scenarios
Audience: Graduate

6. Quantitatively analyze CAV models based on real trajectory data
Audience: Graduate

CIV ENGR 571 – URBAN TRANSPORTATION PLANNING
3 credits.

Principles of planning, evaluation, selection, adoption, financing, and implementation of alternative urban transportation systems; formulation of community goals and objectives, inventory of existing conditions; transportation modeling--trip generation, distribution, modal choice, assignment, technological characteristics and operation of modern transit and other movement systems.
Requisites: CIV ENGR 370, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe principles of planning, evaluation, selection, adoption, financing, and alternative urban transportation systems
Audience: Both Grad & Undergrad

2. Formulate community goals and objectives, inventory of existing conditions
Audience: Both Grad & Undergrad

3. Implement algorithms of transportation modeling–trip generation, distribution, and modal choice
Audience: Both Grad & Undergrad

4. Describe technological characteristics and operation of modern transit and other movement systems
Audience: Graduate

CIV ENGR 572 – TRANSPORTATION OPERATIONS
3 credits.

Introduction to assessment tools of transportation operations and fundamental concepts in flow theory, flow control, observation and measurement techniques, and scheduled transportation. Applied to various modes of transportation. Emphasis on logic rather than recipe-oriented practice.
Requisites: CIV ENGR 370 and (E C E 331, STAT/MATH 431, or STAT 311), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze operational characteristics of transportation systems using graphical tools (time-space diagram and cumulative curve)
Audience: Both Grad & Undergrad

2. Analyze vehicular traffic flow using advanced traffic models in different analysis scales: microscopic (vehicle-level), macroscopic (aggregate-level), and network-level scales
Audience: Both Grad & Undergrad

3. Characterize uncertainty in transportation systems
Audience: Both Grad & Undergrad

4. Analyze transportation data based on probability and statistics theories

Audience: Both Grad & Undergrad

5. Design traffic control strategies considering various uncertainties in traffic flow
Audience: Graduate

CIV ENGR 573 – GEOMETRIC DESIGN OF TRANSPORT FACILITIES
3 credits.

Problems in ground transportation facility design; generation, capacity, location and design; rural and urban at-grade intersection design; grade separations; interchanges; parking lots and terminals.
Requisites: CIV ENGR 370, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and characterize the key attributes of the vehicles, operators, and highway systems that affect geometric design
Audience: Both Grad & Undergrad

2. Describe human behavior and accommodation of driver attributes in design
Audience: Both Grad & Undergrad

3. Describe highway design objectives, constraints, and controlling factors

Audience: Both Grad & Undergrad

4. Identify the basic parameters and constraints for the design of rural and urban alignments, vertical profiles, cross sections, and intersections
Audience: Both Grad & Undergrad

5. Design a highway from terrain to complete highway in a 3D computer-aided design package
Audience: Both Grad & Undergrad

6. Use design theory concepts and highway design knowledge in a real-world design project
Audience: Both Grad & Undergrad

7. Explain the social, economic, and/or environmental dimensions of the sustainability challenge(s) of highway design
Audience: Both Grad & Undergrad

8. Apply sustainability principles and/or frameworks to addressing the challenge of building highways in urban and rural areas
Audience: Both Grad & Undergrad

9. Describe highway design theory concepts regarding your area of research
Audience: Graduate

CIV ENGR 574 – TRAFFIC CONTROL
3 credits.

Traffic data collection studies; measures of effectiveness and evaluation of traffic system performance; design and application of traffic control devices; design of traffic signal systems; operational controls and traffic management strategies.
Requisites: CIV ENGR 370, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CIV ENGR 575 – ADVANCED HIGHWAY MATERIALS AND CONSTRUCTION
3 credits.

Soils, soil stabilization, aggregates, bituminous materials and mixtures, general highway materials and construction of rigid and flexible pavements.
Requisites: E M A/CIV ENGR 395, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Use knowledge of highway materials behavior to select and specify materials used for highway construction
Audience: Both Grad & Undergrad

2. Interpret results of standardized and advanced testing of highway materials
Audience: Both Grad & Undergrad

3. Use material properties to optimize pavement layer thicknesses according to commonly used design methodologies
Audience: Both Grad & Undergrad

4. Identify and describe requirements for inspection and Quality Control/Quality Assurance of highway materials
Audience: Graduate

CIV ENGR 576 – ADVANCED PAVEMENT DESIGN
3 credits.

Covers the principles of stress and strain analyses in typical highway pavement structures due to loading from traffic and climate. Also covers the most commonly used analysis and design procedures/software to determine thickness of pavement layers and prediction of performance.
Requisites: E M A/CIV ENGR 395, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use knowledge of mechanics of materials and structural analysis of pavements to determine stresses and strains in highway pavements caused by traffic and climate changes
Audience: Both Grad & Undergrad

2. Use knowledge of highway materials behavior for selecting materials to meet damage resistance requirements and estimate service life of pavements
Audience: Both Grad & Undergrad

3. Conduct life cycle cost analysis of pavements and provide methodologies for maintenance and rehabilitation of pavements
Audience: Both Grad & Undergrad

4. Use best practices to monitor pavement surface and structural conditions to enhance pavement service life
Audience: Graduate

CIV ENGR 577 – TRAFFIC FLOW THEORY
3 credits.

Comprehensive overview of vehicular traffic flow theory and its use in evaluating congestion and determining control strategies. Starting from the basic concepts defining traffic streams, existing theories are presented at different scales, including car-following (microsimulation) models, lane-changing models, cellular automata models, the kinematic wave model, and macroscopic/network fundamental diagram. Techniques for empirical analysis. Connected and automated vehicles.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Analyze vehicular traffic flow using advanced models and numerical techniques in different analysis scales: microscopic (vehicle-level), mesoscopic (platoon-level), macroscopic (aggregate-level), and network-level scales
Audience: Graduate

2. Design traffic control strategies to improve efficiency and/or stability of traffic flow
Audience: Graduate

3. Design traffic control strategies considering various uncertainties in traffic flow
Audience: Graduate

CIV ENGR 578 – SENIOR CAPSTONE DESIGN
4 credits.

The application of theoretically and academically acquired knowledge to a civil and environmental engineering problem in as near "real-world" as possible.
Requisites: Declared in Civil Engineering BS or Environmental Engineering BS and (CIV ENGR 414, 426, 427, 428, 442, 445, 447, 522, 573, 574, 576, G L E/CIV ENGR 530, 532, or 535)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Integrate and apply the knowledge gained in prior coursework into a simulated real-world design environment
Audience: Undergraduate

2. Use open-ended problem-solving skills
Audience: Undergraduate

3. Work effectively in a multidisciplinary team environment
Audience: Undergraduate

4. Use oral and written communication skills to articulate proposed and completed work
Audience: Undergraduate

5. Explain basic concepts in management, business, and public policy
Audience: Undergraduate

6. Explain the importance of professional licensure
Audience: Undergraduate

7. Identify common failure mechanisms of a component, process, or system and their causes and prevention
Audience: Undergraduate

CIV ENGR 579 – SEMINAR-TRANSPORTATION ENGINEERING
1 credit.

Current problems and research developments in transportation, highways, traffic engineering, and transportation planning and systems analysis.
Requisites: Senior standing or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate awareness of historic and/or current advances in transportation engineering research, practice, policy and/or professional conduct
Audience: Both Grad & Undergrad

2. Connect the topics of this course with their graduate research work
Audience: Graduate

CIV ENGR 609 – SPECIAL TOPICS IN WATER CHEMISTRY
1-3 credits.

Topics vary.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and describe key theories, concepts, and methods in environmental chemistry
Audience: Both Grad & Undergrad

2. Use appropriate tools, processes, and/or software to apply key theories, concepts, and methods in environmental chemistry
Audience: Undergraduate

3. Use appropriate tools, processes, and/or software to apply, analyze, and/or evaluate advanced theories, concepts, or methods in environmental chemistry
Audience: Graduate

CIV ENGR/G L E 612 – ECOHYDROLOGY
3 credits.

Mutual interactions between the hydrologic cycle and ecosystems, including hydrologic mechanisms that underlie ecological patterns and processes, movement of water and energy through the soil-plant-atmosphere continuum, application and development of models for simulating ecohydrologic processes, and case studies on ecohydrologic function and ecosystem services of varied environments.
Requisites: CIV ENGR 311, GEOSCI/G L E 627, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Identify, describe, and quantify ecohydrologic processes
Audience: Both Grad & Undergrad

2. Build and use models for simulating hydrologic processes, ecologic structure and vegetation composition
Audience: Both Grad & Undergrad

3. Work effectively and collaborate in groups to communicate ecohydrologic concepts
Audience: Both Grad & Undergrad

4. Critically evaluate the ecohydrologic literature
Audience: Graduate

CIV ENGR 618 – SPECIAL TOPICS IN HYDRAULICS AND FLUID MECHANICS
1-3 credits.

Topics vary.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023
Learning Outcomes: 1. Identify and describe key theories, concepts, and methods in hydraulics and fluid mechanics
Audience: Both Grad & Undergrad

2. Use appropriate tools, processes, and/or software to apply key theories, concepts, and methods in hydraulics and fluid mechanics
Audience: Undergraduate

3. Use appropriate tools, processes, and/or software to apply, analyze, and/or evaluate advanced theories, concepts, or methods in hydraulics and fluid mechanics
Audience: Graduate

CIV ENGR 619 – SPECIAL TOPICS IN HYDROLOGY
1-3 credits.

Topics vary.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and describe key theories, concepts, and methods in hydrology
Audience: Both Grad & Undergrad

2. Use appropriate tools, processes, and/or software to apply key theories, concepts, and methods in hydrology
Audience: Undergraduate

3. Use appropriate tools, processes, and/or software to apply, analyze, and/or evaluate advanced theories, concepts, or methods in hydrology
Audience: Graduate

CIV ENGR 621 – BIOLOGICAL TREATMENT PROCESS MODELING
1 credit.

Modeling for wastewater treatment plant evaluation and design using a commercial modeling program. Focus on biological treatment processes and the kinetics of biological growth and substrate degradation. Set up and calibrate model, configure and size plant processes, and explore the impact of configuration and kinetic parameters on treatment efficiency. Evaluate impacts and tradeoffs for advanced treatment scenarios with regards to chemical use, energy needs, sludge production, and plant footprint.
Requisites: CIV ENGR 426, 721, or 821
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Configure wastewater treatment plant processes and input data utilizing a commercial modeling program for design
Audience: Both Grad & Undergrad

2. Define the wastewater characterization requirements for calibrating a model for a given treatment scenario
Audience: Both Grad & Undergrad

3. Utilize models for planning, design, and operations problem statements
Audience: Both Grad & Undergrad

4. Utilize a model to evaluate alternatives for treatment considering carbon availability, chemical use, energy requirements, and sludge production
Audience: Graduate

5. Analyze possibilities for new and innovative control strategies
Audience: Graduate

6. Determine the most significant factors affecting plant design and use the model to do a sensitivity analysis for changes in these factors
Audience: Graduate

CIV ENGR 629 – SPECIAL TOPICS IN ENVIRONMENTAL ENGINEERING
1-3 credits.

Topics vary.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023
Learning Outcomes: 1. Identify and describe key theories, concepts, and methods in environmental engineering
Audience: Both Grad & Undergrad

2. Use appropriate tools, processes, and/or software to apply key theories, concepts, and methods in environmental engineering
Audience: Undergraduate

3. Use appropriate tools, processes, and/or software to apply, analyze, and/or evaluate advanced theories, concepts, or methods in environmental engineering
Audience: Graduate

CIV ENGR/M&ENVTOX/SOIL SCI 631 – TOXICANTS IN THE ENVIRONMENT: SOURCES, DISTRIBUTION, FATE, & EFFECTS
3 credits.

Nature, sources, distribution, and fate of contaminants in air, water, soil, and food and potential for harmful exposure.
Requisites: (CHEM 104, 109, or 116) and (MATH 211, 217, or 221) and (PHYSICS 104, 202, 208, or 248), or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe how the physicochemical properties of an organic chemical and equilibrium and kinetic principles influence the distribution of the chemical in the environment
Audience: Both Grad & Undergrad

2. Estimate the physico-chemical properties of organic compounds using linear free energy relationships
Audience: Both Grad & Undergrad

3. Predict the behavior of hazardous organic chemicals in the environment

Audience: Both Grad & Undergrad

4. Derive and use equilibrium and kinetic box models for determining the fate of organic pollutants in the environment
Audience: Graduate

CIV ENGR/G L E 635 – REMEDIATION GEOTECHNICS
3 credits.

Geotechnical practice for remediation of sites containing contaminated soil and groundwater is discussed. Topics include non-invasive and invasive subsurface exploration techniques, methods to monitor for the presence of contaminants in the saturated and unsaturated zones, and geotechnically-oriented remedial action technologies.
Requisites: CIV ENGR/G L E 330, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023

CIV ENGR 639 – SPECIAL TOPICS IN GEOTECHNICAL ENGINEERING
1-4 credits.

Topics vary.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2024
Learning Outcomes: 1. Identify and describe key theories, concepts, and methods in geotechnical engineering
Audience: Both Grad & Undergrad

2. Use appropriate tools, processes, and/or software to apply key theories, concepts, and methods in geotechnical engineering
Audience: Undergraduate

3. Use appropriate tools, processes, and/or software to apply, analyze, and/or evaluate advanced theories, concepts, or methods in geotechnical engineering
Audience: Graduate

CIV ENGR 643 – PRESTRESSED CONCRETE
3 credits.

Analysis and design of prestressed concrete members, including working stress and ultimate strength analysis and design for flexure; shear design; prestress losses, deflections, and composite beams. Knowledge of Concrete Structures [such as CIV ENGR 447] required.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Identify, formulate, and solve engineering problems
Audience: Graduate

2. Use the techniques, skills, and modern engineering tools necessary for engineering practice
Audience: Graduate

3. Determine the required number and layout of prestressing strands in a prestressed concrete beam based on allowable stresses
Audience: Graduate

4. Analyze and design a prestressed or partially prestressed concrete beam for ultimate flexural strength
Audience: Graduate

5. Design a prestressed concrete beam for shear
Audience: Graduate

6. Estimate immediate and time-dependent prestress losses
Audience: Graduate

7. Estimate short-term and time-dependent deflections of a prestressed concrete beam
Audience: Graduate

CIV ENGR 647 – CONCRETE STRUCTURES III
3 credits.

Inelastic behavior and modeling of reinforced concrete members, with emphasis on response to earthquake-type loading. Knowledge of concrete structures [such as CIV ENGR 447] required.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Identify, formulate, and solve engineering problems
Audience: Graduate

2. Use the techniques, skills, and modern engineering tools necessary for engineering practice
Audience: Graduate

3. Calculate the moment versus curvature response of reinforced concrete flexural members with or without axial force
Audience: Graduate

4. Design reinforced concrete members for combined flexure, shear and torsion under gravity-type loading
Audience: Graduate

5. Describe the influence of various design/loading parameters on the flexure and shear behavior of reinforced concrete members when subjected to monotonic and reversed cyclic loading
Audience: Graduate

6. Design reinforced concrete beams, columns, joints, and structural walls for earthquake motions
Audience: Graduate

CIV ENGR 649 – SPECIAL TOPICS IN STRUCTURAL ENGINEERING
1-3 credits.

Topics vary.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and describe key theories, concepts, and methods in structural engineering
Audience: Both Grad & Undergrad

2. Use appropriate tools, processes, and/or software to apply key theories, concepts, and methods in structural engineering
Audience: Undergraduate

3. Use appropriate tools, processes, and/or software to apply, analyze, and/or evaluate advanced theories, concepts, or methods in structural engineering
Audience: Graduate

CIV ENGR 669 – SPECIAL TOPICS IN CONSTRUCTION ENGINEERING AND MANAGEMENT
1-4 credits.

Topics vary.
Requisites: Senior standing or member of Engineering Guest Students
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and describe key theories, concepts, and methods in construction engineering and management
Audience: Both Grad & Undergrad

2. Use appropriate tools, processes, and/or software to apply key theories, concepts, and methods in construction engineering and management
Audience: Undergraduate

3. Use appropriate tools, processes, and/or software to apply, analyze, and/or evaluate advanced theories, concepts, or methods in construction engineering and management
Audience: Graduate

CIV ENGR 678 – ADVANCED TRAFFIC MODELING AND COMPUTER SIMULATION
3 credits.

Theoretical and practical perspectives of traffic flow modeling with a focus on micro-simulation. Simulation software, such as CORSIM, VISSIM, and PARAMICS. Develop and calibrate a set of base models of existing conditions, extend the models to include design alternatives (generally using traffic demands projected for future years), and then generate conclusions on the basis of the modeling results.
Requisites: CIV ENGR 370, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply theoretical and practical perspectives of traffic flow modeling, with a focus on micro-simulation analytical methods
Audience: Both Grad & Undergrad

2. Use proficiently at least one major simulation software package for traffic flow modeling
Audience: Both Grad & Undergrad

3. Apply advanced vehicle-based microscopic traffic flow models and emerging theoretical concepts to analyze complex multi-modal conditions
Audience: Graduate

CIV ENGR 679 – SPECIAL TOPICS IN TRANSPORTATION AND CITY PLANNING
3 credits.

Topics vary.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024
Learning Outcomes: 1. Identify and describe key theories, concepts, and methods in transportation and city planning
Audience: Both Grad & Undergrad

2. Use appropriate tools, processes, and/or software to apply key theories, concepts, and methods in transportation and city planning
Audience: Undergraduate

3. Use appropriate tools, processes, and/or software to apply, analyze, and/or evaluate advanced theories, concepts, or methods in transportation and city planning
Audience: Graduate

CIV ENGR/PUB AFFR 694 – MANAGEMENT OF CIVIL INFRASTRUCTURE SYSTEMS
3 credits.

Comprehensive systems approach to civil infrastructure and asset management with emphasis on transportation facilities. Social, political, economic factors that influence transportation planning, design, construction, maintenance and operation. Needs assessment, information management, performance measurement, life cycle cost and benefits analysis, prioritization and optimization, budgeting and finance.
Requisites: CIV ENGR 494, or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019

CIV ENGR 699 – INDEPENDENT STUDY
1-9 credits.

Under faculty supervision.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Conduct and report on independent civil or environmental engineering research
Audience: Both Grad & Undergrad

2. Appropriately use online and library resources
Audience: Both Grad & Undergrad

3. Communicate research clearly to other researchers in their field of study
Audience: Graduate

CIV ENGR/ATM OCN 701 – THE CHEMISTRY OF AIR POLLUTION
2 credits.

Covers background and modern research methods for the application of chemical analysis tools to understanding of the origin, composition, and the chemical transformations of pollutants that occur in the atmosphere. Emphasis will be directed at the pollutants impacting human health, climate change, and ecosystem degradation. Approximately half of the course materials will be taken from the scientific literature and will provide the opportunity to advance skills in the critical reading of journal articles. The course is directed at graduate students conducting research and interested in air pollution and environmental chemistry. Gain experiences in presenting scientific research methods and results related to course materials.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

CIV ENGR 702 – GRADUATE COOPERATIVE EDUCATION PROGRAM
1-2 credits.

Work experience that combines classroom theory with practical knowledge of operations to provide a background on which to develop and enhance a professional career. The work experience is tailored for MS students from within the U.S. as well as eligible international students.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and respond appropriately to real-life engineering ethics cases relevant to co-op work
Audience: Graduate

2. Synthesize and apply appropriate technical education to real world technical work
Audience: Graduate

3. Communicate effectively in writing and speaking with a range of audiences in the workplace, including those without disciplinary expertise
Audience: Graduate

4. Develop professional and transferable habits like time management skills, collaborative problem-solving skills, and research skills for learning new information
Audience: Graduate

CIV ENGR 703 – ENVIRONMENTAL GEOCHEMISTRY
3 credits.

A quantitative treatment of chemical and biological processes controlling the speciation and partitioning of inorganic compounds in natural waters. Particular attention will be paid to heterogeneous reaction mechanisms, and kinetics controlling inorganic compounds in aqueous environments. Discuss in-situ techniques for measurement of environmental reactions. For those interested in environmental chemistry, chemistry, limnology, geology, environmental microbiology, soil science, and environmental modeling.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Describe the relationship of environmental reactions to kinetic and thermodynamic parameters
Audience: Graduate

2. Identify important biogeochemical reactions controlling nutrient and contaminant dynamics in aqueous systems
Audience: Graduate

3. Recognize factors controlling solid-phase mineralogy and reactivity with respect to engineered systems
Audience: Graduate

4. Incorporate biological reactions into a geochemical model of environmental systems
Audience: Graduate

CIV ENGR 704 – ENVIRONMENTAL CHEMICAL KINETICS
3 credits.

Fundamental molecular processes that govern the fate and transformation of organic contaminants in natural environmental systems and engineered treatment processes. Emphasizes the kinetics describing these processes and focuses on transformation mechanisms of organic contaminants in aquatic systems. Specific topics include partitioning between air, water, and solids; chemical kinetics; substitution, hydrolysis, and redox reactions; oxidation reactions encountered in ozone and chlorine-based disinfection systems; and photochemical and biological transformations. Knowledge of water chemistry [such as CIV ENGR 500] required.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Predict the environmental fate of organic compounds based on their structure
Audience: Graduate

2. Estimate partitioning between air, water, organic phases, particles, and biota
Audience: Graduate

3. Use the steady-state assumption to estimate reaction half-lives
Audience: Graduate

4. Predict the kinetics and mechanisms of nucleophilic attack and hydrolysis reactions
Audience: Graduate

5. Describe how temperature and ionic strength affect rate constants
Audience: Graduate

6. Describe direct and indirect photolysis reactions
Audience: Graduate

CIV ENGR/ENVIR ST/URB R PL 717 – WATER RESOURCES MANAGEMENT PRACTICUM PLANNING SEMINAR I
1 credit.

The first of two seminars for planning the activities of the practicum.
Requisites: Declared in Water Resources Management MS or Doctoral Minor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CIV ENGR/ENVIR ST/URB R PL 718 – WATER RESOURCES MANAGEMENT PRACTICUM PLANNING SEMINAR II
2 credits.

The second of two seminars for planning the field work, analysis, and reporting of the practicum.
Requisites: Declared in Water Resources Management MS or Doctoral Minor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

CIV ENGR/ENVIR ST/URB R PL 719 – WATER RESOURCES MANAGEMENT SUMMER PRACTICUM
4 credits.

Interdisciplinary team of students and staff working with agency personnel, citizen groups, and/or private sector representatives on the analysis of a contemporary, problem-oriented water resource issue. Physical, biological, economic and social aspects of the issue analyzed. Comprehensive written report results, practicum's findings and management recommendations.
Requisites: URB R PL/CIV ENGR/ENVIR ST 718
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

CIV ENGR 721 – BIOLOGICAL PRINCIPLES OF ENVIRONMENTAL ENGINEERING
3 credits.

Biological principles important to diagnosing and controlling pollution through environmental engineering applications such as fate and transport of contaminants in the environment, eutrophication, water treatment for human consumption, biological waste treatment for pollution control and bioenergy generation.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Describe how microorganisms gain energy from organic and inorganic contaminants
Audience: Graduate

2. Perform calculations to determine whether a specific chemical reaction would support microbial growth
Audience: Graduate

3. Perform calculations to quantitatively estimate the rates at which microorganisms transform chemical contaminants
Audience: Graduate

4. Describe different types of waterborne pathogens
Audience: Graduate

5. Describe how microorganisms are used to produce biofuels
Audience: Graduate

CIV ENGR 722 – CHEMICAL PRINCIPLES OF ENVIRONMENTAL ENGINEERING
3 credits.

Principles of general, physical, equilibrium, colloid and biochemistry applied to environmental engineering processes such as evaluating environmental quality and treating water, air and soil to meet environmental standards.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use basic principles of general, physical, equilibrium, colloid, and biological chemistry to solve water chemistry problems related to environmental engineering
Audience: Graduate

2. Use conservation of mass and energy principles to solve water chemistry problems related to environmental engineering
Audience: Graduate

3. Describe the risks to public health and welfare associated with chemical contaminants and greenhouse gases and explain how these risks are used to develop environmental policies and regulations
Audience: Graduate

4. Describe the basic biochemical reactions important to environmental engineering (aerobic, anoxic, anaerobic, photosynthetic), and estimate the enthalpy of reactions when the formulation of reactants and products are known
Audience: Graduate

5. Explain the roles of nutrients and organic carbon in water quality, and their relative concentrations in oligotrophic waters, eutrophic waters, and typical wastes; discuss anthropogenic sources of nutrients and policies for their control
Audience: Graduate

6. Explain connections between environmental chemistry principles and processes used in environmental engineering
Audience: Graduate

7. Review viable options and complete the preliminary design of a solution to an identified environmental engineering problem using at least two areas of environmental chemistry
Audience: Graduate

CIV ENGR 723 – ENERGY PRINCIPLES OF ENVIRONMENTAL ENGINEERING
3 credits.

Principles of energy applied to environmental engineering such as energy resources, sustainability concerns, work and power, thermodynamics, system and process efficiencies, energy production from waste, heat transfer, and heating and cooling of systems.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Describe the sources and limitations of renewable and non-renewable energy
Audience: Graduate

2. Describe options to minimize the use of energy and maximize its production from renewable resources
Audience: Graduate

3. Describe important environmental consequences of energy production and consumption
Audience: Graduate

4. Prepare process flow diagrams and perform relevant energy balance calculations for an environmental engineering system or process
Audience: Graduate

5. Estimate the performance efficiency of a process or component from thermodynamic principles and size a pump, compressor, or other machine based on these principles
Audience: Graduate

6. Estimate heat transfer, heat losses, and heating demand for a system or process
Audience: Graduate

7. Using at least two energy principles, complete a preliminary design of an environmental engineering system, process, or component to meet stated needs
Audience: Graduate

CIV ENGR 729 – ENVIRONMENTAL SUSTAINABILITY TOOLS
3 credits.

Environmental impact must be quantified systematically and rigorously in order to inform decision making, process improvement, and policy. Life cycle assessment will be utilized in a project-based framework to evaluate the environmental impacts of products and process across multiple environmental impact categories.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Define a question to answer using life cycle assessment
Audience: Graduate

2. Determine the relevant goal and scope, and boundaries for a life cycle assessment
Audience: Graduate

3. Determine and quantify the relevant inputs and outputs of a product system or process
Audience: Graduate

4. Determine the most relevant functional unit for a life cycle assessment
Audience: Graduate

5. Conduct a life cycle assessment on a product or process using appropriate software
Audience: Graduate

6. Interpret a life cycle assessment on a product or process in order to evaluate the environmental sustainability of the system
Audience: Graduate

7. Analyze sustainability issues and/or practices using a systems-based approach.
Audience: Graduate

8. Describe the social, economic, and environmental dimensions of selected term project topic and identify potential trade-offs and interrelationships among these dimensions at a level appropriate to the course.
Audience: Graduate

CIV ENGR/G L E 730 – ENGINEERING PROPERTIES OF SOILS
3 credits.

Determination and interpretation of soil properties for engineering purposes; physio-chemical properties of soil-water systems, permeability and capillarity, compression characteristics of soils, measurement of soil properties in the triaxial test, properties of frozen soils and permafrost.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Describe the physicochemical characteristics of soils and their importance to the engineering behavior of soils
Audience: Graduate

2. Define the factors which control the hydraulic and mechanical behavior of soils
Audience: Graduate

3. Evaluate how engineering classification of soils capture fundamental responses
Audience: Graduate

4. Run and interpret laboratory tests used to characterize how physical and chemical properties of particles affect the behavior of soil masses, including hydraulic properties and the stiffness and shear strength properties
Audience: Graduate

5. Explain models that describe the behavior and properties of soils
Audience: Graduate

CIV ENGR/G L E 732 – UNSATURATED SOIL GEOENGINEERING
3 credits.

Engineering principles of unsaturated soils as they apply to geotechnical and geoenvironmental systems. Effect of soil water suction and stress on hydraulic conductivity, shear strength, and compressibility of soils in the context of geoengineering problems of flow and stability. Knowledge of Soil Mechanics [such as CIV ENGR/G L E 330] is required.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Define properties of unsaturated soils
Audience: Graduate

2. Use principles of interfacial physics, hydrology, and soil mechanics to interpret unsaturated soil behavior
Audience: Graduate

3. Use results from measurement methods to characterize unsaturated soil properties
Audience: Graduate

CIV ENGR/G L E 733 – PHYSICOCHEMICAL BASIS OF SOIL BEHAVIOR
3 credits.

Applications of physiochemical, mineralogical and environmental considerations to the engineering behavior of soils. Soil composition, formation, fabric, pore fluid chemistry and interaction of phases. The particulate nature of soils and the fabric-engineering property (volume change, strength, deformation and conduction) relationships. Knowledge of Soil Mechanics [such as CIV ENGR/G L E 330] is required.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Characterize properties of soils that consist partly or wholly of clay
Audience: Graduate

2. Define the composition and fabric of natural soils, their surface and pore-fluid chemistry, and the physical and chemical factors that govern fine-grained soil behavior
Audience: Graduate

CIV ENGR 744 – STRUCTURAL DYNAMICS AND EARTHQUAKE ENGINEERING
4 credits.

Dynamic analysis and behavior of structures; basic principles and application of engineering seismology; determination of earthquake-induced loads for earthquake-resistant design; and analysis and design of reinforced concrete and steel buildings subjected to ground motion. Knowledge of analysis and design of reinforced concrete and structural steel buildings [such as CIV ENGR 440, 445, and 447] required.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Estimate the dynamic response of single- and multi-degree of freedom systems subjected to arbitrary loads
Audience: Graduate

2. Develop closed-formed and numerical solutions to compute the time-history response of single- and multi-degree of freedom systems
Audience: Graduate

3. Estimate the earthquake-induced ground motions that can be expected to occur at a given site
Audience: Graduate

4. Estimate the response of single- and multi-story buildings subjected to earthquakes
Audience: Graduate

5. Given a site and predicted ground motions, establish the layout of the structure to resist earthquake-induced loads and displacements
Audience: Graduate

6. Determine the response of the structure to design earthquake ground motions by computing displacements, forces, stresses, deformations, and estimating damage
Audience: Graduate

CIV ENGR 749 – SPECIAL TOPICS IN STRUCTURAL ENGINEERING
1-4 credits.

Advanced topics of special interest to graduate students in structural engineering.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022
Learning Outcomes: 1. Identify and describe key theories, concepts, and methods in structural engineering
Audience: Graduate

2. Use appropriate tools, processes, and/or software to apply, analyze, and/or evaluate advanced theories, concepts, or methods in structural engineering
Audience: Graduate

CIV ENGR 760 – RESEARCH METHODS IN CONSTRUCTION ENGINEERING MANAGEMENT
1 credit.

Present research in Construction Engineering Management, discuss ideas and results. Receive feedback on research and presentation style.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Present and discuss research in Construction Engineering Management
Audience: Graduate

2. Formulate problem statement and methodology
Audience: Graduate

3. Give and receive constructive feedback
Audience: Graduate

CIV ENGR/E M A/M E 775 – TURBULENT HEAT AND MOMENTUM TRANSFER
3 credits.

Stochastic methods in turbulent heat and momentum transfer; fully developed turbulence; numerical methods including model applications to boundary layers, reacting flows, mass transfer, and unsteady flows; linear and non-linear stability and transition; emphasis on applications of interest to Mechanical, Aerospace, and Environmental Engineers. Knowledge of fluid mechanics [such as M E 363 or CBE 320] strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the physics and mathematics of turbulence theory and modeling
Audience: Graduate

2. Describe general features of turbulence
Audience: Graduate

3. Use analysis tools to solve problems and process data related to turbulence
Audience: Graduate

4. Use turbulence concepts to understand and explain turbulent behavior in more complex systems
Audience: Graduate

CIV ENGR 790 – MASTER'S RESEARCH OR THESIS
1-9 credits.

Under faculty supervision.
Requisites: Declared in a Civil and Environmental Engineering or Environmental Chemistry and Technology graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Integrate knowledge from multiple disciplines to address a civil or environmental engineering research question
Audience: Graduate

2. Conduct a research study using experimental, computational, and/or theoretical approaches
Audience: Graduate

3. Communicate research results in written and verbal formats
Audience: Graduate

CIV ENGR 820 – HYDRAULICS AND APPLIED FLUID MECHANICS FOR ENVIRONMENTAL ENGINEERS
3 credits.

Principles of hydraulics and fluid mechanics applied to environmental engineering systems that convey, control, and measure the flow of liquids, solid-liquid slurries, and gases.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Describe flow measurement and conveyance piping, equipment, and appurtenances commonly used for fluids in environmental engineering
Audience: Graduate

2. Describe and use concepts of conservation of mass and energy for fluid flow
Audience: Graduate

3. Estimate energy losses in a given flow system for water, sludge/biosolids mixtures, other liquids, and gases under steady flow conditions
Audience: Graduate

4. Describe problems of unsteady flow and transient flow conditions that may be encountered in environmental engineering and how such problems may be addressed by design
Audience: Graduate

5. Examine and design full pipe flow and open channel flow systems, including pumping and blower/compressor systems, hydraulic control structures, piping and channels for fluids normally encountered in environmental engineering problems
Audience: Graduate

6. Use modern engineering tools to solve hydraulics and applied fluid mechanics problems in environmental engineering
Audience: Graduate

CIV ENGR 821 – ENVIRONMENTAL ENGINEERING: BIOLOGICAL TREATMENT PROCESSES
3-4 credits.

Advanced theory and applications of biological systems for the treatment of wastes; lab techniques to assess treatability and to provide design parameters. Introductory knowledge of Environmental Engineering [such as CIV ENGR 320] is required.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe how microbial communities work in synergistic ways to remove organic and inorganic contaminants from wastewater
Audience: Graduate

2. Describe the specific microbial metabolism associated with nitrogen and phosphorus removal in wastewater treatment plants
Audience: Graduate

3. Perform calculations to estimate the efficiency of different wastewater treatment processes
Audience: Graduate

4. Use computer simulation tools for analysis of wastewater treatment processes
Audience: Graduate

5. Examine data from biological treatment processes to identify causes of poor performance
Audience: Graduate

CIV ENGR 822 – ENVIRONMENTAL ENGINEERING: PHYSICAL/ CHEMICAL TREATMENT PROCESS
3-4 credits.

Advanced theory and applications of chemical and physical-chemical processes for the treatment of water and wastewater; lab techniques to assess design requirements and treatability. Introductory knowledge of Environmental Engineering [such as CIV ENGR 320] is required.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Describe the fundamental physical and chemical mechanisms that drive the performance of phase transfer processes, chemical transformation processes, and physical separation processes
Audience: Graduate

2. Describe the influence of physical and chemical mechanisms on performance of the above processes
Audience: Graduate

3. Describe the fundamental hydraulic mechanisms of batch and flow-through reactors and the influence of these mechanisms on performance of the above processes
Audience: Graduate

4. Draw process flow diagrams and use them in deriving mathematical models that predict reactor performance
Audience: Graduate

5. List assumptions used in the derivation of mathematical models and list the limitations of the resulting models
Audience: Graduate

6. Conduct experiments and interpret results using derived mathematical models combined with statistical analysis methods such as nonlinear regression
Audience: Graduate

7. Describe limitations in experimental design and their effect on interpretation of data
Audience: Graduate

CIV ENGR 823 – ENVIRONMENTAL ENGINEERING DESIGN PROJECT
3 credits.

Engineering design project applied to environmental engineering solutions involving environmental chemistry, environmental quality, physical-chemical treatment processes, biological treatment processes, solid and hazardous waste engineering, energy, resource recovery, economic analysis, hydrology, and/or hydraulics and applied fluid mechanics.
Requisites: Declared in Civil and Environmental Engineering MS, Environmental Chemistry and Technology MS, or Civil and Environmental Engineering: Environmental Engineering ME
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Use teamwork and leadership skills needed to plan and design solutions to open ended problems in environmental engineering
Audience: Graduate

2. Perform problem formulation and analysis of an environmental engineering problem
Audience: Graduate

3. Use modern engineering tools to analyze and solve an environmental engineering problem
Audience: Graduate

4. Use knowledge and experience gained during the course and in prior coursework to analyze and solve an environmental engineering problem
Audience: Graduate

5. Use written and verbal communication skills necessary to gain technical and public input to the analysis and understanding of the recommended solution
Audience: Graduate

CIV ENGR 890 – PRE-DISSERTATOR'S RESEARCH
1-9 credits.

Under faculty supervision.
Requisites: Declared in Civil and Environmental Engineering PHD or Environmental Chemistry and Technology PHD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate broad knowledge of civil or environmental engineering
Audience: Graduate

2. Integrate knowledge from multiple disciplines to independently develop civil or environmental engineering research hypotheses
Audience: Graduate

3. Design and conduct preliminary research to iteratively test and finalize hypotheses
Audience: Graduate

4. Communicate research results in written and verbal formats
Audience: Graduate

CIV ENGR 909 – GRADUATE SEMINAR - ENVIRONMENTAL CHEMISTRY & TECHNOLOGY
1 credit.

Current research in environmental chemistry and technology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate awareness of historic and/or current advances in environmental chemistry and technology research, practice, policy and/or professional conduct
Audience: Graduate

CIV ENGR/ATM OCN/BOTANY/ENVIR ST/GEOSCI/ZOOLOGY 911 – LIMNOLOGY AND MARINE SCIENCE SEMINAR
1 credit.

Sections in various fields of zoological research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

CIV ENGR 919 – SEMINAR-HYDRAULIC ENGINEERING AND FLUID MECHANICS
1 credit.

Current research and review of literature in theoretical and applied fluid mechanics and hydraulic engineering.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate awareness of historic and/or current advances in hydraulic engineering and fluid mechanics research, practice, policy and/or professional conduct
Audience: Graduate

CIV ENGR 929 – SEMINAR-ENVIRONMENTAL ENGINEERING
1 credit.

Current research and literature on water, wastewater, water pollution control, solid wastes engineering and management.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate awareness of historic and/or current advances in environmental engineering research, practice, policy and/or professional conduct
Audience: Graduate

CIV ENGR 939 – GEOTECHNICAL ENGINEERING SEMINAR
1 credit.

Geotechnical analysis, design, and construction.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate awareness of historic and/or current advances in geotechnical engineering research, practice, policy and/or professional conduct
Audience: Graduate

CIV ENGR 949 – SEMINAR-STRUCTURAL ENGINEERING
1 credit.

Structural analysis, design, and construction.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023
Learning Outcomes: 1. Demonstrate awareness of historic and/or current advances in structural engineering research, practice, policy and/or professional conduct
Audience: Graduate

CIV ENGR 990 – THESIS
1-12 credits.

Under faculty supervision.
Requisites: Declared in Civil and Environmental Engineering PHD or Environmental Chemistry and Technology PHD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Integrate knowledge from multiple disciplines to independently develop civil or environmental engineering research hypotheses
Audience: Graduate

2. Design and conduct fundamental research tasks to test hypotheses
Audience: Graduate

3. Interpret the results of the research, then communicate the interpretation in both written and verbal formats
Audience: Graduate

CIV ENGR 999 – ADVANCED INDEPENDENT STUDY
1-9 credits.

Under faculty supervision.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Conduct and report on independent civil or environmental engineering research
Audience: Graduate

2. Independently develop civil or environmental engineering research questions
Audience: Graduate

3. Appropriately use online and library resources
Audience: Graduate

CIVIL SOCIETY AND COMMUNITY STUDIES (CSCS)

CSCS 125 – COMMUNITY AND SOCIAL CHANGE
3 credits.

Examine contemporary issues with an emphasis on the role that individuals and communities play in achieving positive social change. Develop the mindsets and communication skills necessary to work in diverse community contexts. Specific themes may shift based on current events, but often include education reform, racial justice, health equity, alternative economies, food systems, and sustainability.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze community issues and contemporary social movements from human ecological & multicultural perspectives
Audience: Undergraduate

2. Identify stakeholders and describe the possibilities, values, and limitations of strategies for achieving social change objectives
Audience: Undergraduate

3. Link historical and contemporary scholarly authors as it relates to Community-Based and Action-Oriented research
Audience: Undergraduate

4. Recognize how power, privilege, and social identity influence the ways diverse individuals and groups experience (and influence) social change
Audience: Undergraduate

5. Reflect on how social identities, community contexts, and relative privilege impact the ways they experience and/or agitate for social change

Audience: Undergraduate

CSCS 130 – COMMUNITY NEWSWRITING
3 credits.

Newswriting of interest to individuals, families, and communities.
Requisites: Sophomore standing
Course Designation: Gen Ed - Communication Part B
Repeatable for Credit: No
Last Taught: Summer 2025

CSCS 155 – SOCIAL MEDIA FOR SOCIAL JUSTICE
3 credits.

Social media is a strategic tool to help organizations, advocacy groups, and individuals advance social justice initiatives to create a more equitable future. Analyze historical campaigns to evaluate social media presence, audience focus, communication goals, content resonance, storytelling techniques, and audience engagement. Explore ethical topics tied to social media as a communications and organizing medium including: first amendment rights and the emerging regulation of social media platforms; source authenticity and the weaponization of misinformation in an era of rapidly evolving technology; privacy in an increasingly connected world; biases built into our technology; and equity of technology access.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Explore the history of social media as a communications tool to build a social movement and catalyze change
Audience: Undergraduate

2. Analyze a campaign, recommend the most effective ways to reach and motivate diverse audience segments
Audience: Undergraduate

3. Build information literacy, critically evaluate information sources and motives of the communicator
Audience: Undergraduate

4. Differentiate ethical vs. unethical use of social media technology to foster community and relationships that advance well-being, public discourse, and civil society
Audience: Undergraduate

CSCS 254 – CAREER PATHWAYS IN COMMUNITY & ORGANIZATIONAL DEVELOPMENT
1 credit.

Explores career pathways in community engagement, organizational development, and public service within Human Ecology professions. Features insights from professionals in social change, government, nonprofits, and grassroots movements. Examines roles, responsibilities, and challenges in community development. Covers options and guidance on advanced professional credentials and/or academic preparation.
Requisites: None
Repeatable for Credit: Yes, for 1 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify key career pathways and opportunities within Human Ecology and community development, including roles in public, private, and nonprofit sectors, and opportunities for graduate school programs in these fields
Audience: Undergraduate

2. Analyze the challenges and opportunities faced by professionals working in various community-focused organizations, drawing insights from guest speakers and panel discussions
Audience: Undergraduate

3. Get to know individual community leaders and their unique perspectives and experiences that led to their current role(s) in social change professions
Audience: Undergraduate

4. Evaluate different organizational approaches and strategies for fostering community development, as presented by leaders and community-based professionals and graduate students
Audience: Undergraduate

CSCS 255 – INTRODUCTION TO SOCIAL INNOVATION
3 credits.

Introduction to the process of developing effective solutions to complex problems as a means of systemic social change. Provides a broad overview of the social innovation ecosystem, including history, context, case studies, and critical perspectives.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate their understanding of the social innovation ecosystem locally and globally across sectors and disciplines
Audience: Undergraduate

2. Analyze and reflect on characteristics of social innovators, including individuals, organizations, and coalitions
Audience: Undergraduate

3. Investigate and analyze social and systemic issues, including sources of inequity and injustice, and recognize the social responsibility of individuals within a community and the value of co-creation with communities
Audience: Undergraduate

4. Critically analyze and critique social innovation in theory and practice from human ecological and multicultural perspectives
Audience: Undergraduate

5. Formulate, communicate, and discuss concepts of problem-solving and value creation/co-creation connected to their professional and academic goals
Audience: Undergraduate

6. Assess major trends in social innovation, recognizing interconnectedness of the major sectors of society
Audience: Undergraduate

CSCS 299 – INDEPENDENT STUDY
1-3 credits.

Directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

CSCS 300 – NONPROFIT SECTOR: OVERVIEW AND FOUNDATIONS
3 credits.

Learn the concepts and tools to analyze the broad environment in which nonprofits operate and assess the impact of this environment at the community and individual organizational level.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Associate the roles and interrelationships among the three main sectors of the U.S. economy: civil society/NP, private/corporate, and public/government; and link identifying characteristics that are unique to the nonprofit sector
Audience: Undergraduate

2. Describe the historical development of the nonprofit sector in the United States
Audience: Undergraduate

3. Engage in the theories of NPO's contributions to the development of civil society
Audience: Undergraduate

4. Identify how expectations of nonprofit contributions to collaborations and community-building can affect individual nonprofit organizations
Audience: Undergraduate

5. Identify trends currently affecting the nonprofit sector in the United States, including (but not limited to) social identity, power, privilege, partisan politics & civil discourse via traditional media and social media, nonprofit industrial complex, neoliberalism
Audience: Undergraduate

CSCS/AMER IND 330 – AMERICAN INDIAN COMMUNITIES: SOVEREIGNTY, STRUGGLES, AND SUCCESSES
3 credits.

Learn about contemporary Native communities, both domestically and globally, through a carefully curated selection of readings, podcasts, and videos from Indigenous scholars, community members, knowledge holders, and activists. Offers a broad historical overview of Native American communities in the United States that illustrates the historical trajectory from early colonization and dispossession through self-determination and the recognition of tribal sovereignty in action by local, state, and federal governments.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Awareness of History's Impact on the Present: Understand and identify the relationships and effects of colonial & historical trauma that shaped and continues to influence current sovereignty issues, health disparities, food inequalities, and Tribal lifeways for both rural and urban communities.
Audience: Undergraduate

2. A Consciousness of Self and Other: Explore individual implicit biases in which to construct respectful and culturally responsive self-awareness.
Audience: Undergraduate

3. Identify key ways Native communities differ from other racial/ethnic groups. Students will "unlearn" and question assumptions about Native communities in the US and reflect on their own racial/ethnic identity.
Audience: Undergraduate

4. Describe the role of sovereignty for Native American communities historically and contemporarily.
Audience: Undergraduate

5. Evaluate the impact and significance of colonization on Native communities in the US including global Indigenous populations. Students will offer a critical analysis of who has and who continues to benefit from dominant narratives of colonization.
Audience: Undergraduate

6. Apply learned knowledge to interrogate the complex systems of oppression and marginalization that Native communities continue to face.
Audience: Undergraduate

7. Compare and analyze the efforts of Native communities working to make systemic changes in their own communities and better understand the cultural perspectives of those communities.
Audience: Undergraduate

CSCS 335 – COMMUNICATING WITH KEY AUDIENCES
3 credits.

Comprehensive communication strategies for individuals, families, and communities.
Requisites: Sophomore standing
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate the context of communications planning based on several dispositions of nonprofit communications, including hospitality, gratitude, inclusion, engagement, and expressing need
Audience: Undergraduate

2. Engage in 'best practices' of nonprofit communications via grant-writing, donor communique, special events plans, social media and on-line strategies, and fundraising & development
Audience: Undergraduate

3. Engage in the fundamental principles of brand management, including graphic and visual design, social media strategies, print materials, and in-person communications
Audience: Undergraduate

4. Identify and analyze nonprofit sector "key audiences," including: volunteers, donors, board members, community and political leaders, employees, community-based employers, religious organizations, civic clubs, government agencies, and neighborhood constituents
Audience: Undergraduate

5. Identify, analyze and evaluate components of nonprofit communications plans based on contemporary communications 'best practices'
Audience: Undergraduate

6. Name the demographic make-up of a community nonprofit organization, with particular emphasis on its "key audiences"
Audience: Undergraduate

CSCS 345 – EVALUATION AND PLANNING FOR COMMUNITY AND NONPROFIT ORGANIZATIONS
3 credits.

An applied introduction to planning and evaluation for nonprofit and community-based organizations. Develop skills that can be utilized in both existing and prospective organization-level strategic planning, individual program-level planning, as well as multi-organization planning contexts. Learn how to think of evaluation as a practice, a way of thinking, and as a process integral to and interdependent with strategic and program planning.
Requisites: CSCS 300
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe and create ethical, inclusive, and culturally appropriate approaches to planning & eval that engage diverse stakeholders in a participatory process
Audience: Undergraduate

2. Develop strategic plans, program plans, and evaluation frameworks that bridge short-term objectives with the longer-term goals of justice and liberation
Audience: Undergraduate

3. Recognize and identify systems thinking, evidence-based evaluation, backwards design, strategic doing, and other methods for meeting the planning and evaluation needs of programs
Audience: Undergraduate

CSCS 375 – SPECIAL TOPICS
1-4 credits.

Specialized subject matter of current interest.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

CSCS 400 – PHILANTHROPY AND CIVIC ENGAGEMENT
3 credits.

Explores philanthropy and civic engagement through giving time, money and effort to a public purpose. Learn the philanthropic process including creating a giving plan, as well as exploring strategic and creative ways to give that promote civil society and engagement. Develop plans for assessment and evaluation of philanthropic giving.
Requisites: Sophomore standing
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Critically analyze philanthropy issues from a human ecology perspective
Audience: Undergraduate

2. Explore philanthropy trends such as women and giving, corporate philanthropy, diverse populations, and youth philanthropy
Audience: Undergraduate

3. Explore careers that focus on philanthropy in the nonprofit and corporate settings
Audience: Undergraduate

4. Identify multiple stakeholders and describe the possibilities, values, and limitations of philanthropic decisions
Audience: Undergraduate

5. Recognize the social responsibility of individuals within a community and reflect on the role of giving within civil society including corporate, international, & disaster relief philanthropy
Audience: Undergraduate

6. Share fund allocation decisions using written, oral, and visual communication
Audience: Undergraduate

7. Understand the mechanisms of social entrepreneurship
Audience: Undergraduate

CSCS 410 – HUMAN TRAFFICKING: GLOBAL AND LOCAL PERSPECTIVES
3 credits.

An interdisciplinary approach to understand human trafficking as a complex social phenomenon. The topic of human trafficking is analyzed through readings and a robust set of case studies, as part of a spectrum of interrelated violence, exploitation and systemic inequities influenced by various social determinants rooted in gender, power, class, sex, race, opportunity, education, culture, politics, access, and sexual orientation among other factors. Advocacy training will focus on commercial sexual exploitation and human trafficking with attention to supply and demand issues, vulnerability factors, immigration and law enforcement policies, and the overall impact on survivors' rights, health, and their status in society.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Review legal definitions of human trafficking and understand human trafficking in historical, geographical and geopolitical contexts including migration.
Audience: Undergraduate

2. Explain the scope and dynamics of human trafficking, both domestically and internationally
Audience: Undergraduate

3. Recognize the challenges in identifying and supporting victims of human trafficking and describe essential trauma-informed practices and strategies for promoting survivor agency and wellbeing.
Audience: Undergraduate

4. Analyze the intersection of race/ethnicity and indigenous identity with human trafficking, both in the U.S. and in international settings, considering the perspective of the victims, the needs of survivors, as well as the demand side of trafficking.
Audience: Undergraduate

5. Compare the roles of various disciplines, organizations and professionals working on anti-trafficking efforts and collaborative alliances that have the potential to confront human trafficking and bring positive social transformation.
Audience: Undergraduate

6. Develop survivor informed advocacy approaches to assist trafficking victims/survivors, confront traffickers, prevent trafficking, and reduce the demand for human trafficking.
Audience: Undergraduate

7. Apply competencies, skills and approaches within one's graduate discipline that are relevant to human trafficking policy, practice and advocacy.
Audience: Graduate

CSCS/CURRIC 428 – PROGRAM PLANNING IN FAMILY AND CONSUMER EDUCATION
3 credits.

Theory and processes of program planning for formal and informal educational settings; relation of vocational education to secondary, adult, and continuing education programs.
Requisites: Junior standing
Repeatable for Credit: No
Last Taught: Fall 2018
Learning Outcomes: 1. Design and implement ethical, inclusive, and culturally appropriate approaches to planning and evaluation that engage a variety of stakeholders together in a participatory process
Audience: Undergraduate

2. Develop program plans that bridge short-term objectives with long-term goals of justice and equity
Audience: Undergraduate

3. Engage in reflective thinking about individual, interpersonal, and organizational power, privilege, and positionality in relation to program planning, strategic planning, and evaluation
Audience: Undergraduate

4. Explain how organizations can propagate systems of injustice and inequity through their programming if they do not address root causes
Audience: Undergraduate

5. Justify the decision to develop a new program plan, adapt an existing program, or take no action, appraising the opportunities and challenges associated with each course of action
Audience: Undergraduate

6. Translate general program planning concepts to a variety of settings, social issues, and audiences
Audience: Undergraduate

CSCS 430 – FUNDRAISING & DEVELOPMENT FOR NONPROFIT ORGANIZATIONS
3 credits.

Explores the philosophy of fundraising and development, its bearing on the nonprofit sector, as well as the practical strategies employed by nonprofits in their fundraising efforts to secure time, talent and treasure for sustaining their work. Nonprofit sector organizations (NPO) seek to thrive in their efforts to have a positive impact in bringing social change - to individuals, families, and communities and, indeed, the world. To sustain these noble efforts, these dynamic organizations must attract and garner the time, talent and treasure necessary to develop and grow. Fundraising programs are a significant part of a NPO's work in bringing resources to support their fund development/institutional advancement. Development is a mindset - a way to frame the NPO's thinking and behaviors in providing a comprehensive approach to broad mission support.
Requisites: None
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Research and understand fundraising & development and the historical contexts for contemporary giving trends in the nonprofit sector (locally, nationally and globally)
Audience: Undergraduate

2. Know the key principles of nonprofit fundraising and development
Audience: Undergraduate

3. Be able to develop a Case Statement for nonprofit fundraising
Audience: Undergraduate

4. Understand the importance of donor relations and donor relationship-building
Audience: Undergraduate

5. Understand and engage in the important activities of nonprofit fundraising and development, including: major gifts, annual funds, special events, online fundraising, grant writing, donor stewardship, legacy giving, capital campaigns, and more
Audience: Undergraduate

6. Understand the social change dynamic of nonprofit organizations and how to manage fundraising efforts that honor and empower stakeholder engagement and leadership
Audience: Undergraduate

7. Know the 'best practices' of nonprofit development program management, including: personnel development, information and data management, volunteer program management, member services, development program planning
Audience: Undergraduate

8. Learn from nonprofit leaders, donors, corporate and foundation executives, and other professionals associated with nonprofit development and fundraising work – via guest lectures and discussions (in-person and online) – in order to broaden one's understanding of the scope of this important work
Audience: Undergraduate

CSCS 455 – ENTREPRENEURIALISM AND SOCIETY
3 credits.

Explores entrepreneurialism in nonprofits, business, government, and arts and humanities contexts. With a broad approach of ideas, readings, and lectures, students will understand the ever-changing role that entrepreneurs play and contribute to society.
Requisites: Junior standing
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Gain new ways of looking at and understanding familiar concepts, i.e. understanding systems, problem solving vs. management, various sectors, and the entities therein (non-profit, for-profit, and hybrid organizations)
Audience: Undergraduate

2. Expand ability to formulate, communicate, and discuss concepts of value creation/co-creation, irrespective of career path or professional aspiration
Audience: Undergraduate

3. Develop a sense of agency, leverage assets beyond immediate control, learn strategies that catalyze change, irrespective of domain
Audience: Undergraduate

4. Conceptualize, design, and iterate (using a conventional tool, e.g., a lean start-up canvas) a social enterprise model that incorporates the outcomes described above
Audience: Undergraduate

CSCS 460 – CIVIL SOCIETY AND COMMUNITY LEADERSHIP
3 credits.

Provides opportunities for learning about some of the "nuts and bolts" of nonprofit organizations. Through studying high- impact organizations, interacting with local experts, and through an independent investigation of the work of a local nonprofit organization, develop uniquely tailored understandings and skills for nonprofit leadership.
Requisites: Junior standing
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Define key traits, values, and skills related to leadership and community-building.
Audience: Undergraduate

2. Describe the history of community activism, evolution of civic engagement, and role(s) of significant individuals and organizations in shaping community and civil leadership today.
Audience: Undergraduate

3. Demonstrate the role(s) of -isms on community and civic leadership. More specifically, what is the role of race/gender/class/(dis)ability/religion/sexual orientation/etc. on those in leadership positions within communities and across civic groups.
Audience: Undergraduate

4. Examine how leadership operates in relation to important contemporary topics including diversity, white saviorism, and social justice across communities of color, social class, etc.
Audience: Undergraduate

5. Offer informed critique of today's civil society and community leaders.
Audience: Undergraduate

CSCS 470 – THE HUMAN RIGHTS OF CHILDREN AND YOUTH: GLOBAL AND LOCAL PERSPECTIVES
3 credits.

Human rights precepts, policies and frameworks for change in governments and civil society. Convention of the Rights of the Child (CRC), the principal human rights convention related to children, and other human rights policies related to children and young people. Critically analyze the CRC and access information from the Reports of the Committee on the Rights of the Child. Legal and policy frameworks which address the needs of children in adversity Internationally. Review and develop case studies from around the world and from the United States on child rights topics, including a statement of intention and profiles of relevant research, advocacy, or service organizations.
Requisites: Junior standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Summarize the Convention of the Rights of the Child (CRC) and compare it to other approaches to advancing of the wellbeing of children.
Audience: Both Grad & Undergrad

2. Analyze and develop case studies from international settings.
Audience: Both Grad & Undergrad

3. Analyze case studies related to selected populations of children in the United States.
Audience: Both Grad & Undergrad

4. Discern and articulate their intentions for future engagement with child rights and identify and profile organizations that are doing related work.
Audience: Both Grad & Undergrad

5. Relate child health and human rights to the learning objectives associated with graduate/professional course of study, discuss how a rights-based approach might inform the culminating project (clerkship, thesis or dissertation), and identify professional associations and grant opportunities that link child health and human rights with their graduate specialization.
Audience: Graduate

CSCS 500 – GLOBAL HEALTH AND COMMUNITIES: FROM RESEARCH TO PRAXIS
3 credits.

Explores global health and well-being from a community perspective and through the holistic lens of human ecology. Respectful community-engagement, evidence-based practice, and making the local to global connection are key themes. Almost everything we do has an impact on our own health and that of our communities and the world. Prepares students for community-oriented global health engagement. Consider the nature of community and different types of communities, both locally and globally. Reflect on experiences in communities where you have lived or called home. Review the concept of health and well-being, and evidence-based practice. Learn basic principles of asset-based participatory community research and study, compare and contrast case examples from around the world.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Define and analyze the concept of community, describe different types of communities, and effectively educate peers about communities where they have lived or called home.
Audience: Both Grad & Undergrad

2. Understand the evolving definition of global health, develop a holistic understanding of the interrelated determinants of health and wellbeing, and make connections between assets, challenges and strategies in local and global communities.
Audience: Both Grad & Undergrad

3. Become familiar with ways to describe and measure health status and be able to use tools and resources to describe disease burden and risk factors in national, state, city and neighborhood settings.
Audience: Both Grad & Undergrad

4. Compare and contrast strategies for community engagement from around the world.
Audience: Both Grad & Undergrad

5. Draw connections and implications for health and wellbeing across sectors using the Sustainable Development Goals, as well as other ways of knowing and conceptualizing community life.
Audience: Both Grad & Undergrad

6. Practice self-directed learning, perspective-taking, peer-to-peer learning and experiential learning related to the course topics.
Audience: Both Grad & Undergrad

7. Integrate knowledge and skills related to community-oriented global health engagement.
Audience: Both Grad & Undergrad

8. Identify target publications and submission requirements relevant to individual work and submit final paper for publication.
Audience: Graduate

CSCS 501 – SPECIAL TOPICS
1-3 credits.

Specialized subject matter of current interest.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023

CSCS 510 – DESIGN & WRITE GRANT PROPOSALS
3 credits.

Theoretical and practical background in designing and writing grant proposals. Develop skills to locate funding opportunities, summarize program elements, create budgets, and write competitively. Emphasizes writing skills, budget creation, building collaborative partnerships, understanding funder interests and priorities. Analyzing requests for proposals, writing needs statements, methods, budgets, peer review.
Requisites: Junior standing
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Practice reflective, ethical leadership while facilitating communication, planning skills, and fostering innovation and creativity within teams.
Audience: Undergraduate

2. Design and create a grant proposal in response to an RFA/RFP that summarizes the basic elements and principles of a successful grant proposal using the language, terms, and vocabulary of a grantor, grantee, and grant writer.
Audience: Undergraduate

3. Identify individual or organizational needs and locate appropriate granting agencies or funding sources congruent with those needs.
Audience: Undergraduate

4. Apply a global lens in creating a literature review that provides the framework for an overview of knowledge on a particular subject area within a grant proposal.
Audience: Undergraduate

CSCS 530 – PURPOSE-DRIVEN ORGANIZATIONS
3 credits.

Purpose-driven organizations including community and grassroots efforts, nonprofits, nongovernmental organizations, social enterprises, cooperatives, and land trusts. Examines roles, critiques, characteristics, and infrastructural components. Includes analysis of historical, current, and trending approaches to purpose-driven work through textual, community-engaged, or case study learning.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Organizational management and professional development. Demonstrate knowledge and skills relevant to the structuring, operations, infrastructure, and strategy of a range of purpose-driven organizations, including nonprofit and community organizations, social enterprises, cooperatives, etc.
Audience: Undergraduate

2. Ecological perspectives on community and society. Apply an ecological perspective to the third sector and the roles of a variety of types of purpose-driven organizations locally and globally; recognize and discern the context in which they do their work and have an impact on communities and other sectors. Take into account history, power dynamics, theories, global and local context, and trends.
Audience: Undergraduate

3. Identity, diversity, and social justice. Recognize well-being and social justice in the context of purpose-based organizations and the third sector.
Audience: Undergraduate

CSCS 555 – COMMUNITY AND SOCIAL INNOVATION LAB
3 credits.

Develop and implement a social change project in collaboration with a community partner. Explore diverse approaches to changemaking and address systemic issues through project-based work.
Requisites: CSCS 255 or 455
Repeatable for Credit: No
Learning Outcomes: 1. Apply a deep understanding of community transformation, social innovation, and human ecology knowledge and skills to a complex project
Audience: Undergraduate

2. Develop and implement project plans, considering scope, timeline, resource allocation, and evaluation, to create and deliver social transformation projects on schedule
Audience: Undergraduate

3. Demonstrate creative and critical thinking in the synthesis of foundational ideas applied to a social change project
Audience: Undergraduate

4. Communicate the results of their project to both academic and non-academic audiences, focusing on how the work contributes to positive systemic change
Audience: Undergraduate

CSCS 570 – COMMUNITY BASED RESEARCH AND EVALUATION
3 credits.

Theoretical, critical, and analytical understanding and application of the conscious and systematic use of data, inquiry and analysis for community, organization and program diagnosis, intervention and evaluation in various community-based and nonprofit organizations.
Requisites: Junior standing, satisfied Quantitative Reasoning (QR) A requirement, and CSCS 300
Repeatable for Credit: No
Last Taught: Fall 2025

CSCS 600 – COMMUNITY LEADERSHIP PORTFOLIO CAPSTONE
3 credits.

Designed to demonstrate accumulated training and experience in community and nonprofit leadership. Explores how to better conceptualize, engage with, and reflect on social justice and community issues from a human ecology perspective, while also learning from prior practice and experience working with nonprofit, community- and mission-based organizations.
Requisites: Senior standing
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply human ecological perspectives at discrete levels of analysis – including individual, group, community, and society.
Audience: Undergraduate

2. Recognize the influence and interconnectedness across the major sectors of society – private, public and civil/nonprofit.
Audience: Undergraduate

3. Exhibit a strong capacity for sustained, high impact participation in civic life.
Audience: Undergraduate

4. Recognize wellbeing and social justice as relational and positional.
Audience: Undergraduate

5. Identify professional, academic and entrepreneurial options for applying wellbeing and social justice in community organizing and empowerment.
Audience: Undergraduate

6. Demonstrate entry-level knowledge and skills relevant to nonprofit and community organizations.
Audience: Undergraduate

7. Exhibit the practices of a lifelong learner through the development (production, completion) and implementation of a portfolio.
Audience: Undergraduate

8. Recognize the value of being a reflective, ethical leader who cultivates others' strengths and leadership capabilities, while exhibiting self-care and care for others.
Audience: Undergraduate

9. Create a dynamic professional portfolio, with content and format consistent with personal and vocational passions, interests, skills and strivings – exhibiting perspectives on and understandings of CSCS curricula.
Audience: Undergraduate

CSCS 601 – INTERNSHIP
1-6 credits.

A supervised internship providing hands-on training in a professional experience in community and nonprofit leadership related fields.
Requisites: Consent of instructor
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025
Learning Outcomes: 1. Engage in professional work experiences and training in the nonprofit sector. Training and work may involve (but not be limited to) activities and tasks related to: fundraising, event planning, advertising/public relations, volunteer coordination, budgeting, human resource management, and customer service programs.
Audience: Undergraduate

2. Develop analytical skills and problem#solving competencies related to working with nonprofit agencies.
Audience: Undergraduate

3. Apply academic knowledge to the nonprofit work environment
Audience: Undergraduate

4. Develop professional competencies in written and oral communication.
Audience: Undergraduate

5. Expand awareness of career opportunities & establish professional contacts with nonprofits.
Audience: Undergraduate

CSCS 680 – SENIOR HONORS THESIS
2-4 credits.

Individual study in honors as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2014

CSCS 690 – SENIOR THESIS
2 credits.

Individual study as arranged with a faculty member.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions

CSCS 699 – INDEPENDENT STUDY
1-4 credits.

Directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

CSCS 742 – NONPROFIT BOARD LEADERSHIP DEVELOPMENT I
2 credits.

Part one of a two part course sequence. Develop a commitment to community and civic engagement through volunteer leadership of nonprofit organizations in Madison/Dane County. Serve on the boards of nonprofits (in a non-voting capacity) and complete an independent governance project.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022
Learning Outcomes: 1. Demonstrate and articulate the responsibilities of a non-profit governance board including the duties of the board chair and board members by contributing time and talent to a working committee of the board.
Audience: Graduate

2. Recognize the processes and protocols used by the board to shepherd key issues through decision-making and into action by the organization.
Audience: Graduate

3. Partner with a diverse set of board members and organizational staff to develop and implement a governance-based strategy that addresses an important challenge of the organization.
Audience: Graduate

4. Articulate the ways in which boards can motivate organizations to be successful and sustainable and reflect on your board's professional development strategy for improving their value to future board work.
Audience: Graduate

5. Utilize effective team-based and interpersonal communication skills as a means to build a professional network with a set of diverse board members and staff leaders.
Audience: Graduate

CSCS 743 – NONPROFIT BOARD LEADERSHIP DEVELOPMENT II
1 credit.

Part two of a two part course sequence. Continued development of a commitment to community and civic engagement through volunteer leadership of nonprofit organizations in Madison/Dane County. Continued service on the boards of nonprofits (in a non-voting capacity) and completion of an independent governance project.
Requisites: CSCS 742
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Interpret and relate the key strategic and tactical issues being addressed by an organization's board members.
Audience: Graduate

2. Partner with a diverse set of board members and organizational staff to develop and implement a governance-based strategy that addresses an important challenge of the organization.
Audience: Graduate

3. Identify and apply personal knowledge, experiences and skills that are most valued in board service that is equitable, diverse and inclusive.
Audience: Graduate

4. Utilize effective team-based and interpersonal communication skills as a means to build a professional network with a set of diverse board members and staff leaders.
Audience: Graduate

CSCS 775 – BUILDING CIVIL SOCIETY
3 credits.

Consistent with the values of civil society, emphasizes engagement, debate, collegiality, personal discernment, and expression. Reflect on how developing academics and practitioners can use frameworks and practices of civil society to further professional goals and civic contributions.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Form a learning community that integrates academic study with ongoing and iterative reflection on the lived experience and truth(s) of people, places, histories, and environments that have historically been marginalized.
Audience: Graduate

2. Explore the meaning and history of the concept of civil society in the US and around the world, through the study and critique of canonical texts and contemporary scholars. We will complement these texts with scholarship that enables us to consider civil society from different perspectives.
Audience: Graduate

3. Review the landscape and typologies for civil society organizations in the US and around the world. Map your own past experiences in civil society and consider what kind of civil society you would like to prioritize for future engagement.
Audience: Graduate

4. Identify and understand current frameworks of civic competencies that are related to building civil society.
Audience: Graduate

5. Define your own voice and identity and relationship to civil society – consider your role as a member, leader, researcher, practitioner, and your relationship to others.
Audience: Graduate

6. Increase capacity for civil discourse – conversational skills, clear communication, and strategies for joint learning. Identify personal strengths and goals and strategies to build skills in these areas in the future.
Audience: Graduate

7. Practice and develop improved written and oral communication skills needed for civil society leadership and scholarship.
Audience: Graduate

CSCS 785 – CIVIC DEVELOPMENT ACROSS THE LIFESPAN
3 credits.

Focus on ways in which people develop identities and commitments as members of cultural and community groups and how they exercise rights and assume responsibilities in those contexts. An ecological approach to civic development - considering characteristics of persons (age, race, ethnicity, gender, sexual orientation, culture) and the opportunities, structural impediments, and challenges of social and institutional contexts for different groups. Major themes are people's collective agency in working for social change and how engaging in civic work promotes well-being. Designed to encourage a collaborative approach to learning, to articulate scholarship based on your passions for social justice, and to make your work accessible to different scholarly and public audiences.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Become versed in a cross-disciplinary body of literature on civic engagement (CE) and its relevance for personal and community well-being
Audience: Graduate

2. Communicate their scholarship and its implications for well-being – to public and academic audiences
Audience: Graduate

3. Integrate and critique extant research and practice in their area of interest
Audience: Graduate

4. Synthesize and critique theories relevant to their scholarship
Audience: Graduate

5. Formulate a statement of aims and a testable hypothesis for their area of interest
Audience: Graduate

CSCS 795 – COMMUNITY POWER AND COLLECTIVE ACTION
3 credits.

Enhance your collective ability to identify, describe, and analyze power and empowerment within communities and social, economic, and political systems. Enables us to more effectively and intentionally situate our praxis with regard to power and collective action. Centers on inquiries into the roles that power plays in collective action for community change and improvement, as well as the roles that it often plays in hindering such efforts and maintaining the status quo or defending elite interests.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Build an understanding of the roles that power plays inproducing social problems and social injustices.
Audience: Graduate

2. Make linkages among contemporary social structures and power differentials between and within communities and articulate them in relation to community-based interventions and research.
Audience: Graduate

3. Deepen capacity for thinking about social power in strategic ways for galvanizing social action and bringing about changes that enhance community wellbeing and social justice.
Audience: Graduate

4. Critically assess various strategies for building power incommunities and taking collective action.
Audience: Graduate

CSCS 801 – SPECIAL TOPICS IN CIVIL SOCIETY AND COMMUNITY RESEARCH
1-3 credits.

Specialized subject matter of current interest.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023

CSCS 811 – COMMUNITY-BASED RESEARCH: THEORY AND PRACTICE
3 credits.

An interdisciplinary, introduction to community-based research. Designed to be a co-exploration of different community-based, community-engaged, and action-oriented research approaches and methods as utilized in a variety of disciplines. An opportunity to apply skills gained through participation in community-based research (CBR) projects developed collaboratively with a local community partner.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Examine the different approaches to doing research in communities
Audience: Graduate

2. Think critically about the relationship between researchers and those for whom the research is being done (i.e., the academy and the community)
Audience: Graduate

3. Gain the skills and knowledge necessary to successfully conduct research that is responsive to community needs
Audience: Graduate

CSCS 812 – MIXED-METHODS IN COMMUNITY-BASED RESEARCH
3 credits.

Applied, methodologically focused seminar that aims to develop capacities for action-oriented mixed-methods research design, as well as basic understanding of an array of methodological tools. Readings, discussions, assignments, and class projects are all oriented toward developing this capacity and understanding.
Requisites: CSCS 811
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Design research intended to produce or influence desirable social/community impacts.
Audience: Graduate

2. Apply the philosophical underpinnings of action research and mixed methods research.
Audience: Graduate

3. Build a critical understanding of multiple uses of evidence, forms of validity, and communication and dissemination techniques.
Audience: Graduate

4. Blend and apply multiple research methods in sequence or tandem.
Audience: Graduate

CSCS 813 – TRANSFORMATIVE EVALUATION IN PRACTICE
3 credits.

Develop, conduct, and lead a participatory program evaluation using a transformative lens. Emphasizes collaborative strategies that build evaluation capacity and improve the use of evaluation findings. Build knowledge and skills in evaluation and apply them through projects with institutions (e.g. community organizations, voluntary associations or foundations) involved in creating a civil and just society. Topics include but are not limited to professional standards and ethical practice, understanding context and engaging stakeholders, the role of power in evaluation, evaluation theory, mixed methods designs, developmental and collective approaches to evaluation, and systems thinking.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Use terminology and apply concepts common to transformative evaluation practice;
Audience: Graduate

2. Build skills to create effective and equitable partnerships with community organizations that want to evaluate program(s) or services;
Audience: Graduate

3. Develop capacity to assess an evaluation's context and determine an approach and design for the evaluation using a transformative lens;
Audience: Graduate

4. Apply program evaluation standards and ethical guidelines in the development, design, conduct and reporting of an evaluation;
Audience: Graduate

5. Appropriately select and utilize qualitative, quantitative or mixed methods approaches to collect and analyze data; and
Audience: Graduate

6. Acquire skills and tools to effectively communicate with and engage stakeholders throughout the evaluation process.
Audience: Graduate

CSCS 990 – RESEARCH AND THESIS
1-12 credits.

Independent research and writing under the supervision of a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

CSCS 999 – INDEPENDENT STUDY
1-3 credits.

Directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

CLASSICS (CLASSICS)

CLASSICS 100 – LEGACY OF GREECE AND ROME IN MODERN CULTURE
3 credits.

Explores the legacy of ancient Greek and Roman Civilization in modern culture. Reflect on the roots of western civilization and understand and interpret reflections of antiquity in today's society.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Demonstrate knowledge of Classical societies and cultures.
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts in translation.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

4. Evaluate the influence of the Classical tradition on contemporary society and culture.
Audience: Undergraduate

CLASSICS 101 – TOPICS IN CLASSICAL AND ANCIENT NEAR EASTERN STUDIES
3 credits.

An introduction to the literature, history, and culture of Greece, Rome, and the Ancient Near East. Topics vary.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024
Learning Outcomes: 1. Demonstrate knowledge of Classical and ancient Near Eastern societies and cultures.
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts in translation and material culture.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

CLASSICS 102 – TOPICS IN CLASSICAL AND ANCIENT NEAR EASTERN LITERATURE
3 credits.

General principles of reading ancient literature in translation. Topics include: genres and forms of ancient literature, oral and written cultures, social context of ancient literature, ancient and modern practices of linguistic translation, interactions between literary texts and other media, ancient literature and modern categories.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge of Classical and ancient Near Eastern societies and cultures.
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts in translation and material culture.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

CLASSICS 103 – NATURE, RACE, AND HUMAN DIFFERENCE
3 credits.

What do we mean when we talk about nature? What does it mean to call something natural? Are humans part of nature, and is human difference a product of nature or culture? An introduction to the concepts of nature, culture, and race in both the ancient Mediterranean and contemporary US society with an emphasis on how ancient accounts of human difference have shaped-and continue to shape-modern discourse. Approaching the topics of race, nature, and the environment using critical resources afforded by the humanities, consider how the nature/culture binary is deployed in definitions for race and ethnicity, and show how the experiences of racially marginalized groups in the United States are impacted by ancient debates surrounding nature and human difference, as well as their re-articulation over the intervening millennia.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Examine, analyze, and interpret ancient texts in translation.
Audience: Undergraduate

2. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

3. Strengthen skills in analytical writing and discussion.
Audience: Undergraduate

4. Investigate ancient and modern definitions of and debates surrounding the concepts of nature, culture, and race.
Audience: Undergraduate

5. Recognize and question cultural assumptions and knowledge claims relating to race and ethnicity by interrogating how they are used in both contemporary discourse and in vastly different societies.
Audience: Undergraduate

6. Articulate how ancient literature and ideology has affected present day circumstances regarding race and racial inequalities in the U.S.
Audience: Undergraduate

CLASSICS/HISTORY 110 – THE ANCIENT MEDITERRANEAN
4 credits.

An examination of the evolution of the human community in the Mediterranean Basin, from the beginning of the earliest civilizations in the Near East (3,000 B.C.E.) until the collapse of the Roman Empire in the West (500 C.E.).
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge of Classical and ancient Near Eastern societies and cultures.
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts in translation and material culture.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

4. Demonstrate a holistic view of the Ancient Mediterranean society and culture.
Audience: Undergraduate

CLASSICS 111 – CLASSICS AND POP CULTURE
3 credits.

Explores influence of Greco-Roman literature on contemporary popular culture putting classical texts, myths, and philosophical literature alongside modern media such as films, shows, books, pop songs, and music videos, to understand the past and critically engage with the present.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Make informed and original observations about Ancient Greek and Roman literature
Audience: Undergraduate

2. Critique Ancient Greek and Roman literature and culture in terms of contemporary culture and vice versa
Audience: Undergraduate

3. Understand ancient narratives through critical analysis of rhetoric and poetics, including attention to problems of accessing foreign literature in translation
Audience: Undergraduate

4. Increase familiarity with and convincingly employ secondary resources from scholarship to understand ancient literature
Audience: Undergraduate

5. Manage collaborative multimedia projects on complex themes
Audience: Undergraduate

CLASSICS 120 – FAKES, FORGERIES, AND THE ETHICAL PROBLEMS IN CLASSICAL ANTIQUITIES
3 credits.

Covers the crisis of fakes and forgeries in the world of classical antiquities, with emphasis on ancient Greek and Roman art from the period 1200 BCE to 400 CE, but also including comparative cases in the world of modern art. Introduces the basic vocabulary of fakes and, by means of readings and discussions, generates knowledge around the impact that fakes and forgeries have on perceptions of past civilizations and truths of the present day. Learn how to distinguish originals from counterfeits, how fakes and forgeries can distort understandings about the past and present, how to deploy tools for art historical analysis and the study of forgeries, how to discuss ethical problems in classical antiquities with peers, how to identify and organize evidence and scholarship to produce coherent and cogent arguments, and how to think critically about the impact of ancient art (both real and fake) in modern times.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Summarize the crisis of forgeries in the world of ancient and modern art, with emphasis on forgeries of ancient Greek and Roman art from the period 1200 BCE to 400 CE.
Audience: Undergraduate

2. Employ the basic vocabulary of art forgery and recognize the impact that fakes and forgeries have on perceptions of past civilizations and truths of the present day.
Audience: Undergraduate

3. Identify original works from fakes and forgeries and discover the ways that fakes and forgeries can distort understandings about the past and present.
Audience: Undergraduate

4. Employ tools for art historical analysis and the study of forgeries and discuss these matters with peers.
Audience: Undergraduate

5. Organize material to produce coherent and cogent arguments and think critically about the impact of ancient art (both real and fake) on today's modern world
Audience: Undergraduate

CLASSICS 150 – ANCIENT GREEK AND ROMAN MONSTERS
3 credits.

Ancient monsters were forces of chaos that threatened the natural order of the universe: they had to be contained, banished to the edges of the world or destroyed. But the Greeks and Romans also believed them to be magical beings that held the promise of special knowledge - of the past, of dangers to be faced, of musical arts - or which, like the Sphinx, possessed an enigmatic intelligence capable of fooling all but the most cunning of mortals. Investigate these contrasting aspects of ancient monsters, drawing directly on texts (in translation) and works of art through which the Greeks and Romans explored the monstrous and its place in their world. Compare ancient representations with those in modern artistic media - comics, games, stories and movies - considering both how our notions of the monstrous are influenced by or contrast with those of our ancient predecessors, and how our very identities are created by and enacted through our depictions of monsters.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge of Classical societies and cultures.
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts in translation and material culture.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

4. Evaluate modern conceptions of the monstrous in the light of those of the Greeks and Romans.
Audience: Undergraduate

CLASSICS 205 – GREEK AND LATIN ORIGINS OF MEDICAL TERMS
3 credits.

Discover the elements of Latin and Greek that are most commonly used in modern medicine. Learn a great deal about the cultural influences that lie behind the linguistic developments, and explore some of the striking contrasts between ancient and modern medicine.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Demonstrate knowledge of Classical societies and cultures.
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts in translation.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

4. Demonstrate knowledge of Greek and Latin etymology and semantics as it applies to modern medical terminology.
Audience: Undergraduate

CLASSICS 206 – CLASSICAL INFLUENCES ON WESTERN ART AND SCIENCE
3 credits.

Explores the legacy of ancient Greek, Roman, and Near Eastern art and science in later historical periods of Western culture. Identify, analyze and critique the roots of western culture and to understand and interpret how classical cultures influence global arts and sciences past and present.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Demonstrate knowledge of Classical societies and cultures
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts in translation
Audience: Undergraduate

3. Compare and critique ancient Greek, Roman and/or Near Eastern societies and cultures to other societies and cultures
Audience: Undergraduate

4. Evaluate the influence of the Classical tradition of art and science on later Western societies and cultures
Audience: Undergraduate

5. Understand art and science as related forms of knowing the world
Audience: Undergraduate

CLASSICS/JEWISH/LITTRANS/RELIG ST 227 – INTRODUCTION TO BIBLICAL LITERATURE (IN ENGLISH)
4 credits.

Introduction to the text, development, history, and social context of the Hebrew Bible/Old Testament. Covers the Torah (Pentateuch), Neviim (Former and Latter Prophets), and Ketuvim (Writings), and provides a brief introduction to early Jewish literature (Pseudepigrapha/Apocrypha). Discusses various methods of analysis and theories of composition. Addresses major theological claims made of the text by Jewish and Christian communities. Explores contextualized interpretations in the ancient and modern day.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate knowledge of ancient Near Eastern societies and cultures.
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts in translation.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

4. Articulate a self-critical understanding of one's own approach to the biblical text.
Audience: Undergraduate

CLASSICS/JEWISH 241 – INTRODUCTION TO BIBLICAL ARCHAEOLOGY
4 credits.

An overview of archaeology and its relationship to understanding the biblical world.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2018
Learning Outcomes: 1. Demonstrate knowledge of Classical and ancient Near Eastern societies and cultures.
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts in translation and material culture.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

4. Demonstrate a holistic view of Ancient Mediterranean society and culture.
Audience: Undergraduate

CLASSICS 270 – CLASSICAL MYTHOLOGY
3 credits.

Classical myths and their influence on later literature and art.
Requisites: Not open to students with credit for CLASSICS 370 prior to Fall 2023
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge of Classical societies and cultures.
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts in translation and material culture.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

4. Demonstrate knowledge of Classical myths and their influence in literature and art.
Audience: Undergraduate

CLASSICS/ART HIST 300 – THE ART AND ARCHAEOLOGY OF ANCIENT GREECE
3-4 credits.

Explores the art and archaeology of ancient Greece from the Bronze Age through the Hellenistic period.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge of ancient Greek society and culture.
Audience: Undergraduate

2. Examine, analyze, and interpret material culture.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

4. Understand and evaluate the art and archaeology of ancient Greece, current archaeological methods, the ethics of collecting antiquities, and the legacy of ancient Greek material culture and technologies.
Audience: Undergraduate

CLASSICS/ART HIST 304 – THE ART AND ARCHAEOLOGY OF ANCIENT ROME
3-4 credits.

Explores the art and archaeology of ancient Italy, the Roman Republic, and the Roman Empire from the Iron Age to Late Antiquity.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate knowledge of ancient Roman society and culture.
Audience: Undergraduate

2. Examine, analyze, and interpret material culture.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

4. Understand and evaluate the art and archaeology of ancient Rome, current archaeological methods, the ethics of collecting antiquities, and the legacy of ancient Roman material culture and technologies.
Audience: Undergraduate

CLASSICS 308 – SEX AND VIOLENCE IN THE ANCIENT NEAR EAST
3 credits.

Examines the intersections of sex and violence in biblical and related literature. Read through a variety of lenses, including feminist interpretation, queer theory, and post-colonial theory. Consider how, why, and for whom texts depicting gender violence worked in the ancient world. Explore the reception of such texts in art, fiction, and film and their impact on modern society.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge of Classical and ancient Near Eastern societies and cultures.
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts in translation.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

4. Understand and apply gender-nuanced interpretation to Classical and ancient Near Eastern literature.
Audience: Undergraduate

CLASSICS 315 – AFRICANA APPROACHES TO BIBLICAL INTERPRETATION
3 credits.

An exploration of African and Black Diaspora interpretations of biblical literature (Hebrew and Greek Testaments). Includes a survey of Sub-Saharan Africans' roles in the Bible; studies the translation of the Bible in the 4th - 5th centuries CE in Axumite Ethiopia; follows the movement of biblical interpretation across the Middle Passage; explores the intellectual dimensions of Black Diaspora biblical interpretation in North America and the Caribbean. Discuss hermeneutics and reading strategies, the interplay of colonialist and post-colonialist dynamics of reading, and methods of reading scriptural texts.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate knowledge of ancient Near Eastern societies and cultures.
Audience: Undergraduate

2. Examine, Analyze, and Interpret ancient texts in translation and material culture.
Audience: Undergraduate

3. Compare and Critique ancient Greek, Roman, and/or Near Eastern societies and cultures to other societies and cultures.
Audience: Undergraduate

4. Evaluate the reception of biblical texts in the modern period.
Audience: Undergraduate

5. Articulate how the past has affected present day circumstances regarding race and racial inequities in the U.S.
Audience: Undergraduate

6. Recognize and question cultural assumptions and knowledge claims as they relate to race and ethnicity.
Audience: Undergraduate

7. Hone their close reading skills so as to be able to read literary, exhortatory, and scholarly texts with deeper attention to detail and sharper interpretive instincts.
Audience: Undergraduate

8. Apply course concepts to their lives outside the classroom by respectfully participating in our multicultural society.
Audience: Undergraduate

CLASSICS 320 – THE GREEKS
3 credits.

Greek literature in translation with emphasis on its social background.
Requisites: Satisfied Communications A requirement
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge of ancient Greek society and culture.
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts in translation and material culture.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

4. Demonstrate advanced skills in critical reading, logical thinking, and the use of evidence.
Audience: Undergraduate

5. Demonstrate advanced skills in the use of appropriate style and disciplinary conventions in writing and speaking.
Audience: Undergraduate

6. Demonstrate advanced skills in the use of core library resources specific to the Greek world.
Audience: Undergraduate

CLASSICS 321 – THE EGYPTIANS: HISTORY, SOCIETY, AND LITERATURE
3 credits.

An introduction to the study of Ancient Egypt, analyzing its political clout through two millennia of history, its society and economy, its variegated religious systems, the art and literature it produced, and its reception in the modern period.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Demonstrate knowledge of ancient Near Eastern societies and cultures.
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts in translation and material culture.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

4. Evaluate the reception of ancient Egypt in the modern period.
Audience: Undergraduate

CLASSICS 322 – THE ROMANS
3 credits.

Latin literature in translation with emphasis on its social background.
Requisites: Satisfied Communications A requirement
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Demonstrate knowledge of ancient Roman society and culture.
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts in translation and material culture.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

4. Demonstrate advanced skills in critical reading, logical thinking, and the use of evidence.
Audience: Undergraduate

5. Demonstrate advanced skills in the use of appropriate style and disciplinary conventions in writing and speaking.
Audience: Undergraduate

6. Demonstrate advanced skills in the use of core library resources specific to the Roman world.
Audience: Undergraduate

CLASSICS/JEWISH/RELIG ST 323 – THE BIBLE AND FILM: LITERATURE AND MEDIA
3 credits.

An introduction to the study of the Bible as literature and of biblical reception in the medium of film, from early Hollywood to the present day. Explores the way in which the Bible (including both Hebrew and Greek Testaments), one of the foundational literary corpora of American society, has been interpreted, reinterpreted, and misinterpreted through the medium of film over the past century. We will begin each segment of the course by reading portions of the biblical text that have experienced significant interpretation, in order to understand the literary text that has been received in film. How beholden are filmmakers to the interpretations of communities that view these texts as authoritative, and where are they free to depart from their sources? Is it possible to "translate" biblical narratives into film without losing something in the translation? These questions will focus our study on ways the literature has been interpreted in this new medium.
Requisites: Sophomore standing
Course Designation: Gen Ed - Communication Part B
Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Demonstrate knowledge of ancient Near Eastern societies and cultures.
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts in translation.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

4. Develop understanding of film as a form of biblical reception.
Audience: Undergraduate

5. Hone close reading and film-watching skills so as to be able to read a literary text with deeper attention to detail and sharper interpretive instincts, as well as increase ability to articulate their observations.
Audience: Undergraduate

6. Demonstrate skills in critical reading, logical thinking, and the use of evidence.
Audience: Undergraduate

7. Demonstrate skills in the use of appropriate style and disciplinary conventions in writing and speaking.
Audience: Undergraduate

8. Demonstrate skills in the use of core library resources specific to the ancient Near Eastern world.
Audience: Undergraduate

CLASSICS/HEBR-BIB/JEWISH/LITTRANS/RELIG ST 332 — PROPHETS OF THE BIBLE
4 credits.

An introduction to the thought, literature, and history of the prophets of ancient Israel (in English).
Requisites: RELIG ST/CLASSICS/JEWISH/LITTRANS 227 or Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2019
Learning Outcomes: 1. Demonstrate knowledge of ancient Near Eastern societies and cultures.
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts in translation.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

4. Compare ancient Near Eastern prophetic voices to modern prophetic voices.
Audience: Undergraduate

CLASSICS/JEWISH/RELIG ST 335 — KING DAVID IN HISTORY AND TRADITION
3 credits.

An exploration of the literary and historical aspects of the text of 1-2 Samuel + 1 Kings 1-2; the history and archaeology of Jerusalem during the tenth century B.C.E.; and the varieties of ways in which the figure of King David has been received in subsequent religious and secular literature, visual art, music, television, and cinema.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Demonstrate knowledge of ancient Near Eastern societies and cultures.
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts in translation.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

4. Demonstrate a critical understanding of the reception of David in various media.
Audience: Undergraduate

CLASSICS 340 – CONSPIRACY IN THE ANCIENT AND MODERN WORLDS
3 credits.

Interrogates the phenomenon and notion of "conspiracy" within the political, social, and religious spheres of the ancient Roman world. Explores the structure of the traditional Roman household, including the preeminence of the paterfamilias and the challenges that women, children, and/or slaves pose to his notional "tyranny". Considers a number of prominent religions that came into conflict with Roman authorities - especially the mystery cults surrounding Bacchus as well as early Christianity. Apply insights from the ancient world to the modern one in our consideration of conspiracies such as the Salem Witch Trials, the Red Scare of the '50s, the Kennedy Assassination, and the Watergate Conspiracy.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge of ancient Roman society and culture.
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts in translation.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

4. Assess and critique the value of the concepts of “conspiracy” and “conspiracy theory” for understanding historical, political, social, cultural, familial, and religious phenomena.
Audience: Undergraduate

CLASSICS/GEN&WS 351 – WOMEN AND GENDER IN THE CLASSICAL WORLD
3-4 credits.

Constructions of gender and sexuality in the classical world through art, literature and archaeology.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Demonstrate knowledge of Classical societies and cultures.
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts in translation and material culture.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

4. Demonstrate knowledge of constructions of gender and sexuality in the classical world and their relevance for the contemporary world.
Audience: Undergraduate

CLASSICS/GEN&WS 361 – SEX AND POWER IN GREECE AND ROME
3 credits.

Sex as a source of domination and liberation in Ancient Greek and Roman literature and modern European and North American theory and practice, including questions of sexual orientation, gender identity, violence, and self-realization.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate knowledge of Classical societies and cultures.
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts in translation and material culture.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

4. Apply critical concepts relating to gender and sexuality to contemporary phenomena.
Audience: Undergraduate

CLASSICS/HISTORY/POLI SCI 362 – ATHENIAN DEMOCRACY
3 credits.

Explores key issues in the ideology and practice of Athenian democracy. Examines democratic values, institutions, rhetoric, and sociology in order to provide the basic tools to understand democracy in its ancient context. Engages with a variety of source material (literary, archaeological, epigraphic) in order to develop multiple skills of interpretation. Some questions examined include: What are the key features of Athenian democracy, how did it change over time, and how did it differ from modern democracy? How did the Athenians justify and critique this political system? How did they reconcile citizen egalitarianism with social inequalities of wealth, gender, and status? To what extent were women, foreigners, slaves, or the poor included or excluded from politics? Was Athenian democracy a robust political system or a system in crisis?
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand and use appropriately the specific terminology (names, places, concepts) related to Athenian democracy
Audience: Undergraduate

2. Discuss with appropriate methodological awareness conflicting views expressed in modern scholarship
Audience: Undergraduate

3. Analyze problems relating to the reconstruction of historical concepts in the ancient world with reference to relevant source material
Audience: Undergraduate

4. Critically read and engage with complex academic texts (both ancient sources and modern literature)
Audience: Undergraduate

5. Present knowledge, ideas, and analysis orally (in classroom discussion) and in written formats
Audience: Undergraduate

CLASSICS 371 – TOPICS IN GREEK CULTURE
1-3 credits.

Selected aspects of Greek culture (e.g., sports, women, the family, warfare), with emphasis on literary remains.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2021
Learning Outcomes: 1. Demonstrate knowledge of ancient Greek society and culture.
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts in translation.
Audience: Undergraduate

CLASSICS 373 – TOPICS IN CLASSICAL CULTURE
1-3 credits.

Selected aspects of Classical culture (e.g., sports, women, the family, warfare), with emphasis on literary remains.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge of Classical and ancient Near Eastern societies and cultures.
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts in translation.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

CLASSICS 420 – ANCIENT TEXTS, MODERN CONTEXTS
3 credits.

Explores how classical antiquity has been adapted, translated, and reimagined in the modern world through a variety of media and critical approaches.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge of ancient Greek myth, literature, and culture.
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts and their modern receptions.
Audience: Undergraduate

3. Compare and critique ancient Greek society and contemporary culture.
Audience: Undergraduate

4. Demonstrate knowledge of construction of gender and sexuality in ancient Greece and their relevance to the modern world.
Audience: Undergraduate

CLASSICS 430 – TOPICS IN CLASSICAL ARCHAEOLOGY
3 credits.

Explores topics in the archaeology of ancient Greece and Rome, such as the Seven Wonders of the Ancient World, the archaeology of Greek and Roman religion, or Late Antique Palaces.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024
Learning Outcomes: 1. Demonstrate knowledge of Classical and ancient Near Eastern societies and cultures.
Audience: Undergraduate

2. Examine, analyze, and interpret material culture.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

CLASSICS/ENVIR ST 488 – GREEKS, ROMANS AND THE NATURAL ENVIRONMENT
3 credits.

Examine ways in which the ancient Greeks and Romans interacted with their Mediterranean environments and the various conceptions of the natural world that they developed in poetry, prose and visual art. Explore a number of general topics that will underpin the course as a whole: the characteristics of the Mediterranean environment, the effect of nature on humankind, and the impact of humankind on nature. Study aspects of Greek and Roman engagements with nature, such as agriculture, hunting, sacrifice, the contested relationship between the natural and the civilized, and representations of human beings using terms drawn from the natural world ("bears" of Artemis, cannibalistic "wolves"). Consider how these aspects of the ancient world relate to modern treatments of such themes. (NB: All Greek and Latin texts will be read in English translation.)
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Demonstrate knowledge of Classical societies and cultures.
Audience: Both Grad & Undergrad

2. Examine, analyze, and interpret ancient texts in translation.
Audience: Both Grad & Undergrad

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Both Grad & Undergrad

4. Carry out and present the results of in-depth research into aspects of the modern and ancient worlds.
Audience: Graduate

5. Develop an extended scholarly argument in written form.
Audience: Graduate

6. Reflect on modern environmental issues in light of ancient experiences and thought.
Audience: Both Grad & Undergrad

7. Explain the social, economic, and/or environmental dimensions of the sustainability challenge of the over-exploitation of natural resources.
Audience: Both Grad & Undergrad

8. Analyze the causes of and solutions for the sustainability challenges of human-caused climate change, pollution and other forms of environmental harm.
Audience: Both Grad & Undergrad

CLASSICS/HISTORY/RELIG ST 517 – RELIGIONS OF THE ANCIENT MEDITERRANEAN
3 credits.

Ancient religions in their political, social and cultural contexts; topics include ritual, literary and artistic representations, religious persecutions, and/or modern approaches to the study of ancient religions. Chronological and geographical focus will vary between Greece, Rome, Judaea and Egypt.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate knowledge of Classical and ancient Near Eastern societies and cultures.
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts in translation and material culture.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

4. Demonstrate knowledge of ancient Mediterranean religions.
Audience: Undergraduate

CLASSICS 523 – PALMYRA AND THE PALMYRENES
3 credits.

Explores the history and culture of ancient Palmyra. Topics considered during the first half of the course will include the city-state's art, architecture, economy, religion, and foreign relations - including with the Roman and Sassanian Empires. Also explores issues of identity and reception centered on the following questions: How did Palmyrenes in the service of the Roman army retain their ethnic identity while also integrating into Roman society? How is ancient Palmyrene society remembered and used by modern cultures to promote diverse political goals? and What effects do museum collection and display and academic publication have on our perception of ancient Palmyra?
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate knowledge of ancient Near Eastern societies and cultures.
Audience: Both Grad & Undergrad

2. Examine, Analyze, and Interpret ancient texts in translation and material culture.
Audience: Both Grad & Undergrad

3. Compare and Critique ancient Near Eastern societies and cultures to other societies and cultures.
Audience: Both Grad & Undergrad

4. Evaluate the reception of Roman-era Palmyra and Syria in the modern period.
Audience: Both Grad & Undergrad

5. Develop a deeper understanding of the historical context and social structures of Roman-period Syria, especially as instantiated in the city-state of Palmyra and its population (both inhabiting Palmyra and abroad).
Audience: Both Grad & Undergrad

6. Demonstrate familiarity with basic methodological approaches to archaeological, art historical, and textual study in reconstructing the history and society of ancient Palmyra.
Audience: Both Grad & Undergrad

7. Evaluate critically one's own historical and social circumstances with an eye towards understanding the means that Palmyrenes used to construct identity and maintain social boundaries in the context of the ancient Mediterranean world (including places as far-flung as Roman Britain and North Africa).
Audience: Both Grad & Undergrad

8. Develop an extended scholarly argument in written form, while also performing basic work in Palmyrene Aramaic.
Audience: Graduate

CLASSICS 591 – UNDERGRADUATE SEMINAR: APPROACHES TO THE CLASSICAL WORLD
3 credits.

Demonstrate knowledge of Classical and ancient Near Eastern societies and cultures through examination and interpretation of ancient texts in translation. Learn to compare and critique ancient Greek, Roman, and/or Near Eastern societies and cultures to other societies and cultures. Produce an original scholarly project based on ancient Greek, Roman, or Near Eastern society and culture.
Requisites: Junior standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate knowledge of Classical and ancient Near Eastern societies and cultures.
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts in translation.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

4. Produce an original scholarly project based on ancient Greek, Roman, or Near Eastern society and culture.
Audience: Undergraduate

CLASSICS 681 – SENIOR HONORS THESIS
3 credits.

Individual mentored study for seniors completing theses for Honors in the Major as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Demonstrate knowledge of Classical and ancient Near Eastern societies and cultures.
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts in translation and material culture.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

4. Produce an original scholarly project based on ancient Greek, Roman, or Near Eastern society and culture.
Audience: Undergraduate

CLASSICS 682 – SENIOR HONORS THESIS
3 credits.

Individual mentored study for seniors completing theses for Honors in the Major as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate knowledge of Classical and ancient Near Eastern societies and cultures.
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts in translation and material culture.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

4. Produce an original scholarly project based on ancient Greek, Roman, or Near Eastern society and culture.
Audience: Undergraduate

CLASSICS 691 – SENIOR THESIS
3 credits.

Individual mentored study for seniors completing theses, as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Demonstrate knowledge of Classical and ancient Near Eastern societies and cultures.
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts in translation and material culture.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

4. Produce an original scholarly project based on ancient Greek, Roman, or Near Eastern society and culture.
Audience: Undergraduate

CLASSICS 692 – SENIOR THESIS
3 credits.

Individual mentored study for seniors completing theses, as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Demonstrate knowledge of Classical and ancient Near Eastern societies and cultures.
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts in translation and material culture.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

4. Produce an original scholarly project based on ancient Greek, Roman, or Near Eastern society and culture.
Audience: Undergraduate

CLASSICS 699 – DIRECTED READING
1-3 credits.

Independent study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge of Classical and ancient Near Eastern societies and cultures.
Audience: Both Grad & Undergrad

2. Examine, analyze, and interpret ancient texts in translation and material culture.
Audience: Both Grad & Undergrad

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Both Grad & Undergrad

4. Produce an original scholarly project based on ancient Greek, Roman, or Near Eastern society and culture.
Audience: Both Grad & Undergrad

5. Explain and assess the position of the topic in relation to the classical and near eastern tradition.
Audience: Graduate

CLASSICS/ART HIST 700 – THE ART AND ARCHAEOLOGY OF ANCIENT GREECE
3 credits.

Explores the art and archaeology of ancient Greece from the Bronze Age through the Hellenistic period.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

CLASSICS/ART HIST 704 – THE ART AND ARCHAEOLOGY OF ANCIENT ROME
3 credits.

Explores the art and archaeology of ancient Italy, the Roman Republic, and the Roman Empire from the Iron Age to Late Antiquity.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021

CLASSICS/HISTORY 801 – SEMINAR-ANCIENT HISTORY
1-3 credits.

Special problems in Greek and Roman history.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022

CLASSICS/POLI SCI 834 – ROMAN POLITICAL THOUGHT
3 credits.

In depth study of key works of Roman political thought, along with recent and classic scholarship in political theory, history, philosophy, classics, and literature.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2020
Learning Outcomes: 1. Master the state of existing research on Roman political thought through the study of primary and secondary sources.
Audience: Graduate

2. Develop expertise in methods of political inquiry, specifically the study of the history of political thought.
Audience: Graduate

3. Design, conduct, and complete original research dealing with Roman political thought.
Audience: Graduate

4. Communicate effectively, in both speech and writing, complex concepts and arguments related to Roman political thought to multiple audiences.
Audience: Graduate

CLASSICS 900 – ADVANCED SEMINAR IN THEORY AND METHODOLOGY
3 credits.

Aims to improve research skills, help develop important expertise not gained in general coursework, and to engage with topics that make CANES graduates distinctive when applying for positions after the PhD.
Requisites: Declared in Classical and Ancient Near Eastern Studies graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

CLASSICS 970 – CLASSICAL LITERATURE AND CULTURE
3-4 credits.

Examines central literary and cultural issues in classical antiquity from both Greek and Roman perspectives.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2022

COLLABORATIVE NURSING PROGRAM (CNP)

CNP 306 – TRANSITIONS: PRACTICE, PROFESSIONAL AND PERSONAL
3 credits.

Designed to advance knowledge of nursing as it is embedded in clinical practice, address current and emerging health care trends, and examine healthcare workforce data and health care policy as it impacts opportunities for and impediments to nursing practice.
Requisites: Declared in Nursing (Collaborative Program) BSN
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Gather on the Madison campus early in the collaborative nursing program to encourage the development of learning communities that facilitate distance education and academic success.
Audience: Undergraduate

2. Orientation to the technology and approaches used in distance education to increase students' confidence as students in distance learning courses.
Audience: Undergraduate

3. Explore the issues and practice of professional nursing in multiple settings via narrative analyses of practice experiences.
Audience: Undergraduate

4. Examine nursing education and issues specific to the return to school for registered nurses.
Audience: Undergraduate

5. Discuss practice roles in nursing to provide opportunities to explore career paths and to evaluate ethics, quality, evidence and policy in nursing practice.
Audience: Undergraduate

CNP 317 – HEALTH ASSESSMENT
3 credits.

Techniques of health history and physical examination to ascertain normal from variations of normal health conditions, in addition cultural and developmental variations are considered.
Requisites: Declared in Nursing (Accelerated or Traditional program) BSN
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Use professional communication techniques and differentiate between the history-taking of patients based on cultural or developmental difference.
Audience: Undergraduate

2. Demonstrate an ability to use interviewing techniques and systematically take and record a health history.
Audience: Undergraduate

3. Manipulate and use correctly certain instruments required in carrying out a physical examination.
Audience: Undergraduate

4. Perform a physical examination and begin to differentiate between the wide range of normal and grossly abnormal findings through the physical examination.
Audience: Undergraduate

5. Record the physical examination findings, including cognitive and emotional status.
Audience: Undergraduate

6. Recognize normal variance in history and physical findings based on cultural or developmental differences.
Audience: Undergraduate

CNP 407 – FOUNDATIONS OF PROFESSIONAL NURSING PRACTICE
3 credits.

Philosophical perspectives, theories, and standards are applied to the practice of professional nursing. Factors influencing nursing/healthcare delivery are analyzed. Professional communication and critical thinking skills are enhanced.
Requisites: Declared in Nursing (Collaborative Program) BSN
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate an understanding of professional nursing practice, including participation on an interprofessional team.
Audience: Undergraduate

2. Integrate nursing and interdisciplinary theories and philosophies into nursing practice.
Audience: Undergraduate

3. Examine the important influence of historical, cultural, political, and economic influences on nursing practice and healthcare.
Audience: Undergraduate

4. Apply ethical reasoning and professional values in nursing practice and healthcare.
Audience: Undergraduate

5. Demonstrate critical thinking and professional communication skills
Audience: Undergraduate

CNP 441 – CHRONIC CARE MANAGEMENT
3 credits.

Exploration of interaction of biological, psychological, social, and environmental factors important to understanding management of chronic conditions at the individual, family, community, and societal levels.
Requisites: Declared in Nursing (Collaborative Program) BSN
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze the interaction of biological, psychological, social, and environmental factors in the management of chronic conditions.
Audience: Undergraduate

2. Synthesize theories and concepts related to the management of chronic conditions to support self-management.
Audience: Undergraduate

3. Integrate selected concepts of pathophysiology and pharmacology in the nursing management of chronic health problems.
Audience: Undergraduate

4. Examine the impact of cultural, spiritual, ethical, healthcare policy, aging, and social concerns in the management of chronic conditions.
Audience: Undergraduate

5. Understand the roles and functions of the nurse in the management of chronic conditions.
Audience: Undergraduate

6. Demonstrate an understanding of resources and models of care to manage chronic health problems across the continuum of care.
Audience: Undergraduate

CNP 446 – NURSING RESEARCH AND EVIDENCE-BASED PRACTICE
3 credits.

Introduces the concept of evidence-based practice, the importance of evidence to improve clinical practice, strategies to evaluate the quality of evidence, and how to design an evidence-based project.
Requisites: Declared in Nursing (Collaborative Program) BSN
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Contrast the relationships between theory, research, and nursing practice.
Audience: Undergraduate

2. Differentiate selected quantitative and qualitative approaches to research.
Audience: Undergraduate

3. Manipulate search terms to retrieve best evidence for practice in search engines.
Audience: Undergraduate

4. Critique individual research studies considering research approaches and the rights of human subjects.
Audience: Undergraduate

5. Discuss approaches for fostering adoption of an evidence-based practice change in a healthcare setting.
Audience: Undergraduate

6. Design an evidence-based practice change.
Audience: Undergraduate

CNP 447 – LEADERSHIP AND MANAGEMENT
3 credits.

Examines nursing leadership and management using relevant theories and concepts. Analyze decision-making in relation to communication, delegation, supervision and group process.
Requisites: Declared in Nursing (Collaborative Program) BSN
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge of the complex and dynamic economic, political, and social influences on health care organizations and professional nursing practice.
Audience: Undergraduate

2. Examine the interrelationships among organizational behavior, leadership and management strategies and processes, and professional nursing practice.
Audience: Undergraduate

3. Analyze decision-making in relation to ethics, communication, delegation, leadership and followership, supervision and group process.
Audience: Undergraduate

4. Analyze leadership and management behaviors, evidence-based leadership, and management research to promote quality care and professional nursing practice.
Audience: Undergraduate

CNP 453 – INFORMATION MANAGEMENT AND HEALTHCARE TECHNOLOGY
3 credits.

Utilize computer and information/decision science to support quality and safety in health care. Explore informatics issues and examine nursing's role in healthcare technology. Opportunities to use and master various healthcare technologies and healthcare data will be given.
Requisites: Declared in Nursing (Collaborative Program) BSN
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Delineate the role of the nurse in healthcare informatics
Audience: Undergraduate

2. Describe how the manage data, information, knowledge, and technology to enhance and measure clinical practice, education, administration, and research
Audience: Undergraduate

3. Discuss health care informatics relationship to ethical, legal, political, social, cultural, economic, and management issues that impact the delivery of quality and cost-effective healthcare
Audience: Undergraduate

4. Demonstrate mastery of select and current technology skills
Audience: Undergraduate

5. Evaluate health care forces, trends, and professional standards impacting health care informatics
Audience: Undergraduate

CNP 454 – COMMUNITY HEALTH NURSING
3 credits.

Nursing care of populations and communities to facilitate optimal health outcomes.
Requisites: Declared in Nursing (Collaborative Program) BSN
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Compare the components of community health nursing, public health nursing, and community-based nursing, and compare how they are enacted in the community.
Audience: Undergraduate

2. Examine community health issues and health systems/resources using state, national, and international health planning documents.
Audience: Undergraduate

3. Use epidemiological principles as a foundation for community health nursing practice.
Audience: Undergraduate

4. Describe community health nursing interventions used to assess, protect, and improve the health of individuals, families, populations, and communities.
Audience: Undergraduate

5. Articulate the impact of social, cultural, political, and environmental determinants on individual and population health.
Audience: Undergraduate

6. Apply principles of technology (i.e., telehealth) to the specialty of community health nursing.
Audience: Undergraduate

CNP 490 – SPECIAL TOPICS IN NURSING
1-4 credits.

The special topics course is designed to provide a planned, systematic analysis of topics, issues and problems in the area of nursing.
Requisites: Declared in Nursing (Collaborative Program) BSN
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Evaluate the impact of culture on health, illness, and wellness.
Audience: Undergraduate

2. Analyze the health responses and patterns of the following cultural groups: African American, Latino/Hispanic, Asian/Hmong and American Indian.
Audience: Undergraduate

3. Compare the similarities and differences of these four cultures as each view's health, illness, and wellness.
Audience: Undergraduate

4. Examine the interrelationships among a pluralistic society, the culturally diverse groups with that society, and the health/illness status of the group members, with a specific focus on African Americans, Latino/Hispanics, Hmong/Asians and American Indians.
Audience: Undergraduate

CNP 519 – CAPSTONE PRACTICUM FOR REGISTERED NURSES
3 credits.

Synthesizes professional nursing knowledge in a variety of practice settings. Practicum sites may include hospitals, clinics, long-term care (LTC), and community-based settings, or practicums in policy or health care systems. Expand skills sets by exposure to best practices in a clinical setting of choice. The practicum enriches the integration of knowledge from current and past academic and clinical learning experiences.
Requisites: CNP 306, 407, 441, 446, 447, 453, and 454 or concurrent enrollment
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Formulate current and future practice goals by developing and enacting specific learning objectives with a clinical preceptor.
Audience: Undergraduate

2. Apply concepts learned in prior BSN-at-Home courses and relate them to professional nursing practice through reflective course assignments.
Audience: Undergraduate

3. Analyze scientific, theoretical, and experiential knowledge to guide professional nursing practice by providing professional nursing care or completing a project under the direction of a nurse preceptor in a hospital, outpatient, or community health care setting.
Audience: Undergraduate

4. Explore a current healthcare issue observed in the practicum setting.
Audience: Undergraduate

COMMUNICATION ARTS (COM ARTS)

COM ARTS 100 – INTRODUCTION TO SPEECH COMPOSITION
3 credits.

Develop written and spoken communication skills through hands-on learning while studying audience- centered public speaking. Focus on becoming more confident and comfortable as a speaker and writer. Strengthen your library research skills and digital literacy. Gain essential skills for success in college courses and life beyond the university, from job interviews to professional presentations, to research talks.
Requisites: Students required to take the MSN ESLAT cannot enroll until the ESL 118 requirement is satisfied. Not open to students who have credit for COM ARTS 105 or 181.
Course Designation: Gen Ed - Communication Part A
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Write effective public speeches
Audience: Undergraduate

2. Deliver effective public speeches
Audience: Undergraduate

3. Think critically and to apply the skills of critical thinking to the analysis of written and oral texts
Audience: Undergraduate

4. Listen effectively to public speeches
Audience: Undergraduate

5. Utilize research skills and strategies
Audience: Undergraduate

6. Demonstrate an awareness of diversity in audiences by using language that is attentive to people's cultural backgrounds, values, viewpoints, and experiences
Audience: Undergraduate

COM ARTS 155 – INTRODUCTION TO DIGITAL MEDIA PRODUCTION
4 credits.

Teaches the skills needed to produce, engage with, and understand new and emerging technologies within the context of communication and creative expression. Become a more critical consumer and producer of digital media.
Requisites: Not open to special students
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Employ aesthetic and design principles in the creation of digital media
Audience: Undergraduate

2. Integrate ethical and legal considerations in the creation of digital media
Audience: Undergraduate

3. Create works of digital media through the bringing together of concepts, aesthetic choices, and technical execution
Audience: Undergraduate

4. Analyze how stories are constructed and told across forms of digital media
Audience: Undergraduate

5. Critically reflect on the relationship and communication dynamic between artistic self-expression and audience engagement
Audience: Undergraduate

COM ARTS 181 – ELEMENTS OF SPEECH-HONORS COURSE
3 credits.

The process of oral communication; principles of effective speaking; application of principles in selected speaking and reading projects.
Requisites: Declared in an Honors program. Not open to students with credit for COM ARTS 100 or 105. Students required to take the MSN ESLAT cannot enroll until the ESL 118 requirement is satisfied.
Course Designation: Gen Ed - Communication Part A
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Write effective public speeches
Audience: Undergraduate

2. Deliver effective public speeches
Audience: Undergraduate

3. Think critically and to apply the skills of critical thinking to the analysis of written and oral texts
Audience: Undergraduate

4. Listen effectively to public speeches
Audience: Undergraduate

5. Utilize research skills and strategies
Audience: Undergraduate

6. Demonstrate an awareness of diversity in audiences by using language that is attentive to people's cultural backgrounds, values, viewpoints, and experiences
Audience: Undergraduate

COM ARTS 198 – DIRECTED STUDY
1-3 credits.

Elementary level directed study project(s) under supervision of faculty member. Graded on a credit/no credit basis.
Requisites: Consent of instructor
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2020

COM ARTS 199 – DIRECTED STUDY
1-3 credits.

Elementary level directed study project(s) under supervision of faculty member. Graded on a lettered basis.
Requisites: Consent of instructor
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2007

COM ARTS 200 – INTRODUCTION TO DIGITAL COMMUNICATION
3 credits.

An introduction to digital communication and how it shapes our everyday lives. Develop digital communication skills, explore digital media tools and trends, and examine expressions of power online.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Consider the relationship between digital media and communication
Audience: Undergraduate

2. Explain basic concepts in digital communication theory
Audience: Undergraduate

3. Imagine a specific audience for digital communication
Audience: Undergraduate

4. Fashion digital messages that can effectively engage that audience
Audience: Undergraduate

5. Deploy basic design principles in text, photo, and video digital communications in communication to a chosen institutional audience
Audience: Undergraduate

6. Deploy basic video production techniques in video digital communications to a chosen non-institutional audience
Audience: Undergraduate

COM ARTS 213 – INTRODUCTORY TOPIC IN COMMUNICATION ARTS: STUDY ABROAD
1-6 credits.

A course carried with a UW-Madison study abroad program which has no equivalent on this campus. Current enrollment in a UW-Madison study abroad program
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Identify and describe core concepts within the topic area of communication arts
Audience: Undergraduate

COM ARTS 250 – SURVEY OF CONTEMPORARY MEDIA
3 credits.

Key concepts for the critical analysis of television, film, radio, and digital media. Focusing primarily on meanings, aesthetics, technology, media industries, representations, and audiences.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain what media are and why it's important to study media
Audience: Undergraduate

2. Develop media literacy and skills for engaging in critical analyses of contemporary media
Audience: Undergraduate

3. Understand how media industries developed and how they have changed over time
Audience: Undergraduate

4. Challenge common understandings about the relationship between media technologies and society
Audience: Undergraduate

5. Analyze the different ways that audiences engage with media as individuals and as communities
Audience: Undergraduate

6. Develop the study skills and habits of independent learners to be successful in more advanced Communication Arts courses
Audience: Undergraduate

COM ARTS 260 – COMMUNICATION AND HUMAN BEHAVIOR
3 credits.

Concepts and processes relevant to the study of communication and human behavior including approaches to communication inquiry, the dynamics of face-to-face interaction, and the pragmatic and artistic functions of public communication.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain an array of communication theories and research methodologies that are applicable to our lives and the world
Audience: Undergraduate

2. Analyze real life communication concerns, questions, and problems using insights from scholarly communication research
Audience: Undergraduate

3. Apply lessons from the course to better understand how communication shapes our lives and the world
Audience: Undergraduate

4. Practice forms of writing and communicating that are common in our relationships, workplaces, and communities
Audience: Undergraduate

COM ARTS 262 – ARGUMENTATION AND DEBATE
3 credits.

Develop your skills of argument to productively engage people in a diverse society. Learn to discuss differences with others and to contribute positively to a dynamic and diverse society. Critically examine the roles of advocates and audience members. Gain an understanding of the contexts and significance of argument in democratic societies, identity the components and qualities of arguments, construct cogent ethical arguments, and evaluate the arguments of others.
Requisites: Satisfied Communications A requirement
Course Designation: Gen Ed - Communication Part B
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the contexts and significance of public argument in democratic societies
Audience: Undergraduate

2. Identify the components and qualities of arguments and processes of argumentation
Audience: Undergraduate

3. Construct cogent arguments on political and public issues
Audience: Undergraduate

4. Evaluate the arguments of others on political and public issues
Audience: Undergraduate

5. Employ critical reading, logical thinking, and evidence in your arguments

Audience: Undergraduate

6. Argue and communicate with fluency in writing and speaking conventions
Audience: Undergraduate

7. Use library resources in productive ways
Audience: Undergraduate

COM ARTS 266 – THEORY AND PRACTICE OF GROUP DISCUSSION
3 credits.

Structure and dynamics of small group decision-making. Critical and creative problems in group interaction processes.
Requisites: None
Course Designation: Gen Ed - Communication Part B
Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the central theories related to the formation, functioning, and effects of group communication dynamics
Audience: Undergraduate

2. Explain and evaluate the most influential lines of empirical research on the formation, functioning, and effects of group communication dynamic
Audience: Undergraduate

3. Demonstrate effective communication skills through the articulation of critical thinking about group communication dynamics through writing and informal oral presentation
Audience: Undergraduate

4. Hone skills in writing, public speaking, and library research
Audience: Undergraduate

5. Improve writing through responses to feedback and revision
Audience: Undergraduate

COM ARTS 272 – INTRODUCTION TO INTERPERSONAL COMMUNICATION
3 credits.

Survey of concepts, theories, and research concerning communication across all phases of interpersonal relationships, focusing on both theoretical and practical applications.
Requisites: Not open to students with credit for COM ARTS 273
Course Designation: Gen Ed - Communication Part B
Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the major theories and research findings in the field of interpersonal communication
Audience: Undergraduate

2. Describe how interpersonal communication affects vital relationships, such as those with family, friends, and romantic partners
Audience: Undergraduate

3. Reflect on your own interpersonal communication patterns within these relationships, and become better attuned to the needs, motivations, and communication styles of relational partners
Audience: Undergraduate

4. Develop your own interpersonal communication skills, such as emotional intelligence, active listening, and conflict management
Audience: Undergraduate

5. Hone skills in writing, public speaking, and library research
Audience: Undergraduate

COM ARTS 273 – THEORY AND PRACTICE OF INTERPERSONAL COMMUNICATION
3 credits.

Survey of concepts, theories, and research concerning communication across all phases of interpersonal relationships, focusing on both theoretical and practical applications.
Requisites: Not open to students with credit for COM ARTS 272
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Explain the major theories and research findings in the field of interpersonal communication
Audience: Undergraduate

2. Describe how interpersonal communication affects vital relationships, such as those with family, friends, and romantic partners
Audience: Undergraduate

3. Reflect on your own interpersonal communication patterns within these relationships, and become better attuned to the needs, motivations, and communication styles of relational partners
Audience: Undergraduate

COM ARTS 298 – DIRECTED STUDY
1-3 credits.

Intermediate level project under the direction of faculty member e.g., independent reading with research paper, production project, or member of research team. Graded on a credit/no credit basis.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2021

COM ARTS 299 – DIRECTED STUDY
1-3 credits.

Intermediate level project under the direction of faculty member e.g., independent reading with research paper, production project, or member of research team. Graded on a letter basis.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

COM ARTS 300 – FILM COMEDY
3 credits.

An exploration of the comedy genre, examining theories of humor in film; introducing conceptual tools for critical appreciation and analysis; and investigating different subgenres and tendencies prominent in various phases and traditions of popular film comedy.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain what makes a comedy a comedy
Audience: Undergraduate

2. Draw pertinent distinctions among different forms and techniques of comedy
Audience: Undergraduate

3. Summarize key theories of humor and evaluate their pros, cons, and overlaps
Audience: Undergraduate

4. Discern formal, narrative, and rhetorical variables shaping particular comedic works
Audience: Undergraduate

5. Identify social and ethical values and pitfalls of humor and comedy
Audience: Undergraduate

COM ARTS 308 – TOPICS IN RHETORIC, POLITICS, AND CULTURE
3 credits.

Explore various topics in rhetoric, politics, and culture.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Explain the role of a rhetorical perspective in interpreting emerging topic areas.
Audience: Undergraduate

2. Demonstrate knowledge of the cultural and/or historical aspects of emerging topic areas.
Audience: Undergraduate

3. Describe and compare key rhetorical theories, concepts, and/or methods
Audience: Undergraduate

4. Critically analyze emerging topic areas using key rhetorical theories, concepts, and/or methods.
Audience: Undergraduate

COM ARTS 309 – TOPICS IN COMMUNICATION AND SOCIAL DYNAMICS
3 credits.

Explore topics related to emerging communication practices and experiences, including those related to new information and communication technologies or new applications of such technologies.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Explore communication practices and experiences in newly emerging topic areas.
Audience: Undergraduate

2. Review and critically evaluate social scientific theories and research in these topic areas.
Audience: Undergraduate

3. Apply social scientific concepts, theories, and methods to understand and enhance the communication practices and experiences in these topic areas.
Audience: Undergraduate

COM ARTS 310 – TOPICS IN RHETORIC AND COMMUNICATION SCIENCE
3 credits.

Explore various topics in rhetoric or communication science.
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and describe key theories, concepts, and methods used to analyze communication within its historical, technical, cultural, social or political contexts
Audience: Undergraduate

2. Identify and describe key theories, concepts, and methods used to analyze how communication structures shape the flow of information, policy law, culture, or power
Audience: Undergraduate

3. Apply key theories, concepts, and methods in the analysis of communication
Audience: Undergraduate

COM ARTS/JOURN/RP & SE 312 – DISABILITY AND THE MEDIA
3 credits.

Examines the interaction between disability and media in modern society. Explore representations of disability in various forms of mass media, including television and film, social media, advertising, and others. Analyze how these representations affect disabled people directly, including the development of their identities, as well as how they influence disability attitudes and stigma throughout society. Discuss overt and casual ableism within media, as well as how the disability community uses media for activism. Discuss issues of access for disabled people (e.g., assistive technology, captions, audio descriptions), as well as the future of disability representations within media.
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify key concepts and terminology for understanding the intersection of disability and the media, including the medical and social models of disability, definitions and conceptualizations of disability, ableism, stigma, disability justice, disability identity development, and others.
Audience: Undergraduate

2. Identify how disability is represented within various forms of media, and how these representations affect disabled people both directly and indirectly.
Audience: Undergraduate

3. Describe how technology can facilitate access to media for disabled people
Audience: Undergraduate

4. Discuss how the media is and can be utilized in pursuit of disability justice.
Audience: Undergraduate

COM ARTS 313 – TOPICS IN FILM AND MEDIA STUDIES
3 credits.

Explore various topics in film and media studies, history, and theory.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Explain core concepts within the topic area of film and media studies
Audience: Undergraduate

2. Analyze film and media texts, institutions, or audiences from theoretical, historical, and critical perspectives appropriate to the topic under examination
Audience: Undergraduate

3. Communicate effectively about the topic area in film and media studies

Audience: Undergraduate

4. Participate in discussions about diversity, equity, and inclusion for the historically marginalized within the topic area of film and media studies
Audience: Undergraduate

COM ARTS 315 – THE RHETORIC OF REPRODUCTIVE JUSTICE
3 credits.

Study the history of reproductive justice activism in the United States. Consider the legal basis for reproductive rights and key Supreme Court decisions relating to birth control and abortion. Examine core questions: how have reproductive rights been defined differently in different historical moments? What are rights in the context of reproduction? Who has reproductive freedom, and whose reproduction has been controlled? What role does race play in the history of reproductive justice? How does class influence people's access to reproductive healthcare? How does analyzing gender help us understand the history of reproductive justice?
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Identify key moments in the organized movement for reproductive justice in the United States
Audience: Undergraduate

2. Explain key concepts from rhetorical criticism and social movement studies
Audience: Undergraduate

3. Apply theoretical concepts to primary and secondary texts
Audience: Undergraduate

4. Evaluate the links between reproduction and power
Audience: Undergraduate

5. Collaborate with classmates to develop an understanding of how historical and contemporary movements for reproductive freedom emerged
Audience: Undergraduate

COM ARTS/GEN&WS 316 – GENDER AND COMMUNICATION
3 credits.

Effective communication requires awareness of how gender influences communication and our capacity to build lasting and meaningful relationships. Learn about theories and concepts to understand how gender influences our interpersonal, professional, and social lives. Topics include terms and concepts relevant to the study of how we communicate about gender, sex and sexuality, including identity, language and nonverbal behavior, socialization, close personal relationships, education, work, violence, media and social movements.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Employ the definitions and theoretical explanations of gender and communication
Audience: Undergraduate

2. Examine how gender intersects with our personal identity
Audience: Undergraduate

3. Raise self-awareness concerning our communication behaviors within a gendered context
Audience: Undergraduate

4. Foster an open mind so that we may fully comprehend the complex social constructs that influence gender and communication
Audience: Undergraduate

5. Critically evaluate the impact gender has as a tool of power
Audience: Undergraduate

6. Create a safe space for online discussion and learning
Audience: Undergraduate

COM ARTS 317 – RHETORIC AND HEALTH
3 credits.

Investigate how the concept of health is rhetorically constructed and deployed in a number of different contexts. Explore how language and argument shape our understanding of health, how health is positioned in opposition to illness and disability, and how the meaning of health has become a site of argument and controversy.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply critical communication and cultural theory to issues of health, illness, disability, and healthcare
Audience: Undergraduate

2. Critically reflect on how structural inequity impacts the health and healthcare experiences of historically marginalized communities
Audience: Undergraduate

3. Illustrate how creative engagement can enhance the understanding of illness and the patient-provider relationship
Audience: Undergraduate

4. Demonstrate written and visual communication skills
Audience: Undergraduate

5. Demonstrate research and critical thinking skills
Audience: Undergraduate

COM ARTS 318 — INTRODUCTION TO HEALTH COMMUNICATION
3 credits.

Explore the diversity of health experiences and the ways in which health communication affects our lives, whether it is through interpersonal conversations about health issues, exposure to health information in the media, or through our personal involvement with the healthcare system.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2022
Learning Outcomes: 1. Communicate how the healthcare system is structured and its influence on health perceptions and interactions
Audience: Undergraduate

2. Identify differences in insurance plans and associated payments
Audience: Undergraduate

3. Discuss how interpersonal and media messages influence our perceptions of health
Audience: Undergraduate

4. Critically reflect on the diversity in individuals' health experiences
Audience: Undergraduate

5. Read and synthesize social scientific research on health communication
Audience: Undergraduate

COM ARTS 323 — THE BUSINESS AND CULTURE OF DISNEY
3 credits.

Analyze The Walt Disney Company and its prominence as a purveyor of narratives, consumer products, and dreams in global culture. Examine the business and culture of Disney to reveal how creators, capitalists, and consumers all relate to the corporate media empires that shape everyday life.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the industrial and cultural dynamics that animate the Walt Disney Company empire
Audience: Undergraduate

2. Analyze the many products and practice of Disney from a cultural studies perspective attuned to the meaningful relationships between business and culture
Audience: Undergraduate

3. Communicate effectively about Disney in writing, discussion, and/or creative work
Audience: Undergraduate

4. Interrogate the ideologies, hierarchies, and inequalities that impact the production and consumption of Disney products
Audience: Undergraduate

COM ARTS 325 — MEDIA AND HUMAN BEHAVIOR
3 credits.

Investigate the ways in which individuals use, create, and respond to media content in the context of increasingly blurred boundaries between "mass" and "interpersonal" media. We will consider social scientific theories and research on a wide array of topics, including media uses and effects with regard to social connection, learning, judgments, perceptions, stereotypes, violence, consumption, and political participation.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe a range of theories of media uses and effects
Audience: Undergraduate

2. Explain the social scientific logic that you may employ to address questions about media and human behavior
Audience: Undergraduate

3. Read and critically evaluate social scientific studies on media uses and effects
Audience: Undergraduate

COM ARTS 330 – MUSIC INDUSTRIES AND POPULAR CULTURE
3 credits.

The popular music industries are a vital part of the media industries. Music is the soundtrack to our lives. It provides the score to our quietest moments alone and our loudest parties with friends. Music helps us create and understand our identities and those of others. It is both a form of subversive activism and one of the most commercially valuable commodities in the media industries. Explore the contemporary popular music industries and the roles businesses, artists, audiences, fans, and technologies play in shaping music as a media industry. Focus specifically on the disruption that the internet, digital technologies, and social media have ushered in over the last two decades and the new ways artists, listeners, and businesses are discovering, promoting, sharing and experiencing music. Talk about the music you love, how it gets made, and why that matters for how we understand creative industries, ourselves, and each other.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Assess the structure of the contemporary popular music industries, with attention to the inequalities it creates for artists and workers
Audience: Undergraduate

2. Analyze the role the music industries play in governing the circulation, discovery, and experience of popular music
Audience: Undergraduate

3. Employ audio production tools to create media about music and the music industries
Audience: Undergraduate

4. Develop communication skills for writing and speaking critically about the intersections of music, popular culture, identity, and power
Audience: Undergraduate

COM ARTS 335 – SOCIAL MEDIA AS LITERATURE
3 credits.

Analysis of artistic and expressive communication in social media as forms of literature.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate definitions of literature in terms of literary elements that constitute genres
Audience: Undergraduate

2. Articulate some possible relationships between genres and the cultures and contexts that shape them
Audience: Undergraduate

3. Identify social media use in terms of culture, context, literary elements, and genre
Audience: Undergraduate

4. Create social media expressions based on culture, context, and the literary elements from specific social media genres
Audience: Undergraduate

5. Analyze social media expressions based on culture, context, literary elements, and genre
Audience: Undergraduate

6. Articulate ethical implications and possibilities of analyzing artistic and expressive communication online
Audience: Undergraduate

COM ARTS 343 – HUMAN COMMUNICATION IN THE AGE OF ARTIFICIAL INTELLIGENCE (AI)
3 credits.

Explore the rapidly evolving landscape of communication technologies, with a particular focus on generative artificial intelligence (AI), and discuss its role in communication contexts. Examine the transformative effects of these emerging technologies on individual, social, and professional lives. Consider the potential dark sides of AI, including ethical concerns, biases, and the implications of over-reliance on technology in communication.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe key terms and definitions related to artificial intelligence (AI)
Audience: Undergraduate

2. Explain the characteristics of AI and how it is applied in various human communication contexts
Audience: Undergraduate

3. Demonstrate the use of theoretical frameworks to analyze the impacts of AI on personal and professional lives
Audience: Undergraduate

4. Compare and contrast different AI tools and their effectiveness in real-life scenarios
Audience: Undergraduate

5. Evaluate the use of today's emerging technologies, with an emphasis on the potential impacts they may have on users and society
Audience: Undergraduate

COM ARTS 344 – SOCIAL MEDIA & WELL-BEING
3 credits.

One of the most widely debated and consequential issues of our time is how social media use affects users' well-being. Examine the ways in which social media use can promote well-being (e.g., by being a source of self-affirmation, social support, and social capital) and hinder it (e.g., by provoking envy and fear-of-missing out). Special attention is paid to how users' well-being deficits (e.g., low self-esteem, depression, anxiety) prompt them to use social media in beneficial or harmful ways.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Define well-being and its multiple components, including positive (e.g., high self-esteem, relationship satisfaction) and negative elements (e.g., depression, anxiety)
Audience: Undergraduate

2. Apply theories of human behavior to understand how social media activities can benefit or hurt users' well-being, and how users' well-being shapes their social media activities
Audience: Undergraduate

3. Synthesize current research findings on the relationship between social media use and well-being
Audience: Undergraduate

4. Analyze how characteristics of users (e.g., life experiences, personality traits), specific social media activities and information (e.g., browsing, actively posting) and social media design features (e.g., access to audiences) work together to shape users' well-being
Audience: Undergraduate

5. Evaluate the potential of various social media platforms to support users' well-being
Audience: Undergraduate

COM ARTS 345 – ONLINE COMMUNICATION AND PERSONAL RELATIONSHIPS
3 credits.

Examines how personal relationships unfold in online communication contexts (social network sites, online dating, mobile computing). Topics include impression formation and management, deception and trust, self-perception and identity, social support and relationship maintenance.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify features of online environments that affect people's ability to express themselves and to manage relationships
Audience: Undergraduate

2. Explain how information flow between people in online environments shapes social interaction
Audience: Undergraduate

3. Describe the latest research findings in the area of online relationships
Audience: Undergraduate

4. Discuss the main theories and models of how online technologies and online information shape human social behavior
Audience: Undergraduate

5. Use research methods, practices, and tools for studying online technologies and online information flow in social spaces
Audience: Undergraduate

COM ARTS 346 – CRITICAL INTERNET STUDIES
3 credits.

Traces the Internet's history, reception, audience, industries, rhetorics, fictional and filmic narratives, and potential as a purveyor and transmitter of culture and values.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define key terms/concepts related to the Internet and digital culture and use them in written work and everyday discussions
Audience: Undergraduate

2. Explain how digital divides intersect with elements of identity, including race, gender, class, and ability, and how this structures different experiences of the Internet and its possibilities
Audience: Undergraduate

3. Use methods from the course to enhance their Internet-based research skills
Audience: Undergraduate

COM ARTS/CHICLA 347 – RACE, ETHNICITY, AND MEDIA
3 credits.

Introduction to the changing images of race and ethnicity in U.S. entertainment media and popular culture. Surveys history, key concepts and contemporary debates regarding mediated representation of ethnic minorities. Critical and cultural studies approaches are emphasized.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Connect the way that racial minorities have historically been represented in mainstream media to the way that they are represented in contemporary media
Audience: Undergraduate

2. Analyze the representation of race/ethnicity in contemporary media in a sophisticated way
Audience: Undergraduate

3. Point to evidence of the way that racism is upheld systemically in society, and the ways racism has been and is currently being challenged
Audience: Undergraduate

4. Reflect on and articulate your own participation in contributing to or fighting against racial inequalities
Audience: Undergraduate

5. Increase your ability to understand different perspectives on race in your everyday life, and respectfully engage in discussions of race with colleagues and peers
Audience: Undergraduate

6. Articulate some of the effects the past has had on present day circumstances, perceptions of, and disparities in, race in the U.S.
Audience: Undergraduate

7. Recognize and question cultural assumptions, rules, biases, and knowledge claims as they relate to race and ethnicity
Audience: Undergraduate

COM ARTS 350 – INTRODUCTION TO FILM
3 credits.

Explains how films work using classics such as "Citizen Kane," "Vertigo," "Battleship Potemkin," and "Do The Right Thing." Study film as an art form and a medium, cover all the major film types (silent, classical, and contemporary narrative cinema, art cinema, animation, documentary, and experimental film), and get introduced to two basic approaches to film criticism: authorship criticism and genre criticism. Learn to recognize film techniques--mise-en-scène, cinematography, editing, and sound--and to analyze how filmmakers make us watch, think, and feel.
Requisites: Sophomore standing or COM ARTS 250
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use the basic analytical tools that are required for a sustained critical engagement with cinematic narrative and form
Audience: Undergraduate

2. Examine the formal elements, historical and contextual specificities that shape film
Audience: Undergraduate

3. Demonstrate how directors, actors, cinematographers, producers, sound engineers and VFX artist build up a film brick-by-brick
Audience: Undergraduate

4. Analyze the aesthetic and stylistic aspects of film through form and content
Audience: Undergraduate

5. Identify the vocabulary of film language and criticism
Audience: Undergraduate

6. Combine course concepts to investigate contemporary media production in a sustained way
Audience: Undergraduate

COM ARTS 351 – TELEVISION INDUSTRIES
3 credits.

Critical overview of the cultural industries driving television in the United States, from broadcast networks and cable to downloading and streaming, focusing on economic and regulatory structures, programming practices, labor, globalization, audiences, and adaptations to changing conditions in the digital age.
Requisites: Sophomore standing or COM ARTS 250
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the economic, technological, and regulatory pressures reshaping American television
Audience: Undergraduate

2. Evaluate the relationship between industry and programming aesthetics, constraints, and conventions
Audience: Undergraduate

3. Critically examine the hierarchies of power that shape identity, community, and inclusion in television production cultures
Audience: Undergraduate

4. Develop strong arguments about industry through sustained research and analysis of trade journals and other primary evidence
Audience: Undergraduate

5. Use feedback to improve critical insights about industry through the process of revision
Audience: Undergraduate

6. Apply industry principles of long-term planning, development, and scheduling to course work
Audience: Undergraduate

COM ARTS 354 – FILM GENRES
3 credits.

Explores six major film genres -- musical; thriller; comedy; horror; drama; and melodrama -- investigating their narrative and stylistic conventions and the principles underlying them. Critical, historical, and theoretical approaches examine definitional criteria and ambiguities; key elements, functions, goals, and effects; and significant subgenres, cycles, and trends.
Requisites: COM ARTS 350
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Explain and evaluate theories on the nature, functions, and appeals of popular storytelling
Audience: Undergraduate

2. Define the concept of genre
Audience: Undergraduate

3. Summarize various types of conventions informing classifications of film by genre
Audience: Undergraduate

4. Describe primary earmarks of specific major genres
Audience: Undergraduate

5. Recount historical developments, cycles, and variations shaping particular genres
Audience: Undergraduate

COM ARTS 355 – INTRODUCTION TO MEDIA PRODUCTION
4 credits.

Theory and practice of media production and screenwriting.
Requisites: Sophomore standing or COM ARTS 155
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Employ the basics of videography and composition
Audience: Both Grad & Undergrad

2. Apply the concepts of cinematic storytelling to the production of short video projects
Audience: Both Grad & Undergrad

3. Examine a variety of cinematic forms, styles, and production strategies
Audience: Both Grad & Undergrad

4. Use industry-standard production tools for screenwriting, pre-visualization, video recording, and motion picture editing
Audience: Both Grad & Undergrad

5. Articulate the relationship and deployment of media production to other industries and fields of study
Audience: Graduate

COM ARTS 357 – HISTORY OF THE ANIMATED FILM
3 credits.

Survey of the development of animation as a motion picture production technique, as a film genre, a part of the Hollywood classical cinema, and an independent art form.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Identify the major studios, directors, technologies and techniques shaping film, television, and avant-garde animation
Audience: Both Grad & Undergrad

2. Compare the history and practice of animation in different cultural, commercial, and artistic contexts
Audience: Both Grad & Undergrad

3. Conduct close analysis of character-animation techniques on a frame-by-frame level
Audience: Both Grad & Undergrad

4. Explain strategies of "limited animation" as a resource for production efficiency and artistic stylization
Audience: Both Grad & Undergrad

5. Articulate relationships between industrial configuration, technology, technique, and style in animation
Audience: Graduate

6. Examine and evaluate the academic literature on animation history, criticism, and theory and discern opportunities for fruitful scholarly contribution
Audience: Graduate

COM ARTS 358 – HISTORY OF DOCUMENTARY FILM
3 credits.

Development and history of documentary film and video from Lumiere to the present.
Requisites: COM ARTS 350 or declared in Communication Arts MA or PhD
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Delineate the history and evolution of the documentary film tradition
Audience: Undergraduate

2. Identify the major theories, genres, and key directors of documentary film
Audience: Undergraduate

3. Analyze the style and rhetorical goals of key documentary film
Audience: Undergraduate

COM ARTS 359 – SPORTS MEDIA
3 credits.

Examines sports media using the frameworks of media and cultural studies. The relationship between sports and popular culture provides an important site for understanding and critiquing the media's relationships to social, cultural, economic, and political structures. Topics for discussion will include sports media industries and technologies; representations of race, class, gender, sexual orientation, nationality, and other identities; and the intersection of sports media cultures with such issues as activism and social change, ethics and morality, gambling and fantasy sports, celebrity athletes, and fandom.
Requisites: COM ARTS 250 or 351
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Draw connections between sports media, sports, and culture
Audience: Undergraduate

2. Explain the development of sports media industries
Audience: Undergraduate

3. Analyze representations of race, class, gender, sexuality, etc. in sports media
Audience: Undergraduate

4. Explore the different ways audiences and sports fans engage with sports media
Audience: Undergraduate

COM ARTS 360 – INTRODUCTION TO RHETORIC IN POLITICS AND CULTURE
3 credits.

An introduction to the study of rhetoric in politics and culture. Explores the interrelationship of theory, criticism, and practice. Students gain an understanding of rhetoric as a social force emerging from political and cultural contexts and as an influence on those contexts.
Requisites: Sophomore standing or COM ARTS 260
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain, assess, and analyze key terms, concepts, theories, and themes scholars use to evaluate rhetorical action
Audience: Undergraduate

2. Apply these critical and theoretical lenses to historical and contemporary discourse and public culture
Audience: Undergraduate

3. Articulate a clear, compelling rationale for how and why rhetoric is valuable and necessary for civic participation & democratic life
Audience: Undergraduate

4. Identify evidences of various rhetorical strategies in our contemporary moment
Audience: Undergraduate

COM ARTS 361 – INTRODUCTION TO QUANTITATIVE RESEARCH IN COMMUNICATION
3 credits.

An introduction to social science research methods and statistical analyses applicable to the study of communication research and mass media effects.
Requisites: Sophomore standing and satisfied Quantitative Reasoning (QR) A requirement
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Manipulate quantitative information to create models, and/or devise solutions to problems using multi-step arguments, based on and supported by quantitative information
Audience: Undergraduate

2. Evaluate models and arguments using quantitative information
Audience: Undergraduate

3. Express and interpret in context, models, solutions, and/or arguments using verbal, numerical, graphical, algorithmic, computational or symbolic techniques
Audience: Undergraduate

4. Become familiar with key issues in designing surveys, experiments, and content analyses
Audience: Undergraduate

5. Develop clear, falsifiable hypotheses
Audience: Undergraduate

6. Examine the validity and reliability of measures for an online survey to test your hypotheses
Audience: Undergraduate

7. Understand the logic of various statistical tests, which statistics are appropriate to examine your data, including univariate distributions, bivariate relationships, and moderated relationships
Audience: Undergraduate

8. Become competent in the use of Excel to conduct these analyses, and evaluate your hypotheses
Audience: Undergraduate

9. Assess the limitations of your study and the implications for your conclusions
Audience: Undergraduate

COM ARTS 368 – PERSUASION AND SOCIAL INFLUENCE
3 credits.

Study social influence and persuasion. Learn how to improve your persuasive and social influence skills, lower an audience's resistance to a persuasive message, and be a savvier consumer of persuasive messages and techniques. Explore nonconscious and emotional social influence processes in social media and other settings, especially in the context of influencers, marketing, advertising, and communication campaigns. Create a persuasion campaign, with both online and interpersonal components.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop an understanding of social influence and persuasion in online contexts, such as social media influencers, persuasive AI, and persuasive technologies.
Audience: Undergraduate

2. Describe the fundamental assumptions and the causal mechanisms of selected theories of persuasion, social influence, and compliance gaining.
Audience: Undergraduate

3. Analyze multiple persuasive messages from the perspective of course theories.
Audience: Undergraduate

4. Create persuasive messages utilizing theories from the course.
Audience: Undergraduate

5. Create and use compliance-gaining techniques discussed in the course.

Audience: Undergraduate

6. Become a more critical and savvy consumer of social influence and persuasive messages.
Audience: Undergraduate

COM ARTS 369 – RHETORIC OF THE U.S. PRESIDENTIAL ELECTION
3 credits.

Approach the U.S. presidential election from a rhetorical perspective. Analyze how individual candidates and political parties use and abuse language and other symbols to 1) identify with U.S. voters; 2) advance an agenda to address a current need; 3) present a particular narrative of U.S. history, identity, and national purpose; and 4) convince U.S. citizens to support their candidacy and policies on Election Day.
Requisites: Sophomore standing or COM ARTS 260
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Identify the rhetorical norms and expectations for U.S. presidential rhetoric throughout history.
Audience: Undergraduate

2. Assess and analyze how presidential speech (and the speech of potential U.S. presidents) contributes to ideas about American identity, history, diversity, and equity.
Audience: Undergraduate

3. Define and describe the key issues and debates shaping the U.S. presidential election, including party platforms, policy proposals, and other related issues.
Audience: Undergraduate

4. Articulate a clear, compelling rationale for how and why rhetoric is valuable and necessary for civic participation and democratic life.
Audience: Undergraduate

COM ARTS 370 – GREAT SPEAKERS AND SPEECHES
3 credits.

Significant speeches from throughout history, generally from the United States. Speakers studied include Pericles, Abraham Lincoln, Elizabeth Cady Stanton, Frederick Douglass, Emma Watson, John F. Kennedy, Barbara Jordan, Nelson Mandela.
Requisites: Sophomore standing or COM ARTS 260
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Read and discuss a wide variety of speeches
Audience: Undergraduate

2. Listen to, comprehend, and assess oral discourse
Audience: Undergraduate

3. Understand and utilize methods of rhetorical criticism when approaching texts
Audience: Undergraduate

4. Engage rhetorical theory in your comprehension and assessment of discourse
Audience: Undergraduate

COM ARTS 371 – COMMUNICATION AND CONFLICT RESOLUTION
3 credits.

Examines intra- and interpersonal theories of the causes and functions of conflict. Focuses on message strategies for conflict resolution and/or management. Both theoretical and applied issues.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Explain a variety of ways to think about conflict and conflict management
Audience: Undergraduate

2. Identify the basic components of conflict escalation in interpersonal, organizational and intercultural conflicts
Audience: Undergraduate

3. Interrogate your own conflict behavior and how it facilitates/inhibits conflict management
Audience: Undergraduate

4. Expand your response repertoire for conflict-management situations
Audience: Undergraduate

COM ARTS 372 – RHETORIC OF CAMPAIGNS AND REVOLUTIONS
3 credits.

Public discourse as it affects and reflects the process of dynamic social change. Historical and contemporary instances of rhetorical processes.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Explain the abolition movement, the US women's suffrage movement, the twentieth century movement for reproductive justice, and contemporary activism
Audience: Both Grad & Undergrad

2. Utilize rhetorical methodologies to approach movement texts
Audience: Both Grad & Undergrad

3. Read across primary texts, scholarly texts that provide contextualized analysis of primary sources, and book-length texts detailing movement history and actor biography
Audience: Both Grad & Undergrad

4. Recognize and question cultural assumptions, rules, biases, and knowledge claims as they relate to race and ethnicity
Audience: Both Grad & Undergrad

5. Examine questions and make decisions with consideration for the cultural perspectives and worldviews of others
Audience: Both Grad & Undergrad

6. Apply concepts from the course to contemporary examples of social movement rhetoric at the graduate level
Audience: Graduate

7. Communicate about the rhetoric of campaigns and revolutions in graduate level communication genres
Audience: Graduate

COM ARTS 373 – INTERCULTURAL COMMUNICATION & RHETORIC
3 credits.

The transnational movement of people, goods, and discourses blurs the boundaries between the local and global, making intercultural communication and rhetoric essential to our personal and public lives. We explore how rhetoric and communication function between and across cultures and examine how culture, history, and power constitute our cultural identities, our modes of communication, and how we engage with others.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Explain how culture and communication are mutually influential factors in human behavior
Audience: Undergraduate

2. Apply key theories about culture, communication and power to understand and explain the world around them
Audience: Undergraduate

3. Articulate how their identities, values, and ways of communication are steeped in culture, history and socio-political, economic dynamics
Audience: Undergraduate

4. Practice their intercultural competency and fluency
Audience: Undergraduate

5. Articulate some of the effects the past has had on present day circumstances, perceptions of, and disparities in, race in the U.S.
Audience: Undergraduate

6. Examine questions and make decisions with consideration for the cultural perspectives and worldviews of others
Audience: Undergraduate

COM ARTS/RELIG ST 374 – THE RHETORIC OF RELIGION
3 credits.

Rhetorical character of religious controversy and sectarian persuasion in Western religion.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2022
Learning Outcomes: 1. Identify and describe key theories, concepts, and methods used to analyze religious communication within their historical, technical, cultural, social or political contexts
Audience: Undergraduate

2. Identify and describe key theories, concepts, and methods used to analyze how media shape the flow of information, policy law, culture, and power in relation to religous communication
Audience: Undergraduate

3. Apply key theories, concepts, and methods in the analysis of religious communication
Audience: Undergraduate

COM ARTS 375 – ETHICS OF ENTERTAINMENT MEDIA
3 credits.

Develop skills for viewing and interrogating entertainment media through the lens of ethical theory and to articulate their own ethical stance on a diverse range of media, including documentary film, sports entertainment, reality television, and digital media. By approaching ethics from a media studies perspective, ask questions about how media are produced, how audiences are created and engaged, how communities and cultures are represented, and how we should respond to these different forms of media and the ethical questions that they raise.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Explain core ethical theories
Audience: Undergraduate

2. Build arguments for moral positions and think about them critically
Audience: Undergraduate

3. Use ethical theories to analyze moral issues within contemporary entertainment media
Audience: Undergraduate

4. Distinguish between different moral dilemmas as they relate to the production, consumption, and analysis of media texts
Audience: Undergraduate

COM ARTS 377 – TOPICS IN DIGITAL STUDIES (COMMUNICATION SCIENCE & RHETORIC)
3 credits.

Explore topics in communication science and rhetoric, with a digital focus.
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and describe key theories, concepts, and methods used to analyze digital media within their historical, technical, cultural, social or political contexts.
Audience: Undergraduate

2. Identify and describe key theories, concepts, and methods used to analyze how digital information structures shape the flow of information, policy law, culture, or power.
Audience: Undergraduate

3. Apply key theories, concepts, and methods in the analysis of digital media and digital information structures.
Audience: Undergraduate

COM ARTS 379 – GLOBAL TECHNOLOGY & DIGITAL CULTURE
3 credits.

Digital media, devices, and networks are deeply embedded in our cultural fabric and are reshaping cultures worldwide. While networks enable instant communication and sharing, they aren't neutral, and their benefits aren't evenly distributed. Examine how digital environments affect global cultures differently, and how local differences shape the use of technology. Explore what being 'global' means in the context of rapid, technologically facilitated changes and analyze how these technologies impact offline experiences within communities based on nationality, region, race, gender, and class.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze global technologies, industries, and infrastructures from a historical and cultural standpoint.
Audience: Undergraduate

2. Describe concepts related to cultural globalization and transnational flows, and explain how digital technology impacts them.
Audience: Undergraduate

3. Explain how the design of specific digital technologies and access to them can lead to imbalances in social power.
Audience: Undergraduate

4. Evaluate how global adoption of technologies leads to changes in local cultural practices.
Audience: Undergraduate

5. Analyze concepts such as participatory culture and consumption and apply them to social and cultural contexts across the globe.
Audience: Undergraduate

6. Analyze how existing relationships of social power (for example race, gender, and class) can be exacerbated or resisted through digital technologies.
Audience: Undergraduate

COM ARTS 402 – THE PSYCHOLOGY OF COMMUNICATION
3 credits.

The role and function of information processing in human communication behavior.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Employ a range of theoretical ideas of social cognition
Audience: Undergraduate

2. Explain how these ideas may be (or have been) applied to studying human communication process
Audience: Undergraduate

3. Develop analytical skills to analyze human communication issues critically
Audience: Undergraduate

4. Analyze a communication phenomenon based on critically evaluation and integration of research literature
Audience: Undergraduate

COM ARTS/GEN&WS 418 – GENDER, SEXUALITY, AND THE MEDIA
3 credits.

Examines images of gender and sexuality in the media, with a focus on contemporary media in the U.S. Using theories from cultural studies, film and media studies, gender studies, and communication explore different processes and practices of gender and sexuality. Look at the way that gender and sexuality are constructed through social, cultural, and economic forces, and the way that these identities intersect with other social identities such as race, ethnicity, and class. Consider the way that media impact our understanding of feminism and post-feminism, violence, celebrity, consumer culture, subcultures and activism.
Requisites: GEN&WS 101, 102, 103, SOC/GEN&WS 200, COM ARTS 250 or graduate/professional standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Explain the way that systems of oppression such as patriarchy and heteronormativity are manifested in today's society and media cultures
Audience: Both Grad & Undergrad

2. Analyze and interrogate the meaning of contemporary representations of sexuality and gender in the media
Audience: Both Grad & Undergrad

3. Conduct intersectional analyses of the way that different categories of identity such as gender, sexuality, race, class, and ability come together in the media
Audience: Both Grad & Undergrad

4. Articulate their own perspective on how empowerment and liberation are connected to media practices and cultures of production and consumption
Audience: Both Grad & Undergrad

5. Create and participate in creating a respectful environment for having informed discussions about power, identity, representation, and difference with peers
Audience: Both Grad & Undergrad

6. Demonstrate advanced analysis of gender and sexuality in media based on rigorous engagement with media studies scholarship
Audience: Graduate

COM ARTS/CHICLA 419 – LATINO/AS AND MEDIA
3 credits.

Critical and historical survey of the participation and representation of Latino/as in U.S. film, television, and popular culture, with a primary focus on Hispanic representation in Hollywood-produced imagery. The counter-images of Latino and Latina media producers also will be explored.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Connect the way that Latinx people have historically been represented in mainstream media to the way that they are represented in contemporary media and to their treatment in contemporary society more
Audience: Both Grad & Undergrad

2. Define anti-Latinx racism and its connections to other forms of oppression, including sexism, heteronormativity, classism, colonization, and ableism
Audience: Both Grad & Undergrad

3. Analyze the different constraints and possibilities for how Latinx people produce and consume media texts
Audience: Both Grad & Undergrad

4. Respectfully engage in nuanced discussions about race and reflect on the cultural perspectives and worldviews of others
Audience: Both Grad & Undergrad

5. Demonstrate advanced analysis of Latinx media texts that rigorously engages with scholarship in Latinx media studies
Audience: Graduate

COM ARTS/ASIAN AM 420 – ASIAN AMERICANS AND MEDIA
3 credits.

Examines representations of Asian American in American media using historical, analytical, and critical approaches. Issues of cultural production, identity, race, politics, and gender are linked to examinations of specific media forms.
Requisites: CHICLA/COM ARTS 347, ASIAN AM 101, or sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Connect the way that Asian Americans have historically been represented in mainstream media to the way that they are represented in contemporary media and to their treatment in contemporary society more broadly
Audience: Both Grad & Undergrad

2. Define anti-Asian racism and its connections to other forms of oppression, including sexism, heteronormativity, classism, colonization, and ableism
Audience: Both Grad & Undergrad

3. Analyze the different constraints and possibilities for how Asian Americans produce and consume media texts
Audience: Both Grad & Undergrad

4. Respectfully engage in nuanced discussions about race and reflect on the cultural perspectives and worldviews of others
Audience: Both Grad & Undergrad

5. Demonstrate advanced analysis of Asian American media texts that rigorously engages with scholarship in Asian American media studies
Audience: Graduate

COM ARTS/ASIAN 443 – INDIAN CINEMA IN THE U.S. AND BEYOND
3 credits.

India is home to one of the largest film industries in the world, Bollywood. Beyond Bollywood, India has a thriving film culture that caters to its many regional languages. Explore India's diverse, yet interconnected film and media cultures as well as the global resonances of Indian- and South-Asian-inflected media elsewhere. Examine questions of diasporic identity through media produced by the South Asian American community. Consider questions of genre, style and auteurship, ethnicity, decolonization, gender non-conformity, caste, settler colonialism, censorship and linguistic nationalism that shape cinematic discourses in the country and its intersection with South Asian diaspora in the United States.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Critically examine the representational nuances, ideological underpinnings and political rhetoric underlying South Asian Diaspora media texts.
Audience: Both Grad & Undergrad

2. Examine the aesthetic, contextual and historical framings of media artifacts to understand how it shapes conversations on ethnicity, race and diversity.
Audience: Both Grad & Undergrad

3. Analyze the varying patterns of desire, labor and agential assertions that mark film and media forms and practices to understand how it hinders production and positionality.
Audience: Both Grad & Undergrad

4. Demonstrate how film and media can provide us with conceptual grounds to understand the larger social realities that govern representational politics and media production practices.
Audience: Both Grad & Undergrad

5. Critically examine how postcoloniality has been used as a frame of reference in film and media studies.
Audience: Graduate

6. Examine how power, identity and representations shape diasporic media and its pursuit of an audience.
Audience: Both Grad & Undergrad

7. Encourage participation in the multi-cultural context by offering ways to engage with media material to understand how past the has shaped present day circumstances, perceptions of, and disparities in race in the U.S.
Audience: Both Grad & Undergrad

8. Recognize and question cultural assumptions, rules, biases, and knowledge claims as they relate to race and ethnicity.
Audience: Both Grad & Undergrad

9. Apply course concepts to their lives outside classroom by demonstrating self-awareness and empathy towards the cultural perspectives and worldviews of others.
Audience: Both Grad & Undergrad

COM ARTS/AFRICAN/L I S 444 – TECHNOLOGY AND DEVELOPMENT IN AFRICA AND BEYOND
3 credits.

Surveys the past 20 years of digital technology and communications culture on the African continent, cross-referenced with discourse on technology experiences in other parts of the developing world, through the framework of development studies. Readings include case studies of micro-tech practices as well as political and social use of new media, and government and NGO-led tech interventions. Information Communication Technology for Development (ICT4D) is a key area of focus. Cross-discipline areas include communications and media studies, African, Latin American and International area studies, as well as the social anthropology of technology and science, and design. Think critically about technology use in the context of different tech cultures from around the world. Apply this perspective towards new media solutions to social problems.
Requisites: Junior standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Identify canonical authors and texts, historical forms, genres, and structures in African culture studies and information and communication studies. Students will demonstrate their understanding of major theories, approaches, concepts and current and classical research findings.
Audience: Both Grad & Undergrad

2. Understand their own learning processes and possess the capacity to intentionally seek, evaluate and learn from information, and recognize and reduce bias in their thinking.
Audience: Both Grad & Undergrad

3. Communicate effectively through essays, oral presentations and discussion and project based work, so they may share their knowledge, wisdom and values with others across social and professional settings.
Audience: Both Grad & Undergrad

4. Write and speak across disciplinary boundaries with regard to existing research about Africa, the African diaspora and international development.

Audience: Graduate

5. Explain the social, economic, and/or environmental dimensions of the sustainability challenge(s) of the historic and contemporary challenges of development-oriented tech projects, and identify areas within ICT which could assist in their sustainability. [Sustainability]
Audience: Both Grad & Undergrad

6. Analyze sustainability issues and/or practices using a systems-based approach of information access and media communications within the sustainability framework with regards to environmental change, public infrastructure for clean water and sanitation, urban growth, education, governance and democracy, and public health. [Sustainability]
Audience: Both Grad & Undergrad

COM ARTS 448 – MEDIA AND NATIONAL IDENTITY
3 credits.

Examination of the various roles that film, television, and other media play in creating, challenging, and negotiating national and global identities.
Requisites: COM ARTS 250 or graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze the nation as a unit that is in large part constituted by media, and be able to explain how this act of constitution occurs
Audience: Both Grad & Undergrad

2. Critically examine how lines of belonging and exclusion are drawn by the media
Audience: Both Grad & Undergrad

3. Critically reflect upon ways in which media become a primary battleground for competing notions of national identity
Audience: Both Grad & Undergrad

4. Assess multiple ways in which access to various identities is in some cases restricted by media to certain consumers or citizens
Audience: Both Grad & Undergrad

5. Identify and pursue opportunities to contribute to the scholarly analysis of national identity
Audience: Graduate

COM ARTS 449 – SOUND CULTURES: PODCASTING AND MUSIC
3 credits.

Sound plays a crucial but understudied role in experiences of media and cultural life. From the mundane sounds of our daily routines to the irresistible refrains of our favorite songs, sound (in its various guises as noise, music, echo, vibration, etc.) is fundamental to communications media and, more broadly, to our perceptions of the world around us. An introduction to the emerging field of sound studies and an investigation into the role sound and music (or lack thereof) play in various communications media. Through audio assignments such as the creation of podcasts, learn the basics of digital audio recording and editing software and how to present and distribute audio content via the Internet, specifically as podcasts. Gain practical skills for creating digital audio projects and a deeper appreciation for how paying attention to sound leads to unique understandings of history, culture, and media technologies.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Apply theories from the field of sound studies to discussions of the everyday sounds that structure our experiences.
Audience: Both Grad & Undergrad

2. Use digital audio recording/editing technologies and techniques to build a portfolio of soundwork for future projects
Audience: Both Grad & Undergrad

3. Critically analyze how sounds and sound media shape our identities and are shaped by factors such as race, gender, class and other markers of identity
Audience: Both Grad & Undergrad

4. Demonstrate facility with theory and methodologies from the field of sound studies
Audience: Graduate

5. Apply concepts, ideas and arguments from research in sound studies in the production of a scholarly podcast or soundwork
Audience: Graduate

COM ARTS 450 – CULTURAL HISTORY OF BROADCASTING
3 credits.

Traces the development of broadcasting as a cultural institution, examining the emergence of radio and television within the context of national identity and globalization.
Requisites: COM ARTS 250 or graduate/professional standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Identify major events, ideas, and institutions from the history of American broadcasting
Audience: Both Grad & Undergrad

2. Analyze a range of television and radio programs and evaluate such programs as historical documents with relevance to American cultural, technological, and industrial histories
Audience: Both Grad & Undergrad

3. Describe the ways television and radio programs engage issues of class, race, gender, sexuality, ethnicity, religion, region, and nationhood
Audience: Both Grad & Undergrad

4. Evaluate primary and secondary sources as historical evidence and determine the range of historical claims such evidence supports
Audience: Both Grad & Undergrad

5. Practice the skills needed to conduct historical research and writing
Audience: Both Grad & Undergrad

6. Identify and pursue opportunities to contribute to the field of broadcasting history
Audience: Graduate

COM ARTS 451 – TELEVISION CRITICISM
3 credits.

Analysis of selected television programming, interpretation of contemporary television programs, and survey of existing critical approaches.
Requisites: COM ARTS 351 or graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Develop a wide variety of tools for the close, incisive analysis of television programs
Audience: Both Grad & Undergrad

2. Critically evaluate contemporary television programs for their messages and modes of delivering said messages
Audience: Both Grad & Undergrad

3. Explain in nuanced, sophisticated ways how television form and content are interrelated
Audience: Both Grad & Undergrad

4. Explain how a range of cultural, contextual factors impact textual meanings
Audience: Both Grad & Undergrad

5. Identify and pursue opportunities to contribute to the field of television studies
Audience: Graduate

COM ARTS 454 – CRITICAL FILM ANALYSIS
3 credits.

Intensive analysis of selected films, using contemporary critical theories and methods.
Requisites: (Junior standing and COM ARTS 350) or declared in Communication Arts MA or PhD
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Identify the formal patterning of mise-en-scene, cinematography, and editing that produces various forms of meaning in a film text
Audience: Both Grad & Undergrad

2. Summarize different approaches to film analysis derived from semiotics, feminism, queer theory, critical race theory, Marxism, and neoformalism
Audience: Both Grad & Undergrad

3. Apply an array of principles and perspectives in close description and analysis of film scenes and sequences
Audience: Both Grad & Undergrad

4. Assess and utilize critical concepts pertinent to methodologies and practices of film analysis
Audience: Graduate

COM ARTS 455 – FRENCH FILM
3 credits.

Survey of French cinema from 1895 to the present. Emphasis on aesthetic trends, film movements, film industry, and cultural context.
Requisites: COM ARTS 350 or graduate/professional standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the major directors, movements and cycles that have shaped the history of French cinema
Audience: Both Grad & Undergrad

2. Explain the variety of modes of production in use, including large-scale industrial, independent, and artisanal models
Audience: Both Grad & Undergrad

3. Write persuasively, elegantly, and with precision about the narrative structure, style, and cultural context of the films covered in the course
Audience: Both Grad & Undergrad

4. Identify and pursue opportunities to contribute to the field of French film studies
Audience: Graduate

COM ARTS 458 – GLOBAL MEDIA CULTURES
3 credits.

Analysis of media systems, practices and uses from a global perspective.
Requisites: COM ARTS 351 or graduate/professional standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2020
Learning Outcomes: 1. Analyze mechanisms and processes by which media move globally
Audience: Both Grad & Undergrad

2. Critically evaluate what cultural ripple effects often accompany global media movement, and how power, identity, and representation are intricately involved in media movement
Audience: Both Grad & Undergrad

3. Describe how specific media move across the globe
Audience: Both Grad & Undergrad

4. Explain how media interact with nation and national identity in diverse ways
Audience: Both Grad & Undergrad

5. Critically evaluate modern media developments within a history of how media have moved globally
Audience: Both Grad & Undergrad

6. Contextualize the United States' and US media's specific roles in both the global media economy and culture
Audience: Both Grad & Undergrad

7. Identify and pursue opportunities to contribute to the field of global media studies
Audience: Graduate

COM ARTS 459 – NEW MEDIA AND SOCIETY
3 credits.

Explores political, economic and cultural relationships between new media of communication and society, including issues of history, race, gender, class, globalization, national identity and everyday life.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Link key terms and course concepts to contemporary debates on technology and new media
Audience: Both Grad & Undergrad

2. Use a “new” media technology, while reflecting on the adoption process

Audience: Both Grad & Undergrad

3. Document the history and adoption of a new media technology, paying attention to its cultural implications
Audience: Both Grad & Undergrad

4. Demonstrate facility with theory and methodologies from the field of new media studies
Audience: Graduate

5. Apply concepts, ideas and arguments from research in new media studies toward an original analysis of a new media object/technology
Audience: Graduate

COM ARTS/ITALIAN 460 – ITALIAN FILM
3 credits.

General survey of Italian cinema and of the relationship between film and the other arts. Consideration of the Italian and European socio-political context and developments in film theory.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Identify the major directors, genres, movements and technological developments that have shaped the history of Italian cinema
Audience: Both Grad & Undergrad

2. Contextualize Italian film within cultural, socio-political and industrial developments at the national, European and global levels
Audience: Both Grad & Undergrad

3. Identify major theories of film aesthetics impacting the development of Italian cinema
Audience: Both Grad & Undergrad

4. Develop research skills and write persuasively, elegantly, and with precision about the narrative structure, style, and cultural context of Italian films
Audience: Both Grad & Undergrad

5. Conduct research and engage critically with the historiographical, theoretical, and methodological practices of scholarship in Italian film studies.
Audience: Graduate

COM ARTS 461 – GLOBAL ART CINEMA
3 credits.

In the wake of World War Two, European directors began making films that employed location shooting, ambiguity, psychological realism, and unfamiliar stylistic flourishes. Such films drew on literary modernism, experimenting with time shifting, extreme duration, subjectivity, and reflexivity. "Art cinema," as it came to be called, is now the dominant storytelling mode of the contemporary film festival circuit and constitutes a robust alternative to mainstream genre cinema. Explores art cinema from a variety of national and transnational contexts, analyzing its narratives, styles, and cultural contexts. Investigates the work of directors from the first generation of art cinema, including Michelangelo Antonioni, Robert Bresson, Ingmar Bergman, and Agnès Varda, and more recent work by Aki Kaurismäki, Abbas Kiarostami, Wong Kar-wai, and Claire Denis.
Requisites: COM ARTS 350 or graduate/professional standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Identify the major directors, films, and cultural contexts that have shaped the history of art cinema
Audience: Both Grad & Undergrad

2. Analyze distinctive approaches to narrative and style in art Cinema
Audience: Both Grad & Undergrad

3. Demonstrate understanding of the funding, exhibition, and reception of art cinema
Audience: Both Grad & Undergrad

4. Evaluate the scholarly literature and assess opportunities to contribute to the field of art-cinema studies
Audience: Graduate

COM ARTS 462 – AMERICAN INDEPENDENT CINEMA
3 credits.

History of American independent narrative cinema with particular attention to the impact various art movements and subcultures have had on its development over the past 60 years.
Requisites: COM ARTS 350
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2018
Learning Outcomes: 1. Identify major directors and films highlighting the history of American Independent cinema
Audience: Undergraduate

2. Explain cultural, artistic, and commercial contexts shaping this cinematic movement
Audience: Undergraduate

3. Delineate key difference between indie and mainstream film-making by analyzing distinctive narrative structures, styles, and modes of production
Audience: Undergraduate

COM ARTS 463 – AVANT-GARDE FILM
3 credits.

Examines the history and aesthetics of avant-garde/experimental film from its beginnings in the late 1910s to the present. Studies key aesthetic programs and their relations to adjacent movements in art and critical theory.
Requisites: COM ARTS 350 or declared in Communication Arts MA or PhD
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Explain general ideas and definitions of "avant-garde"
Audience: Both Grad & Undergrad

2. Distinguish aesthetic features associated with avant-garde film
Audience: Both Grad & Undergrad

3. Delineate a body of critically acclaimed and emblematic works in this mode
Audience: Both Grad & Undergrad

4. Contextualize avant-garde films in relation to broader artistic movements and tendencies
Audience: Both Grad & Undergrad

5. Think about the nature and possibilities of the cinematic medium in new ways
Audience: Both Grad & Undergrad

6. Communicate the nature and value of creative originality, perceptual expansion, and aesthetic pleasure
Audience: Both Grad & Undergrad

7. Evaluate methodologies and trends in the academic literature on avant-garde cinema and assess areas of inquiry inviting further conceptual engagement, research, and scholarly publication
Audience: Graduate

COM ARTS 465 – EDITING AND POST-PRODUCTION FOR VIDEO AND FILM
4 credits.

Focus on the theory and practice of video editing and post-production. Gain a thorough understanding of narrative editing techniques, color correction, audio post-production and the requisite software. Discusses the art of post-production and how post-production affects narrative function in moving picture media (including films, music videos, and television).
Requisites: COM ARTS 355
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Create effective dramatic scenes from raw footage
Audience: Undergraduate

2. Implement the principles and approaches underlying editing, both in terms of cutting mechanics and in terms of narrative construction
Audience: Undergraduate

3. Explain how editing fits within the larger post-production workflow
Audience: Undergraduate

4. Practice the basic elements of color correction and post-production sound
Audience: Undergraduate

5. Import and synchronize footage and prepare it for editing.
Audience: Undergraduate

6. Recognize how the tools of post-production have changed over time, and will continue to develop
Audience: Undergraduate

COM ARTS 466 – WRITING FOR TELEVISION AND FILM
3 credits.

Basic introduction to the elements of a successful dramatic screenplay. Particular emphasis placed on story concept, dramatic structure, character development, dialogue, and visual storytelling.
Requisites: COM ARTS 355
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze, critically evaluate, and critique narrative screenplays and screenwriting
Audience: Undergraduate

2. Compose original, short, narrative screenplays, treatments and spec scripts
Audience: Undergraduate

3. Employ industry standards for screenplay formatting, pitch decks, and treatments
Audience: Undergraduate

4. Create narrative (fictional) characters, scenes, and story ideas
Audience: Undergraduate

COM ARTS 467 – CINEMATOGRAPHY AND SOUND RECORDING
4 credits.

Learn the fundamentals of short-film production, including cinematography, lighting, and sound recording. With an emphasis on dramatic storytelling, produce scenes from existing scripts, rotating through crew positions. Directing, editing, and color grading will be covered, with casting, location scouting, and production design incorporated to successfully produce each scene. Gain an understanding of the inner-workings of a film crew, the operation of digital cinema technologies, and visual and aural storytelling aesthetics and techniques.
Requisites: COM ARTS 355
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify how story works in short film form
Audience: Undergraduate

2. Produce a scene from a motion picture screenplay, from pre-production to post-production
Audience: Undergraduate

3. Develop proficiency and command with the course technologies to achieve desired results
Audience: Undergraduate

4. Combine aesthetic options and technical limitations to make creative decisions on each project
Audience: Undergraduate

5. Follow industry standards throughout the production process
Audience: Undergraduate

COM ARTS 468 – PRODUCING FOR INTERNET TV AND VIDEO
3 credits.

Producing Internet television and video (which encompasses a wide range of media content, from expensive Netflix and Amazon shows to low-budget YouTube channels). With its focus on "producing" and the role of the producer, combines the hands-on production work of writing, shooting, and editing videos with an emphasis on entrepreneurship and the innovation of sustainable business models.
Requisites: COM ARTS 155 or 355
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Lead video projects in the role of the producer, the position in which art and commerce necessarily intersect
Audience: Undergraduate

2. Develop skills in cinematography and editing
Audience: Undergraduate

3. Analyze the Internet as a platform for distribution, advertising, and audience engagement, along with Internet aesthetics, economics, and policies
Audience: Undergraduate

4. Analyze a complex industry environment
Audience: Undergraduate

5. Prepare strategies to address the creative and economic imperatives of Internet video
Audience: Undergraduate

COM ARTS 470 – CONTEMPORARY POLITICAL DISCOURSE
3 credits.

Examines themes, genres, and significant instances of contemporary political discourse, as well as issues and concerns that arise in public discussions of political discourse. Case studies and theoretical analyses are considered.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Critically examine the speech, writings, imagery, and symbolic actions that have influenced the origins and outcomes of democratic revolutions across the globe
Audience: Undergraduate

2. Identify both recurring and distinctive elements of the speech of leaders and groups studied (including types of argument, rhetorical devices, branding, imagery, and other figurative speech)
Audience: Undergraduate

3. Develop and demonstrate a critical, comparative perspective that will enable students to step back from, and make sense of, the different leaders, groups and forms of speech studied
Audience: Undergraduate

4. Explain how styles and elements of speech used by leaders and groups operate differently depending on historical and political context and on their specific configurations with other elements
Audience: Undergraduate

COM ARTS 474 – RHETORIC OF THE COLD WAR
3 credits.

Examine the Cold War from a rhetorical perspective. Consider key texts, orators, movements, and foreign policy themes that have come to define the Cold War (1945-1991). Trace how these rhetorical strategies laid the groundwork for the contemporary moment, the "New Cold War."
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Identify key rhetorical moments in Cold War discourse.
Audience: Both Grad & Undergrad

2. Assess and analyze key terms, concepts, theories, and themes rhetoricians and historians use to examine the Cold War.
Audience: Both Grad & Undergrad

3. Apply these critical and theoretical lenses to historical and contemporary discourse and public culture
Audience: Both Grad & Undergrad

4. Articulate the relationship between rhetoric and history.
Audience: Both Grad & Undergrad

5. Research and write a rhetorical analysis of text/object related to the themes of the course.
Audience: Graduate

COM ARTS 476 – NATURE OF CRITICISM-THE PUBLIC ARTS OF COMMUNICATION
3 credits.

A survey of rhetorical criticism methods. Apply methods to landmark historical and contemporary texts - from presidential war discourse to women's suffrage rhetoric to timely political debates.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Communicate appreciation of significant rhetorical texts
Audience: Undergraduate

2. Identify, evaluate, and apply significant methods of rhetorical criticism to rhetorical artifacts
Audience: Undergraduate

3. Identify rhetorical critics who have made significant contributions to the field of rhetorical criticism
Audience: Undergraduate

4. Articulate the relationship between critic, method, and text
Audience: Undergraduate

5. Define and explain the importance of audience, argument, and intent when performing rhetorical criticism
Audience: Undergraduate

6. Read, understand, and analyze peer-reviewed scholarly essays in the field of rhetorical criticism
Audience: Undergraduate

7. Deliver a cogent and concise research presentation
Audience: Undergraduate

COM ARTS 478 – RHETORIC AND POWER ON THE INTERNET
3 credits.

Explores and analyzes Internet communication as a magnifier, transmitter, and limiter of power for both individual people and institutions with special attention to the roles of politics, social issues, and justice. Use rhetorical analysis to engage in the critical assessment of Internet media content that exerts power in their lives.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2019
Learning Outcomes: 1. Use rhetorical and cultural theory to discuss examples of online expression in a group
Audience: Undergraduate

2. Locate and document in a digital form online expressive materials operating in your own experience
Audience: Undergraduate

3. Use rhetorical and cultural theory to evaluate online expressions orally
Audience: Undergraduate

4. Use rhetorical and cultural theory to evaluate online expressions in formal writing
Audience: Undergraduate

COM ARTS 509 – DIGITAL MEDIA AND POLITICAL COMMUNICATION
3 credits.

Examines core questions related to the impacts of digital media (including but not limited to the Internet) on processes of political communication and the health of democratic governance in advanced industrialized democracies.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019
Learning Outcomes: 1. Demonstrate understanding of the most influential theories and perspectives regarding the role of communication and information technologies in political communication processes
Audience: Both Grad & Undergrad

2. Evaluate contemporary claims about digital media and politics based on the extent to which they are supported by sound social scientific research
Audience: Both Grad & Undergrad

3. Demonstrate effective communication skills through the articulation of critical thinking about digital media and political communication through writing and informal oral presentation
Audience: Both Grad & Undergrad

4. Develop a proposal for, or improve upon an already in-progress, original research paper that makes a substantive contribution to the scholarly literature on digital media use in political communication
Audience: Graduate

COM ARTS 513 – TOPICS IN COMMUNICATION ARTS: STUDY ABROAD
1-6 credits.

A course carried with a UW-Madison study abroad program which has no equivalent on this campus. Enrollment in a UW-Madison resident study abroad program
Requisites: None
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2001

COM ARTS 518 – COMMUNICATION AND HEALTH INEQUALITIES
3 credits.

Explore the role of communication as a contributor to existing health inequalities and a means of helping to reduce them. Consider social scientific theories and research on a wide array of topics including communication inequalities and public discourse around social determinants of health.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the ways in which communication contributes to and can ameliorate health inequalities
Audience: Both Grad & Undergrad

2. Describe communication and social science theories and research methods that are commonly employed to study communication and health inequalities
Audience: Both Grad & Undergrad

3. Critique methodology and samples designed to examine the relationships between communication and health inequalities
Audience: Both Grad & Undergrad

4. Use communication theories and concepts to evaluate current communication about health inequalities
Audience: Both Grad & Undergrad

5. Write cogent analyses of journal articles, policy documents, and media
Audience: Both Grad & Undergrad

6. Develop a project that relates to communication and health inequalities and that utilizes appropriate, relevant theory and concepts from the literature
Audience: Both Grad & Undergrad

7. Synthesize, apply, and/or extend communication theories and research methods to investigate issues around communication and health inequalities
Audience: Graduate

COM ARTS/FOLKLORE 522 – DIGITAL STORYTELLING FOR SOCIAL MEDIA
3 credits.

Explore everyday communication in social media. Learn digital recording technologies for documenting everyday communication and the use of digital content in social media.
Requisites: Junior standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Evaluate the reasons we value everyday artistic and expressive communication
Audience: Both Grad & Undergrad

2. Analyze the affordances of different social media platforms
Audience: Both Grad & Undergrad

3. Evaluate the formal elements best suited to the affordances of different media platforms
Audience: Both Grad & Undergrad

4. Apply that understanding in the design and production of digital text, photo, sound, and video communications that document everyday artistic and expressive communication
Audience: Both Grad & Undergrad

5. Analyze ethical implications of documenting human behavior
Audience: Both Grad & Undergrad

6. Apply scholarly theories on digital media to digital platforms and digital platform content
Audience: Graduate

COM ARTS 540 – TELEVISION GENRES
3 credits.

An examination of a specific television genre, analyzing it as a narrative, economic, cultural, and political entity and exploring its role in perpetuating and/or challenging ideas of what society is or could be.
Requisites: (COM ARTS 250 and 351) or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024
Learning Outcomes: 1. Assess how the topic genre works as a unique mode of communication
Audience: Both Grad & Undergrad

2. Discuss thoughtfully the cultural work being done by current examples of the topic genre
Audience: Both Grad & Undergrad

3. Explain the roles that older examples of the topic genre played in cultural history
Audience: Both Grad & Undergrad

4. Analyze how the topic genre works as a business and/or industry
Audience: Both Grad & Undergrad

5. Critically examine various modes, styles, theories, and uses of the topic genre
Audience: Both Grad & Undergrad

6. Analyze various ways in which the topic genre both explicitly and implicitly engages important cultural issues, debates, and topics of concern to a society
Audience: Both Grad & Undergrad

7. Identify and pursue opportunities to contribute to the scholarly analysis of the topic genre
Audience: Graduate

COM ARTS 545 – MEDIA AUDIENCE CULTURES
3 credits.

Explore the complexities of what it means to be a media audience. Consider how audiences engage media thoughtfully and actively. Approach audiences both qualitatively and theoretically, focusing on how audiencehood becomes more than just a position of watching, listening, and downloading the intended message. Study audiencehood as a site of voice, agency, identity construction, play, activism, and meaning-making across various media audience types - fans, haters, casual viewers; television, film, social media, games, and other media consumers; watchers, listeners, readers, gamers, and users; networked communities and isolated individuals. Analyze the different worlds, affective positions, practices, and socialities that make up "the audience."
Requisites: COM ARTS 250 or graduate/professional standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Analyze the cultures that surround media consumption
Audience: Undergraduate

2. Analyze and interpret a wide variety of modes and styles of media reception
Audience: Undergraduate

3. Critically examine methods and strategies for, and the ethics of, studying audiences
Audience: Undergraduate

4. Conduct qualitative research into media audiences
Audience: Undergraduate

5. Develop an awareness of the rich history of the cultural studies tradition of audience and reception research
Audience: Graduate

6. Write critically about audiences, balancing theory and empirical research
Audience: Graduate

COM ARTS 547 – DIGITAL GAME CULTURES
3 credits.

An examination of the forms, practices, economies, institutions, politics, and modes of engagement that make digital games an important site of culture and power.
Requisites: COM ARTS 250, (COM ARTS 351 or 346), and junior standing, or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the complex cultural forms that constitute digital games
Audience: Both Grad & Undergrad

2. Critique the powerful structures and institutions that drive the cultural economies of gaming
Audience: Both Grad & Undergrad

3. Analyze the diverse practices and ways of life in which game players and communities engage
Audience: Both Grad & Undergrad

4. Evaluate the contradictory politics of digital games in terms of their complicity with cultural hierarchies and their potential for radical cultural critique
Audience: Both Grad & Undergrad

5. Share the experience of play to build a productive and inclusive community
Audience: Both Grad & Undergrad

6. Make choices to develop individualized pathways through course material and meaningful ways of engaging it
Audience: Both Grad & Undergrad

7. Embrace the challenges of play to take satisfaction and pride in accomplishments, regardless of failures along the way
Audience: Both Grad & Undergrad

8. Develop a vision for digital games as a part of research and/or teaching practice
Audience: Graduate

COM ARTS 552 – CONTEMPORARY HOLLYWOOD CINEMA
3 credits.

An examination of contemporary Hollywood films focusing on the interrelations of cinematic narrative, style, technology, and institutions. Survey the work of major directors and consider the box office impact of key genres and film cycles.
Requisites: COM ARTS 350 or concurrent enrollment
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Describe the major directors, genres, and cycles that have shaped the contemporary landscape of Hollywood film production
Audience: Undergraduate

2. Explain the overall market structure of the contemporary film industry and the studios' main strategies for generating profits and managing financial risks
Audience: Undergraduate

3. Analyze the narrative patterns of a contemporary Hollywood film, including its large-scale sections, its turning points, its motifs, and its use of deadlines, dangling causes, and dialogue hook
Audience: Undergraduate

4. Produce a close textual analysis of the stylistic elements found in a scene or sequence from a contemporary Hollywood film
Audience: Undergraduate

COM ARTS 556 – THE AMERICAN FILM INDUSTRY IN THE ERA OF THE STUDIO SYSTEM
3 credits.

Influences of industrial structure, trade policies, foreign markets and censorship on Hollywood's production practices up to 1948.
Requisites: COM ARTS 350, 351, or declared in Communication Arts MA or PhD
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify major events, ideas, and institutions from the history of American film
Audience: Both Grad & Undergrad

2. Evaluate a range of films as historical works with relevance to American cultural, aesthetic, technological, and industrial histories
Audience: Both Grad & Undergrad

3. Analyze systems of power and unequal access to filmmaking resources in American film history, especially in regards to race and gender
Audience: Both Grad & Undergrad

4. Evaluate primary and secondary sources as historical evidence and determine the range of historical claims such evidence supports
Audience: Both Grad & Undergrad

5. Practice the skills needed to conduct historical research and writing
Audience: Both Grad & Undergrad

6. Identify and pursue opportunities to contribute to the field of American film history
Audience: Graduate

COM ARTS 565 – COMMUNICATION AND INTERETHNIC BEHAVIOR
3 credits.

The relation of communication processes to interethnic and interracial attitudes and behavior. Social and psychological foundations of interethnic communication and conflict, group identification and communication processes, interpersonal communication and culture, communication about race and ethnicity, mass media content and effects.
Requisites: Junior standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Summarize different historical and current beliefs about race
Audience: Undergraduate

2. Interpret and critique social science research on the impact of race/ethnicity on communication in a variety of contexts including family life, school, college, work, and healthcare
Audience: Undergraduate

3. Develop a research question related to race/ethnicity and communication in the U.S.
Audience: Undergraduate

4. Find and synthesize five social scientific studies that address the research question
Audience: Undergraduate

5. Examine questions and make decisions with consideration for the cultural perspectives and worldviews of others
Audience: Undergraduate

6. Recognize and question cultural assumptions, rules, biases, and knowledge claims as they relate to race and ethnicity
Audience: Undergraduate

7. Articulate some of the effects the past has had on present day circumstances, perceptions of, and disparities in, race in the U.S.
Audience: Undergraduate

COM ARTS 570 – CLASSICAL RHETORICAL THEORY
3 credits.

Study of major theories of rhetoric from their origins in ancient Greece to Bacon, including theories of Plato, Aristotle, Cicero, Quintilian, Longinus, St. Augustine, and others.
Requisites: (Two from: COM ARTS 262, 360, 370, 372, 470, 472, 562, or RELIG ST/COM ARTS 374) or graduate/professional standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Read major texts of ancient rhetoric and explain their historical contexts
Audience: Both Grad & Undergrad

2. Explain fundamental concepts from ancient rhetorical theory
Audience: Both Grad & Undergrad

3. Explain the history & development of rhetorical practice and education
Audience: Both Grad & Undergrad

4. Explain the connection between historical rhetorical texts to contemporary rhetorical theory
Audience: Both Grad & Undergrad

5. Practice critical reading, writing, research, and presentation skills
Audience: Both Grad & Undergrad

6. To interrogate the emphasis on these ancient traditions in the 21st century at the graduate level
Audience: Graduate

7. Communicate about classical rhetorical theory in graduate level communication genres
Audience: Graduate

COM ARTS 573 – RHETORIC OF GLOBALIZATION AND TRANSNATIONALISM
3 credits.

Introduction to basic concepts in global and transnational rhetorical studies and provided with the analytic tools to examine discourses about globalization and transnationalism produced by key global actors including transnational corporations, states, global institutions such as the World Bank, media producers, human rights advocates, and activists.
Requisites: Junior standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Identify and describe key rhetorical theories, concepts, and methods that have a bearing on issues of globalization and transnationalism
Audience: Undergraduate

2. Use key theories, concepts, and methods from rhetorical studies to analyze how communication structures have a bearing on issues of globalization and transnationalism
Audience: Undergraduate

3. Communicate findings about globalization and transnationalism gained in the application of key theories, concepts, and methods from rhetorical studies
Audience: Undergraduate

COM ARTS 575 – COMMUNICATION IN COMPLEX ORGANIZATIONS
3 credits.

Examine problem solving within complex organizations. Study communication pitfalls, decision-making biases, and problem-solving blind spots that negatively affect one's ability to communicate. Learn to innovate in teams and make high-quality decisions.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the different theories of decision-making and what type of decision-making process is more appropriate depending on the situation
Audience: Undergraduate

2. Nudge others and self to make better decisions
Audience: Undergraduate

3. Design your decisions and solve your problems using a better process based on empirical social science
Audience: Undergraduate

4. Design your teams and groups to maximize performance based on principles from social science
Audience: Undergraduate

5. Apply strategies to increase open communication and strategically use conflict in organizations to increase productivity and decision quality
Audience: Undergraduate

6. Create environments that nudge ethical decisions in organizations and create a healthy, ethical organizational culture
Audience: Undergraduate

COM ARTS 577 – DYNAMICS OF ONLINE RELATIONSHIPS
3 credits.

Examines how people form their identities and manage their personal relationships using new communication technologies (social network sites, online dating, video games). Emphasis will be placed on how humans adapt to technology and use it for social purposes.
Requisites: Junior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Discuss state-of-the-art research in the area of online relationship
Audience: Both Grad & Undergrad

2. Explain how humans adapt to technology and use it for social purposes
Audience: Both Grad & Undergrad

3. Identify features of technology that affect people's ability to express themselves and manage relationships online
Audience: Both Grad & Undergrad

4. Describe the scientific method and of theory-building in the social sciences
Audience: Both Grad & Undergrad

5. Evaluate theories critically and identify worthwhile avenues for future research
Audience: Both Grad & Undergrad

6. Develop research proposals for the social sciences
Audience: Both Grad & Undergrad

7. Contribute to the research in online relationships
Audience: Graduate

COM ARTS 605 – DIGITAL STUDIES CAPSTONE
1 credit.

Create an online portfolio integrating material learned throughout the certificate program. Explore opportunities for professional and personal growth. Must be declared in Digital Studies Certificate with senior standing.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Share your ideas, stories, and projects on your own personal website
Audience: Undergraduate

2. Articulate your personal brand and how this brand aligns with your career path and goals
Audience: Undergraduate

3. Use digital tools to network with alumni and others in your field(s) of interest and to research professional opportunities
Audience: Undergraduate

COM ARTS 608 – SPECIAL TOPICS IN MEDIA AND CULTURAL STUDIES
3 credits.

Specialized topics and issues in media and cultural studies.
Requisites: COM ARTS 250, 346, 351, CHICLA/COM ARTS 347 or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023
Learning Outcomes: 1. Explain core concepts within the topic area of Media and Cultural Studies
Audience: Both Grad & Undergrad

2. Analyze media and culture from theoretical, historical, and critical perspectives appropriate to the topic under examination
Audience: Both Grad & Undergrad

3. Communicate effectively about the Media and Cultural Studies topic area
Audience: Both Grad & Undergrad

4. Participate in discussions about diversity, equity, and inclusion for the historically marginalized within the topic area of media and cultural studies
Audience: Both Grad & Undergrad

5. Use your investigation of the topic area to make a scholarly contribution to Media and Cultural Studies
Audience: Graduate

COM ARTS 609 – SPECIAL TOPICS IN PRODUCTION
3 credits.

Specialized advanced subject matter in film, video or digital media production.
Requisites: COM ARTS 355 or declared in Communication Arts MA or PhD
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate mastery of the aesthetic and technical tools image and/or audio storytelling
Audience: Both Grad & Undergrad

2. Analyze story structure and illustrate how creative decisions support story interpretation
Audience: Both Grad & Undergrad

3. Analyze the meaning, form, and process of cinematic work with the goal of providing honest, critical, and instructive feedback
Audience: Both Grad & Undergrad

4. Reproduce and apply industry standards
Audience: Both Grad & Undergrad

5. Articulate the relationship between the field of media production and the field of media studies
Audience: Graduate

COM ARTS 610 – SPECIAL TOPICS IN RHETORIC AND PUBLIC ADDRESS
3 credits.

Specialized subject matter of current interest in rhetoric and public address.
Requisites: Junior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024
Learning Outcomes: 1. Analyze communication rhetorically within its historical, technical, cultural, social or political contexts
Audience: Undergraduate

2. Analyze how communication structures shape the flow of information, policy law, culture, or power
Audience: Undergraduate

3. Apply key theories, concepts, and methods in the rhetorical analysis of communication
Audience: Undergraduate

4. Use key theories, concepts, and methods from rhetorical studies to analyze communication at a graduate level
Audience: Graduate

5. Communicate findings about communication gained in the application of key theories, concepts, and methods from rhetorical studies in graduate level communication genres
Audience: Graduate

COM ARTS 612 – SPECIAL TOPICS IN COMMUNICATION SCIENCE
3 credits.

Specialized subject matter of current interest in communication theory and research.
Requisites: Junior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022
Learning Outcomes: 1. Explain the ways in which communication contributes to and can ameliorate various deficient societal an individual conditions
Audience: Both Grad & Undergrad

2. Identify and analyze communication and social science theories and methods commonly employed to examine communication and wellbeings
Audience: Both Grad & Undergrad

3. Critique methodology and samples designed to investigate the relationships between communication and wellbeings
Audience: Both Grad & Undergrad

4. Utilize communication theories and concepts to evaluate current communication about wellbeings
Audience: Both Grad & Undergrad

5. Write cogent analyses of journal articles, policy documents, and media
Audience: Both Grad & Undergrad

6. Communicate research findings of empirical research on communication and wellbeings to fellow researchers and/or general public
Audience: Graduate

COM ARTS 613 – SPECIAL TOPICS IN FILM
3 credits.

Specialized topics and issues in film history, theory, and criticism.
Requisites: COM ARTS 350 or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Explain core concepts within the topic area of film studies
Audience: Both Grad & Undergrad

2. Analyze film texts, institutions, and relevant social and expressive contexts from theoretical, historical, and critical perspectives illuminating the topic under examination
Audience: Both Grad & Undergrad

3. Communicate effectively about the topic area in film studies
Audience: Both Grad & Undergrad

4. Participate in discussions about diversity, equity, and inclusion for the historically marginalized within the topic area of film studies
Audience: Both Grad & Undergrad

5. Explain critical and analytic methodologies pertinent to the specific topi

Audience: Graduate

6. Evaluate the relevant academic literature and identify areas affording opportunities to contribute in the field of film studies
Audience: Graduate

COM ARTS 614 – FIELD EXPERIENCE IN COMMUNICATION
1 credit.

Application of communication concepts to problems in such professional field settings as business organizations, media firms, political offices and organizations, and governmental agencies. Must be declared in Communication Arts.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Workplace - Workplace Experience Course
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Build strong working relationships
Audience: Undergraduate

2. Relate your employers' needs and strategies to your own career objective
Audience: Undergraduate

3. Confront responsibility, value, and inequality in the labor market
Audience: Undergraduate

4. Apply your previous Communication Arts coursework to your internship experiences
Audience: Undergraduate

5. Describe your internship experiences in ways that emphasize your accomplishments, qualifications gained, and potential for future employment
Audience: Undergraduate

6. Evaluate your work successes and failures with an eye toward pursuing future goals
Audience: Undergraduate

COM ARTS 615 – SECOND FIELD EXPERIENCE IN COMMUNICATION
1 credit.

Application of communication concepts to problems in such professional field settings as business organizations, media firms, political offices and organizations, and governmental agencies. Must be declared in Communication Arts.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Workplace - Workplace Experience Course
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Reflect on your previous experience and use it to maximize the value of your current internship
Audience: Undergraduate

2. Expand both the knowledge and skillsets that you bring into your work experiences
Audience: Undergraduate

3. Identify and take advantage of opportunities for mentorship
Audience: Undergraduate

4. Strengthen your network and participation in professional communities
Audience: Undergraduate

5. Develop positive working relationships and sustain them over time
Audience: Undergraduate

6. Create a strategy for the next stage in your career based on the experience you gain
Audience: Undergraduate

COM ARTS/HDFS/JOURN 616 – MASS MEDIA AND YOUTH
3 credits.

Children's and adolescents' use of mass media and mass media effects on them. Particular attention is given to changes in comprehension and other cognitive activities that give insights into media use and effects.
Requisites: JOURN 202, COM ARTS 325, HDFS 262 (or HDFS 362 prior to Fall 2023), ED PSYCH 320, PSYCH 460, LSC 251, or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain how children and youth process media
Audience: Undergraduate

2. Compare/contrast the impact of different types of media content on development
Audience: Undergraduate

3. Explain how individual differences moderate the impact of media on development
Audience: Undergraduate

4. Describe moderating effects of the context in which media use occurs
Audience: Undergraduate

5. Read, interpret, evaluate, and discuss social scientific reports of findings in this area
Audience: Undergraduate

6. Synthesize and interpret research in this area for a lay audience
Audience: Undergraduate

7. Explain with nuance how children and youth process media
Audience: Graduate

8. Compare/contrast the impact of different types and formats of media content on development, with reference to key developmental milestones
Audience: Graduate

9. Explain how individual differences and social contexts moderate the impact of media uses and interpretations on development
Audience: Graduate

10. Synthesize and interpret research in this area and identify a research gap for future work
Audience: Graduate

COM ARTS/JOURN/LSC 617 – HEALTH COMMUNICATION IN THE INFORMATION AGE
3 credits.

Examines the role of communication in health, how the revolution in information technology has affected health communication, and the assumptions about health information and communication that drive current efforts to use technologies.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate their understanding of major theories, approaches, concepts, and current research findings in the area of health communication
Audience: Both Grad & Undergrad

2. Gain a sense of the methodological issues involved in the construction and evaluation of health communication
Audience: Both Grad & Undergrad

3. Demonstrate their understanding of the connections between the environment (e.g., physical, social, media), cognition, and behavior
Audience: Both Grad & Undergrad

4. Communicate effectively through written reports, oral presentations and discussion
Audience: Both Grad & Undergrad

5. Evaluate ideas from different sources critically
Audience: Graduate

6. Derive new testable hypotheses by integrating or contrasting different theories
Audience: Graduate

7. Develop variations on theoretical models or ideas such as contingent conditions or mediating factors
Audience: Graduate

COM ARTS/ED PSYCH 626 – YOUTH DEVELOPMENT AND SOCIAL MEDIA: INTERDISCIPLINARY TRAINING SEMINAR
1 credit.

Advanced level seminar that involves critical analysis of conceptual and methodological issues underlying empirical research on how social media affect and are affected by adolescent development, provides a venue for feedback on design of research studies involving youth and social media, and fosters interdisciplinary approaches to studying connections between youth development and social media use.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2021
Learning Outcomes: 1. Become familiar with conceptual and methodological approaches to studying youth development and social media use
Audience: Graduate

2. Sharpen the ability to read, understand, and critique research studies in the social sciences, through sustained readings and class discussion
Audience: Graduate

3. Learn how to formulate an original and theoretically meaningful research proposal in the area of social media, youth, and well-being
Audience: Graduate

4. Become clear and confident public speakers in an academic group setting
Audience: Graduate

COM ARTS 651 – ADVANCED VIDEO PRODUCTION AND DIRECTION
3 credits.

Remote video production in both documentary and narrative genres.
Requisites: COM ARTS 355
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Produce a short film from idea to fine cut
Audience: Undergraduate

2. Develop camera technique, sound recording, editing, writing, and directing skills
Audience: Undergraduate

3. Implement the storytelling strategy that best fits your short film's thesis

Audience: Undergraduate

4. Practice pre-production proposal writing
Audience: Undergraduate

5. Develop peer evaluation skills
Audience: Undergraduate

COM ARTS 659 – ADVANCED MOTION PICTURE PRODUCTION WORKSHOP
4 credits.

Provides an immersive experience in the art of cinematic storytelling. This capstone workshop is structured around the creation of a half-hour finished film, planned and completed as a group, with roles matching those of a professional crew. Working with an existing script and using state-of-the-art digital tools, students gain knowledge in a wide variety of motion-picture production skills. Most importantly, explore the meanings and nuances of a script, making the artistic choices necessary to bring the story to the screen. Present a completed film in a public, campus screening.
Requisites: COM ARTS 467
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Produce a scene from a motion picture screenplay, from pre-production to post-production
Audience: Undergraduate

2. Develop the necessary production skills for serving on a crew
Audience: Undergraduate

3. Combine aesthetic options and technical limitations to make creative decisions in each crew position
Audience: Undergraduate

4. Follow industry standards throughout the production process
Audience: Undergraduate

COM ARTS 669 – FILM THEORY
3 credits.

Survey of significant trends within both classical and contemporary film theory. Designed for those interested in reading, analyzing, and evaluating the central concepts and intellectual history of writings about film, particularly with respect to film as a medium presenting an array of aesthetic, psychological, and social potentialities. Whereas classical film theory attempts to treat cinema as a unique art form, contemporary film theory addresses issues related to cinema as a mode of communication, a source of visual pleasure, and as an ideological tool. Much contemporary theory attempts to incorporate the insights of other critical and analytical paradigms, such as semiotics, psychoanalysis, feminism, queer theory, critical race theory, postmodernism, and cognitive science. Questions regarding the ontology of cinema, its relation to existing theories of art, its effects on spectators, and the various ways in which its formal properties create meaning are considered.
Requisites: COM ARTS 350 or graduate/professional standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Attain a deep and wide-reaching understanding of the ways in which cinema has been conceptualized by film theorists and practitioners globally, as a distinct aesthetic form with its own medium-specific characteristics
Audience: Both Grad & Undergrad

2. Parse out the interconnections and influences between the work of film theorists and other disciplines and fields including but not limited to philosophy, psychology, semiotics, political theory, and cultural studies
Audience: Both Grad & Undergrad

3. Understand the ways in which ideology, power and hegemony are intertwined with the status of the film object, especially in relation to articulations of gender, race, class, ethnicity and sexuality
Audience: Both Grad & Undergrad

4. Evaluate and analyze the ways in which film theory and praxis approaches aspects of spectatorship and craft
Audience: Both Grad & Undergrad

5. Articulate individual approaches to film theory based on the material
Audience: Both Grad & Undergrad

6. Map the development of the discipline of film studies through an historical understanding of ideas and concepts in the field of film theory
Audience: Graduate

COM ARTS 681 – SENIOR HONORS THESIS
3 credits.

Research and preparation for writing senior Honors in the Major thesis under the direction of a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025

COM ARTS 682 – SENIOR HONORS THESIS
3 credits.

Writing and completion of senior Honors in the Major thesis begun in COM ARTS 681 under the direction of a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2024

COM ARTS 691 – SENIOR THESIS
2-3 credits.

Research and preparation for the writing of the senior thesis under the direction of a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2021

COM ARTS 692 – SENIOR THESIS
2-3 credits.

Writing and completion of senior thesis begun in COM ARTS 691 under the direction of a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2021

COM ARTS 698 – DIRECTED STUDY
1-3 credits.

Advanced level project under the direction of faculty member e.g., independent reading with research paper, production project, or member of research team. Graded on a credit/no credit basis.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

COM ARTS 699 – DIRECTED STUDY
1-3 credits.

Advanced level project under the direction of faculty member e.g., independent reading with research paper, production project, or member of research team. Graded on a letter basis.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

COM ARTS/L I S 705 – INTRODUCTORY ANALYTICS FOR DECISION MAKING
3 credits.

Introduces key stages in the processes of gathering and analyzing data for decision making, including tasks, methods, and tools used at each stage. Topics include developing the research question from organizational goals, choosing appropriate data collection methods, sampling, basics of measurement and question design, managing and visualizing data, descriptive statistics and basic inferential statistics such as correlations, regressions, and ANOVA.
Requisites: Graduate/professional standing or Declared in Analytics for Decision Making capstone certificate
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

COM ARTS 760 – ADVANCES IN COMMUNICATION THEORIES
3 credits.

In-depth review and evaluation of behavioral and social scientific theories of human communication.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

COM ARTS 762 – COMMUNICATION RESEARCH METHODS
3 credits.

Epistemological and methodological principles of behavioral and social scientific research of particular relevance to communication research, including various research designs and modes of observation, casual inferences, and basic hands-on experiences in empirical research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

COM ARTS 799 – INDEPENDENT STUDY
1-3 credits.

Independent research and writing under the supervision of an instructor.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

COM ARTS 902 – FILM COLLOQUIUM
1 credit.

Studies in advanced research in film history, theory and criticism.
Requisites: Declared in Communication Arts MA or PhD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

COM ARTS 903 – MEDIA AND CULTURAL STUDIES COLLOQUIUM
1 credit.

Current research in cultural studies, audience effects, broadcast regulation, history of broadcasting and comparative national systems.
Requisites: Declared in Communication Arts MA or PhD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

COM ARTS 904 – COMMUNICATION SCIENCE COLLOQUIUM
1 credit.

Social scientific approaches to the study of interpersonal communication and media effects.
Requisites: Declared in Communication Arts MA or PhD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

COM ARTS 905 – RHETORIC COLLOQUIUM
1-3 credits.

Advanced research in rhetorical theory and criticism, and in the history of public address.
Requisites: Declared in Communication Arts MA or PhD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

COM ARTS/CURRIC 914 – HOW GAMES CHANGE US
3 credits.

Video games can be powerful experiences that take us to new worlds, teach us about complex systems, and provoke a range of emotions. Games transform us while we play, and some of these changes can be hard to predict and understand. Games can disrupt our sense of self, reshape our pleasures and feelings, lead us to question deeply held values, and allow us to experience new forms of embodiment through an avatar. A growing body of research in game studies engages with this potential for expansive change by focusing on player experience from a variety of methodological perspectives, including phenomenological, feminist and queer theory, critical disability studies, learning sciences, ecocriticism, and media archeology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Devise, plan, and begin a research project in game studies.
Audience: Graduate

2. Articulate the disciplinary tenets and controversies of game studies and position your work in relation to other game scholars.
Audience: Graduate

3. Use strategic and purposeful reading methods to approach dense theoretical texts.
Audience: Graduate

4. Make clear and theoretically informed arguments about how a player is changed in the process of playing a game.
Audience: Graduate

5. Describe some of the common ways game designers have used the transformative potential of games and other design choices that have not been explored.
Audience: Graduate

COM ARTS 950 – SEMINAR-RADIO TELEVISION FILM
2-3 credits.

An advanced review and exploration of theoretical and methodological developments in media studies.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

COM ARTS 955 – MEDIA HISTORY AND HISTORIOGRAPHY
3 credits.

Post-structuralist historical theory, historiographical methods, and issues in historiography for students of media history. Introduction to archival research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

COM ARTS 958 – SEMINAR IN FILM HISTORY
2-3 credits.

Seminar probes theoretical questions concerning nature of historical knowledge, examines scholarly models and introduces methodologies and resources for research on the history of cinema.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023

COM ARTS 967 – SEMINAR-PROBLEMS IN COMMUNICATION AND PUBLIC ADDRESS
2-3 credits.

An examination of current theoretical and/or practical problems in communication and/or public address.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2021

COM ARTS 969 – SEMINAR: CONTEMPORARY RHETORICAL THEORY
2-3 credits.

A review of recent and ongoing theoretical developments in rhetorical theory.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

COM ARTS 970 – SEMINAR IN COMMUNICATION SCIENCE
3 credits.

A critical review of theoretical developments in social scientific studies of communication and its psychological and/or social impact.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

COM ARTS 976 – SEMINAR IN RHETORICAL CRITICISM
2-3 credits.

An examination of historical and/or ongoing developments in methodological and analytic approaches to rhetorical studies.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

COM ARTS 990 – RESEARCH AND THESIS
1-9 credits.

Independent research and writing under the supervision of an instructor.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

COMMUNICATION SCIENCES AND DISORDERS (CS&D)

CS&D 110 – INTRODUCTION TO COMMUNICATIVE DISORDERS
3 credits.

A survey of the scientific basis of normal and disordered communication; covers speech, hearing, and language.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

CS&D 120 – CULTURE, LANGUAGE, AND COMMUNICATION
3 credits.

The impact of cultural and linguistic diversity on the field of Communication Sciences and Disorders (CSD); different ideas about what culture is, how culture influences different aspects of communication, and how cultural and linguistic differences intersect with neurodiversity, and with difficulties in speech, language, hearing, voice, and swallowing. Language variation, including bilingualism, multilingualism, dialect, and accent. Culturally responsive assessment and intervention; working with interpreters and translators. Main focus is on two populations - Spanish-English and African American English speakers in the United States. Also discusses other cultural and linguistic communities in the US and around the world.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand how race and racial inequities have affected access to speech, language, and hearing services in the U.S.
Audience: Undergraduate

2. Recognize and question cultural assumptions and knowledge claims regarding best practices for assessment and intervention in CSD and identify culturally responsive alternatives
Audience: Undergraduate

3. Demonstrate self-awareness and empathy toward the cultural perspectives and worldviews of others
Audience: Undergraduate

4. Apply concepts of cultural responsiveness outside the classroom by respectfully participating in our multicultural and multilingual society
Audience: Undergraduate

CS&D 201 – ANATOMY AND PHYSIOLOGY OF SPEECH PRODUCTION
3 credits.

Anatomy and physiology of the speech production mechanism; acoustic characteristics of the speech signal.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall, identify, and label the bones and cartilages that support respiration, phonation, and articulation.
Audience: Undergraduate

2. Recall, identify, and label the muscles (origin, insertion, and innervation)used in respiration, phonation, and articulation
Audience: Undergraduate

3. Identify and summarize physiological processes involved in respiration, phonation, and articulation.
Audience: Undergraduate

4. Identify and distinguish basic anatomical structures, including types of tissues and the cranial nerves.
Audience: Undergraduate

5. Explain major anatomical and physiological disorders of respiration, phonation, and articulation in their anatomical sources and behavioral consequences.
Audience: Undergraduate

CS&D 202 – HEARING SCIENCE
3 credits.

Physical acoustics of sound, the anatomy and physiology of the auditory system, and the psychology related to hearing, known as psychoacoustics.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze sound: its characteristics, its propagation, and its fundamental components (frequencies)
Audience: Undergraduate

2. Map out the anatomy and physiology of the human auditory system
Audience: Undergraduate

3. Connect anatomy and physiology to their consequences for human auditory perception
Audience: Undergraduate

4. Describe psychoacoustic concepts such as intensity, pitch, selectivity, and hearing in time and space
Audience: Undergraduate

5. Identify appropriate tools and scientific methods used to study hearing
Audience: Undergraduate

CS&D 210 – NEURAL BASIS OF COMMUNICATION
3 credits.

Considers the neural basis for communicative behaviors. Provides understanding of the anatomy, physiology, and physiopathy of the central and peripheral nervous systems as they relate to normal and disordered communication.
Requisites: Sophomore standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025

CS&D 240 – LANGUAGE DEVELOPMENT IN CHILDREN AND ADOLESCENTS
3 credits.

Covers communication and language development from infancy to adulthood.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

CS&D 303 – SPEECH ACOUSTICS AND PERCEPTION
3 credits.

Detailed examination of the acoustic properties of the speech signal within the source-filter theory of speech production. Theories of speech perception pertaining to phoneme and word recognition are presented and discussed.
Requisites: CS&D 201 and 202
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

CS&D 315 – PHONETICS AND PHONOLOGICAL DEVELOPMENT
3 credits.

Introduction to the international phonetic alphabet and articulatory phonetics. Overview of typical and atypical phonological development.
Requisites: CS&D 201 and 240
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

CS&D 318 – VOICE, CRANIOFACIAL, AND FLUENCY DISORDERS
3 credits.

Provides a basis for understanding the communication problems of individuals with voice disorders, orofacial anomalies, and fluency disorders.
Requisites: CS&D 201, 202, 240 and Junior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and summarize how structures of the head and neck develop to produce communication and swallowing is vital to understanding dysfunction.
Audience: Undergraduate

2. Identify and summarize how craniofacial disorders impair communication and swallowing, thus affecting health, well-being, and quality of life.
Audience: Undergraduate

3. Identify and summarize how craniofacial disorders can be evaluated and treated, improving communication and swallowing and quality of life.
Audience: Undergraduate

4. Identify and summarize how craniofacial disorders are treated with an interdisciplinary team, which includes the patient and their caregivers.
Audience: Undergraduate

5. Identify and summarize how voice is produced and used in communication is vital to understanding dysfunction.
Audience: Undergraduate

6. Identify and summarize how voice disorders impair communication, thus affecting health, well-being, and quality of life.
Audience: Undergraduate

7. Identify and summarize how voice disorders can be evaluated and treated, improving communication and quality of life.
Audience: Undergraduate

8. Identify and summarize how fluency disorders manifest and affect communication is vital to evaluation and treatment.
Audience: Undergraduate

9. Identify and summarize how fluency disorders impact communication, thus health, well-being, and quality of life.
Audience: Undergraduate

10. Identify and summarize how fluency disorders can be evaluated and treated, improving communication and quality of life.
Audience: Undergraduate

11. Identify and summarize the rationale for helping individuals accept dysfluency as part of their daily life is vital to living with stuttering.
Audience: Undergraduate

CS&D 320 – INTRODUCTION TO AUDIOLOGY
3 credits.

Introduction to the profession of Audiology, hearing assessment across the lifespan, ear and hearing disorders, management options.
Requisites: CS&D 202
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

CS&D 371 – PRE-CLINICAL OBSERVATION OF CHILDREN AND ADULTS
3 credits.

Emphasizes clinical writing, group participation, and observation of video and live treatment sessions to develop and improve observational skills related to communication behaviours and clinical teaching.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

CS&D 424 – SIGN LANGUAGE I
2 credits.

Manual alphabet, numbers, and 300 basic signs in both American Sign Language (ASL) and Manually Coded English (MCE) systems. Emphasizes words and sign skill for clinic/schools.
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

CS&D 425 – AUDITORY REHABILITATION
3 credits.

Topics include hearing devices and technology, auditory rehabilitation principles and methods across the lifespan.
Requisites: CS&D 201, 202, and 320
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

CS&D 434 – SIGN LANGUAGE IN HEALTH AND EDUCATION
3 credits.

Interactive practice of ASL vocabulary; integrating principles of ASL facial expression and body language; conceptually accurate signed phrasing.
Requisites: Sophomore standing and CS&D 424
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify Vocabulary
Audience: Undergraduate

2. Differentiate Grammatical Features
Audience: Undergraduate

3. Generalize Conversational and Communication Skills
Audience: Undergraduate

4. Demonstrate Cultural Awareness
Audience: Undergraduate

CS&D 440 – CHILD LANGUAGE DISORDERS, ASSESSMENT AND INTERVENTION
3 credits.

Language differences and disorders in various populations are covered, as well as means of assessment and intervention.
Requisites: CS&D 240
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

CS&D 481 – UNDERGRADUATE JUNIOR HONORS
3 credits.

A writing-intensive introduction to research methodology in Communication Sciences and Disorders, emphasizing participant selection criteria, experimental design and methodology, data collection, and data analysis, leading to the design and future implementation of an independent research project. Activities include written and oral critiques of published research, written summaries of oral research presentations, and composition of an individual research proposal.
Requisites: Satisfied Communications A requirement and declared in an Honors program
Course Designation: Gen Ed - Communication Part B
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025

CS&D 503 – NEURAL MECHANISMS OF SPEECH, HEARING AND LANGUAGE
3 credits.

Basic neuroanatomical and neurophysiological mechanisms underlying the communication process. Neuropathologies and their associated communication disorders.
Requisites: (Declared in Biology or Neurobiology) and (CS&D 210 or PSYCH/ZOOLOGY 523), or declared in Communication Sciences Disorders MS
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CS&D 681 – SENIOR HONORS THESIS
3 credits.

Individual mentored study for seniors completing theses for Honors in the Major as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025

CS&D 682 – SENIOR HONORS THESIS
3 credits.

Individual mentored study for seniors completing theses for Honors in the Major as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2025

CS&D 698 – DIRECTED STUDY
1-6 credits.

Independent study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 1991

CS&D 699 – DIRECTED STUDY
1-6 credits.

Independent study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

CS&D 700 – CLINICAL FOUNDATIONS FOR SPEECH-LANGUAGE PATHOLOGY PRACTICE
1 credit.

Overview of clinical practice procedures and skills with integration of evidence-based practice and practical career guidance.
Requisites: Declared in Communication Sciences and Disorders MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 5 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Describe considerations related to the clinical supervision and practicum.
Audience: Graduate

2. Integrate the ASHA Code of Ethics and evidence-based practice in clinical procedures and skills.
Audience: Graduate

3. Describe the role and importance of interdisciplinary practice in clinical care
Audience: Graduate

4. Define and measure behavior via baseline assessment
Audience: Graduate

5. Develop clinical goals that are specific, measurable, achievable, relevant, and time-bound.
Audience: Graduate

6. Describe procedures for and principles of data collection/progress monitoring, behavior management and shaping, and clinical writing.
Audience: Graduate

7. Apply cultural humility, counseling principles, and trauma-informed care practices to treatment implementation and planning.
Audience: Graduate

8. Describe the clinical fellowship, certification, and licensure process in speech-language pathology.
Audience: Graduate

9. Create materials central to the job search process.
Audience: Graduate

CS&D 701 – AUGMENTATIVE AND ALTERNATIVE COMMUNICATION FOR INDIVIDUALS WITH COMPLEX COMMUNICATION NEEDS
3 credits.

Assessment and treatment across the lifespan of individuals with complex communication needs who require augmentative and alternative communication systems and strategies to support functional communication.
Requisites: Declared in Communication Sciences and Disorders MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define the purposes and role of AAC for individuals with complex communication needs.
Audience: Graduate

2. Discuss the complementary roles of speech and other modes of communication along with AAC systems and strategies.
Audience: Graduate

3. Apply AAC principles from a global perspective, including culturally sensitive practices.
Audience: Graduate

4. Identify, describe, and interpret clinical assessment procedures for individuals who may benefit from AAC.
Audience: Graduate

5. Develop and implement appropriate AAC intervention plans for individuals with complex communication needs.
Audience: Graduate

6. Explain population-specific issues in AAC, with special emphasis on individuals with motor speech disorders.
Audience: Graduate

CS&D 703 – LANGUAGE AND LEARNING DISORDERS OF CHILDREN
3 credits.

Theoretical concepts of symbolic disorders with emphasis on variables which interfere with language learning and function.
Requisites: Declared in Communication Sciences & Disorders MS or Pharmacy DPH
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CS&D 704 – ACQUIRED LANGUAGE AND COGNITIVE-COMMUNICATION DISORDERS IN ADULTS
3 credits.

Intervention for adults with acquired aphasia and cognitive-communication disorders, including principles of evaluation and treatment.
Requisites: Declared in Communication Sciences & Disorders MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

CS&D 705 – ASSESSMENT AND TREATMENT OF MOTOR SPEECH DISORDERS ACROSS THE LIFESPAN
2 credits.

Motor speech disorders with a focus on dysarthria.
Requisites: Declared in Communication Sciences & Disorders MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe methods, strengths, and weakness of the different approaches to characterizing motor speech disorders.
Audience: Graduate

2. Demonstrate knowledge of clinical assessment methods and interpretation for motor speech disorders
Audience: Graduate

3. Define speech intelligibility and discuss strategies for its measurement as well as its clinical uses.
Audience: Graduate

4. Describe the Mayo Clinic classification system for dysarthria and discuss its strengths and weakness as well as contemporary alternative approaches to classification of dysarthria.
Audience: Graduate

5. Describe the unique issues associated with pediatric motor speech disorders relative to adult onset motor speech disorders and how these issues impact assessment and treatment.
Audience: Graduate

6. Develop treatment plans for individuals with motor speech disorders and provide theoretical and evidence-based justification for the selection of treatment targets in the context of the patient's ability profile.
Audience: Graduate

7. Differentiate between impairment-based (restorative/(re)habilitative) objectives / approaches vs. activities and participation focused (compensatory) objectives / approaches.
Audience: Graduate

8. Define population-specific features that impact intervention target selection and develop population-specific treatment plans.
Audience: Graduate

CS&D 706 – MANAGEMENT AND ASSESSMENT OF VOICE DISORDERS
3 credits.

Presents information of the anatomy and physiology of voice production, the various diseases and conditions that cause voice disorders, ways to assess and treat voice disorders across the lifespan.
Requisites: Declared in Communication Sciences & Disorders MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

CS&D 707 – SWALLOWING DISORDERS
2-3 credits.

Presents information on the anatomy, physiology, and neural bases of normal swallowing, the various diseases that can affect swallowing function, the nature of swallowing dysfunction and ways to assess it, and treatment options for patients with swallowing disorders.
Requisites: Declared in Communication Sciences & Disorders MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

CS&D 708 – ASSESSMENT AND MANAGEMENT OF FLUENCY DISORDERS ACROSS THE LIFESPAN
1 credit.

Assessment and treatment of adults and children with fluency disorders including stuttering and cluttering.
Requisites: Declared in Communication Sciences and Disorders MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall features of typical linguistic and speech fluency
Audience: Graduate

2. Explain and demonstrate various fluency treatments including counseling approaches.
Audience: Graduate

3. Thoughtfully respond to tough clinical questions related to fluency disorders
Audience: Graduate

4. Critically evaluate how to assess and treat fluency disorders in children and adults with varying linguistic, dialectical, and cultural backgrounds using quality evidence, resources, and foundational knowledge.
Audience: Graduate

5. Distinguish how treatment and assessment differ for adolescents and adults very young children who clutter or stutter.
Audience: Graduate

6. Differentiate between cluttering and stuttering and methods of assessing and treating both conditions.
Audience: Graduate

7. Identify and describe fluency disorders, their severity, and impact on clients and their family's lives by integrating information from assessments/observations.
Audience: Graduate

8. Analyze the importance of client and family-centered care and how your own background and beliefs may shape your approach to clinical care of persons with fluency disorders.
Audience: Graduate

9. Identify evidence and rationales for or against treatment or assessment techniques/approaches depending on clients' presenting characteristics and/or fluency disorder diagnosis.
Audience: Graduate

10. Describe considerations when assessing and treating a client for/with fluency disorders and associated co-occurring conditions.
Audience: Graduate

CS&D 709 – LANGUAGE DEVELOPMENT AND DISORDERS IN SCHOOL AGE POPULATIONS: SCHOOL METHODS AND PROCEDURES
3 credits.

Reviews contemporary literature relating to the language development and disorders of school age children and adolescents. Emphasis is on a description of disorders, assessment techniques, and school methods and procedures. Addresses UW-Madison Teacher Education Standards; WI Rules and Statutes, Teaching Standards stipulated in PI 34.
Requisites: Declared in Communication Sciences & Disorders MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

CS&D 710 – ACQUIRED LANGUAGE AND COGNITIVE-COMMUNICATION DISORDERS IN ADULTS II
3 credits.

Intervention for adults with acquired cognitive-communication disorders and language, including principles of evaluation and treatment.
Requisites: CS&D 704
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Compare and contrast aphasia and cognitive-communication disorders with regard to definitions, basic characteristics, and principles of assessment and intervention
Audience: Graduate

2. Compare and contrast the characteristics of acquired language and cognitive-communication disorders vs. normal aging effects on communication
Audience: Graduate

3. Describe assessment and intervention principles that apply across acquired communication disorders
Audience: Graduate

4. Demonstrate evidence of critical thinking skills, the ability to be a critical consumer of the research literature, and generate research questions, and professional presentation skills
Audience: Graduate

5. Demonstrate the ability to engage in collaborative and critical group discussion
Audience: Graduate

6. Describe social determinants of health, and the interaction between cultural, linguistic, and sociocultural factors in order to discuss and identify health disparities in persons with acquired language and cognitive-communication disorders.
Audience: Graduate

7. Explain the interaction of cultural and linguistic variables and linguistic diversity on the individuals served, and their caregivers, in order to maximize service delivery for adults with cognitive-communication disorders and their family and care partners.
Audience: Graduate

CS&D 712 – ASSESSMENT AND MANAGEMENT OF SPEECH SOUND DISORDERS IN CHILDREN
3 credits.

Speech sound disorders in children, with an emphasis on articulation and phonological disorders.
Requisites: Declared in Communication Sciences and Disorders MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Describe typical speech sound development
Audience: Graduate

2. Describe underlying differences between articulation disorders, phonological disorders, and apraxia of speech.
Audience: Graduate

3. Explain and demonstrate various articulation and phonological treatment and awareness approaches.
Audience: Graduate

4. Critically evaluate, using quality evidence, resources, and foundational knowledge, assessment and treatment of articulation and phonological disorders in children with varying linguistic, dialectical, and cultural backgrounds.
Audience: Graduate

5. Develop proficiency in administering and interpreting various norm-referenced speech sound disorder assessments.
Audience: Graduate

6. Identify and describe speech sound disorders, their severity, and impact on clients and their family's lives by integrating information from assessments/observations.
Audience: Graduate

7. Identify evidence and rationales for or against treatment or assessment techniques/approaches depending on clients' presenting characteristics and/or speech sound disorder diagnosis.
Audience: Graduate

8. Describe accent modification as an elective service provided by speech-language pathologists.
Audience: Graduate

9. Describe considerations when assessing and treating a child with phonological and articulation disorders and associated co-occurring conditions.
Audience: Graduate

10. Indicate how structural conditions like cleft lip and palate may affect speech sound production and how such conditions may be assessed and treated via speech-language pathologists and other team members.
Audience: Graduate

CS&D 720 – HEARING AND AUDITORY REHABILITATION FOR SPEECH-LANGUAGE PATHOLOGY PRACTICE
2 credits.

Fundamental treatments for addressing the communication needs of individuals with hearing difficulties.
Requisites: Declared in Communication Sciences & Disorders MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Describe how sound is produced and define properties of sound
Audience: Graduate

2. Name and describe internal and external structures and functions of the ear.
Audience: Graduate

3. Define the types of hearing loss and their effects across the lifespan.
Audience: Graduate

4. Explain audiologist's reports and create reports for audiologists to share the patient's advancement in auditory and linguistic skills.
Audience: Graduate

5. Explain characteristics, advantages, and disadvantages of contemporary styles of hearing aids as well as cochlear implants.
Audience: Graduate

6. Compare and contrast communication modes and approaches for facilitating oral language development in deaf children.
Audience: Graduate

7. Describe Assistive Listening Devices
Audience: Graduate

8. Design auditory, speech, and language lesson plans for children with hearing loss based on data gathered from assessments.
Audience: Graduate

9. Develop active listening and counseling skills when treating families of children with hearing loss.
Audience: Graduate

CS&D 752 – CAPSTONE IN COMMUNICATION SCIENCES AND DISORDERS: INTEGRATION OF CLINICAL AND RESEARCH METHODS
3 credits.

Practice using scientific principles in your daily life and clinical practice; Evaluate scientific evidence as disseminated through multiple channels for use in research and clinical practice; and apply parallel modes of thinking in clinical practice and research.
Requisites: Declared in Communication Sciences & Disorders MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

CS&D 790 – PRACTICUM IN COMMUNICATION SCIENCES AND DISORDERS
1-4 credits.

Supervised experience with persons manifesting communicative problems. Evaluation, rehabilitation, and conservation of hearing, language, and speech disorders in various clinical settings.
Requisites: Declared in Communication Sciences & Disorders MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Conduct comprehensive chart review while abiding by the laws governing client confidentiality.
Audience: Graduate

2. Complete comprehensive communication assessments
Audience: Graduate

3. Analyze assessment data to inform development of individualized treatment goals,objectives, activities and materials for weekly therapy sessions.
Audience: Graduate

4. Collect, analyze, and report qualitative and quantitative data from daily sessions to monitor progress and facilitate weekly treatment planning.
Audience: Graduate

5. Generate comprehensive and objectively written or dictated SOAP notes, written treatment plans, and progress reports.
Audience: Graduate

6. Deliver evaluation and intervention services effectively via telepractice.
Audience: Graduate

7. Use developmental norms and typical neurological functioning to guide selection of treatment activities, interventions, and materials.
Audience: Graduate

8. Discuss topics related to diversity, equity, and inclusion.
Audience: Graduate

9. Engage in regular communication with parents/caregivers via spoken communication (i.e., phone or during therapy sessions) or written communication (i.e., emails, written reports, and home practice instructions).
Audience: Graduate

CS&D 791 – SCHOOL PRACTICUM IN COMMUNICATION SCIENCES & DISORDERS
4 credits.

Supervised experience in a public/private school setting with children manifesting speech, language and/or hearing problems. Involves evaluation and management of a variety of communicative disorders, as well as participation in the multi-disciplinary team process.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate proficient performance in the knowledge, skills, and dispositions under all of the Department of Public Instruction's (DPI) teacher standards.
Audience: Graduate

2. Apply policies and procedures to your student teaching experience.
Audience: Graduate

3. Actively participate in seminar activities (e-portfolio, job search, etc.).
Audience: Graduate

CS&D 799 – INDEPENDENT STUDY
1-6 credits.

Independent study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

CS&D 806 – PROFESSIONAL ISSUES: MEDICAL ISSUES
1 credit.

Evaluation and management of persons with communication disorders within a medical setting. Information regarding various medical settings, ethics, functional goals, and documentation (e.g. billing, reporting, etc.).
Requisites: Declared in Audiology Consortial Program with UW-Stevens Point AUD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

CS&D 832 – PEDIATRIC AUDIOLOGY
3 credits.

Study of normal physical, social, cognitive, speech and language and auditory development in children, the causes and effects of childhood hearing loss, hearing screening and the principles of early intervention, and the behavioral and objective assessment of hearing in children.
Requisites: Declared in Audiology Consortial Program with UW-Stevens Point AUD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

CS&D 833 – OCCUPATIONAL AUDIOLOGY
2 credits.

Consideration of principles and issues regarding the effects of noise on people, of federal and state regulation of workplace noise, and of the practical aspects of hearing conservation for those exposed to occupational noise, non-occupational noise, or both.
Requisites: Declared in Audiology Consortial Program with UW-Stevens Point AUD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

CS&D 834 – COUNSELING IN AUDIOLOGY
2 credits.

Study of various roles of counseling in the audiologic rehabilitative process, and developing skills and awareness of building a trusting relationship, reflective practice including examining personal biases, conveying diagnostic information, educating and empowering patients, responding to the social-emotional impact of hearing and balance disorders, and examining how diversity, equity, and inclusion intersect with the counseling process.
Requisites: Declared in Audiology Consortial Program with UW-Stevens Point AUD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CS&D 835 – CLINICAL RESEARCH METHODS
3 credits.

Critical analysis of research in speech-language pathology and audiology including theoretical support, research design, statistical levels of measurement, methods of reporting research results, and drawing conclusions from the results.
Requisites: Declared in Audiology Consortial Program with UW-Stevens Point AUD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CS&D 836 – PEDIATRIC HABILITATION/REHABILITATION
3 credits.

Study of the principles and techniques of intervention used with children with hearing loss, including the selection and fitting of amplification, the effect of hearing loss on speech perception, production, and language, communication and educational options, and the habilitation of communication skills.
Requisites: Declared in Audiology Consortial Program with UW-Stevens Point AUD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

CS&D 845 – THE HUMAN BALANCE SYSTEM: STRUCTURE, ASSESSMENT, AND REHABILITATION
3 credits.

Study of human balance function with emphasis on the vestibular system, including neurophysiology, testing, and rehabilitation. Clinical experience in electronystagmography (ENG) and videonystagmography (VNG), analysis of results, familiarization with rotational and posturography tests, and treatment techniques are included.
Requisites: CS&D 850 and 852
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge of anatomy and physiology related to vestibular and balance function.
Audience: Graduate

2. Demonstrate understanding of assessment purpose and techniques, relation of assessments to anatomy, physiology, and function.
Audience: Graduate

3. Demonstrate understanding of selecting appropriate management recommendations and techniques related to assessments and balance function.
Audience: Graduate

CS&D 846 – THE HUMAN BALANCE SYSTEM: LABORATORY
1 credit.

Training to perform and analyze the results of electronystagmography (ENG) and videonystagmography (VNG) examinations, and practice the canalith repositioning maneuver. May also include observations of rotational and posturography tests.
Requisites: Declared in Audiology Consortial Program with UW-Stevens Point AUD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CS&D 849 – GERIATRIC AUDIOLOGY: DIAGNOSIS AND REHABILITATION
2 credits.

A study of basic theories of aging, anatomical and physiological effects of aging on the auditory and balance systems, and resulting communication difficulties associated with aging. Emphasizes both the diagnostic and rehabilitative challenges in working with elderly patients.
Requisites: Declared in Audiology Consortial Program with UW-Stevens Point AUD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

CS&D 850 – HEARING SCIENCE I: BASIC ACOUSTICS AND PSYCHOACOUSTICS
3 credits.

Study of anatomy and physiology of the human auditory system, with an emphasis on the peripheral system. Basic concepts in psychoacoustics are discussed with reference to the normal and pathological auditory systems.
Requisites: Declared in Audiology Consortial Program with UW-Stevens Point AUD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CS&D 852 – HEARING ASSESSMENT
3 credits.

Learn concepts and procedures necessary for a basic hearing evaluation, including otoscopy, immittance, pure tone and speech audiometry. Take a case history, document and report results, and communicate results to patients. Develop beginning-level abilities to rule out medical disorders and make appropriate referrals.
Requisites: Declared in Audiology Consortial Program with UW-Stevens Point AUD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize safe and unsafe practices related to hearing assessment, particularly when performing otoscopy.
Audience: Graduate

2. Operate hearing assessment equipment with professionalism, confidence and competence including troubleshooting and seeking guidance from available resources and user guides.
Audience: Graduate

3. Explain the components and underlying anatomy, physiology, pathology and theories related to comprehensive diagnostic hearing evaluation of a diverse population.
Audience: Graduate

4. Solicit and evaluate a patient's case history, hearing handicap and other factors that may affect their hearing and/or the hearing assessment process, performing the components of a comprehensive diagnostic hearing evaluation of a diverse population with accuracy and efficiency.
Audience: Graduate

5. Participate in discussions and reflect on topics of diversity, equity, and inclusion.
Audience: Graduate

CS&D 853 – HEARING ASSESSMENT LABORATORY
1 credit.

Focuses on procedures for tests of auditory function, the importance of understanding auditory function and available evidence as bases for test selections and the importance of realizing the objective(s) forming the bases of diagnostic procedures.
Requisites: Declared in Audiology Consortial Program with UW-Stevens Point AUD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CS&D 854 – ELECTROACOUSTICS AND INSTRUMENT CALIBRATION
2 credits.

Systematic review of physical concepts of acoustics and electronics underpinning the practice of audiology, as well as formally adopted standards by which clinical environments, instruments and procedures are calibrated.
Requisites: Declared in Audiology Consortial Program with UW-Stevens Point AUD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CS&D 855 – ELECTROACOUSTICS AND CALIBRATION LABORATORY
1 credit.

Laboratory experience in electroacoustic measurement and calibration of examination spaces, test equipment, and amplification systems pertinent to the practice of audiology.
Requisites: Declared in Audiology Consortial Program with UW-Stevens Point AUD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CS&D 856 – AMPLIFICATION SYSTEMS I
3 credits.

Introduction to hearing aids. Components and signal processing features of hearing aids, electroacoustic measurement and verification of hearing aids in couplers and real ears, earmold and earshell acoustics, assessing patient needs and determining hearing aid candidacy, using prescriptive fitting strategies, and hearing aid repair and troubleshooting.
Requisites: Declared in Audiology Consortial Program with UW-Stevens Point AUD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Determine, and explain the rationale for, appropriate stimulus choices for electroacoustic testing of hearing aids.
Audience: Graduate

2. Accurately interpret results of electroacoustic testing to determine if hearing aids meet manufacturer specifications, to determine if features are working properly, and to understand the actual measured effects of programming adjustments.
Audience: Graduate

3. Interpret real-ear measurements (REMs), troubleshoot problems with REM measurement, and verify hearing aid features.
Audience: Graduate

4. Describe methods to appropriately fit, program, adjust, and troubleshoot compression signal processing in hearing aids.
Audience: Graduate

5. Describe the main characteristics of essential HA components and other signal processing features, such as directionality, noise reduction, AI, feedback management, connectivity, and other noise management features.
Audience: Graduate

6. Determine each individual's concerns and needs (hearing aid candidacy), and select appropriate amplification for sample/hypothetical patients.
Audience: Graduate

7. Determine and justify appropriate frequency-gain and output characteristics of hearing aids based on evidence-based hearing aid prescriptive procedures.
Audience: Graduate

8. Select and justify an appropriate earmold/earshell/dome, tubing, and venting configuration for hypothetical patients that allows the necessary gain and minimizes the risk of feedback.
Audience: Graduate

CS&D 857 – LABORATORY IN AMPLIFICATION SYSTEMS I
1 credit.

Testing, fitting, and repairing hearing aids, performing basic hearing aid tests and repairs, proper cerumen removal and ear impression atechniques, and using appropriate strategies in fitting. Electroacoustic evaluation and use of probe microphone measures in hearing aid fitting.
Requisites: Declared in Audiology Consortial Program with UW-Stevens Point AUD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

CS&D 858 – PHYSIOLOGICAL ASSESSMENT IN AUDIOLOGY I
2 credits.

Study of concepts and procedures in physiological assessment of the auditory system, with emphasis on otoacoustic emissions and auditory brainstem responses. Clinical applications and case studies integrate these recordings with behavioral assessment of the auditory system.
Requisites: Declared in Audiology Consortial Program with UW-Stevens Point AUD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

CS&D 859 – LABORATORY IN PHYSIOLOGICAL ASSESSMENT OF THE AUDITORY SYSTEM I
1 credit.

Laboratory experience in the procedures and interpretation of physiological assessment of the auditory system, wih the major emphasis on otoacoustic emissions and the auditory brainstem response.
Requisites: Declared in Audiology Consortial Program with UW-Stevens Point AUD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

CS&D 860 – PHYSIOLOGICAL ASSESSMENT IN AUDIOLOGY II
2 credits.

Advanced study of physiological measures used by audiologists in threshold and diagnostic evaluations, including acoustic immittance, middle and long latency auditory evoked potentials, and cognitive auditory potentials.
Requisites: Declared in Audiology Consortial Program with UW-Stevens Point AUD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CS&D 861 – LABORATORY IN PHYSIOLOGICAL ASSESSMENT OF THE AUDITORY SYSTEM II
1 credit.

Laboratory experience with hands-on recording and interpreting advanced physiological measures used by audiologists for threshold and diagnostic evaluations. Tests include advanced acoustic immittance, middle and long latency auditory evoked potentials, and cognitive auditory potentials. Learn to administer and interpret these tests and integrate the findings to form an overall assessment of clinical patients.
Requisites: Declared in Audiology Consortial Program with UW-Stevens Point AUD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CS&D 862 – AUDITORY AND VESTIBULAR PATHOLOGIES II
3 credits.

Major disorders of the auditory and vestibular systems, with an emphasis on differential diagnosis of disorders of the endorgans and neural systems and multisystem disorders. Casual factors, treatment, prognosis, and case studies are included.
Requisites: Declared in Audiology Consortial Program with UW-Stevens Point AUD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

CS&D 863 – IMPLANTABLE AUDITORY PROSTHESES
3 credits.

The audiological management of severe to profound hearing loss using implantable auditory prostheses. Focuses on cochlear implants, and provides an introduction to the auditory brainstem implant.
Requisites: Declared in Audiology Consortial Program with UW-Stevens Point AUD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe different implantable auditory prostheses
Audience: Graduate

2. Understand history, background, development of internal and external components.
Audience: Graduate

3. Understand patient candidacy and outcomes.
Audience: Graduate

4. Demonstrate advanced understanding of design of auditory implantable devices and the philosophies underlying clinical programming approaches.
Audience: Graduate

5. Demonstrate advanced knowledge of appropriate use of electrophysiologic measurements in clinical settings and similar objective measures in implantable device programming .
Audience: Graduate

6. Demonstrate understanding of a topic in the field in preparation for a professional presentation
Audience: Graduate

CS&D 865 – PRACTICE MANAGEMENT
2 credits.

Consideration of non-profit and for-profit practice models with emphasis on organizational structure, legal and tax implications, financial performance, policies and practices of personnel management, marketing strategies, risk management and professional ethics.
Requisites: Declared in Audiology Consortial Program with UW-Stevens Point AUD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

CS&D 866 – AMPLIFICATION SYSTEMS II
2 credits.

Strategies for fitting hearing aids, including selection and recommendation, use of prescription gain formulas, and verification of gain. Considerations in geriatric and pediatric hearing aid fitting and ethical issues. Basic techniques in determining patient satisfaction with hearing aids.
Requisites: Declared in Audiology Consortial Program with UW-Stevens Point AUD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

CS&D 867 – SCHOOL METHODS FOR AUDIOLOGISTS
1 credit.

Designed to fulfill Wisconsin's Department of Public Instruction (DPI) licensing requirements for audiologists. Application of knowledge and skills in assessment and intervention of hearing related disorders to the public school setting.
Requisites: Declared in Audiology Consortial Program with UW-Stevens Point AUD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

CS&D 891 – CLERKSHIP IN AUDIOLOGY I
1-3 credits.

Hands-on experience focusing on the acquisition of beginning skills in both screening and diagnostic audiology. It provides initial training in the use of audiometric instruments and software, patient interactions, and reporting procedures.
Requisites: Declared in Audiology Consortial Program with UW-Stevens Point AUD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

CS&D 892 – CLERKSHIP IN AUDIOLOGY II
1-3 credits.

Provides the continued development of skills in the assessment of the hearing and implementation of treatment plans across all ages. It also may include assessment of vestibular and peripheral and central auditory systems.
Requisites: CS&D 891
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

CS&D 893 – CLERKSHIP IN AUDIOLOGY III
1-4 credits.

Provides opportunities to practice skills in settings outside of the university clinics. The goal is to advance all skills to the developing level and perform assessments and treatment with less supervision.
Requisites: CS&D 892
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

CS&D 894 – EXTERNSHIP IN AUDIOLOGY
2-4 credits.

Continue development of skills in assessment of hearing and implementation of treatment plans across all ages. Hone skills to the mastery level and perform competently with a minimum of supervision.
Requisites: CS&D 893
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

CS&D 899 – CAPSTONE STUDY IN AUDIOLOGY
1-3 credits.

Independent work on a capstone project under the supervision of a faculty member.
Requisites: Declared in Audiology Consortial Program with UW-Stevens Point AUD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

CS&D 900 – SEMINAR-SPEECH SCIENCE
2-3 credits.

Focus varies with staff. Various aspects of physiological and acoustic phonetics and of speech perception.
Requisites: Declared in Communication Sciences and Disorders MS or PhD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

CS&D 921 – SEMINAR-PROBLEMS IN AUDIOLOGY
1-3 credits.

Current interests in areas of auditory evaluation, pathology or rehabilitation.
Requisites: Declared in Audiology Consortial Program with UW-Stevens Point AUD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

CS&D 990 – RESEARCH AND THESIS
1-12 credits.

Advanced level mentored reading and research for students with dissertator status.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

CS&D 999 – INDEPENDENT STUDIES
1-3 credits.

Advanced level mentored reading and research for students with dissertator status.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

COMMUNITY AND ENVIRONMENTAL SOCIOLOGY (C&E SOC)

C&E SOC/AGROECOL/ENTOM/ENVIR ST 103 – AGROECOLOGY: AN INTRODUCTION TO THE ECOLOGY OF FOOD AND AGRICULTURE
3 credits.

Agroecology has blossomed across the world in recent decades as not only a science, but also a practice, and a movement. Employ the multiple disciplines and perspectives that Agroecology affords to analyze our agricultural and food systems within a broader context of dynamic social and ecological relationships.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain and analyze basic biophysical processes of agricultural ecosystems and the challenges and benefits of various management systems
Audience: Undergraduate

2. Interrogate social, economic, and political structures underlying agriculture at local, regional, national, and global scales
Audience: Undergraduate

3. Describe how they personally connect to local to global agricultural landscape as humans, ecological actors, food and fuel consumers, and thoughtful citizens
Audience: Undergraduate

C&E SOC/SOC 140 – INTRODUCTION TO COMMUNITY AND ENVIRONMENTAL SOCIOLOGY
4 credits.

Sociological examination of the linkages between the social and biophysical dimensions of the environment. Key topics include community organizing, local food systems, energy transitions, environmental justice, resource dependence, and sustainable development.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand how social science arguments are constructed and evaluated.
Audience: Undergraduate

2. Learn and practice core elements of sociological reasoning, including making connections between a social phenomenon and its larger context; evaluating the "situated" nature of knowledge; and recognizing the paradigms, or knowledge frameworks, that structure our thinking about social issues.
Audience: Undergraduate

3. Gain experience critically evaluating various sources of knowledge and data about social issues.
Audience: Undergraduate

4. Become familiar with key concepts such as: "community," "development," "growth," "economic security," "environmental justice," "sustainability," "globalization," and "neoliberalism;" learn how these concepts are involved in contemporary debates about what is fair, just, and desirable for the places where we live and the world as a whole.
Audience: Undergraduate

5. Become familiar with important actors in the social processes that affect our communities and environment, including government, corporations, transnational institutions and social movements; also learn about historical shifts in the relationships among these actors.
Audience: Undergraduate

6. Develop skills and frameworks for analyzing how social processes disparately affect different groups of people.
Audience: Undergraduate

7. Make connections between sociological theories and concepts and your own experiences.
Audience: Undergraduate

C&E SOC/SOC 210 — SURVEY OF SOCIOLOGY
3-4 credits.

Introduction to the field of American sociology, its subfields and specialized areas of research, theoretical traditions and research methods.
Requisites: Satisfied Communications A requirement. Not open to students with credit for SOC 181 or C&E SOC/SOC 211
Course Designation: Gen Ed - Communication Part B
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

C&E SOC/SOC 211 — THE SOCIOLOGICAL ENTERPRISE
3 credits.

Basic principles and definitions of sociology. Readings and discussion of the perspectives of sociology, the individual and society, groups and social process, stratification, organizations and power, demography, and social change.
Requisites: Not open to students with credit for SOC 181 or C&E SOC/SOC 210
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze and discuss what sociologists (and scholars in "neighboring" disciplines) have written.
Audience: Undergraduate

2. Perform some forms of sociological research and writing.
Audience: Undergraduate

C&E SOC/SOC 222 — FOOD, CULTURE, AND SOCIETY
3 credits.

Social and cultural dimensions of food production and consumption. Uses historical and cross-cultural analytical frameworks. Treats a wide variety of topics including indigenous, racial, and ethnic foodways, industrialized food systems, sustainable agriculture, movements for food justice.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate knowledge about how the system of food production, distribution and consumption in the United States is organized, how it has changed, and how it is changing.
Audience: Undergraduate

2. Understand the ways that technologies, globalization, and social movements have affected the food system.
Audience: Undergraduate

3. Present clearly written, persuasive arguments in response to academic questions.
Audience: Undergraduate

4. Prepare for and present in oral discussion by offering points with evidence.
Audience: Undergraduate

5. Recognize, challenge and avoid false analogies, overgeneralizations, and other logical fallacies.
Audience: Undergraduate

C&E SOC/SOC 245 – TECHNOLOGY AND SOCIETY
3 credits.

Covers technology, the social forces shaping its development, and social impacts of its adoption. Examine one's assumptions about technology and its relationship to society.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Recognize and apply key sociological concepts for the analysis of technology, technological change, and technological systems
Audience: Undergraduate

2. Critically evaluate and apply concepts and theory from existing Science and Technology Studies literature
Audience: Undergraduate

3. Interpret, explain, and critique both contemporary and historical technological issues and controversies
Audience: Undergraduate

4. Demonstrate verbal and written communication skills that are applicable in a professional setting
Audience: Undergraduate

5. Frame and conduct social science research
Audience: Undergraduate

6. Ethically apply research methods, such as qualitative, quantitative, historical, interdisciplinary, participatory, and action approaches, and evaluate findings
Audience: Undergraduate

C&E SOC/F&W ECOL/SOC 248 – ENVIRONMENT, NATURAL RESOURCES, AND SOCIETY
3 credits.

Introduces the concerns and principles of sociology through examination of human interaction with the natural environment. Places environmental issues such as resource depletion, population growth, food production, environmental regulation, and sustainability in national and global perspectives.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe and critique the role of social conditions and social change in shaping equities and disparities in environment, health, and community
Audience: Undergraduate

2. Place an understanding of local social conditions and change in the global context of rural and urban life, including political, ecological, economic, geographic, historical, and cultural dimensions
Audience: Undergraduate

3. Frame and conduct social science research
Audience: Undergraduate

4. Ethically apply research methods, such as qualitative, quantitative, historical, interdisciplinary, participatory, and action approaches, and evaluate findings
Audience: Undergraduate

5. Demonstrate leadership and collaboration skills for working with people from a diversity of backgrounds in professional and ethical ways that enable beneficial and regenerative relationships
Audience: Undergraduate

6. Demonstrate advanced verbal and written communication skills that are applicable in a professional setting
Audience: Undergraduate

7. Articulate the complex and intricate relationships between people and the planet by exploring the many stories that bind these two together in the US
Audience: Undergraduate

8. Describe how these social ecological relationships produce unequal health outcomes, life chances, and opportunities
Audience: Undergraduate

9. Identify the values and principles of environmental movements
Audience: Undergraduate

10. Evaluate how the climate change crisis exacerbates urgent and contemporary social problems
Audience: Undergraduate

11. Apply analytical skills in spatial, political economic, culture, and critical environmental analysis
Audience: Undergraduate

C&E SOC/HISTORY/POLI SCI/SOC 259 — FORWARD? THE WISCONSIN IDEA, PAST AND PRESENT
1-3 credits.

Engage in ongoing reflection and dialogue on the Wisconsin Idea and how it informs the mission of the University of Wisconsin. Consider the Wisconsin Idea as it has developed since its beginnings, with a focus on what it means today and what it can mean in the future.
Requisites: Junior or senior standing only
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023
Learning Outcomes: 1. Listen respectfully to different opinions, respond rationally rather than emotionally, make reasoned arguments.
Audience: Undergraduate

2. Respond to another point of view with research and substantive comments or questions, present and support your own position, and thus engage in a wider conversation.
Audience: Undergraduate

3. Consider a specific question ("What makes an idea a Wisconsin Idea...?) and present a reasoned argument supporting the conclusion. (1-credit students)
Audience: Undergraduate

4. Deeply analyze an argument and respond by applying it to the student's own educational strengths and weaknesses. (3-credit students)
Audience: Undergraduate

5. Use course content to explain a controversial issue and suggest a course of action to address it, stating reasons, and anticipating counterarguments. (3-credit students)
Audience: Undergraduate

C&E SOC/AFROAMER/ANTHRO/GEOG/HISTORY/LACIS/ POLI SCI/SOC/SPANISH 260 — LATIN AMERICA: AN INTRODUCTION
3-4 credits.

Latin American culture and society from an interdisciplinary perspective; historical developments from pre-Columbian times to the present; political movements; economic problems; social change; ecology in tropical Latin America; legal systems; literature and the arts; cultural contrasts involving the US and Latin America; land reform; labor movements; capitalism, socialism, imperialism; mass media.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Analyze Latin American culture and society from an interdisciplinary perspective.
Audience: Undergraduate

2. Examine historical developments from pre-Columbian times to the present.
Audience: Undergraduate

3. Identify political movements, economic problems, social change, and ecology in Latin America.
Audience: Undergraduate

C&E SOC 289 — HONORS INDEPENDENT STUDY
1-2 credits.

Research work for Honors students under direct guidance of a faculty member in an area of Community and Environmental Sociology. Students are responsible for arranging the work and credits with the supervising instructor.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Develop critical, analytical, and independent thinking skills
Audience: Undergraduate

2. Apply the scientific method and engage in constructive problem solving

Audience: Undergraduate

3. Demonstrate application of research skills and methodologies
Audience: Undergraduate

4. Effectively communicate findings
Audience: Undergraduate

C&E SOC 299 – INDEPENDENT STUDY
1-3 credits.

Research work for students under direct guidance of a faculty member in an area of Community and Environmental Sociology. Students are responsible for arranging the work and credits with the supervising instructor.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Develop critical, analytical, and independent thinking skills
Audience: Undergraduate

2. Apply the scientific method and engage in constructive problem solving

Audience: Undergraduate

3. Demonstrate application of research skills and methodologies
Audience: Undergraduate

4. Effectively communicate findings
Audience: Undergraduate

C&E SOC/A A E/SOC 340 – ISSUES IN FOOD SYSTEMS
3-4 credits.

With primary emphasis on the U.S., the course covers social, economic and biological dimensions of food systems. Using classroom and community experience, the course combines academic approaches with practitioner knowledge. A community project is required.
Requisites: SOC/C&E SOC 140, SOC 181, 210, or 211
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze the community food system from production, distribution, and consumption including cultural, environmental and social factors that influence food options.
Audience: Undergraduate

2. Investigate strategies communities engage to access nutrient-rich foods, including food justice/security/sovereignty movements
Audience: Undergraduate

3. Develop and conduct survey research and family oral histories to understand the significance of cultural food ways
Audience: Undergraduate

C&E SOC/SOC 341 – LABOR IN GLOBAL FOOD SYSTEMS
3 credits.

Overview of our current food system and how new technologies and globalization are reshaping it, focusing especially on the implications for workers throughout the food chain. Learn about the ways that social movements are working to reshape commodity chains by promoting local production, fair trade, and labor justice.
Requisites: 3 credits in C&E SOC or SOC
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Describe food commodity chains, the workers at the chains' nodes, and the systems of power that govern the chain
Audience: Undergraduate

2. Place an understanding of local social conditions and change in the global context of rural and urban life, including political, ecological, economic, geographic, historical, and cultural dimensions of the food system
Audience: Undergraduate

3. Frame independent research projects based on sociological articles
Audience: Undergraduate

4. Apply interview methodologies to gain knowledge of a type of food system labor
Audience: Undergraduate

5. Ethically apply research methods, such as qualitative, quantitative, historical, interdisciplinary, participatory, and action approaches, and evaluate findings
Audience: Undergraduate

6. Demonstrate excellent verbal and written communication skills that are applicable in a professional setting
Audience: Undergraduate

C&E SOC/SOC 343 – SOCIOLOGY OF HEALTH AND MEDICINE
3 credits.

Social, cultural, and structural factors in shaping definitions of health and illness, distribution of disparate health outcomes, and the organization of health professions and healthcare.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand how concepts such as "disease" and "health" are socially constructed.
Audience: Undergraduate

2. Identify and describe how social contexts (e.g. race and gender) shape health outcomes and structure disparities.
Audience: Undergraduate

3. Identify the social and cultural shifts in medicine and healthcare.
Audience: Undergraduate

4. Critically analyze their own experiences with health, illness, and medicine using course material.
Audience: Undergraduate

5. Demonstrate understanding and engagement with course material and produce thoughtful and compelling arguments in assigned work.
Audience: Undergraduate

C&E SOC/GEN&WS/SOC 347 – GENDER AND SEXUALITY IN RURAL PLACES
3 credits.

A sociological examination of the influence of rurality and place on gender and sexual performances, norms, and identities in rural geographies.
Requisites: GEN&WS 101, 102, 103, C&E SOC/SOC 140, 210, 211, or SOC 181
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Explain the role of social organization and social change in shaping equities and disparities in environment, health, and community.
Audience: Undergraduate

2. Describe how rurality and place influence gender norms and performance in private and public spheres.
Audience: Undergraduate

3. Critique ideas related to gender, sexuality, and rurality, including anti-urbanism, metronormativity, the rural idyll, natural/unnatural, and visibility politics.
Audience: Undergraduate

4. Assess how discourses and ideas about gender and sexuality influence dominant and minority groups.
Audience: Undergraduate

C&E SOC/SOC 357 – METHODS OF SOCIOLOGICAL INQUIRY
3-4 credits.

Scientific methods in the study of society; procedures for testing sociological theory: problem definition, hypothesis construction, collection and evaluation of data. Practical experience conducting small research projects.
Requisites: Sophomore standing or (SOC 181, SOC/C&E SOC 140, 210, or 211)
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

C&E SOC/SOC 360 – STATISTICS FOR SOCIOLOGISTS I
4 credits.

Presentation of sociological data; descriptive statistics; probability theory and statistical inference; estimation and tests of hypotheses; regression and correlation and the analysis of contingency tables.
Requisites: Satisfied Quantitative Reasoning (QR) A requirement
Course Designation: Gen Ed - Quantitative Reasoning Part B
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use the methods of quantitative social research to assemble, describe, and draw inference from quantitative data.
Audience: Undergraduate

2. Execute and present elementary statistical analyses.
Audience: Undergraduate

3. Critically evaluate statistical evidence in both academic and popular settings.
Audience: Undergraduate

C&E SOC/SOC 361 – STATISTICS FOR SOCIOLOGISTS II
4 credits.

Applied linear regression modeling for social scientists. Bivariate and multiple regression, dummy variables, interactions, nonlinear relationships, indirect effects and omitted variable bias, outliers, heteroskedasticity, and mulitcollinearity; associated diagnostics and corrections. Use of Stata and/or SAS for dataset creation and analysis.
Requisites: C&E SOC/SOC 360, ECON 310, PSYCH 210, GEOG 360, MATH/STAT 310, STAT 301, or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Honors - Accelerated Honors (!)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Prepare oneself to conduct one's own research using linear and logistic regression analysis and secondary data sources, at a level befitting beginning research assistants on faculty research projects.

Audience: Both Grad & Undergrad

2. Find, download, and format social science data suitable for analysis.
Audience: Both Grad & Undergrad

3. Make, interpret, and critique advanced specifications involving dummy variables, interactions, and nonlinear transformations.
Audience: Both Grad & Undergrad

4. Use diagnostics for various threats to model fit and interpretation.
Audience: Both Grad & Undergrad

5. Establish a solid foundation for studying the many methods that are extensions of linear regression (including logistic regression).
Audience: Both Grad & Undergrad

6. Achieve a deep understanding of ordinary least squares regression (OLS).
Audience: Both Grad & Undergrad

7. Become expert at presenting quantitative results from OLS models in a substantively meaningful and accessible way.
Audience: Both Grad & Undergrad

8. Understand and critique the ways in which OLS is used in the field.
Audience: Both Grad & Undergrad

9. Prepare oneself to write an article-length description of an independent research project that uses linear or logistic regression.
Audience: Graduate

C&E SOC/SOC 365 — DATA MANAGEMENT FOR SOCIAL SCIENCE RESEARCH
3-4 credits.

Understanding the structure of different types of social scientific data, techniques for data evaluation, cleaning, documentation and visual display, merging data from multiple sources, restructuring data for analysis.
Requisites: C&E SOC/SOC 360, PSYCH 210, STAT 301, ECON 310, MATH/STAT 310, or GEOG 360
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

C&E SOC/POP HLTH 370 — INTRODUCTION TO PUBLIC HEALTH
3 credits.

Introduction to the principles of public health. Using local and global health problems as examples, introduces epidemiology, evidence-based public health practice, evaluation, and communication. Covers the major subject domains of public health including infectious and chronic disease, environmental health, injuries and accidents, and health care systems. Key theoretical models and empirical approaches of public health are discussed.
Requisites: Sophomore standing
Course Designation: Breadth - Either Social Science or Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Define public health and its core functions
Audience: Undergraduate

2. Describe the difference between individual- and population-based strategies for improving health, including primary, secondary, and tertiary prevention approaches
Audience: Undergraduate

3. Describe major causes and trends in morbidity and mortality in the U.S. and globally
Audience: Undergraduate

4. Demonstrate knowledge of the 5-step public health approach (define the problem, find the causes, develop effective programs, implement programs, and evaluate impact)
Audience: Undergraduate

5. Describe the challenges and opportunities for evidence-based public health practice, focusing on health equity and social justice
Audience: Undergraduate

C&E SOC 375 — SPECIAL TOPICS
1-4 credits.

Specialized topics in community and environmental sociology. In-depth investigation into the sociological aspects of a variety of community and environmental issues, such as globalization, climate change, social and environmental sustainability, technology.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

C&E SOC 399 — COORDINATIVE INTERNSHIP/COOPERATIVE EDUCATION
1-8 credits.

An internship under guidance of a faculty or instructional academic staff member in Community and Environmental Sociology and internship site supervisor. Students are responsible for arranging the work and credits with the UW-Madison instructor and the internship site supervisor.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Workplace - Workplace Experience Course
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply concepts learned in coursework to authentic professional situations
Audience: Undergraduate

2. Demonstrate professional skills appropriate for the field
Audience: Undergraduate

3. Identify and reflect on how concepts learned in coursework apply to specific work settings and situations
Audience: Undergraduate

C&E SOC 400 — STUDY ABROAD IN COMMUNITY AND ENVIRONMENTAL SOCIOLOGY
1-6 credits.

Provides an area equivalency for courses taken on Madison Study Abroad Programs that do not equate to existing UW courses. Enrollment in a UW-Madison resident study abroad program
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions

C&E SOC/CURRIC/ENVIR ST 405 – EDUCATION FOR SUSTAINABLE COMMUNITIES
3 credits.

How can education - for children and adults, in school and out - help to address crucial environmental and social sustainability challenges? What ideas and strategies have guided environmental and sustainability education over the years? What can individual people do to address environmental challenges, and what can only be accomplished by people working together? What does sustainability have to do with justice - and vice versa? Examine the principles behind behavior change and empowerment, community action and whole-scale social reform. Drawing on research and theory from across the social sciences, we will explore the uncertain relationship between education and advocacy, seeking the means by which education can have the greatest impact without compromising the core ideals of a democratic society.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain and apply the complicated and controversial idea of sustainability
Audience: Undergraduate

2. Articulate a clear definition of education that goes beyond schools and classrooms
Audience: Undergraduate

3. Analyze factors that influence individuals' decisions about sustainability-related action
Audience: Undergraduate

4. Describe how social structure and social context shapes sustainability-related action, and describe how some factors relevant to sustainability can only be seen and changed at the community level
Audience: Undergraduate

5. Identify educational strategies that can be used to make change at the individual and community level, and understand the advantages and limitations of different educational perspectives
Audience: Undergraduate

6. Explain how and why some environmental projects come at the expense of poor, minoritized and otherwise vulnerable groups of people
Audience: Undergraduate

C&E SOC/ENVIR ST/GEOG 434 – PEOPLE, WILDLIFE AND LANDSCAPES
3 credits.

Explores the relationship between humans and wildlife amid diverse landscapes, both historic and contemporary, tropical and temperate. Investigates how humans shape wild animal populations by modifying physical environments, and by hunting, domesticating and introducing species.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

C&E SOC/SOC 475 – CLASSICAL SOCIOLOGICAL THEORY
3 credits.

Classical theory; Marx, Durkheim, Weber, and other important classical theorists and schools of thought.
Requisites: Sophomore standing or (SOC 181, SOC/C&E SOC 140, 210, or 211)
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

C&E SOC 500 – CAPSTONE EXPERIENCE
3 credits.

A capstone experience involving the application of sociological concepts and methods to concrete social and environmental problems. Involves working in teams, engaging in problems using approaches such as service learning, community based research, and interdisciplinary approaches.
Requisites: Senior standing
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Critically analyze and apply sociological theories and concepts to understand the interplay between community and environmental issues
Audience: Undergraduate

2. Design and execute group research projects that integrate sociological frameworks, data collection, and interdisciplinary insights
Audience: Undergraduate

3. Present research findings clearly and persuasively through oral presentations, written reports, and active participation in discussions
Audience: Undergraduate

4. Evaluate the ethical implications of societal and environmental challenges, incorporating diverse perspectives like feminist and Indigenous viewpoints
Audience: Undergraduate

5. Reflect on personal learning, collaboration, and the application of sociological insights to real-world problems and civic responsibilities
Audience: Undergraduate

C&E SOC/SOC 532 – HEALTH CARE ISSUES FOR INDIVIDUALS, FAMILIES AND SOCIETY
3 credits.

Issues related to health and health care delivery in our society. Topics include social, cultural and ethical influences on consumer definitions of health and use of medical care, and on the health care system's responses.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2021

C&E SOC/SOC 533 – PUBLIC HEALTH IN RURAL & URBAN COMMUNITIES
3 credits.

Sociological approaches to community, rural, and public health. Examines epidemiological evidence for and policy solutions to health issues that impact vulnerable populations in diverse geographic and social settings. Topics include mental health, environmental and occupational health, preventive care, substance abuse.
Requisites: SOC 181, SOC/C&E SOC 140, 210, or 211
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe and critique the role of social conditions and social change in shaping equities and disparities in environment, health, and community
Audience: Undergraduate

2. Place an understanding of local social conditions and change in the context of rural and urban life and describe how these relate to health outcomes at the population level
Audience: Undergraduate

3. Demonstrate leadership and collaboration skills for working with people from a diversity of background
Audience: Undergraduate

4. Demonstrate advanced verbal and written communication skills that are applicable in a professional setting
Audience: Undergraduate

5. Identify and analyze a particular public health problem in detail and select and evaluate the interventions that have been undertaken to ameliorate that problem, assessing those interventions' strengths and weaknesses
Audience: Undergraduate

C&E SOC/ENVIR ST/SOC 540 – SOCIOLOGY OF INTERNATIONAL DEVELOPMENT, ENVIRONMENT, AND SUSTAINABILITY
3 credits.

Sociological analysis of relationships among economic growth, environmental sustainability and social justice in the developing world. Considers frameworks for understanding poverty, hunger, educational and technological inequality, and the impact of globalization on prospects for socially and ecologically sustainable development.
Requisites: SOC 181, SOC/C&E SOC 140, 210, or 211
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Critically reflect on the complex meanings and basic histories of international development, globalization, and environment
Audience: Undergraduate

2. Critically reflect on the history of sustainability and how it mediates development, globalization, and environmental politics
Audience: Undergraduate

3. Demonstrate a deep understanding the sociology of international development, environment, and globalization
Audience: Undergraduate

4. Use social theoretical concepts for speaking about development, globalization, and environment
Audience: Undergraduate

C&E SOC/SOC 541 – ENVIRONMENTAL STEWARDSHIP AND SOCIAL JUSTICE
3 credits.

Application of sociological theory and analysis to environmental issues. Examines the ways in which environmental stewardship and conflict are embedded within broader cultural, social, and political contexts.
Requisites: SOC 181, SOC/C&E SOC 140, 210, 211, F&W ECOL/ C&E SOC/SOC 248, ENVIR ST 112, 113, GEOG/ENVIR ST 139, 337, 339, GEOG 101, or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe and critique the role of social conditions and social change in shaping equities and disparities in environment, health, and community
Audience: Both Grad & Undergrad

2. Place an understanding of local social conditions and change in the global context of rural and urban life, including political, ecological, economic, geographic, historical, and cultural dimensions
Audience: Both Grad & Undergrad

3. Frame and conduct social science research
Audience: Both Grad & Undergrad

4. Demonstrate the ability to ethically apply research methods, such as qualitative, quantitative, historical, interdisciplinary, participatory, and action approaches, and to evaluate findings
Audience: Both Grad & Undergrad

5. Demonstrate leadership and collaboration skills for working with people from a diversity of backgrounds in professional and ethical ways that enable beneficial and regenerative relationships
Audience: Both Grad & Undergrad

6. Demonstrate advanced verbal and written communication skills that are applicable in a professional setting
Audience: Both Grad & Undergrad

7. Critically and creatively evaluate environmental and social justice through a diversity of perspectives about knowledge, culture, and land management practices
Audience: Both Grad & Undergrad

8. Apply collaborative skills through writing workshops and weekly discussions
Audience: Both Grad & Undergrad

9. Identify the strengths, limitations, and possibilities of anti-racism, anti-colonial, and other justice-oriented approaches in the field of environmental stewardship, including their tensions with dominant discourses about sustainability, land management, and science and technology
Audience: Both Grad & Undergrad

10. Identify the practical challenges of universal values and perspectives, specifically how they impact people across the world
Audience: Both Grad & Undergrad

11. Unearth the hidden roots and connections across differently situated people and places
Audience: Both Grad & Undergrad

C&E SOC/MED HIST/PHILOS 565 – THE ETHICS OF MODERN BIOTECHNOLOGY
3 credits.

An in-depth study of a selection of ethical issues arising from the application of modern biotechnology to microorganisms, plants, non-human animals, and human beings. We will aim at a discussion that is informed by empirical research and by work done in ethical theory, political philosophy, and other relevant disciplines, and whose character is rigorous, clear, nuanced, and unbiased.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Think critically about arguments.
Audience: Both Grad & Undergrad

2. Communicate precisely and concisely in both writing and speech.
Audience: Both Grad & Undergrad

3. Exchange reasons about controversial matters respectfully and with the aim of uncovering the truth.
Audience: Both Grad & Undergrad

4. Practice interpretive charity and intellectual honesty, which includes appropriate attribute to others of their ideas, and recognition and frankness about the limitations of one's own ideas.
Audience: Both Grad & Undergrad

5. Independently locate and engage with the latest relevant empirical and philosophical research.
Audience: Graduate

6. Exhibit substantial synthetic and analytic abilities by considering how an application of modern biotechnology ethically compares to the status quo and to other possible alternatives.
Audience: Graduate

C&E SOC/SOC 573 – COMMUNITY ORGANIZATION AND CHANGE
3 credits.

Examines theories of community change and different models of community organizing.
Requisites: Junior standing or (SOC 181, SOC/C&E SOC 140, 210, or 211)
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021
Learning Outcomes: 1. Situate oneself, individually, as an agent and (re)actor of change
Audience: Both Grad & Undergrad

2. Describe how the study of community organization development and change has evolved into a behavioral science over time, in a variety of settings and with multiple, equally valid approaches
Audience: Both Grad & Undergrad

3. Assess community need and readiness for change
Audience: Both Grad & Undergrad

4. Evaluate key change interventions and their efficacy for achieving intended outcomes
Audience: Both Grad & Undergrad

5. Discuss leadership and community organization with current professionals in the field
Audience: Both Grad & Undergrad

6. Construct a theory of change that demonstrates and articulates how a planned change effort is diagnosed, facilitated, implemented and evaluated
Audience: Both Grad & Undergrad

7. Synthesize and evaluate current academic literature to explore a current issue related to community organization and change
Audience: Graduate

C&E SOC/AMER IND/SOC 578 — POVERTY AND PLACE
3 credits.

The allocation of economic and social rewards in the United States; emphasis on persistently poor regions and communities; analysis of selected minority groups and their poverty statuses; poverty programs and their consequences for structural and cultural changes.
Requisites: SOC/C&E SOC 140, 210, 211, or SOC 181
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze measures of poverty, inequality, and population health and draw conclusions from them
Audience: Undergraduate

2. Describe the places and communities in the United States in which poverty is deepest and most persistent and understand the historical processes that have reproduced such disadvantage
Audience: Undergraduate

3. Place an understanding of local social conditions and change in the global context of rural and urban life, including political, ecological, economic, geographic, historical, and cultural dimensions
Audience: Undergraduate

4. Describe how social conditions of poverty affect people's lives in distinct social contexts
Audience: Undergraduate

5. Contrast and evaluate theoretical approaches to explaining poverty
Audience: Undergraduate

6. Discuss racial and ethnic disparities in social conditions linked to poverty
Audience: Undergraduate

7. Compare the US to peer nations in terms of poverty levels, rates of attendant social problems, and kinds of policies affecting the poor
Audience: Undergraduate

8. Engage in ethical reasoning about how poverty and the policies that impact it relate to shared values
Audience: Undergraduate

9. Interpret and critique texts that describe and analyze poverty
Audience: Undergraduate

10. Identify a case of poverty in a geographic context and apply social scientific literature to support of analysis that contributes to the literature
Audience: Undergraduate

C&E SOC/SOC/URB R PL 617 — COMMUNITY DEVELOPMENT
3 credits.

Social, cultural and personality factors influencing community development, with reference to developing countries as well as contemporary rural communities; consideration of theoretical and operational issues.
Requisites: SOC/C&E SOC 140, 210, 211, SOC 181, or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Explain how social science arguments related to community development are constructed and evaluated
Audience: Both Grad & Undergrad

2. Assess data quality and whether particular data is appropriate to answer specific questions
Audience: Both Grad & Undergrad

3. Define general theories on basic social processes, especially those related to the relationships between society and the environment and the social organization of communities
Audience: Both Grad & Undergrad

4. Apply verbal and written communication skills to discuss complex issues in the social sciences
Audience: Both Grad & Undergrad

5. Synthesize and evaluate scholarly social science literature related to community development
Audience: Graduate

C&E SOC/SOC 618 – SOCIAL NETWORK ANALYSIS
3 credits.

Social network analysis is a social scientific approach examining individuals as embedded in networks of social relations. Covers the fundamentals of network thinking, network tools, and the analysis and presentation of social network data. Direct practice with network data using software R.
Requisites: Junior standing and (C&E SOC/SOC 360, STAT 301, STAT 371, ECON 310, PSYCH 210, GEOG 360, STAT/MATH 310, or GEN BUS 303)
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify when data are suitable for network analysis.
Audience: Both Grad & Undergrad

2. Choose the appropriate network analysis techniques to answer one's research questions.
Audience: Both Grad & Undergrad

3. Use the R software and packages to perform the analyses.
Audience: Both Grad & Undergrad

4. Critically read network studies from across the social sciences.
Audience: Both Grad & Undergrad

5. Prepare a substantive social network analysis up to publication standards.
Audience: Graduate

C&E SOC/SOC 630 – SOCIOLOGY OF DEVELOPING SOCIETIES/ THIRD WORLD
3 credits.

Review of problems and prospects of so-called "developing societies." Includes theory of economic/social development, political economic organizations of "developing" societies, history of colonialism/imperialism, attempts to industrialize and results of those attempts.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023

C&E SOC/SOC/URB R PL 645 – MODERN AMERICAN COMMUNITIES
3 credits.

Relevance of the concept of community to American society. Review of several basic theories of community and analysis of the nature of community in the broader political and economic context.
Requisites: SOC/C&E SOC 140, 210, 211, SOC 181, or graduate/ professional standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021
Learning Outcomes: 1. Critically analyze arguments and evidence in scholarly and public-facing materials concerning residential segregation and integration, housing access and choices, and the role of police and prisons within communities
Audience: Both Grad & Undergrad

2. Formulate an empirical question concerning at least one of the three identified course themes and answer it drawing on course reading materials and data sources
Audience: Both Grad & Undergrad

3. Communicate ideas and arguments about course themes rooted in theory and evidence through written and audio-visual mediums
Audience: Both Grad & Undergrad

4. Synthesize current research in an issue related to community or urban sociology and identify areas for novel research
Audience: Graduate

C&E SOC/SOC 650 – SOCIOLOGY OF AGRICULTURE
3 credits.

Introduction to sociology of agriculture in advanced industrial-capitalist societies, including theoretical, historical, and empirical issues of agriculture in the United States.
Requisites: SOC 181, SOC/C&E SOC 140, 210, or 211
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe broad historical and contemporary trends in the development of the global agri-food system, as well as impacts from a sociological perspective
Audience: Undergraduate

2. Analyze the major theories, concepts, and debates associated with the sociology of agriculture and food systems
Audience: Undergraduate

3. Place an understanding of local social conditions and change in the global context of rural and urban life, including political, ecological, economic, geographic, historical, and cultural dimensions
Audience: Undergraduate

4. Demonstrate advanced verbal and written communication skills that are applicable in a professional setting
Audience: Undergraduate

C&E SOC/SOC 652 – SOCIOLOGY OF ECONOMIC INSTITUTIONS
3 credits.

Sociological perspectives on the organization of the firm, financial markets, and work, intermediate associations (unions, ethnic economies), the state, and the international economy. Contrast between neoclassical, traditional institutionalist, post-fordist, and neo-fordist perspectives on the nature and evolution of these institutions.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

C&E SOC 681 – SENIOR HONORS THESIS
2-4 credits.

Individual study for undergraduate students in an Honors program completing a thesis in the area of Community and Environmental Sociology, as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2019
Learning Outcomes: 1. Review and analyze academic literature
Audience: Undergraduate

2. Identify and use appropriate research methodologies to address a research question
Audience: Undergraduate

3. Begin structuring and writing a thesis based on original research
Audience: Undergraduate

C&E SOC 682 – SENIOR HONORS THESIS
2-4 credits.

Second semester of individual study for undergraduate students in an Honors program completing a thesis in the area of Community and Environmental Sociology, as arranged with a faculty member.
C&E SOC 681
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2020
Learning Outcomes: 1. Review and analyze academic literature
Audience: Undergraduate

2. Identify and use appropriate research methodologies to address a research question
Audience: Undergraduate

3. Write a thesis based on original research
Audience: Undergraduate

C&E SOC 691 – SENIOR THESIS
2 credits.

Individual study for undergraduate students completing a thesis in the area of Community and Environmental Sociology, as arranged with a faculty member.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2018
Learning Outcomes: 1. Review and analyze academic literature
Audience: Undergraduate

2. Identify and use appropriate research methodologies to address a research question
Audience: Undergraduate

3. Begin structuring and writing a thesis based on original research
Audience: Undergraduate

C&E SOC 692 – SENIOR THESIS
2 credits.

Second semester of individual study for undergraduate students completing a thesis in the area of Community and Environmental Sociology, as arranged with a faculty member. C&E SOC 691
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Spring 2019
Learning Outcomes: 1. Review and analyze academic literature
Audience: Undergraduate

2. Identify and use appropriate research methodologies to address a research question
Audience: Undergraduate

3. Write a thesis based on original research
Audience: Undergraduate

C&E SOC/SOC 693 – PRACTICUM IN ANALYSIS AND RESEARCH
3 credits.

Practical experience in techniques of social research through assignment to a research project for the semester. Focuses on the art and practice of research and the writing of research reports.
Requisites: SOC/C&E SOC 357, 361 and declared in Sociology: Concentration in Analysis and Research
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Accelerated Honors (!)
Repeatable for Credit: No
Last Taught: Spring 2025

C&E SOC 699 – SPECIAL PROBLEMS
1-4 credits.

Individual advanced work in an area of Community and Environmental Sociology under the direct guidance of a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Develop critical, analytical, and independent thinking skills
Audience: Undergraduate

2. Apply the sociological methods and engage in constructive problem solving
Audience: Undergraduate

3. Demonstrate application of research skills and methodologies
Audience: Undergraduate

4. Effectively communicate findings
Audience: Undergraduate

C&E SOC/I SY E/N E/SOC 708 – SOCIETAL RISK MANAGEMENT OF TECHNOLOGICAL HAZARDS
3 credits.

Issues involved in decision-making regarding technological risks and risk management in areas such as nuclear power, hazardous waste disposal, and pollution control. Risk perception and cognitive biases; risk analysis and decision analysis; political issues in risk management; regulatory mechanisms; and risk communication. Selected case studies.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020

C&E SOC/SOC 724 – INTERMEDIATE POLITICAL SOCIOLOGY
3 credits.

Critical examination of theories and research in political sociology. Topics include: power and interests, state-formation, social movements, class and political behavior, revolutions, ideology, and states and social policy.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

C&E SOC/SOC 730 – INTERMEDIATE SOCIAL PSYCHOLOGY: THE INDIVIDUAL AND SOCIETY
3 credits.

Major social psychological theories and research that focus on the individual in social context. Topics include: perspectives on socialization, the self, social perception and attribution, attitudes, language and nonverbal communication, and attraction and relationships.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023

C&E SOC/SOC 750 – RESEARCH METHODS IN SOCIOLOGY
3 credits.

Application of scientific methods to the analysis of social phenomena; methodological orientations in sociology; types of research procedure: nature of sociological variables.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

C&E SOC/ED POL/SOC 755 – METHODS OF QUALITATIVE RESEARCH
3 credits.

Introduces qualitative, or ethnographic, research methods, emphasizing those suitable for educational and other organizational settings. Considers strengths and limitations of qualitative approaches in relation to varied research problems. Explores methodological procedures from entry into the field through writing.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

C&E SOC/SOC 875 – SPECIAL TOPICS
1-4 credits.

Advanced topics in sociology. Topics vary.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

C&E SOC/GEN&WS/SOC 904 – SOCIOLOGICAL PERSPECTIVES ON GENDER
3 credits.

Advanced topics in the analysis of gender relations in society.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

C&E SOC/SOC 922 – SEMINAR-RACE AND ETHNIC RELATIONS
3 credits.

Theoretical, methodological, and current research problems.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

C&E SOC/SOC 923 – SEMINAR-SOCIAL STRATIFICATION
3 credits.

Advanced study of current research in social stratification, e.g., historical and comparative studies of inequality; mathematical and econometric modeling of mobility and achievement processes; demographic approaches to power and inequality.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2022

C&E SOC/ANTHRO/ECON/SOC 925 – SEMINAR: SOCIO-ECONOMIC CHANGE IN UNDERDEVELOPED AREAS
2-3 credits.

Social and economic factors relating to stability, growth, and change in the non-Western areas of the contemporary world.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

C&E SOC/SOC 940 – SEMINAR-SOCIOLOGY OF ECONOMIC CHANGE
3 credits.

Theoretical and technical problems in research concerning organizational and socio-psychological aspects of changes in large scale social systems.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

C&E SOC/SOC 945 – SEMINAR-RURAL SOCIOLOGY
3 credits.

Theory and research in alternate semesters in rural aspects of population, stratification, social change, and groups and institutions.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

C&E SOC/SOC 948 – SEMINAR: ENVIRONMENTAL SOCIOLOGY
3 credits.

Examines topics such as theories of environment and society, the treadmill of production, environmental movements, political ecology, environmental justice, consumption, ecological modernization, sustainability, environmental risk, and the sociology of environmental science.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Describe key issues in environmental sociology, including theories of environment and society, environmental movements, political ecology, environmental justice, and sustainability
Audience: Graduate

2. Analyze interdisciplinary approaches to environmental sociology, incorporating perspectives from anthropology, geography, law, history, feminism, and ethnic studies to enhance their sociological research
Audience: Graduate

3. Evaluate multiple approaches to critical race studies within the field of environmental sociology, understanding how race and environmental issues intersect and influence social mobilization and power dynamics
Audience: Graduate

4. Apply foundational theories learned in class to contemporary environmental issues, critically assessing the relevance and impact of these theories on current events and societal challenges
Audience: Graduate

C&E SOC/SOC 960 – SEMINAR-CURRENT METHODOLOGICAL ISSUES IN SOCIAL PSYCHOLOGY
3 credits.

Alternative research designs and processes, measurement, and analytical techniques in social psychology; experience in developing and utilizing research plans and techniques.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2020

C&E SOC/SOC 971 – SEMINAR-TOPICS IN DEMOGRAPHY AND ECOLOGY
3 credits.

Advanced study of selected topics related to population and society, including health and inequality across the life course, environmental and spatial demography, biodemography.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023

C&E SOC/SOC 977 – SEMINAR-HUMAN ECOLOGY
3 credits.

Review of ecological theory and research; critical assessment of the ecological complex (population, organization, environment, and technology); problems of measurement.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023

C&E SOC/A A E/ANTHRO/GEOG/HISTORY/LACIS/POLI SCI/PORTUG/SOC/SPANISH 982 – INTERDEPARTMENTAL SEMINAR IN THE LATIN-AMERICAN AREA
1-3 credits.

Interdisciplinary inquiry in Latin American society and culture.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

C&E SOC/SOC 985 – RESEARCH: COMMUNITY AND ENVIRONMENTAL SOCIOLOGY
1-3 credits.

Critical analysis of recent theoretical and methodological issues through presentations of research in progress.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Describe major theories, methodologies, and research findings in the community and environmental sociological literature
Audience: Graduate

2. Evaluate information pertinent to their research question
Audience: Graduate

3. Communicate in a clear, organized engaging manner, using language, methods, and critical tools appropriate to the social sciences
Audience: Graduate

4. Identify and apply principles of ethical and professional conduct
Audience: Graduate

C&E SOC/SOC 987 – RESEARCH: RACE AND ETHNIC STUDIES
1-3 credits.

Analysis of recent research and theory, based on reviews of literature and presentations of research in progress.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

C&E SOC 990 – RESEARCH
1-12 credits.

Independent graduate research under supervision of a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Conduct and report on research under the guidance of a qualified instructor
Audience: Graduate

2. Develop novel research questions and propose methods to answer those questions
Audience: Graduate

3. Connect their research clearly to other research in their field of study
Audience: Graduate

C&E SOC/SOC 993 – RESEARCH: SOCIOLOGY OF ECONOMIC CHANGE TRAINEES
1-3 credits.

Presentations of research in progress concerning social and economic change in developing countries.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

C&E SOC/SOC 995 – RESEARCH: METHODOLOGY TRAINEES
1-3 credits.

Workshop on social science research methods and professional development, e.g. ethics, communication, data management, novel research methods.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

C&E SOC/SOC 997 – RESEARCH: DEMOGRAPHY AND ECOLOGY TRAINEES
1-3 credits.

Interdisciplinary training workshop on current research in population science from scholars at research and teaching institutions around the world.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

C&E SOC 999 – READING AND RESEARCH
1-3 credits.

Independent graduate research under supervision of a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025
Learning Outcomes: 1. Conduct and report research under the guidance of a qualified instructor
Audience: Graduate

2. Develop novel research questions and propose methods to answer those questions
Audience: Graduate

3. Connect their research clearly to other research in their field of study
Audience: Graduate

COMPARATIVE BIOSCIENCES (COMP BIO)

COMP BIO 500 – FUNDAMENTAL PRINCIPLES OF VETERINARY ANATOMY
5 credits.

A detailed consideration of gross anatomical structure with emphasis on major anatomical patterns present in species important to veterinary medicine. The dog is used as a model domestic mammal and comparisons with other species are considered. All body systems are dissected. Clinical implications of these dissections are emphasized.
Requisites: Declared in Doctor of Veterinary Medicine with first year standing
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024
Learning Outcomes: 1. Use correct anatomical terminology to identify gross anatomical structures of the dog and cat
Audience: Undergraduate

2. Recognize anatomical principles and patterns that can be applied to future study of other veterinary species
Audience: Undergraduate

3. Describe topographical relationships between anatomical structures
Audience: Undergraduate

4. Explain the relationship between structure and function
Audience: Undergraduate

5. Apply the scientific method and critical thinking to the study of anatomy
Audience: Undergraduate

COMP BIO 501 – VETERINARY HISTOLOGY
5 credits.

Light and digital microscopy are used to study the anatomy of organs and tissues at the cellular level. Microanatomic features of all major organ systems are identified, and pertinent physiologic concepts are discussed to correlate structure with function. Mammalian systems are emphasized, and comparisons to non-mammalian species are considered. Direct applications to clinical medicine are included.
Requisites: Declared in Doctor of Veterinary Medicine with first year standing
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Describe the characteristic cellular structure of the basic tissue types and major organs
Audience: Undergraduate

2. Identify tissues and organs by their histologic features
Audience: Undergraduate

3. Extrapolate the 3D microarchitecture of an organ from 2D histologic specimens
Audience: Undergraduate

4. Discuss how tissue composition and cellular organization of an organ facilitates its function
Audience: Undergraduate

5. Make basic predictions of how disruption of normal cellular architecture results in disease
Audience: Undergraduate

COMP BIO 502 – MOLECULAR AND METABOLIC BASIS OF MEDICINE
3 credits.

Covers metabolism with a more advanced incorporation of concepts of chemistry, cell biology and physiology. Clinical correlations in veterinary medicine are also covered.
Requisites: Declared in Doctor of Veterinary Medicine with first year standing
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain how and why metabolism is altered in response to perturbations such as nutrient deprivation, stress, hormonal imbalance, or effectively any other pathological condition that a veterinarian might encounter.
Audience: Undergraduate

2. Apply molecular biology and genetics to elucidate the molecular basis of disease.
Audience: Undergraduate

3. Demonstrate understanding of current and potential uses of biotechnology in diagnosis and treatment of disease.
Audience: Undergraduate

4. Illustrate molecular/biochemical mechanisms of commonly used drugs.
Audience: Undergraduate

5. Apply scientific principles underlying veterinary medicine and recognize the importance of research in advancing the profession.
Audience: Undergraduate

6. Utilize effective communication, demonstrate sound problem-solving and critical-thinking skills, and apply evidence-based decision-making.
Audience: Undergraduate

COMP BIO 503 – VETERINARY DEVELOPMENTAL ANATOMY
2 credits.

Principles of development and organogeneses in domestic animals. Normal developmental patterns are related to adult anatomy. Clinical implications of common congenital defects are discussed.
Requisites: Declared in Doctor of Veterinary Medicine with first year standing
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Illustrate how morphogenetic processes in development can explain common developmental defects and adult anatomic structures.
Audience: Undergraduate

2. Organize adult cell types and anatomical structures to their embryonic cellular origins.
Audience: Undergraduate

3. Predict effects of perturbing key molecular and cellular pathways on embryogenesis.
Audience: Undergraduate

4. Given a clinical presentation of a developmental defect, propose a plausible molecular or cellular mechanism.
Audience: Undergraduate

5. Explain the basis of presented molecular biology techniques and apply them appropriately to research and clinical scenarios
Audience: Undergraduate

6. Apply the SVM problem solving paradigm to clinical scenarios and basic science questions presented in class.
Audience: Undergraduate

7. Identify and critically evaluate primary veterinary literature to enhance your understanding of developmental anatomy concepts and their clinical implications.
Audience: Undergraduate

COMP BIO 505 – VETERINARY NEUROANATOMY AND NEUROPHYSIOLOGY
3 credits.

A comparative approach to the morphological and physiological properties of the central nervous system of animals, particularly those of veterinary importance.
Requisites: Declared in Doctor of Veterinary Medicine with first year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Describe three dimensional relationships of the central nervous system in relevant veterinary species.
Audience: Graduate

2. Identify the structure and function of the major divisions of the central nervous system as a basis for lesion localization.
Audience: Graduate

3. Explain key aspects of a neurologic exam and analyze and interpret the results from a neurologic evaluation.
Audience: Graduate

4. Localize lesions in the nervous system using results from neurologic assessment.
Audience: Graduate

5. Recognize the value of current neuroscience research and its potential applications to clinical veterinary neurology.
Audience: Graduate

COMP BIO 506 – VETERINARY PHYSIOLOGY B
4 credits.

Covers comparative veterinary physiology covering digestive, endocrine, and reproductive systems.
Requisites: Declared in Doctor of Veterinary Medicine with first year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Summarize the processes involved in the absorption of dietary nutrients and water, and examine the role these mechanisms play in support of important bodily functions.
Audience: Graduate

2. Apply the principles of gastrointestinal physiology to identify causes and propose treatments for gastrointestinal tract disorders in animals.
Audience: Graduate

3. Describe the functions of mammalian endocrine systems and the dynamic methods of hormone regulation.
Audience: Graduate

4. Define the major endocrine glands, their hormones, and the functions of those hormones that contribute to homeostasis throughout the body.
Audience: Graduate

5. Discuss how disruptions in balance of the major hormones manifest as clinical disease, and apply this understanding to predict outcomes of basic diagnostic testing and therapeutic approaches to correct disease states.
Audience: Graduate

6. Summarize the events that occur in male and female animals which leads to the generation of healthy gametes.
Audience: Graduate

7. Describe the processes involved in the orchestration and regulation of fertilization, pregnancy, parturition, lactation and the provision of neonatal health of mammals.
Audience: Graduate

8. Predict the effects that interventions and therapeutic approaches will have on animal reproduction.
Audience: Graduate

COMP BIO 550 – ANATOMY OF THE LARGE DOMESTIC ANIMALS
2 credits.

A study of the horse and the ox with special emphasis on the anatomical specializations of these species with extensive comparisons to the anatomy of the small domestic animals. Other large domestic animals, including swine, will be considered as appropriate to demonstrate anatomical variation.
Requisites: Declared in Doctor of Veterinary Medicine with first year standing
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and describe functionally important and clinically relevant anatomical specializations in the horse and ox (and the pig, as applicable).
Audience: Undergraduate

2. Identify and describe topographical relationships, including external landmarks, in the ox and horse, and use external landmarks to locate anatomical structures when performing a physical exam.
Audience: Undergraduate

3. Use anatomic and associated common terminology interchangeably as it relates to large animals.
Audience: Undergraduate

4. Compare the anatomy of small and large animals and draw conclusions regarding fundamental anatomical principles which can be applied to many other species encountered in the curriculum and beyond.
Audience: Undergraduate

5. Engage in peer teaching to facilitate learning for all while developing the intellectual curiosity that fosters independent learning required as future professionals.
Audience: Undergraduate

COMP BIO 551 – VETERINARY PHYSIOLOGY A
4 credits.

Covers comparative veterinary physiology covering electrophysiology, and muscle, cardiovascular, respiratory, renal and acid-base physiology.
Requisites: Declared in Doctor of Veterinary Medicine with first year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Use basic physiological principles to explain how neurological, cardiorespiratory, and renal systems function to maintain homeostasis in healthy animals
Audience: Graduate

2. Describe how neuroendocrine systems regulate organ function and integrate appropriate responses to physiological and environmental challenges
Audience: Graduate

3. Predict changes in physiological variables during pathological conditions and diseases
Audience: Graduate

4. Use fundamental equations to solve quantitative physiological problems and interpret the results appropriately.
Audience: Graduate

COMP BIO 555 – VETERINARY TOXICOLOGY
2 credits.

Science of toxicology as it relates to veterinary practice. The principles of toxicology and the mechanism and treatment of toxicants commonly encountered in small and large animals will be presented.
Requisites: Declared in Doctor of Veterinary Medicine with second year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify major classes of toxicants affecting small and large animals, birds, and other species
Audience: Graduate

2. Identify common toxicant exposure conditions
Audience: Graduate

3. Recall major biochemical, physiological, and dietary factors that cause variations in cell and tissue sensitivity and that may explain species-, sex-, and age-related differences in toxicity
Audience: Graduate

4. Integrate basic toxicological mechanisms and cellular adaptation responses with likely clinical signs and tissue lesions
Audience: Graduate

5. Select appropriate steps in emergency treatment, select appropriate tests to confirm diagnosis, and recall appropriate antidotal therapy to be used.
Audience: Graduate

COMP BIO 556 – VETERINARY PHARMACOLOGY
4 credits.

Basic pharmacology of various drug classes used in veterinary medicine together with examples of clinical drug use. Important species variations in drug use and drug response will be stressed.
Requisites: Declared in Doctor of Veterinary Medicine with second year standing
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply the principles of pharmacology (absorption, distribution, metabolism and excretion) to serve as the basis for selecting classes of drugs for clinical use.
Audience: Undergraduate

2. Predict the therapeutic and toxic effects of drugs based on their mechanisms of action, pharmaceutic properties and patient characteristics (species, age, food animal, etc.).
Audience: Undergraduate

3. Calculate correct drug dosages from a variety of different starting materials, define metric system prefixes, and describe various solution types that constitute drug formulations.
Audience: Undergraduate

4. Identify pre-existing patient conditions that impact drug efficacy, metabolism and excretion.
Audience: Undergraduate

5. Outline major therapeutic drug classes used to modulate the function of multiple organ systems (including cardiac, vascular, pulmonary, renal, urinary, endocrine, GI, CNS, and eye) as well as major drug classes used treat inflammation, and reduce bacterial and parasite infections.
Audience: Undergraduate

6. Define cellular pathways and molecules that serve as drug targets for clinical therapy.
Audience: Undergraduate

COMP BIO 675 – SPECIAL TOPICS
1-5 credits.

Requisites: Declared in Doctor of Veterinary Medicine
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2022
Learning Outcomes: 1. Develop competence and professional skills in veterinary medicine
Audience: Undergraduate

2. Explore current topics and trends in veterinary medicine
Audience: Undergraduate

3. Developing breadths of experiences related to veterinary medicine
Audience: Undergraduate

COMP BIO 699 – DIRECTED STUDY
1-5 credits.

Projects in the laboratory and/or through library work in specific subject area under the direct guidance of faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply foundational veterinary knowledge and critical thinking to identify problems in veterinary medicine
Audience: Undergraduate

2. Develop professional veterinary medicine skills of interest by performing select techniques and procedures
Audience: Undergraduate

3. Communicate in written and/or verbal reports to veterinary colleagues and supervisors
Audience: Undergraduate

COMP BIO 775 – EXTERNSHIP
1-24 credits.

Offers opportunities for faculty coordinated experience in the veterinary medical profession outside School of Veterinary Medicine.
Requisites: Declared in Doctor of Veterinary Medicine with fourth year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023
Learning Outcomes: 1. Understand real-world applications of foundational veterinary medical knowledge and skills
Audience: Graduate

2. Apply foundational veterinary knowledge and critical thinking to solve real-world problems
Audience: Graduate

3. Perform select techniques and procedures to develop various skills professional in veterinary medicine
Audience: Graduate

COMP BIO/PATH-BIO 812 – RESEARCH ETHICS AND CAREER DEVELOPMENT
2 credits.

Provides instruction in principles and concepts of research ethics through presentations and discussion of case studies. Topics pertinent to development of a successful career in research are also included.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze the complexities of ethical issues in research and the factors that can influence perceptions of ethical behavior.

Audience: Graduate

2. Develop a framework for making ethical decisions in research.
Audience: Graduate

3. Identify areas to apply best practices in responsible conduct of research to guide decision-making.
Audience: Graduate

4. Explain where to seek guidance for improving scientific communication skills.
Audience: Graduate

5. Develop the ability to effectively convey research results and findings.
Audience: Graduate

6. Recognize the importance of ethical conduct in research.
Audience: Graduate

7. Discuss the potential consequences of unethical behavior in research.
Audience: Graduate

8. Develop a sense of personal responsibility for maintaining ethical standards in research.
Audience: Graduate

9. Recognize the importance of safe research environments.
Audience: Graduate

COMP BIO 990 – RESEARCH
1-12 credits.

Research.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Exhibit a broad understanding of general comparative bioscience principles
Audience: Graduate

2. Conduct independent research using a variety of approaches
Audience: Graduate

3. Think critically to address research challenges
Audience: Graduate

4. Exhibit and foster professional and ethical conduct in their research
Audience: Graduate

5. Collaborate with other investigators within or outside the thesis lab
Audience: Graduate

COMPARATIVE LITERATURE (COMP LIT)

COMP LIT 201 – INTRODUCTION TO PRE-MODERN LITERATURES/ IMPACT ON THE MODERN WORLD
3 credits.

Critical study of pre-modern literatures from the ancient worlds to the Middle Ages; broad survey covering many national literatures, stressing cross-cultural literary relations and their impact on the modern world.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2022

COMP LIT 202 – INTRODUCTION TO MODERN AND CONTEMPORARY LITERATURE
3 credits.

Critical study of modern literature, from the 15th century to the 20th century; broad survey covering many national literatures, stressing cross-cultural literary relations and including emergent literatures.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2022

COMP LIT 203 – INTRODUCTION TO CROSS-CULTURAL LITERARY FORMS
3 credits.

Introduction to the critical study of specific literary forms (e.g., comedy, short story) and the connections between literary forms and other cultural and artistic phenomena (e.g., cinema, TV, music, visual arts).
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

COMP LIT 350 – PROBLEMS IN COMPARATIVE LITERATURES AND CULTURES
3-4 credits.

Comparative study - historical, theoretical, critical - of literatures and literary studies in their interaction with cultural themes, with social formations, with seminal concepts and ideas, with non-literary disciplines as they inform reading and analysis of literature.
Requisites: Junior standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

COMP LIT 358 – PROBLEMS IN TRANSNATIONAL GENRE AND MODE
3-4 credits.

Comparative study of the nature and substance of genre distinctions; relations between genre and mode in diverse literatures; critical analysis of texts in the context of literary distinctions of genre and mode - with attention to cross-cultural, transnational and historical perspectives.
Requisites: Junior standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

COMP LIT 370 – COMPARATIVE PROBLEMS IN PERIODS AND MOVEMENTS
3-4 credits.

Comparative study of literatures of historical periods, international and inter-linguistic relations, flux of ideas, forms, styles; literary movements and trends, principles linking literary texts, their diversity and variation, their connection to relevant debates in aesthetics, philosophy, or other fields.
Requisites: Junior standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

COMP LIT 475 – POETICS AND LITERARY THEORY
3-4 credits.

Study of the changes and development of the systematics, theoretics, and mechanics of literary form and utterance.
Requisites: Junior standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2020

COMP LIT 500 – THE COMPARATIVE IN AND BEYOND COMPARATIVE LITERATURE
3 credits.

Topics will vary and cover a wide range of comparative topics - literary, cultural, philosophical, historical, legal - with connections to traditional disciplines of comparativist faculty.
Requisites: Junior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2020

COMP LIT 699 – DIRECTED STUDY
1-6 credits.

Advanced directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2019

COMP LIT 750 – PROBLEMS IN COMPARATIVE LITERATURES AND CULTURES
3 credits.

Comparative study - historical, theoretical, critical - of literatures and literary studies in their interaction with cultural themes, with social formations, with seminal concepts and ideas, with non-literary disciplines as they inform reading and analysis of literature.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023

COMP LIT 990 – RESEARCH AND THESIS
1-12 credits.

Advanced level mentored reading and research for students with dissertator status
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

COMPUTER SCIENCES (COMP SCI)

COMP SCI/L I S 102 – INTRODUCTION TO COMPUTING
3 credits.

Provides a broad overview of computing at an introductory level, including topics such as security, robotics, and artificial intelligence. Increases understanding of how computers work and how algorithms solve problems. Design and implement creative applications in an introductory coding environment. Provides a broad overview of computing and algorithms without an emphasis on programming.
Requisites: MATH 96 or placement into MATH 141. MATH 118 does not fulfill the prerequisite. Not open to students with credit for COMP SCI 300 or 320
Course Designation: Gen Ed - Quantitative Reasoning Part A
Breadth - Natural Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop a fundamental understanding of the key concepts of computer science in a variety of contexts.
Audience: Undergraduate

2. Create art, music, stories, games and other programs in a visual, introductory programming language
Audience: Undergraduate

3. Understand how computers use algorithms to solve problems and act in intelligent ways.
Audience: Undergraduate

4. Understand how computers utilize large sets of data to provide insight and knowledge.
Audience: Undergraduate

5. Learn how software and hardware make modern computers work
Audience: Undergraduate

COMP SCI 200 – PROGRAMMING I
3 credits.

Learn the process of incrementally developing small (200-500 lines) programs along with the fundamental Computer Science topics. These topics include: problem abstraction and decomposition, the edit-compile-run cycle, using variables of primitive and more complex data types, conditional and loop-based flow control, basic testing and debugging techniques, how to define and call functions (methods), and IO processing techniques. Also teaches and reinforces good programming practices including the use of a consistent style, and meaningful documentation. Intended for students who have no prior programming experience.
Requisites: Satisfied Quantitative Reasoning (QR) A requirement or declared in the Capstone Certificate in Computer Sciences for Professionals
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Natural Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Design and implement a standalone program that can interact with the user via prompts and or menus, access and edit data stored in an array or list structure, and use and further process the data found in those structures.
Audience: Undergraduate

2. Trace code to determine output or results.
Audience: Undergraduate

3. Implement a given program design and choose correct control structures for implementing algorithms expressed in pseudocode.
Audience: Undergraduate

4. Interpret a variety of diagram types used to express programming concepts and results: truth tables, memory model diagrams, control flow charts (activity diagrams), class diagrams, object diagrams, and use-case diagrams.
Audience: Undergraduate

5. List, describe, use the basic I/O operations for reading and writing text files to and from the computer's hard drive.
Audience: Undergraduate

6. Manipulate quantitative information to create models, and/or devise solutions to problems using multi-step arguments, based on and supported by quantitative information.
Audience: Undergraduate

7. Evaluate models and arguments using quantitative information.
Audience: Undergraduate

8. Express and interpret in context models, solutions and/or arguments using verbal, numerical, graphical algorithmic, computational or symbolic techniques.
Audience: Undergraduate

COMP SCI 220 – DATA SCIENCE PROGRAMMING I
4 credits.

Introduction to Data Science programming using Python. No previous programming experience required. Emphasis on analyzing real datasets in a variety of forms and visual communication.
Requisites: Satisfied Quantitative Reasoning (QR) A requirement or declared in the Professional Capstone Program in Computer Sciences. Not open to students with credit for COMP SCI 301.
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Natural Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Integrate foundational concepts and tools from mathematics, computer science and statistics to solve data science problems
Audience: Undergraduate

2. Demonstrate competencies with tools and processes necessary for data management and reproducibility
Audience: Undergraduate

3. Produce meaning from data employing modeling strategies
Audience: Undergraduate

4. Demonstrate critical thinking related to data science concepts and methods
Audience: Undergraduate

5. Demonstrate oral, written and visual communication skills related to data science
Audience: Undergraduate

6. Manipulate quantitative information to create models, and/or devise solutions to problems using multi-step arguments, based on and supported by quantitative information
Audience: Undergraduate

COMP SCI/MATH 240 – INTRODUCTION TO DISCRETE MATHEMATICS
3 credits.

Basic concepts of logic, sets, partial order and other relations, and functions. Basic concepts of mathematics (definitions, proofs, sets, functions, and relations) with a focus on discrete structures: integers, bits, strings, trees, and graphs. Propositional logic, Boolean algebra, and predicate logic. Mathematical induction and recursion. Invariants and algorithmic correctness. Recurrences and asymptotic growth analysis. Fundamentals of counting.
Requisites: MATH 217 or 221
Course Designation: Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate proficiency with basic skills for constructing and evaluating mathematically rigorous arguments and proofs.
Audience: Undergraduate

2. Construct proofs by induction to prove properties in a variety of domains (mathematical formulas, recursively-defined structures, loop invariants, program correctness).
Audience: Undergraduate

3. Demonstrate a familiarity with and an ability to reason about discrete structures/data types (integers, strings, bit strings, sets, relations, functions, graphs, trees).
Audience: Undergraduate

4. Employ basic program analysis techniques to evaluate behavior of functions and simple algorithms such as assessing correctness and termination of simple algorithms, constructing recurrences, solving simple recurrences, and applying asymptotic analysis.
Audience: Undergraduate

5. Apply basic combinatoric techniques to counting problems.
Audience: Undergraduate

6. Demonstrate the connections between a description of a simple language and a finite state machine or regular expression. Given a finite state machine or regular expression, determine the language it defines and/or whether a given string is recognized by it. Given a simple language, construct a finite state machine or regular expression that recognizes it.
Audience: Undergraduate

COMP SCI/E C E 252 – INTRODUCTION TO COMPUTER ENGINEERING
3 credits.

Logic components built with transistors, rudimentary Boolean algebra, basic combinational logic design, basic synchronous sequential logic design, basic computer organization and design, introductory machine- and assembly-language programming.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Perform basic operations on binary representations for data
Audience: Undergraduate

2. Analyze simple combinational and sequential digital logic and memory systems
Audience: Undergraduate

3. Identify the components and operation of an instruction set processor and write programs using assembly language
Audience: Undergraduate

4. Recognize and analyze ethical and professional responsibilities in engineering contexts
Audience: Undergraduate

COMP SCI 272 – INTRODUCTION TO WEB DEVELOPMENT
3 credits.

Introduces methods and tools for creating/maintaining secure and interactive web content. Topics include programming fundamentals to support core web concepts, application development essentials, and content management systems. Web best practices - such as accessibility, design, and critical thinking about relevant ethics and organization. Covers practical skills to design and implement websites using popular scripting languages and frameworks, content management systems (CMSs), and related tools.
Requisites: Not open to students with credit for L I S/COMP SCI 472.
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop understanding and application of current web scripting languages and development tools and frameworks.
Audience: Undergraduate

2. Install, configure, and customize open source content management systems.
Audience: Undergraduate

3. Understand and apply user experience and accessibility best practices in building accessible web-based systems.
Audience: Undergraduate

4. Design solutions to problems using multi-step scripting, logical operations, and functions.
Audience: Undergraduate

5. Understand ethical issues and concerns related to website development and its related technologies.
Audience: Undergraduate

6. Analyze the management challenges, and ethical considerations inherent in web development projects.
Audience: Undergraduate

COMP SCI 298 – DIRECTED STUDY IN COMPUTER SCIENCE
1-3 credits.

Undergraduate directed study in computer sciences.
Requisites: Consent of instructor
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

COMP SCI 300 – PROGRAMMING II
3 credits.

Introduction to Object-Oriented Programming using classes and objects to solve more complex problems. Introduces array-based and linked data structures: including lists, stacks, and queues. Programming assignments require writing and developing multi-class (file) programs using interfaces, generics, and exception handling to solve challenging real world problems. Topics reviewed include reading/writing data and objects from/to files and exception handling, and command line arguments. Topics introduced: object-oriented design; class vs. object; create and define interfaces and iterators; searching and sorting; abstract data types (List,Stack,Queue,PriorityQueue(Heap),Binary Search Tree); generic interfaces (parametric polymorphism); how to design and write test methods and classes; array based vs. linked node implementations; introduction to complexity analysis; recursion.
Requisites: Satisfied QR-A and (COMP SCI 200, 220, 302, 310, 301, or placement into COMP SCI 300) or (E C E/COMP SCI 252 and E C E 203); graduate/professional standing; declared in Capstone Certificate in COMP SCI. Not open to students with credit for COMP SCI 367.
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. List and describe common operations for List, Stack, Queue, Priority Queue, Tree.
Audience: Undergraduate

2. Analyze the time-complexity and compare the Big-Oh O(n) worse case complexity of different ADT implementations, and the complexity for any data structures and algorithms used to implement those operations.
Audience: Undergraduate

3. Identify and properly test all boundary conditions for comprehensive testing of their programs.
Audience: Undergraduate

4. Interpret and create a variety of diagrams: Call Stack trace; Stack, Queue, and Tree Data Structures; Recursive call (list or tree), control flow charts, class diagrams, object diagrams, and use-case diagrams.
Audience: Undergraduate

5. Implement Object-Oriented (multi-class) standalone programs that manage a variety of data storage and retrieval operations (Program development skills and experience).
Audience: Undergraduate

6. Evaluate models and arguments using quantitative information.
Audience: Undergraduate

COMP SCI 304 – PEER COLLABORATION IN COMPUTER SCIENCES (WES-CS)
1 credit.

Interactive opportunity to discuss basic computer science concepts such as programming, including data structures, algorithms, object-oriented programming principles and techniques for efficient coding, testing, and debugging in a smaller setting with peers. Requires concurrent enrollment in COMP SCI 200, 220, 252, 300, 320, 354, or 400.
Requisites: Consent of instructor
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate collaborative programming and thinking skills in group settings.
Audience: Undergraduate

2. Explain computer science concepts verbally.
Audience: Undergraduate

3. Describe computing's impact on communities, including its role in perpetuating bias and power.
Audience: Undergraduate

COMP SCI 310 – PROBLEM SOLVING USING COMPUTERS
3 credits.

Gives students an introduction to computer and analytical skills to use in their subsequent course work and professional development. Discusses several methods of using computers to solve problems, including elementary programming techniques, symbolic manipulation languages, and software packages. Techniques will be illustrated using sample problems drawn from elementary engineering. Emphasis is on introduction of algorithms with the use of specific tools to illustrate the methods.
Requisites: MATH 222, graduate/professional standing, or declared in the Capstone Certificate in Computer Sciences for Professionals
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2022

COMP SCI 319 – DATA SCIENCE PROGRAMMING I FOR RESEARCH
3 credits.

Introduction to Data Science programming using Python. In addition to a survey of programming basics (control flow and data structures), web scraping, database queries, and tabular analysis will be introduced. Projects will emphasize analyzing real datasets in a variety of forms and visual communication using plotting tools. Similar to COMP SCI 220 but the pedagogical style of the projects will be adapted to graduate students in fields other than computer science and data science. No previous programming experience required.
Requisites: Graduate/professional standing
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. integrate foundational concepts and tools from mathematics, computer science and statistics to solve data science problems
Audience: Undergraduate

2. demonstrate competencies with tools and processes necessary for data management and reproducibility
Audience: Undergraduate

3. produce meaning from data employing modeling strategies
Audience: Undergraduate

4. demonstrate critical thinking related to data science concepts and methods
Audience: Undergraduate

5. demonstrate oral, written and visual communication skills related to data science
Audience: Undergraduate

6. manipulate quantitative information to create models, and/or devise solutions to problems using multi-step arguments, based on and supported by quantitative information
Audience: Undergraduate

COMP SCI 320 – DATA SCIENCE PROGRAMMING II
4 credits.

Intermediate approach to Data Science programming using Python. Experience with basic tabular analysis in Python is assumed. Learn to implement data structures (e.g., graphs) to efficiently represent datasets. Software-engineering tools such as version control and Python virtual environments will be introduced, with an emphasis on reproducibility of analysis. Tracing and A/B testing will be introduced as techniques for generating meaningful datasets. Introduces basic classification, clustering, optimization, and simulation techniques. Plotting and visual communication will be emphasized throughout the course.
Requisites: COMP SCI 220 (or COMP SCI 301 prior to Spring 2020), COMP SCI 300, 319, graduate/professional standing, or declared in the Computer Sciences for Professionals Capstone Certificate
Course Designation: Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. integrate foundational concepts and tools from mathematics, computer science and statistics to solve data science problems
Audience: Undergraduate

2. demonstrate competencies with tools and processes necessary for data management and reproducibility
Audience: Undergraduate

3. produce meaning from data employing modeling strategies
Audience: Undergraduate

4. demonstrate critical thinking related to data science concepts and methods
Audience: Undergraduate

5. conduct data science activities aware of and according to policy, privacy, security and ethical considerations
Audience: Undergraduate

6. demonstrate oral, written and visual communication skills related to data science
Audience: Undergraduate

COMP SCI/E C E 352 – DIGITAL SYSTEM FUNDAMENTALS
3 credits.

Logic components, Boolean algebra, combinational logic analysis and synthesis, synchronous and asynchronous sequential logic analysis and design, digital subsystems, computer organization and design.
Requisites: Satisfied Quantitative Reasoning (QR) A requirement and E C E/COMP SCI 252
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Perform operations on signed and unsigned numbers, including evaluating overflow
Audience: Undergraduate

2. Implement Boolean logic circuits, use Boolean identities to perform algebraic manipulations, use Karnaugh maps to implement any function of 4 variables, use DeMorgans's Theorem, implement any function as SOP or POS
Audience: Undergraduate

3. Design datapath circuits, decoders, muxes, priority encoders, tri-states, understand hierarchy and how to build up larger datapaths from blocks, design ALUs and other digital circuits using rudimentary HDL constructs
Audience: Undergraduate

4. Design sequential circuits, analyze synchronous vs. asynchronous designs and flip-flops vs. latches, trace the behavior of a sequential circuit, design state machines for control Logic
Audience: Undergraduate

5. Analyze basic processor architecture, define a control word and analyze operation of the datapath in relation to it, describe the basic operation of a single-cycle stored program computer
Audience: Undergraduate

COMP SCI/E C E 354 – MACHINE ORGANIZATION AND PROGRAMMING
3 credits.

An introduction to fundamental structures of computer systems and the C programming language with a focus on the low-level interrelationships and impacts on performance. Topics include the virtual address space and virtual memory, the heap and dynamic memory management, the memory hierarchy and caching, assembly language and the stack, communication and interrupts/signals, compiling and assemblers/linkers.
Requisites: E C E/COMP SCI 252 and (COMP SCI 300 or 302) or graduate/professional standing or declared in the Capstone Certificate in Computer Sciences for Professionals
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Implement and interpret C programs using standard tools, and relate C language constructs to both assembly language and fundamental computer system structures.
Audience: Undergraduate

2. Differentiate, describe, and diagram the memory segments of a process's virtual address space and explain how each is used in C programs.
Audience: Undergraduate

3. Describe and diagram how dynamically allocated (heap) memory works, analyze the performance of allocation strategies, and implement a dynamic memory manager in C.
Audience: Undergraduate

4. Differentiate memory hierarchy levels, relative performance, and space differences, differentiate between common cache configurations, and appraise the effects of data structures and access patterns on spatial and temporal locality and available memory caching on the performance of C programs.
Audience: Undergraduate

5. Diagram a stack trace of execution for function calls in C programs, and explain how the compiler implements the stack with assembly language code.
Audience: Undergraduate

6. Write C programs that send and receive signals and respond to exceptional circumstances, and explain the underlying mechanism that enables asynchronous execution.
Audience: Undergraduate

7. Identify and summarize the steps required to build an executable program from multiple C source code files and compiled libraries, and describe the processes of linking multiple object code modules to form an executable and loading an executable to run it.
Audience: Undergraduate

COMP SCI 368 – LEARNING A PROGRAMMING LANGUAGE
1 credit.

For students interested in learning a particular programming language. Focuses on a specific language offered at one of three levels: beginner, intermediate, and advanced. Students may repeat the course if the topic title is different.
Requisites: None
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

COMP SCI 400 – PROGRAMMING III
3 credits.

The third course in our programming fundamentals sequence. It presumes that students understand and use functional and object-oriented design and abstract data types as needed. This course introduces balanced search trees, graphs, graph traversal algorithms, hash tables and sets, and complexity analysis and about classes of problems that require each data type. Students are required to design and implement using high quality professional code, a medium sized program, that demonstrates knowledge and use of latest language features, tools, and conventions. Additional topics introduced will include as needed for projects: inheritance and polymorphism; anonymous inner classes, lambda functions, performance analysis to discover and optimize critical code blocks. Students learn about industry standards for code development. Students will design and implement a medium size project with a more advanced user-interface design, such as a web or mobile application with a GUI and event- driven implementation; use of version-control software.
Requisites: COMP SCI 300, graduate/professional standing, or declared in the Capstone Certificate in Computer Sciences for Professionals
Course Designation: Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

COMP SCI/L I S/STAT 401 – UNDERGRADUATE COOPERATIVE EDUCATION
1 credit.

Full time work experience which combines classroom theory with practical knowledge related to Computer Sciences, Data Science, Statistics, or Information Science.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Workplace - Workplace Experience Course
Repeatable for Credit: Yes, for 3 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply academic experience gained through coursework in a professional setting.
Audience: Undergraduate

2. Experience the nature and demands of a professional career in computer science, information science, and/or statistics/data science
Audience: Undergraduate

3. Develop professional and transferable skills like time management, collaboration, problem-solving, and communication in the workplace.
Audience: Undergraduate

COMP SCI 402 – INTRODUCING COMPUTER SCIENCE TO K-12 STUDENTS
2 credits.

Work in teams to lead Computer Science clubs and workshops for K-12 students at sites in the Madison area. Design and lead activities to help K-12 students learn computational thinking and computer programming.
Requisites: COMP SCI 200, 220, 300, 301, 302, 310, 367, placement into COMP SCI 300, or L I S/COMP SCI 102 (COMP SCI 202 prior to Fall 2023), graduate/professional standing, or declared in the Capstone Certificate in Computer Sciences for Professionals
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Write programs in the Scratch programming language.
Audience: Undergraduate

2. Design and lead after-school programming clubs for K-12 students.
Audience: Undergraduate

3. Incorporate effective instructional strategies when teaching K-12 students.
Audience: Undergraduate

4. Reflect on and document their teaching.
Audience: Undergraduate

COMP SCI/STAT 403 – INTERNSHIP COURSE IN COMP SCI AND DATA SCIENCE
1 credit.

Enables students with outside internships to earn academic credit connected to their work experience related to the Computer Sciences or Data Science programs.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, for 3 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Understand the challenges and opportunities in Computer Sciences and Data Science professions
Audience: Undergraduate

2. Be prepared to find, apply and interview for a job and/or additional education
Audience: Undergraduate

3. Articulate your career goals and long-term trajectory
Audience: Undergraduate

COMP SCI 407 – FOUNDATIONS OF MOBILE SYSTEMS AND APPLICATIONS
3 credits.

Design and implementation of applications, systems, and services for mobile platforms with (i) constraints, such as limited processing, memory, energy, interfaces, variable bandwidth, and high mobility, and (ii) features, such as touchscreens, cameras, electronic compasses, GPS, and accelerometers.
Requisites: COMP SCI 400 or graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand the mobile ecosystem.
Audience: Undergraduate

2. Understand basics of mobile system design and constituents, including wireless communication, location services, energy management, use of cloud services, and mobile device interface design.
Audience: Undergraduate

3. Demonstrate the fundamentals of mobile app development: setting up the development environment, creating an app from scratch, and understanding the app lifecycle.
Audience: Undergraduate

4. Understand the various app components, strategies for optimizing app performance, and use of mobile features.
Audience: Undergraduate

5. Construct end-to-end applications that use server backends.
Audience: Undergraduate

6. Demonstrate strong teamwork capabilities including collaborative working, task distribution, and conflict resolution.
Audience: Undergraduate

COMP SCI 412 – INTRODUCTION TO NUMERICAL METHODS
3 credits.

Interpolation, solution of linear and nonlinear systems of equations, approximate integration and differentiation, numerical solution of ordinary differential equations, Data fitting (such as least squares) by polynomials and splines. Knowledge of matrix algebra recommended, such as MATH 340.
Requisites: MATH 222 and (MATH/COMP SCI 240 or MATH 234) and (COMP SCI 200, 300, 301, 302, 310, or placement into COMP SCI 300) or graduate/professional standing or declared in the Capstone Certificate in Computer Sciences for Professionals
Course Designation: Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

COMP SCI/I SY E/MATH 425 – INTRODUCTION TO COMBINATORIAL OPTIMIZATION
3 credits.

Focuses on optimization problems over discrete structures, such as shortest paths, spanning trees, flows, matchings, and the traveling salesman problem. We will investigate structural properties of these problems, and we will study both exact methods for their solution, and approximation algorithms.
Requisites: (MATH 320, 340, 341, or 375) or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and use the structural properties of combinatorial optimization problems
Audience: Undergraduate

2. Apply algorithms for the solution -exact or approximate- of a combinatorial optimization problem
Audience: Undergraduate

3. Explain why the algorithms studied are correct and understand their running time
Audience: Undergraduate

COMP SCI/E C E/MATH 435 – INTRODUCTION TO CRYPTOGRAPHY
3 credits.

Cryptography is the art and science of transmitting digital information in a secure manner. Provides an introduction to its technical aspects.
Requisites: (MATH 320, 340, 341, or 375) or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe and distinguish between perfect secrecy and computational security.
Audience: Undergraduate

2. State game#based security definitions—IND#CPA, IND#CCA, MAC unforgeability, and signature unforgeability—in both symmetric# and public#key contexts.
Audience: Undergraduate

3. Explain core primitives: pseudorandom functions, block ciphers, and collision#resistant hash functions.
Audience: Undergraduate

4. Contrast foundational hardness assumptions: one#way functions, PRFs, Diffie–Hellman, discrete logarithm, and integer factoring.
Audience: Undergraduate

5. Construct symmetric and public#key encryption and authentication schemes using these primitives, and prove their security.
Audience: Undergraduate

6. Evaluate the security and deployment trade#offs of protocols such as authenticated encryption, key exchange, and digital signatures.
Audience: Undergraduate

COMP SCI/STAT 471 – INTRODUCTION TO COMPUTATIONAL STATISTICS
3 credits.

Classical statistical procedures arise where closed-form mathematical expressions are available for various inference summaries (e.g. linear regression; analysis of variance). A major emphasis of modern statistics is the development of inference principles in cases where both more complex data structures are involved and where more elaborate computations are required. Topics from numerical linear algebra, optimization, Monte Carlo (including Markov chain Monte Carlo), and graph theory are developed, especially as they relate to statistical inference (e.g., bootstrapping, permutation, Bayesian inference, EM algorithm, multivariate analysis).
Requisites: STAT/MATH 310 and (STAT 333 or 340), graduate/professional standing, or declared in Statistics VISP
Course Designation: Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use computational tools (alongside mathematical ones) to extract information from (a) the likelihood function, the central object of interest in frequentist statistics, and (b) the posterior distribution, the central object of interest in Bayesian statistics
Audience: Undergraduate

2. Describe, understand the theoretical properties of, and implement basic algorithms for optimizing likelihood functions, including least squares and the IRLS algorithm, and the EM algorithm
Audience: Undergraduate

3. Understand random numbers and pseudorandom numbers and how to distinguish them, and utilize a variety of techniques for generating random variates from a probability distribution
Audience: Undergraduate

4. Use Monte Carlo methodology for such purposes as (a) carrying out a simulation study to study the properties of a statistical method, or (b) performing statistical inference via the bootstrap, or MCMC
Audience: Undergraduate

5. Understand the use of graphical models for representing the structure of complex joint distributions, and be able to use computational tools to extract information from graphical models
Audience: Undergraduate

COMP SCI/L I S 472 – INTRODUCTION TO WEB DEVELOPMENT
3 credits.

Applied web development introduces methods and tools for creating/maintaining secure and interactive web content. Topics include programming fundamentals to support core web concepts, application development essentials, and content management systems. Web best practices - such as accessibility, design, and critical thinking about relevant ethics and organization - will be incorporated throughout. Gain practical skills to design and implement websites using popular scripting languages and frameworks, content management systems (CMSs), and related tools.
Requisites: Junior standing, declared in Library and Information Studies MA, Information MS, or Capstone Certificate in Computer Sciences for Professionals. Not open to students with credit for COMP SCI 272.
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop understanding and application of current web scripting languages and development tools and frameworks.
Audience: Both Grad & Undergrad

2. Install, configure, and customize open source content management systems.
Audience: Both Grad & Undergrad

3. Understand and apply user experience and accessibility best practices in building accessible websites.
Audience: Both Grad & Undergrad

4. Design solutions to problems using multi-step scripting, logical operations, and functions.
Audience: Both Grad & Undergrad

5. Understand ethical issues and concerns related to website development and its related technologies.
Audience: Both Grad & Undergrad

6. Analyze the management challenges, and ethical considerations inherent in web development projects.
Audience: Both Grad & Undergrad

7. Critically evaluate and compare different frameworks and libraries for extending scripting capabilities.
Audience: Graduate

COMP SCI/MATH/STAT 475 – INTRODUCTION TO COMBINATORICS
3 credits.

Problems of enumeration, distribution, and arrangement. Inclusion-exclusion principle. Generating functions and linear recurrence relations. Combinatorial identities. Graph coloring problems. Finite designs. Systems of distinct representatives and matching problems in graphs. Potential applications in the social, biological, and physical sciences. Puzzles. Problem solving.
Requisites: (MATH 320, 340, 341, or 375) or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand basic counting strategies, such as staged thought-experiments, inclusion/exclusion, generating functions, and recurrence relations, and apply these strategies to solve a wide variety of counting problems.
Audience: Undergraduate

2. Recall basic objects that are used in combinatorics, such as permutations and combinations of sets and multisets, binomial and multinomial coefficients, the Catalan numbers, the Stirling numbers, and the partition numbers.
Audience: Undergraduate

3. Analyze a given combinatorial problem using the standard theorems of combinatorics, such as the pigeonhole principle, the Newton binomial theorem, the multinomial theorem, the Ramsey theorem, the Dilworth theorem, the Burnside theorem, and the Polya counting theorem.
Audience: Undergraduate

4. Construct mathematical arguments related to combinatorial problems using the above definitions, properties, theorems, and counting strategies; including the construction of examples and counterexamples.
Audience: Undergraduate

5. Convey his or her arguments in oral and written form in English, using appropriate mathematical terminology, notation, and grammar.
Audience: Undergraduate

COMP SCI/CURRIC 502 – THEORY AND PRACTICE IN COMPUTER SCIENCE EDUCATION
1 credit.

Computer science educational pedagogy and general teaching practices. Practical experience gained through tutoring students. Knowledge of object-oriented programming required.
Requisites: COMP SCI 300 or 302 or declared in Computer Science graduate program
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe and demonstrate best practices in the teaching of computer science.
Audience: Undergraduate

2. Create learning materials that exemplify selected computer science pedagogical topics.
Audience: Undergraduate

3. Identify effective tutoring session strategies.
Audience: Undergraduate

COMP SCI/E C E 506 – SOFTWARE ENGINEERING
3 credits.

Ideas and techniques for designing, developing, and modifying large software systems. Topics include software engineering processes; requirements and specifications; project team organization and management; software architectures; design patterns; testing and debugging; and cost and quality metrics and estimation. Students will work in large teams on a substantial programming project.
Requisites: (COMP SCI 367 or 400) and (COMP SCI 407, 536, 537, 545, 559, 564, 570, 679 or E C E/COMP SCI 552) or graduate/professional standing, or declared in the Capstone Certificate in Computer Sciences for Professionals
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Execute a significant software development project within a team
Audience: Undergraduate

2. Use software tools for collaboration including source control, project management, and automated testing
Audience: Undergraduate

3. Collaborate effectively on a significant software development project as part of a team, demonstrating professionalism in communication, accountability, and teamwork.
Audience: Undergraduate

4. Describe and participate in various SWE inspection activities (e.g. Group Code Review; Pair Programming; Asynchronous Review).
Audience: Undergraduate

5. Characterize and contrast software engineering methodologies and development techniques, including Agile, Waterfall, DevOps, Test-driven Development, Comment-First Development, and Extreme Programming
Audience: Undergraduate

6. Characterize and contrast software design philosophies and principles.
Audience: Undergraduate

7. Explain and evaluate techniques for software deployment such as Container and VM technologies.
Audience: Undergraduate

COMP SCI/MATH 513 – NUMERICAL LINEAR ALGEBRA
3 credits.

Direct and iterative solution of linear and nonlinear systems and of eigenproblems. LU and symmetric LU factorization. Complexity, stability, and conditioning. Nonlinear systems. Iterative methods for linear systems. QR-factorization and least squares. Eigenproblems: local and global methods.
Requisites: (MATH 340, 341, or 375) and (COMP SCI 200, 300, 301, 302, 310, or placement into COMP SCI 300) or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) program
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

COMP SCI/MATH 514 – NUMERICAL ANALYSIS
3 credits.

Polynomial forms, divided differences. Polynomial interpolation. Polynomial approximation: uniform approximation and Chebyshev polynomials, least-squares approximation and orthogonal polynomials. Numerical differentiation and integration. Splines, B-splines and spline approximation. Numerical methods for solving initial and boundary value problems for ordinary differential equations.
Requisites: (MATH 320, 340, 341, or 375), (MATH 322, 376, 421, or 521), and (COMP SCI 200, 220, 300, 310, or 301 prior to Spring 2020, or placement into COMP SCI 300); grad/professional standing; member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall and state the formal definitions of the mathematical objects and their properties used in numerical analysis (e.g., Lagrange polynomials, Gibbs phenomenon, Runge phenomenon, orthogonal polynomials, recurrence relation, Gaussian quadrature points, splines, etc.).
Audience: Both Grad & Undergrad

2. Use different techniques of numerical analysis in their appropriate settings (e.g., polynomial interpolation, least square approximation, discrete Fourier transform, the Golub-Welsch algorithm, fast Fourier transform, trapezoidal rule and Simpson's rule, numerical differentiation, forward and backward Euler's method, etc.).
Audience: Both Grad & Undergrad

3. State the main theoretical results related to the error analysis for different methods (e.g., least square error, numerical integration using a Riemann sum, the trapezoidal rule, Simpson's rule and Gaussian quadratures, (semi-)discrete Fourier transform, forward and backward Euler, etc.), and recall the arguments for these theorems and the underlying logic of their proofs.
Audience: Both Grad & Undergrad

4. Convey arguments in oral and written forms using English and appropriate mathematical terminology, notation and grammar.
Audience: Both Grad & Undergrad

5. Identify applications of course content in current areas of research.
Audience: Graduate

COMP SCI/DS/I SY E 518 – WEARABLE TECHNOLOGY
3 credits.

Gives students hands-on experience in building wearable computing platforms. Designed for students who have a background in textiles and apparel design, computer science, engineering or media arts. By the completion of the course students will have fundamental knowledge of electronic circuitry, programming, and "maker skills".
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022

COMP SCI 520 – INTRODUCTION TO THEORY OF COMPUTING
3 credits.

Basics about the notion, capabilities, and limitations of computation: elements of finite automata and regular languages, computability theory, and computational complexity theory. Additional topics include context-free grammars and languages, and complexity-theoretic cryptography.
Requisites: (MATH/COMP SCI 240 or STAT/COMP SCI/MATH 475) and (COMP SCI 367 or 400), or graduate/professional standing, or declared in the Capstone Certificate in Computer Sciences for Professionals
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Design and implement deterministic finite automata to capture specified regular languages.
Audience: Undergraduate

2. Differentiate between deterministic and nondeterministic finite automata and apply finite automata theory to express those computation tasks that can be captured by regular languages.
Audience: Undergraduate

3. Express and interpret computational models that lead to and capture algorithmic thinking.
Audience: Undergraduate

4. Design and implement a pushdown automata to capture specified context-free languages.
Audience: Undergraduate

5. Identify and explain reasoning about formalization of computation, formulated as various models of computation and make transformations between finite automata and regular languages, pushdown automata and context-free languages.
Audience: Undergraduate

6. Construct clear, concise, and sound proofs for statements regarding different models of computation, their relative strengths and weaknesses.
Audience: Undergraduate

7. Reason with Turing machines, and the various equivalent formulations of computability theory, for example to explain how the formalization captures everyday computational processes.
Audience: Undergraduate

8. Reason about computational intractability, applying the concepts of NP-hardness and NP-completeness to classify computational problems.
Audience: Undergraduate

COMP SCI/E C E/I SY E 524 – INTRODUCTION TO OPTIMIZATION
3 credits.

Introduction to mathematical optimization from a modeling and solution perspective. Formulation of applications as discrete and continuous optimization problems and equilibrium models. Survey and appropriate usage of basic algorithms, data and software tools, including modeling languages and subroutine libraries.
Requisites: (COMP SCI 200, 220, 300, 301, 302, 310, or placement into COMP SCI 300) and (MATH 320, 340, 341, or 375) or graduate/professional standing
Course Designation: Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Engage in topics about "optimization in practice".
Audience: Undergraduate

2. Use and analyze the results of state of the art optimization software.
Audience: Undergraduate

3. Use the GAMS modeling system and Jupyter notebooks (in conjunction with elementary Python) or Julia and JUMP.
Audience: Undergraduate

4. Design good models for realistic applications in engineering and the sciences.
Audience: Undergraduate

5. Develop a "commercial strength" application of optimization technology.
Audience: Undergraduate

COMP SCI/I SY E/MATH/STAT 525 – LINEAR OPTIMIZATION
3 credits.

Introduces optimization problems whose constraints are expressed by linear inequalities. Develops geometric and algebraic insights into the structure of the problem, with an emphasis on formal proofs. Presents the theory behind the simplex method, the main algorithm used to solve linear optimization problems. Explores duality theory and theorems of the alternatives.
Requisites: MATH 320, 340, 341, 375, or 443 or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use linear programming to formulate real world decision problems.
Audience: Both Grad & Undergrad

2. Apply algorithms to solve linear programming problems and demonstrate their correctness.
Audience: Both Grad & Undergrad

3. Combine different proving techniques explored in class in an original way to show new results.
Audience: Graduate

COMP SCI/I SY E 526 – ADVANCED LINEAR PROGRAMMING
3 credits.

Review of linear programming. Polynomial time methods for linear programming. Quadratic programs and linear complementarity problems and related solution techniques. Solution sets and their continuity properties. Error bounds for linear inequalities and programs. Parallel algorithms for linear and quadratic programs.
Requisites: STAT/COMP SCI/I SY E/MATH 525 and (COMP SCI 200, 220, 300, 301, 302, 310, or placement into COMP SCI 300) or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2020
Learning Outcomes: 1. Use the theory of linear programming to prove general duality results
Audience: Undergraduate

2. Apply the concept of complementarity
Audience: Undergraduate

3. Analyze and develop algorithms for solving optimization and equilibrium problems
Audience: Undergraduate

4. Apply decomposition methods and other advanced algorithms for the solution of optimization and equilibrium problems
Audience: Undergraduate

5. Understand economic concepts and how they relate to optimization and equilibria
Audience: Undergraduate

6. Extend theory of linear programming into the framework of conic programming
Audience: Undergraduate

COMP SCI/E C E/M E 532 – MATRIX METHODS IN MACHINE LEARNING
3 credits.

Linear algebraic foundations of machine learning featuring real-world applications of matrix methods from classification and clustering to denoising and data analysis. Mathematical topics include: linear equations, regression, regularization, the singular value decomposition, and iterative algorithms. Machine learning topics include: the lasso, support vector machines, kernel methods, clustering, dictionary learning, neural networks, and deep learning. Previous exposure to numerical computing (e.g. Matlab, Python, Julia, R) required.
Requisites: (MATH 234, 320, 340, 341, or 375) and (E C E 203, COMP SCI 200, 220, 300, 301, 302, 310, 320, or placement into COMP SCI 300), graduate/professional standing, or declared in Capstone Certificate in Computer Sciences for Professionals
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use matrices and vectors to formulate classification, prediction and matrix completion problems using techniques such as least squares, regularized least squares, the singular value decomposition, subspace methods, support vector machines, neural networks and kernel methods.
Audience: Both Grad & Undergrad

2. Implement machine learning techniques for classification, prediction and matrix completion problems in software, and validate their performance on datasets using cross validation.
Audience: Both Grad & Undergrad

3. Apply advanced techniques to formulate and prove optimality of various matrix based techniques in machine learning.
Audience: Graduate

COMP SCI/E C E 533 – IMAGE PROCESSING
3 credits.

Mathematical representation of continuous and digital images; models of image degradation; picture enhancement, restoration, segmentation, and coding; pattern recognition, tomography.
Requisites: E C E 330 and (MATH 320 or 340), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Process digital images using available engineering software
Audience: Both Grad & Undergrad

2. Use time-domain and frequency-domain methods to analyze images and their properties
Audience: Both Grad & Undergrad

3. Apply nonlinear filters to images such as morphological operations, edge-preserving nonlinearities, and optimization-based filters
Audience: Both Grad & Undergrad

4. Segment images using both small-scale and large-scale techniques
Audience: Both Grad & Undergrad

5. Apply classification techniques to image recognition
Audience: Both Grad & Undergrad

6. Extract features from images and apply to tasks such as registration and super-resolution
Audience: Both Grad & Undergrad

7. Lead team in meeting objectives of image processing operations
Audience: Graduate

COMP SCI 536 – INTRODUCTION TO PROGRAMMING LANGUAGES AND COMPILERS
3 credits.

Introduction to the theory and practice of compiler design. Comparison of features of several programming languages and their implications for implementation techniques. Several programming projects required.
Requisites: E C E/COMP SCI 354 and (COMP SCI 367 or 400) or graduate/professional standing or declared in the Capstone Certificate in Computer Sciences for Professionals
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Construct and manipulate abstract syntax trees (ASTs) to represent the structure of source programs, applying grammar rules and language constructs.
Audience: Undergraduate

2. Compare and contrast interpreters and compilers, focusing on AST passes and execution models.
Audience: Undergraduate

3. Design and implement interpreters by traversing and evaluating ASTs for simple and structured programming languages
Audience: Undergraduate

4. Develop lexers and parsers that convert textual program input into ASTs, using formal grammar specifications and parsing techniques.
Audience: Undergraduate

5. Implement static analyses, such as type checking, by analyzing and annotating ASTs to enforce program correctness rules.
Audience: Undergraduate

6. Translate ASTs into low-level code (e.g., x86 assembly), applying principles of code generation and basic optimization.
Audience: Undergraduate

7. Analyze how advanced language features, such as classes, objects, and garbage collection, introduce complexity in interpretation and compilation.

Audience: Undergraduate

COMP SCI 537 – INTRODUCTION TO OPERATING SYSTEMS
4 credits.

Input-output hardware, interrupt handling, properties of magnetic tapes, discs and drums, associative memories and virtual address translation techniques. Batch processing, time sharing and real-time systems, scheduling resource allocation, modular software systems, performance measurement and system evaluation.
Requisites: E C E/COMP SCI 354 and (COMP SCI 367 or 400) or graduate/professional standing or declared in the Capstone Certificate in Computer Sciences for Professionals
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the role and core responsibilities of an operating system
Audience: Undergraduate

2. Explain and evaluate key OS abstractions and mechanisms
Audience: Undergraduate

3. Analyze and compare scheduling, memory management, and storage strategies
Audience: Undergraduate

4. Implement and extend functionality in an operating system
Audience: Undergraduate

5. Apply systems-level thinking to reason about performance, reliability, and correctness
Audience: Undergraduate

6. Write and debug multi-threaded programs
Audience: Undergraduate

COMP SCI 538 – INTRODUCTION TO THE THEORY AND DESIGN OF PROGRAMMING LANGUAGES
3 credits.

Design and theory of programming languages: procedural, object-oriented, functional and logic paradigms. Serial and concurrent programming. Execution models and formal specification techniques.
Requisites: E C E/COMP SCI 354 and (COMP SCI 367 or 400) or graduate/professional standing or declared in the Capstone Certificate in Computer Sciences for Professionals
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Read, write, and transform functional programs using key paradigms such as lazy evaluation, eager evaluation, and monads.
Audience: Undergraduate

2. Apply lambda calculus as a formal foundation for understanding and reasoning about functional programming languages.
Audience: Undergraduate

3. Reason about and analyze program behavior through type checking, type inference, and static analysis techniques.
Audience: Undergraduate

4. Construct and reason about control flow in programs using techniques such as continuation-passing style (CPS) and monadic control structures.
Audience: Undergraduate

5. Evaluate the role of type systems, polymorphism, and abstraction mechanisms in enforcing program correctness and expressiveness.
Audience: Undergraduate

6. Analyze how programming language features influence program security, with a focus on reasoning about memory management and control flow vulnerabilities.
Audience: Undergraduate

7. Apply formal reasoning techniques to construct correctness proofs of programs.
Audience: Undergraduate

COMP SCI/E C E/M E 539 – INTRODUCTION TO ARTIFICIAL NEURAL NETWORKS
3 credits.

Theory and applications of artificial neural networks: multi-layer perceptron, self-organization mapdeep neural network convolutional neural network, recurrent network, support vector machines genetic algorithm, and evolution computing. Applications to control, pattern recognition, prediction, and object detection and tracking.
Requisites: COMP SCI 200, 220, 300, 301, 302, 310, placement into COMP SCI 300, or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify if a given data analysis task is a pattern classification problem or a model approximation problem.
Audience: Undergraduate

2. Apply multi-layer perceptron neural network training algorithm to develop artificial neural network (ANN) based pattern classifiers and data predictors.
Audience: Undergraduate

3. Apply deep learning network for pattern classification
Audience: Undergraduate

4. Apply support vector machine (SVM) to develop pattern classifiers.
Audience: Undergraduate

5. Apply self-organization map and k-means to perform clustering operations of a given data set.
Audience: Undergraduate

6. Apply stochastic optimization methods, including simulated annealing, genetic algorithm and random search to solve a discrete optimization problem.
Audience: Undergraduate

COMP SCI 540 – INTRODUCTION TO ARTIFICIAL INTELLIGENCE
3 credits.

Principles of knowledge-based search techniques, automatic deduction, knowledge representation using predicate logic, machine learning, probabilistic reasoning. Applications in tasks such as problem solving, data mining, game playing, natural language understanding, computer vision, speech recognition, and robotics.
Requisites: (COMP SCI 300, 320 or 367) and (MATH 211, 217, 221, or 275) or graduate/professional standing or declared in the Capstone Certificate in Computer Sciences for Professionals
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. (Uninformed Search Methods) Identify the formulation of search for problem solving tasks. Understand important concepts in uninformed search. Apply the search methods on the formulated search problem.
Audience: Undergraduate

2. (Informed Search Methods) Understand important concepts in informed search. Differentiate from uninformed search. Solve the formulated search problem with the informed search method A*.
Audience: Undergraduate

3. (Local Search Methods) Identify the formulation of search for problem solving tasks. Apply the hill climbing method for local search problems. Identify and summarize the important features of the simulated annealing and genetic algorithms.
Audience: Undergraduate

4. (Game Playing) Recall the concept of games. Perform the minimax game playing method on formulated game tasks. Apply alpha-beta pruning to speed up the minimax method.
Audience: Undergraduate

5. (Unsupervised and Supervised Learning) Identify and summarize important features about supervised learning and unsupervised learning. Differentiate between the two types of tasks.
Audience: Undergraduate

6. (Classic Learning Methods) Apply linear regression, hierarchical agglomerative clustering algorithm, k-means clustering, or K nearest neighbor algorithm on given problem instances. Judge if the method is appropriate for a given task.
Audience: Undergraduate

7. (Neural Networks and Deep Learning) Apply Perceptron learning rule on given problem instances. Implement neural networks using given software packages.
Audience: Undergraduate

8. (Reinforcement Learning) Understand the concepts of reinforcement learning. Identify and summarize its important features. Compute value function and Q function. Apply value iteration and Q learning on given problems.
Audience: Undergraduate

COMP SCI 541 – THEORY & ALGORITHMS FOR DATA SCIENCE
3 credits.

Theoretical methods for data science. Topics include: review of probability background, concentration inequalities, geometry of high dimensional random variables, parametric and non-parametric estimation, selected topics from optimization (optimality conditions; deterministic and stochastic gradient descent), PAC learning, sample complexity and algorithms for linear classification and regression, and property/distribution testing. Uses Python programming language.
Requisites: (COMP SCI 200, 220, placement into COMP SCI 300, or STAT 340), (MATH 320, 340, 341, 345, or 375), and (STAT 311, 333, 340, MATH/STAT 309, 431, MATH 331, 531, or I SY E 210), or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Use and explain theoretical concepts in data science, such as concentration inequalities, learning, nonparametric distribution testing, optimization.
Audience: Undergraduate

2. Use properties of high-dimensional random variables to perform tasks such as dimension reduction and separating mixtures of Gaussians
Audience: Undergraduate

3. Use optimization algorithms such as gradient descent and stochastic gradient descent and analyze their computational complexity
Audience: Undergraduate

4. Analyze sample complexity for basic learning tasks such binary linear classification, as well as computational complexity of algorithms for solving them
Audience: Undergraduate

5. Analyze sample complexity of distribution testing tasks, such as testing uniformity and testing equivalence of discrete distributions
Audience: Undergraduate

COMP SCI 542 – INTRODUCTION TO SOFTWARE SECURITY
3 credits.

Teaches the security considerations that occur during all steps of the software development life cycle: methodologies for designing secure software, programming using secure programming techniques, in-depth vulnerability assessment methodologies, static and dynamic analysis tools for evaluating software security, and system defenses reducing security threats.
Requisites: COMP SCI 400 or 320, graduate/professional standing, or declared in the Capstone Certificate in Computer Sciences for Professionals
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Think like an attacker, that is to think about software the way that an adversary would.
Audience: Undergraduate

2. Design secure programs based on a structured methodology such as Threat Modeling. Have security in mind before writing the first line of code.

Audience: Undergraduate

3. Program in a secure way by mastering a comprehensive set of techniques for producing code that is more resilient to attack.
Audience: Undergraduate

4. Think like a security analyst, that is how to perform an in-depth software vulnerability assessments using a structured methodology such as First Principles Vulnerability Assessment (FPVA). Acquire the skills of a security analyst.
Audience: Undergraduate

5. Use a variety of automated tools that help statically and dynamically analyze code for security flaws.
Audience: Undergraduate

COMP SCI 544 – INTRODUCTION TO BIG DATA SYSTEMS
3 credits.

Deploy and use distributed systems to store and analyze large datasets. Unstructured and structured approaches to storage will be covered. Analysis will involve learning new query languages, processing streaming data, and training machine learning models. Most programming will be done in Python.
Requisites: COMP SCI 320, 400, or Graduate/Professional Standing
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Deploy distributed systems for data storage and analytics
Audience: Undergraduate

2. Demonstrate competencies with tools and processes necessary for loading data into distributed storage systems
Audience: Undergraduate

3. Write programs that use distributed platforms to efficiently analyze large datasets
Audience: Undergraduate

4. Produce meaning from large datasets by training machine learning models in parallel or on distributed systems
Audience: Undergraduate

5. Measure resource usage and overall cost of running distributed programs
Audience: Undergraduate

6. Optimize distributed analytics programs to reduce resource consumption and program runtime
Audience: Undergraduate

7. Demonstrate competencies with cloud services designed to store or analyze large datasets
Audience: Undergraduate

COMP SCI/E C E 552 – INTRODUCTION TO COMPUTER ARCHITECTURE
3 credits.

The design of computer systems and components. Processor design, instruction set design, and addressing; control structures and microprogramming; memory management, caches, and memory hierarchies; and interrupts and I/O structures. E C E 551 or knowledge of Verilog is recommended.
Requisites: (E C E/COMP SCI 352 and E C E/COMP SCI 354) or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use standard performance metrics to compare performance of different digital systems
Audience: Undergraduate

2. Design a pipelined data path for a RISC (reduced instruction set computer) instruction set and identify concepts of data dependence, pipelined hazards and out of order execution
Audience: Undergraduate

3. Design basic data and control cache subsystems and be able to operate basic memory systems
Audience: Undergraduate

4. Design a pipelined RISC micro-processor system with data cache using computer aided design tool and validate the correctness of the design using logic simulation
Audience: Undergraduate

COMP SCI 557 – PARALLEL & THROUGHPUT- OPTIMIZED PROGRAMMING
3 credits.

A comprehensive yet accessible introduction to high-performance computing practices, emphasizing shared-memory systems and using numerical algorithms as case studies. A focus on shared-memory, single-node multiprocessor systems, with some attention to GPUs. Emphasis is given on multithreaded programming, vectorization, memory hierarchy and its implications, and analysis of performance-limiting factors.
Requisites: E C E/COMP SCI 354 and (MATH 320, 340, 341, or 375), or graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Evaluate the efficiency and parallelism potential of algorithms, relative to bounds imposed by architectural limitations such as compute and memory bandwidth.
Audience: Undergraduate

2. Understand the implications of the memory system on parallel scaling, including considerations of memory throughput, latency and prefetching efficiency.
Audience: Undergraduate

3. Recognize instruction-level parallelism and evaluate how amenable different codes are to compiler-automated (or user-guided, via intrinsics) vectorization.
Audience: Undergraduate

4. Compare data layouts (dense vs. sparse data, structures-of-arrays vs. arrays-of-structures) to throughput-sensitive codes.
Audience: Undergraduate

5. Explore computational and memory-related performance implications of fundamental numerical codes such as convolutions, streaming vector operations, and matrix manipulations
Audience: Undergraduate

COMP SCI 559 – COMPUTER GRAPHICS
3 credits.

Survey of computer graphics. Image representation, formation, presentation, composition and manipulation. Modeling, transformation, and display of geometric objects in two and three dimensions. Representation of curves and surfaces. Rendering, animation, multi-media and visualization. Fluency with vector mathematics (e.g., from MATH 234 or a linear algebra class) is recommended.
Requisites: MATH 222 and (COMP SCI 367 or 400) or graduate/professional standing or declared in the Capstone Certificate in Computer Sciences for Professionals
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop interactive graphical applications in 2D and 3D using different types of APIs
Audience: Undergraduate

2. Analyze and apply coordinate systems and transformations in 2D and 3D to model objects hierarchically and prepare them for viewing
Audience: Undergraduate

3. Explain and apply shape modeling techniques, including parametric curves and meshes, in 2D and 3D
Audience: Undergraduate

4. Select and apply appearance modeling techniques including texturing and lighting
Audience: Undergraduate

5. Explain the structure and operation of the graphics pipeline and hardware, and use this understanding to implement and optimize efficient graphical applications
Audience: Undergraduate

6. Identify the issues in discrete representations and select approaches to mitigate them
Audience: Undergraduate

7. Discuss how imagery is perceived and the impact of perception on computer generated imagery
Audience: Undergraduate

COMP SCI/E C E 561 – PROBABILITY AND INFORMATION THEORY IN MACHINE LEARNING
3 credits.

Probabilistic tools for machine learning and analysis of real-world datasets. Introductory topics include classification, regression, probability theory, decision theory and quantifying information with entropy, relative entropy and mutual information. Additional topics include naive Bayes, probabilistic graphical models, discriminant analysis, logistic regression, expectation maximization, source coding and variational inference.
Requisites: (MATH 320, 340, 341, 375, or M E/COMP SCI/E C E 532 or concurrent enrollment) and (E C E 331, STAT/MATH 309, 431, STAT 311, 324, M E/STAT 424 or MATH 531) or grad/profsnl standing or declared in Capstone Certificate in Computer Sciences for Professionals
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Identify how ambiguity and noise leads to the need for probabilistic methods in machine learning
Audience: Both Grad & Undergrad

2. Implement classification, prediction and generative algorithms using a variety of techniques based in probability, information theory and machine learning
Audience: Both Grad & Undergrad

3. Prove optimality of a variety of algorithms and demonstrate understanding of sample complexity bounds
Audience: Graduate

COMP SCI 564 – DATABASE MANAGEMENT SYSTEMS: DESIGN AND IMPLEMENTATION
4 credits.

What a database management system is; different data models currently used to structure the logical view of the database: relational, hierarchical, and network. Hands-on experience with relational and network-based database systems. Implementation techniques for database systems. File organization, query processing, concurrency control, rollback and recovery, integrity and consistency, and view implementation.
Requisites: E C E/COMP SCI 354 and (COMP SCI 367 or 400) or graduate/professional standing or declared in the Capstone Certificate in Computer Sciences for Professionals
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate and apply the foundations of relational database management systems (RDBMS).
Audience: Undergraduate

2. Explain the concepts of data models, including the Entity-Relationship (ER) and Relational models, express application in these models, and translate between models
Audience: Undergraduate

3. Use SQL to express complex queries over a relational database.
Audience: Undergraduate

4. Describe how an RDBMS stores, indexes, and accesses data.
Audience: Undergraduate

5. Explain how an RDBMS optimizes query execution and efficiently implements various operators.
Audience: Undergraduate

6. Explain the motivations for transactions, concurrency control, and crash recovery.
Audience: Undergraduate

7. Modify and extend the functionality of RDBMS.
Audience: Undergraduate

COMP SCI 565 – INTRODUCTION TO DATA VISUALIZATION
3 credits.

Introduction to topics such as perception, cognition, communication, design, implementation, applications, tools, and evaluation. Provides a broad survey of the field and covers fundamental concepts, theory, and tools in data visualization with opportunities for hands-on activities. Gain real-world experience in designing and evaluating visualizations.
Requisites: COMP SCI 320, 400, or Graduate/Professional Standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Differentiate between visualizations to communicate within situational context.
Audience: Undergraduate

2. Illustrate the types of properties that make visualizations more effective.
Audience: Undergraduate

3. Apply techniques and algorithms for creating effective visualizations based on principles and techniques from graphic design, visual art, perceptual psychology, and cognitive science.
Audience: Undergraduate

4. Utilize visualization creation tools in individual and group assignment
Audience: Undergraduate

COMP SCI 566 – INTRODUCTION TO COMPUTER VISION
3 credits.

Topics include image formation, feature detection, motion estimation, image mosaics, 3D shape reconstruction, and object recognition. Applications of these techniques include building 3D maps, creating virtual characters, organizing photo and video databases, human computer interaction, video surveillance, and automatic vehicle navigation. Broad overview of various computer vision and machine learning techniques and sensing and imaging technologies used in computer vision applications. Project-based.
Requisites: COMP SCI 400 and (MATH 320, 340, 341, 345 or 375) and (STAT 311, 324, 333, 340, 371, STAT/MATH 309, 431, MATH 331 or 531) or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe a broad range of fundamental concepts in 2D and 3D computer vision, including basic image processing, 2D image recognition, 3D sensing and motion recovery
Audience: Undergraduate

2. Explain basic theories, current approaches, key concepts, and common practices in computer vision.
Audience: Undergraduate

3. Design basic statistics and machine learning algorithms for computer vision problems, conduct experiments to evaluate the proposed approaches, and analyze and interpret the results.
Audience: Undergraduate

4. Develop basic computer vision applications and projects in MATLAB.
Audience: Undergraduate

5. Prepare and deliver clear and concise oral presentations.
Audience: Undergraduate

COMP SCI/B M I 567 – BIOMEDICAL IMAGE ANALYSIS
3 credits.

Hands-on introduction to biological and medical image analysis techniques. Topics include medical imaging formats, segmentation, registration, image quantification, and classification.
Requisites: (MATH 320, 340, 341, 345, or 375) and (STAT 511, 541, POP HLTH/B M I 551, MATH 331, MATH/STAT 431, 309, STAT 240, 301, 311, 324, 371, or STAT/F&W ECOL 571) or graduate/professional standing
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Implement the key principles of ideas from probability, statistics and computer vision algorithms used in medical image analysis
Audience: Undergraduate

2. Recognize which image analysis problems will benefit from which modeling approach
Audience: Undergraduate

3. Apply algorithms about image analysis tasks and implement algorithms and pipelines using a programming language
Audience: Undergraduate

4. Implement the building blocks taught in this course to independently learn and apply new, but related imaging analysis algorithms
Audience: Undergraduate

COMP SCI 570 – INTRODUCTION TO HUMAN-COMPUTER INTERACTION
3 credits.

User-centered software design: (1) principles of and methods for understanding user needs; designing and prototyping interface solutions; and evaluating their usability, (2) their applications in designing multiple types of interfaces through group projects.
Requisites: Junior standing or declared in the Capstone Certificate in Computer Sciences for Professionals
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand fundamental concepts and principles of Human-Computer Interaction (HCI).
Audience: Undergraduate

2. Apply user-centered design principles and methods to create effective and usable interfaces.
Audience: Undergraduate

3. Analyze and evaluate user interfaces using appropriate usability evaluation techniques.
Audience: Undergraduate

4. Develop a toolbox of user-centered design techniques that can be applied to new design problems.
Audience: Undergraduate

5. Understand user needs and expectations with the aid of user research methods.
Audience: Undergraduate

COMP SCI 571 – BUILDING USER INTERFACES
3 credits.

Introduces software development of user interfaces (UIs). Build competence in implementing UIs using state-of-the-art (1) UI paradigms, such as event-driven interfaces, direct-manipulation interfaces, and dialogue-based interaction; (2) methods for capturing, interpreting, and responding to different forms of user input and states, including pointing, text entry, speech, touch, gestures, user activity, context, and physiological states; and (3) platform-specific UI development APIs, frameworks, and toolkits for multiple platforms including web/mobile/desktop interfaces, natural user interfaces, and voice user interfaces. Learn about the fundamental concepts, technologies, algorithms, and methods in building user interfaces, implement UIs using of state-of-the-art UI development tools, and build a UI development portfolio.
Requisites: COMP SCI 400
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Engage in design thinking around user interface needs and problems, ideate and communicate conceptual design solutions

Audience: Undergraduate

2. Create visual designs, layouts, and navigation structures, and effectively use design languages, color palettes, and platform-specific design elements
Audience: Undergraduate

3. Prototype and develop user interfaces for the Web, mobile, and voice user interfaces (VUIs)
Audience: Undergraduate

4. Program front-end, user-facing software elements using the state-of-the-art programming languages, frameworks, and libraries
Audience: Undergraduate

5. Follow user-centered design principles, heuristics, and methods to iteratively build, assess, and refine design solutions
Audience: Undergraduate

COMP SCI/B M I 576 – INTRODUCTION TO BIOINFORMATICS
3 credits.

Algorithms for computational problems in molecular biology. Studies algorithms for problems such as: genome sequencing and mapping, pairwise and multiple sequence alignment, modeling sequence classes and features, phylogenetic tree construction, and gene-expression data analysis.
Requisites: (COMP SCI 320 or 400) and MATH 222, graduate/professional standing, or declared in the Capstone Certificate in Computer Sciences for Professionals
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the biology and significance of the most commonly measured molecules in molecular biology.
Audience: Undergraduate

2. Identify the primary computational problems associated with each type of biological data.
Audience: Undergraduate

3. Explain the major algorithms and approaches used to address the computational problems.
Audience: Undergraduate

4. Implement efficient algorithms for bioinformatic tasks through the use of the discussed approaches.
Audience: Undergraduate

5. Apply the discussed algorithms to novel but closely-related tasks.
Audience: Undergraduate

6. Understand the methods covered such that parts of the methods sections of published biological papers are interpretable.
Audience: Undergraduate

7. Begin to gain the qualifications of a bioinformatician.
Audience: Undergraduate

COMP SCI 577 – INTRODUCTION TO ALGORITHMS
4 credits.

Basic paradigms for the design and analysis of efficient algorithms: greed, divide-and-conquer, dynamic programming, reductions, and the use of randomness. Computational intractability including typical NP-complete problems and ways to deal with them.
Requisites: (MATH/COMP SCI 240 or STAT/COMP SCI/MATH 475) and (COMP SCI 367 or 400), or graduate/professional standing, or declared in the Capstone Certificate in Computer Sciences for Professionals
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Design and analyze efficient algorithms based on the paradigms of divide-and-conquer, dynamic programming, and greed.
Audience: Undergraduate

2. Construct clear, concise, and sound proofs for algorithmic correctness and complexity statements, applying logical reasoning, synthesizing definitions and theorems, and effectively communicating structured arguments.
Audience: Undergraduate

3. Formulate abstractions of computational problems, and design and analyze efficient reductions between computational problems.
Audience: Undergraduate

4. Describe, select and apply paradigmatic algorithms and reductions dealing with numbers, strings, graphs, and networks, including some that go beyond the standard paradigms and/or involve more intricate mathematics.
Audience: Undergraduate

5. Recognize computational intractability, demonstrate NP-hardness, and articulate the repercussions.
Audience: Undergraduate

COMP SCI 578 – CONTEST-LEVEL PROGRAMMING
1 credit.

Training in computer programming for competitions: assessing the coding difficulty and complexity of computational problems, recognizing the applicability of known algorithms, fast coding and testing, team work. COMP SCI 577 is suggested but not required.
Requisites: (COMP SCI 300 or 367), graduate/professional standing, or declared in the Capstone Certificate in Computer Sciences for Professionals
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2020

COMP SCI/DS 579 – VIRTUAL REALITY
3 credits.

Introduces students to the field of virtual reality and focuses on creating immersive, interactive virtual experiences. Survey topics include historical perspectives on virtual reality technology, computer graphics and 3D modeling, human perception and psychology, human computer interaction and user interface design. This course is designed for students with backgrounds in Computer Science, Engineering, Art, Architecture and Design. Students will work in interdisciplinary teams on projects, culminating in a final event that will be showcased to the public. While not an official uisite, the class will be technologically motivated; therefore students should be comfortable learning new software. The class will utilize publicly available game design software which provides tools and services for the creation of interactive content. While not necessary, students may find it helpful to have taken classes in programming and computer graphics (such COMP SCI 559: Computer Graphics) or in 3D modeling (such as ART 429: 3D Digital Studio I or DS 242: Visual Communication II).
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025

COMP SCI/L I S 611 – USER EXPERIENCE DESIGN 1
3 credits.

Introduction to the user experience design including key stages of the design process, design ethics, and the methods and tools involved at each stage of design. Conduct formative research on clients, users, use contexts and tasks. Gain experience with user research methodologies and learn to create intermediate design tools such as personas. Develop and present a design proposal for a chosen project.
Requisites: Declared in Information MS, Design + Innovation MS , or Capstone Certificate in User Experience Design
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply fundamental concepts and practices of user experience design
Audience: Graduate

2. Understand the ethics of design including practices of inclusive design and accessibility
Audience: Graduate

3. Conduct formative research to inform design
Audience: Graduate

4. Apply common user data collection methods
Audience: Graduate

5. Analyze and visualize processes across time and interfaces
Audience: Graduate

6. Create and apply common UX design tools such as personas, scenarios and user journey maps
Audience: Graduate

7. Effectively convey the output of user research and initial design through oral and written communication.
Audience: Graduate

COMP SCI/L I S 612 – USER EXPERIENCE DESIGN 2
3 credits.

Advanced study of UX design. Introduces processes of ideation, key concepts of visual design, conceptual and interaction design, low and high-resolution prototyping of design techniques. Applications include drafting designs based on user models and initial testing of prototypes.
Requisites: COMP SCI/L I S 611 and Declared in Information MS, Design + Innovation MS, or Capstone Certificate in User Experience Design
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop design ideas and communicate them through brainstorming, sketching, and modeling;
Audience: Graduate

2. Create designs that follow principles of and best practices in visual and interaction design;
Audience: Graduate

3. Prototype designs using rapid prototyping methods for communication and testing;
Audience: Graduate

4. Understand human perceptual, cognitive, and motor processes involved in interaction;
Audience: Graduate

5. Evaluate designs using expert- and empirical-evaluation methods;
Audience: Graduate

6. Integrate design, prototyping, and evaluation methods and principles into a process toward addressing a design problem
Audience: Graduate

7. Communicate their ideas to others, integrate feedback into their design work, and critique the work of others constructively.
Audience: Graduate

COMP SCI/L I S 613 – USER EXPERIENCE DESIGN 3
3 credits.

Conduct formal evaluations of the user experience (UX) or usability of a digital system. Gain familiarity with the evaluation and research process including key stages, tasks for each stage, common data collection and analysis methods, and common tools employed in the field. Gain experience with a variety of UX evaluation approaches. Collect pilot data and develop a proposal for further UX testing.
Requisites: COMP SCI/L I S 612 and Declared in Information MS, Design + Innovation MS, or Capstone Certificate in User Experience Design
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate understanding of a variety of UX testing approaches
Audience: Graduate

2. Plan and implement all phases of testing for a digital system including planning, data collection, analysis and reporting
Audience: Graduate

3. Demonstrate understanding of the relationship among research design, instruments, metrics, and data analysis
Audience: Graduate

4. Implement major testing approaches such as task-based, information architecture and accessibility
Audience: Graduate

5. Have knowledge of contemporary tools used for UX testing
Audience: Graduate

6. Communicate evaluation findings effectively and use data to improve systems design
Audience: Graduate

COMP SCI/L I S 614 – USER EXPERIENCE DESIGN CAPSTONE
1 credit.

Applies a design studio critique approach to produce a learning environment of collaborative and interdisciplinary peer critique and learning, in addition to provide expert feedback and suggestions. Present and defend the latest iteration of the user experience design project developed in earlier courses while learning about the professions associated with digital user experience design.
Requisites: COMP SCI/L I S 613 and declared in Design + Innovation MS, or the Capstone Certificate in User Experience Design
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Knowledge of, and ability to apply, data collection and analysis methodologies for user experience research.
Audience: Graduate

2. Knowledge of, and ability to apply, design principles and user behavior theories to digital environments.
Audience: Graduate

3. Create, critique and revise design prototypes based on testing data and feedback
Audience: Graduate

4. Effectively plan, manage and communicate a user experience design project.
Audience: Graduate

COMP SCI 620 – COMPUTER SCIENCES CAPSTONE
3 credits.

Build a meaningful product from start to finish with a local, regional, national and international corporate client that solves a real-world problem. In a collaborative space design, develop, test, debug, document, and deliver a software project for a corporate client, learning and using new technologies and agile software development techniques.
Requisites: COMP SCI 400, senior standing, and declared in an undergraduate Computer Sciences major
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Evaluate and utilize agile techniques such as Design Thinking and Scrum.
Audience: Undergraduate

2. Demonstrate effective teamwork skills.
Audience: Undergraduate

3. Develop a software product for a corporate client from start to finish including phases for discovery, design, coding, testing, and documentation.
Audience: Undergraduate

4. Execute presentation skills by holding weekly demos with corporate client.
Audience: Undergraduate

5. Examine the types of roles typically present in an agile software development organization such as Product Manager, UX, Scrum Master, engineers, testers, DevOps, etc
Audience: Undergraduate

COMP SCI 638 – UNDERGRADUATE TOPICS IN COMPUTING
1-4 credits.

Selected topics in computing. Each offering of the course will cover a topic selected by the instructor and may cover one or more topics from all of computer science.
Requisites: COMP SCI 200, 300, 301, 302, 310, 367, placement into COMP SCI 300, or L I S/COMP SCI 102 (COMP SCI 202 prior to Fall 2023), graduate/professional standing, or declared in the Capstone Certificate in Computer Sciences for Professionals
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

COMP SCI 639 – UNDERGRADUATE ELECTIVE TOPICS IN COMPUTING
3-4 credits.

Selected topics in computing. Each offering of the course will cover a topic selected by the instructor. Offerings of this course will provide sufficient depth into their subject to count as electives to meet CS Major requirements.
Requisites: None
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

COMP SCI 640 – INTRODUCTION TO COMPUTER NETWORKS
3 credits.

Architecture of computer networks and network protocols, protocol layering, reliable transmission, congestion control, flow control, naming and addressing, unicast and multicast routing, network security, network performance widely used protocols such as Ethernet, wireless LANs, IP, TCP, and HTTP.
Requisites: (COMP SCI/E C E 354 and COMP SCI 400) or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand what a computer network is and its key components, such as switches, routers, firewalls, and access points.
Audience: Undergraduate

2. Explain the concept of network protocols and their role in communications, how the Internet works, and especially the OSI model and the TCP/IP protocol suite.
Audience: Undergraduate

3. Analyze network protocols at different layers, including TCP, UDP, IP, ARP, the IEEE 802 suite, DNS, BGP, and more, and including how they interact with each other.
Audience: Undergraduate

4. Evaluate network performance metrics, strategies that allow for effective navigation and troubleshooting of network issues, and approaches to design network architectures.
Audience: Undergraduate

5. Design and implement network services and applications.
Audience: Undergraduate

COMP SCI 642 – INTRODUCTION TO INFORMATION SECURITY
3 credits.

Senior level undergraduate course covering various topics on information security. Covers a wide range of topics, such as cryptographic primitives, security protocols, system security, and emerging topics. Elementary knowledge of mathematical logic and discrete probability theory needed, such as MATH/COMP SCI 240.
Requisites: COMP SCI 537 or graduate/professional standing or declared in the Capstone Certificate in Computer Sciences for Professionals
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the purpose of security and accurately define and apply key concepts, including threats, vulnerabilities, and trust.
Audience: Undergraduate

2. Apply best practices for both operational and system design security.
Audience: Undergraduate

3. Apply formal security properties provided by cryptographic techniques and illustrate them with relevant cryptographic algorithms.
Audience: Undergraduate

4. Evaluate the three fundamental authentication mechanisms, evaluate their trade-offs, and determine appropriate use cases.
Audience: Undergraduate

5. Define, implement, and enforce access control policies within networks and operating systems.
Audience: Undergraduate

6. Analyze the security of network and web environments through the deployment technology and policy
Audience: Undergraduate

7. Create threat and trust models, and apply appropriate security mechanisms to protect system integrity.
Audience: Undergraduate

COMP SCI 681 – SENIOR HONORS THESIS
3 credits.

Individual study for seniors completing theses for honors in the Computer Sciences major as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

COMP SCI 682 – SENIOR HONORS THESIS
3 credits.

Individual study for seniors completing theses for honors in the Computer Sciences major as arranged with a faculty member. Continuation of COMP SCI 681
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

COMP SCI 691 – SENIOR THESIS
2-3 credits.

Individual study for seniors completing theses as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

COMP SCI 692 – SENIOR THESIS
2-3 credits.

Individual study for seniors completing theses as arranged with a faculty member, continuation of COMP SCI 691
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

COMP SCI 698 – DIRECTED STUDY
1-6 credits.

Directed study projects for juniors and seniors as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

COMP SCI 699 – DIRECTED STUDY
1-6 credits.

Directed study projects for juniors and seniors as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

COMP SCI 701 – CONSTRUCTION OF COMPILERS
3 credits.

Principles of the design and implementation of programming languages. Topics include: Principles of compilation, static program analysis, compilation methods to support profiling, and code-generation methods. Knowledge of programming languages and compiler design strongly encouraged, such as COMP SCI 536.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020

COMP SCI 702 – GRADUATE COOPERATIVE EDUCATION
1-2 credits.

Apply computer sciences principles in a hands-on, professional setting.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Understand the nature and demands of a professional career in computer science.
Audience: Graduate

2. Apply knowledge gained in computer science coursework in a professional setting.
Audience: Graduate

COMP SCI 703 – PROGRAM VERIFICATION AND SYNTHESIS
3 credits.

Formal methods for program verification. Model-checking techniques; linear temporal logic; computational tree logic; logic/automata connection; bisimulations; probabilistic model-checking. Special topics include: program synthesis, verification and synthesis of privacy properties. Knowledge of programming languages and compiler design strongly encouraged, such as COMP SCI 536.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Logic: Syntax and formal semantics of temporal logics such as LTL and MSO and formalizing software safety properties. Translations from temporal logics to automata.
Audience: Graduate

2. Model Checking: Understand algorithms for checking whether a program satisfies a temporal property in temporal logic and apply such algorithms to verification problems.
Audience: Graduate

3. Synthesis: Understand and apply state-of-the-art program synthesis algorithms such as counterexample-guided inductive synthesis, syntax-guided synthesis, sketching, and MCMC sampling.
Audience: Graduate

COMP SCI 704 – PRINCIPLES OF PROGRAMMING LANGUAGES
3 credits.

Introduction to principles of advanced programming languages and programming-language theory. Topics include: lambda-calculus, functional languages, polymorphic functions, type inference, structural induction, lazy evaluation, operational semantics, denotational semantics, and axiomatic semantics. Students are strongly encouraged to have knowledge of programming languages, such as from COMP SCI 536.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

COMP SCI/E C E 707 – MOBILE AND WIRELESS NETWORKING
3 credits.

Design and implementation of protocols, systems, and applications for mobile and wireless networking, particularly at the media access control, network, transport, and application layers. Focus is on the unique problems and challenges presented by the properties of wireless transmission, various device constraints such as limited battery power, and node mobility. Knower of computer networking is strongly encouraged, such as from COMP SCI 640 or E C E 537.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

COMP SCI 710 – COMPUTATIONAL COMPLEXITY
3 credits.

Study of the capabilities and limitations of efficient computation. Relationships between models representing capabilities such as parallelism, randomness, quantum effects, and non-uniformity; and models based on the notions of nondeterminism, alternation, and counting, which capture the complexity of important problems. Knowledge of the theory of computation is strongly encouraged, such as COMP SCI 520.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

COMP SCI/MATH 714 – METHODS OF COMPUTATIONAL MATHEMATICS I
3 credits.

Development of finite difference methods for hyperbolic, parabolic and elliptic partial differential equations. Analysis of accuracy and stability of difference schemes. Direct and iterative methods for solving linear systems. Introduction to finite volume methods. Applications from science and engineering. Students are strongly encouraged to have programming skills (e.g. COMP SCI 200) and some undergraduate numerical analysis (e.g. MATH/COMP SCI 514 or COMP SCI 412), analysis and differential equations (e.g. MATH 322 and MATH 521) and linear algebra (e.g. MATH 341).
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

COMP SCI/MATH 715 – METHODS OF COMPUTATIONAL MATHEMATICS II
3 credits.

Introduction to spectral methods (Fourier, Chebyshev, Fast Fourier Transform), finite element methods (Galerkin methods, energy estimates and error analysis), and mesh-free methods (Monte-Carlo, smoothed-particle hydrodynamics) for solving partial differential equations. Applications from science and engineering. Applications from science and engineering. Students are strongly encouraged to have programming skills (e.g. COMP SCI 200), undergraduate numerical analysis (e.g. MATH/COMP SCI 514 or COMP SCI 412), analysis (MATH 322 and 521) and linear algebra (e.g. MATH 341 or equiv.)
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

COMP SCI/I SY E 719 – STOCHASTIC PROGRAMMING
3 credits.

Stochastic programming is concerned with decision making in the presence of uncertainty, where the eventual outcome depends on a future random event. Topics include modeling uncertainty in optimization problems, risk measures, stochastic programming algorithms, approximation and sampling methods, and applications. Students are strongly encouraged to have knowledge of linear programming (e.g., MATH/COMP SCI/I SY E/STAT 525) and probability and statistics (e.g., MATH/STAT 431). Knowledge of integer optimization (MATH/COMP SCI/I SY E 728) is helpful, but not required.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Learn the terms, basic capabilities, and limitations of stochastic programming models
Audience: Graduate

2. Formulate stochastic programming models
Audience: Graduate

3. Implement the algorithms used to solve stochastic programming problems
Audience: Graduate

4. Learn principles of decomposition algorithms for solving large-scale optimization problems
Audience: Graduate

COMP SCI/B M I/E C E/MED PHYS 722 – COMPUTATIONAL OPTICS AND IMAGING
3 credits.

Computational imaging includes all imaging methods that produce images as a result of computation on collected signals. Learn the tools to design new computational imaging methods to solve specific imaging problems. Provides an understanding of the physics of light propagation and measurement, and the computational tools to model it, including wave propagation, ray tracing, the radon transform, and linear algebra using matrix and integral operators and the computational tools to reconstruct an image, including linear inverse problems, neural networks, convex optimization, and filtered back-projection. Covers a variety of example computational imaging techniques and their applications including coded apertures, structured illumination, digital holography, computed tomography, imaging through scattering media, compressed sensing, and non-line-of-sight imaging.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Apply ray and wave based light propagation models
Audience: Graduate

2. Explain the process of image formation in conventional imaging systems using theory and computational models
Audience: Graduate

3. Select and combine the different components required in an imaging system to perform light manipulation, collection, and image reconstruction

Audience: Graduate

4. Apply the linear matrix and integral operators that model light propagation
Audience: Graduate

5. Apply the linear inverse algorithms that allow an imaging system to reconstruct properties of the scene from collected data
Audience: Graduate

6. Simulate different computational imaging systems and perform computation on simulated datasets
Audience: Graduate

7. Understand the most common computational imaging techniques and be able to use and adapt them for their own applications
Audience: Graduate

COMP SCI/I SY E 723 – DYNAMIC PROGRAMMING AND ASSOCIATED TOPICS
3 credits.

General and special techniques of dynamic programming developed by means of examples. Shortest-path algorithms. Deterministic equipment replacement models. Resource allocation problem. Traveling-salesman problem. Knapsack problem. Analysis of inventory systems. General stochastic formulations. Markovian decision processes. Students are strongly encouraged to have knowledge of mathematical optimization (e.g., COMP SCI/I SY E/MATH/STAT 525, I SY E 623, COMP SCI/I SY E/MATH/STAT 726), knowledge of analysis (e.g., MATH/STAT 431 or 521) and programming ability (e.g., COMP SCI 200 or 301)
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify basic components, such as the state space, of a dynamic program
Audience: Graduate

2. Formulate and solve dynamic programs under different performance criteria such as finite horizon discounted reward/cost criteria
Audience: Graduate

3. Apply dynamic programming tools and concepts in `traditional' industrial engineering applications such as supply chain, manufacturing, and healthcare
Audience: Graduate

COMP SCI/I SY E/MATH/STAT 726 – NONLINEAR OPTIMIZATION I
3 credits.

Theory and algorithms for nonlinear optimization, focusing on unconstrained optimization. Line-search and trust-region methods; quasi-Newton methods; conjugate-gradient and limited-memory methods for large-scale problems; derivative-free optimization; algorithms for least-squares problems and nonlinear equations; gradient projection algorithms for bound-constrained problems; and simple penalty methods for nonlinearly constrained optimization. Students are strongly encouraged to have knowledge of linear algebra and familiarity with basic mathematical analysis.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

COMP SCI/I SY E 727 – CONVEX ANALYSIS
3 credits.

Convex sets in finite-dimensional spaces: relative interiors, separation, set operations. Convex functions: conjugacy, subdifferentials and directional derivations, functional operations, Fenchel-Rockafellar duality. Applications to operations research and related areas. Students taking this course are strongly encouraged to have had a course in basic analysis (e.g. MATH 521) and a course in linear algebra (e.g., MATH 340).
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

COMP SCI/I SY E/MATH 728 – INTEGER OPTIMIZATION
3 credits.

Introduces optimization problems over integers, and surveys the theory behind the algorithms used in state-of-the-art methods for solving such problems. Special attention is given to the polyhedral formulations of these problems, and to their algebraic and geometric properties. Applicability of Integer Optimization is highlighted with applications in combinatorial optimization. Key topics include: formulations, relaxations, polyhedral theory, cutting planes, decomposition, enumeration. Students are strongly encouraged to have knowledge of Linear Programming (e.g., MATH/COMP SCI/I SY E/STAT 525), including algorithms, duality and polyhedral theory.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe and explain the basics of polyhedral theory, which consists in the study of systems of linear inequalities both from an algebraic and a geometric point of view
Audience: Graduate

2. Define perfect formulations and identify what properties are desirable in an integer programming formulation of a problem
Audience: Graduate

3. Explain how valid inequalities can be used as cutting planes to strengthen integer programming formulations
Audience: Graduate

COMP SCI/I SY E/MATH 730 – NONLINEAR OPTIMIZATION II
3 credits.

Theory and algorithms for nonlinearly constrained optimization. Relevant geometric concepts, including tangent and normal cones, theorems of the alternative, and separation results. Constraint qualifications. Geometric and algebraic expression of first-order optimality conditions. Second-order optimality conditions. Duality. Nonlinear programming algorithms: merit functions and filters; interior-point, augmented Lagrangian, and sequential quadratic programming algorithms.
Requisites: STAT/COMP SCI/I SY E/MATH 726
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022

COMP SCI 736 – ADVANCED OPERATING SYSTEMS
3 credits.

Advanced topics in operating systems, including process communication, resource allocation, multiprocess and network operating systems, kernel philosophies, fault-tolerant systems, virtual machines, high-level language systems, verifiability and proof techniques. Comp Sci 537 or cons inst
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

COMP SCI 739 – DISTRIBUTED SYSTEMS
3 credits.

Large-scale distributed systems have become pervasive, underlying virtually all widely used computing services. Explore prevalent issues in designing and implementing distributed systems. Topics include fault tolerance, scalability, replication, distributed storage, consensus, reliability, performance, and correctness.
Requisites: COMP SCI 736, 744, 764, or 774
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe core concepts in distributed computing, such as logical clocks, consensus, partitioning, replication and fault tolerance, etc.
Audience: Graduate

2. Explain how real-world distributed systems are realized by relying on core distributed computing concepts.
Audience: Graduate

3. Analyze how emerging technology trends concerning new hardware and applications, influence the designs and implementations of distributed systems.
Audience: Graduate

4. Solve and develop distributed computing problems, services and applications.
Audience: Graduate

COMP SCI 740 – ADVANCED COMPUTER NETWORKS
3 credits.

Advanced topics in computer communications networks: congestion and flow control; routing; rate-based protocols; high speed interfaces and technologies: metropolitan area networks; fast packet switching technologies; advanced applications; network services: name service, authentication, resource location. Students are strongly encouraged to have knowledge of computer network design and protocols (e.g., COMP SCI 640)
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

COMP SCI 744 – BIG DATA SYSTEMS
3 credits.

Issues in the design and implementation of big data processing systems, including: an overview of cluster architecture, key design goals (flexibility, performance and fault tolerance), popular execution frameworks, basic abstractions, and applications (e.g., batch analytics, stream processing, graph processing, and machine learning).
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

COMP SCI/E C E 750 – REAL-TIME COMPUTING SYSTEMS
3 credits.

Introduction to the unique issues in the design and analysis of computer systems for real-time applications. Hardware and software support for guaranteeing timeliness with and without failures. Resource management, time-constrained communication, scheduling and imprecise computations, real-time kernels and case studies. Students are strongly encouraged to have knowledge of computer architecture (e.g., E C E/COMP SCI 552) and operating system functions (e.g., COMP SCI 537)
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

COMP SCI/E C E 752 – ADVANCED COMPUTER ARCHITECTURE I
3 credits.

Processor design, computer arithmetic, pipelining, multi-operation processors, vector processors, control units, precise interrupts, main memory, cache memories, instruction set design, stack machines, busses and I/O, protection and security. Students are strongly encouraged to have knowledge of computer architecture (e.g., E C E/COMP SCI 552).
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

COMP SCI/E C E 755 – VLSI SYSTEMS DESIGN
3 credits.

Overview of MOS devices and circuits; introduction to integrated circuit fabrication; topological design of data flow and control; interactive graphics layout; circuit simulation; system timing; organizational and architectural considerations; alternative implementation approaches; design project. E C E 555 or equivalent experience is strongly recommended.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

COMP SCI/E C E 756 — COMPUTER-AIDED DESIGN FOR VLSI
3 credits.

Broad introduction to computer-aided design tools for VLSI, emphasizing implementation algorithms and data structures. Topics covered: design styles, layout editors, symbolic compaction, module generators, placement and routing, automatic synthesis, design-rule checking, circuit extraction, simulation and verification. Students are strongly encourage to have programming skills and to have taken a course in Digital System Fundamentals such as E C E/COMP SCI 352.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

COMP SCI/E C E 757 — ADVANCED COMPUTER ARCHITECTURE II
3 credits.

Parallel algorithms, principles of parallelism detection and vectorizing compilers, interconnection networks, MIMD machines, processor synchronization, data coherence, multis, dataflow machines, special purpose processors. Students are strongly encouraged to have knowledge of computer architecture (e.g., E C E/COMP SCI 552).
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

COMP SCI 758 — ADVANCED TOPICS IN COMPUTER ARCHITECTURE
3 credits.

Advanced topics in computer architecture that explore the implications to architecture of forthcoming evolutionary and revolutionary changes in application demands, software paradigms, and hardware implementation technologies. Students are strongly encouraged to have knowledge of computer architecture (e.g., E C E/COMP SCI 552).
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

COMP SCI/E C E/E M A/E P/M E 759 — HIGH PERFORMANCE COMPUTING FOR APPLICATIONS IN ENGINEERING
3 credits.

An overview of hardware and software solutions that enable the use of advanced computing in tackling computationally intensive Engineering problems. Hands-on learning promoted through programming assignments that leverage emerging hardware architectures and use parallel computing programming languages. Students are strongly encourage to have completed COMP SCI 367 or COMP SCI 400 or to have equivalent experience.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

COMP SCI/E C E 760 — MACHINE LEARNING
3 credits.

Computational approaches to learning: including inductive inference, explanation-based learning, analogical learning, connectionism, and formal models. What it means to learn. Algorithms for learning. Comparison and evaluation of learning algorithms. Cognitive modeling and relevant psychological results.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify different aspects of machine learning, including supervised learning, unsupervised learning, and reinforcement learning
Audience: Graduate

2. Implement and analyze a variety of supervised models for classification and regression, including decision trees, instance-based models, naive Bayes, support vector machines, a variety of neural networks, linear and logistic regression, and others
Audience: Graduate

3. Implement and analyze neural network models, starting with the perceptron, and continuing to multilayer perceptrons, convolutional neural networks, recurrent neural networks, along with deep generative models
Audience: Graduate

4. Identify various types of regularization techniques and their properties
Audience: Graduate

5. Implement optimization techniques used in modern machine learning, including gradient descent and stochastic gradient descent
Audience: Graduate

6. Apply various concepts and metrics involved in evaluating models: accuracy, F measures, ROC, and precision/recall curves, and implement cross-validation
Audience: Graduate

7. Analyze unsupervised learning techniques for clustering, dimensionality reduction, and latent models
Audience: Graduate

8. Identify classical and modern techniques to improve models or deal with dearth of data: ensemble methods, semi-supervised learning, weak supervision
Audience: Graduate

COMP SCI/E C E 761 – MATHEMATICAL FOUNDATIONS OF MACHINE LEARNING
3 credits.

Mathematical foundations of machine learning theory and algorithms. Probabilistic, algebraic, and geometric models and representations of data, mathematical analysis of state-of-the-art learning algorithms and optimization methods, and applications of machine learning. Knowledge of probability [such as MATH/STAT 431 or COMP SCI/E C E 561] and linear algebra [such as MATH 341 or M E/COMP SCI/E C E 532] is required.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Derive and apply mathematical tools for machine learning from probability, statistics, linear algebra, and optimization
Audience: Graduate

2. Perform mathematical analysis and characterization of generative and discriminative models
Audience: Graduate

3. Perform mathematical analysis of machine learning algorithms
Audience: Graduate

4. Perform derivation of basic machine learning error bounds and related performance analysis
Audience: Graduate

5. Read and understand theoretical papers from machine learning conferences
Audience: Graduate

COMP SCI 762 – ADVANCED DEEP LEARNING
3 credits.

Explore methods and applications of deep learning. Covers cutting-edge topics, including neural architecture design, robustness and reliability of deep learning, learning with less supervision, lifelong machine learning, deep generative modeling, theoretical understanding of deep learning, and interpretable deep learning.
Requisites: E C E/COMP SCI 760
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand the key elements and methods in the design and use of deep neural networks;
Audience: Graduate

2. Advance knowledge and get exposure to cutting-edge topics in AI and deep learning
Audience: Graduate

3. Explore new research directions and applications of deep learning
Audience: Graduate

4. Identify and participate in original research in a collaborative team
Audience: Graduate

5. Search for sources of information and evaluation methods and tools relevant to the project
Audience: Graduate

6. Get hands-on experience in writing software and programs using popular deep learning libraries and frameworks
Audience: Graduate

7. Develop analytic and problem-solving skills using computational approaches
Audience: Graduate

COMP SCI/E C E 763 — TRUSTWORTHY ARTIFICIAL INTELLIGENCE
3 credits.

Explore security and privacy aspects of trustworthy artificial intelligence. Three core subjects will be considered: differential privacy and algorithmic fairness; adversarial machine learning; and end-to-end trustworthy systems. A selection of more advanced topics may be covered such as additional notions of privacy, language-based security, and robust optimization. Knowledge of probability/statistics (such as MATH 431), cryptography (such as MATH 435), security (such as COMP SCI 642), and modern machine learning (such as M E/COMP SCI/E C E 539 or 540) is required.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Evaluate machine learning and AI systems from an adversarial, security and privacy mindset.
Audience: Graduate

2. Identify common pitfalls and problems in ensuring security and privacy for AI.
Audience: Graduate

3. Summarize the commonalities and differences between notions of security and privacy (e.g., the difference between privacy and cryptographic security).
Audience: Graduate

4. Explain the strengths and limitations of candidate definitions of robustness, security, privacy, and fairness properties in AI.
Audience: Graduate

5. Apply useful primitives from end-to-end trustworthiness to machine learning and AI systems.
Audience: Graduate

6. Use modern tools to design attacks and implement defensive measures.
Audience: Graduate

COMP SCI 764 — TOPICS IN DATABASE MANAGEMENT SYSTEMS
3 credits.

Implementation of database management systems, the impact of new technology on database management systems, back-end database computers, distributed database management systems, concurrency control, and query execution in both distributed and centralized systems, implementation of multiple user views, roll-back and recovery mechanisms, database translation. Students are strongly encouraged to have knowledge of database design (e.g., COMP SCI 564).
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

COMP SCI 765 — DATA VISUALIZATION
3 credits.

Principles of the visual presentation of data. Survey of Information Visualization, Scientific Visualization, and Visual Analytics. Design and evaluation of visualizations and interactive exploration tools. Introduction to relevant foundations in visual design, human perception, and data analysis. Encodings, layout and interaction. Approaches to large data sets. Visualization of complex data types such as scalar fields, graphs, sets, texts, and multi-variate data. Use of 2D, 3D and motion in data presentations. Implementation issues.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

COMP SCI/E C E 766 — COMPUTER VISION
3 credits.

Fundamentals of image analysis and computer vision; image acquisition and geometry; image enhancement; recovery of physical scene characteristics; shape-from techniques; segmentation and perceptual organization; representation and description of two-dimensional objects; shape analysis; texture analysis; goal-directed and model-based systems; parallel algorithms and special-purpose architectures. Students are strongly encouraged to have basic proficiency in calculus and linear algebra, such as MATH 340, and basic programming such as COMP SCI 300.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Develop basic computer vision applications using a programming environment
Audience: Graduate

2. Formulate computer vision research problems motivated from real-world applications
Audience: Graduate

3. Evaluate and compare existing solutions to a computer vision problem
Audience: Graduate

4. Design approaches for solving computer vision problems based on a broad range of fundamental concepts in 2D and 3D computer vision, sensing and recognition
Audience: Graduate

5. Communicate solutions verbally and in writing to justify choices while designing solutions
Audience: Graduate

COMP SCI/B M I 767 – COMPUTATIONAL METHODS FOR MEDICAL IMAGE ANALYSIS
3 credits.

Review of advanced medical image analysis techniques. Covers advanced segmentation and registration methods. Describes the use and extension of statistical and machine learning methods for medical image analysis tasks.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2016
Learning Outcomes: 1. Implement advanced ideas from machine learning, statistics, and computer vision for medical image analysis tasks.
Audience: Graduate

2. Develop a deep technical understanding of the machine learning and statistical ideas being utilized in contemporary research in this area, and identification of blockers where research efforts can be focused
Audience: Graduate

COMP SCI 769 – ADVANCED NATURAL LANGUAGE PROCESSING
3 credits.

Develop algorithms and mathematical models for natural language processing tasks, including text categorization, information retrieval, speech recognition, machine translation, and information extraction. Focus is on the state-of-the-art computational techniques as they are applied to natural language tasks. Students are strongly encouraged to have knowledge of introductory artificial intelligence (e.g., COMP SCI 540).
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

COMP SCI/ED PSYCH/PSYCH 770 – HUMAN-COMPUTER INTERACTION
3 credits.

Principles of human-computer interaction (HCI); human subjects research methods and procedures, qualitative and quantitative data analysis; and semester-long research project situated in critical domains of HCI, including applications in ubiquitous, affective, assistive, social, and embodied computing.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

COMP SCI/B M I 771 – LEARNING BASED METHODS FOR COMPUTER VISION
3 credits.

Addresses the problems of representation and reasoning for large amounts of visual data, including images and videos, medical imaging data, and their associated tags or text descriptions. Introduces deep learning in the context of computer vision. Covers topics on visual recognition using deep models, such as image classification, object detection, human pose estimation, action recognition, 3D understanding, and medical image analysis. Emphasizes the design of vision and learning algorithms and models, as well as their practical implementations. Strongly recommended to have knowledge in computer vision or machine learning [such as COMP SCI 540] or medical image analysis [such as B M I / COMP SCI/ B M I 567].
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate their understanding of basic theories, current approaches, key concepts, and common practices in the area of deep learning for computer vision.
Audience: Graduate

2. Recognize and distinguish among a variety of visual recognition problems in computer vision, including their problem formulations and evaluation metrics.
Audience: Graduate

3. Utilize and implement deep learning models to solve visual recognition problems.
Audience: Graduate

4. Design deep learning models for visual recognition problems, conduct experiments to evaluate the proposed model, and analyze and interpret the results.
Audience: Graduate

5. Communicate effectively through written reports, oral presentations, and discussions.
Audience: Graduate

COMP SCI 772 – LEARNING BASED IMAGE SYNTHESIS AND MANIPULATION
3 credits.

Introduces machine learning based synthesis and manipulation of visual data (images and videos). Both classical (e.g., nearest neighbor, filtering) and modern deep learning based (e.g., ConvNets, GANs, Diffusion Models) algorithms will be presented for image representation, synthesis, and manipulation. Usage of self-developed algorithms for image synthesis and manipulation to understand and analyze state-of-the-art techniques, and to identify interesting open questions and future directions.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Apply knowledge of basic theories, current approaches, key concepts, and common practices in the area of deep learning based image synthesis and manipulation.
Audience: Graduate

2. Recognize and distinguish among a variety of image and video generation problems in computer vision, including their problem formulations and evaluation metrics.
Audience: Graduate

3. Utilize and implement deep learning models to solve image and video generation problems.
Audience: Graduate

4. Design deep learning models for image and video generation problems, conduct experiments to evaluate the proposed models, and analyze and interpret the results
Audience: Graduate

5. Communicate effectively through written reports, oral presentations, and discussions.
Audience: Graduate

COMP SCI 774 – DATA EXPLORATION, CLEANING, AND INTEGRATION FOR DATA SCIENCE
3 credits.

Big Data is often said to deal with four Vs: volume, velocity, variety, and veracity. The focus is on variety and veracity challenges, which often arise in data science projects. In many such projects, data is often incorrect, hard to understand, and come from a variety of sources. Data scientists often spend 80% of their effort to explore, clean, and integrate this data, before analysis can be carried out to extract insights. As a result, managing variety and veracity has received significant attention. Study these topics, understand their challenges, and discuss solutions. These solutions often require data management, machine learning, big data scaling, cloud, crowdsourcing, and user interaction techniques. Knowledge of machine learning/AI [COMP SCI 540], databases [COMP SCI 564] and Python [COMP SCI 320] recommended.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and examine the key challenges of managing variety and veracity with large data sets. These include data acquisition, data extraction, data exploration, cleaning, matching, and merging data.
Audience: Graduate

2. Summarize the variety and veracity solution approaches in academic and industry.
Audience: Graduate

3. Design and apply course concepts to experiential learning through a research project.
Audience: Graduate

4. Effectively communicate through written reports, oral presentations, and discussions.
Audience: Graduate

COMP SCI/B M I 775 – COMPUTATIONAL NETWORK BIOLOGY
3 credits.

Introduces networks as a powerful representation in many real-world domains including biology and biomedicine. Encompasses theory and applications of networks, also referred to as graphs, to study complex systems such as living organisms. Surveys the current literature on computational, graph-theoretic approaches that use network algorithms for biological modeling, analysis, interpretation, and discovery. Enables hands-on experience in network biology by implementing computational projects.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize problems in molecular biology that are appropriate for network modeling
Audience: Graduate

2. Identify appropriate network algorithms for different tasks
Audience: Graduate

3. Evaluate the strengths and weaknesses of different network algorithms designed for a specific biological problem
Audience: Graduate

4. Gain practical experience in applying a select set of network algorithms on real data and evaluate its outputs
Audience: Graduate

5. Understand the algorithmic and statistical concepts of different network-based approaches
Audience: Graduate

COMP SCI/B M I 776 – ADVANCED BIOINFORMATICS
3 credits.

Advanced course covering computational problems in molecular biology. The course will study algorithms for problems such as: modeling sequence classes and features, phylogenetic tree construction, gene-expression data analysis, protein and RNA structure prediction, and whole-genome analysis and comparisons.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Select and implement appropriate algorithms and probabilistic models for analyzing genomes, RNA, proteins, and biological networks
Audience: Graduate

2. Write a manuscript describing a bioinformatics research study, including the motivation for the research, the scientific outcomes, and the detailed methods required to reproduce the study
Audience: Graduate

3. Read a bioinformatics research paper to identify the key computational techniques and assess the evidence supporting the paper's claims
Audience: Graduate

4. Identify emerging biological data types and data processing (e.g., single cell biology) and how the data can contribute to their research
Audience: Graduate

COMP SCI/E C E 782 — ADVANCED COMPUTER SECURITY AND PRIVACY
3 credits.

Security and privacy issues in software, networks, and hardware systems. Security vulnerabilities, privacy threats, threats modeling, and mitigation strategies. Privacy issues related to user interaction with devices, online systems, and networks. In addition, a selection of more advanced topics will be covered. Possible examples include applied cryptography in the context of systems, security and privacy policies, user authentication, and cyber-physical systems. Builds on prior experiences with one or more of the following: networking, security, modern machine learning, embedded systems, and mobile computing.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify contemporary research problems related to the security and privacy of modern computer systems
Audience: Graduate

2. Implement known security attacks to identify weaknesses that led to those attacks and evaluate defense strategies
Audience: Graduate

3. Differentiate among the different dimensions involved in protecting users' security and privacy as they relate to effectiveness, practicality, and usability
Audience: Graduate

4. Analyze, interpret, and critique research papers from top-tier security conferences by identifying their strengths and weaknesses
Audience: Graduate

5. Propose original research by defining a problem, outlining a plan, performing the original research, and designing, implementing, and evaluating the proposed solution
Audience: Graduate

6. Work effectively in teams to complete a research project
Audience: Graduate

7. Communicate effectively through written reports, oral presentations, and discussion
Audience: Graduate

COMP SCI 784 — FOUNDATIONS OF DATA MANAGEMENT
3 credits.

Foundational concepts in databases and data management. The first part of the course discusses topics on query languages (conjunctive queries, Datalog), their expressivity and complexity of evaluation. The second part studies advanced topics in modern data management, including data streams, massive parallelism, provenance, uncertain data management and privacy. There are no specific course prerequisites. It is strongly encouraged that the students are familiar with databases and relational algebra (COMP SCI 564 or equivalent). Knowledge of algorithms, complexity theory and probability will also be helpful.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

COMP SCI 787 — ADVANCED ALGORITHMS
3 credits.

Advanced paradigms for the design and analysis of efficient algorithms, including the use of randomness, linear programming, and semi-definite programming. Applications to data structures, approximating NP-hard optimization problems, learning, on-line and distributed problems. Students are strongly encouraged to have introductory knowledge of algorithms (e.g., COMP SCI 577)
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

COMP SCI 790 — MASTER'S THESIS
1-9 credits.

Grad st; Master's candidates only
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

COMP SCI 799 — MASTER'S RESEARCH
1-9 credits.

Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

COMP SCI 812 – ARITHMETIC ALGORITHMS
3 credits.

Survey of algorithms and design paradigms for exact arithmetic, as used in public-key cryptography, computer algebra, and pseudo-random number generation. Topics include primality testing, factorization of integers and polynomials, discrete logarithms, and (optionally) elliptic curves and integer lattices. Students are strongly encourage to have knowledge of basic abstract algebra (e.g., MATH 541), and intermediate programming ability (e.g., COMP SCI 367 or COMP SCI 300).
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

COMP SCI 838 – TOPICS IN COMPUTING
1-3 credits.

Advanced topics of special interest to students in various areas of Computer Science. Each offering of the course will cover a topic selected by the instructor. Credit varies by offering - check with the department to determine how an offering counts toward degree requirements.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

COMP SCI 839 – CORE TOPICS IN COMPUTING
3 credits.

Topics selected from advanced areas.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

COMP SCI/B M I/PSYCH 841 – COMPUTATIONAL COGNITIVE SCIENCE
3 credits.

Studies the biological and computational basis of intelligence, by combining methods from cognitive science, artificial intelligence, machine learning, computational biology, and cognitive neuroscience. Requires ability to program.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

COMP SCI/E C E/STAT 861 – THEORETICAL FOUNDATIONS OF MACHINE LEARNING
3 credits.

Advanced mathematical theory and methods of machine learning. Statistical learning theory, Vapnik-Chevronenkis Theory, model selection, high-dimensional models, nonparametric methods, probabilistic analysis, optimization, learning paradigms.
Requisites: E C E/COMP SCI 761 or E C E 830
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

COMP SCI 880 – TOPICS IN THEORETICAL COMPUTER SCIENCE
3 credits.

Advanced topics in algorithms, complexity, and cryptography. The exact topic varies.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

COMP SCI 899 – PRE-DISSERTATOR RESEARCH
1-9 credits.

Independent research supervised by a faculty member for students who have completed a master's degree but have not reached dissertator status.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

COMP SCI 900 – ADVANCED SEMINAR IN COMPUTER SCIENCE
0-1 credits.

Seminar on recent research on various aspects of computer science.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

COMP SCI/B M E/B M I/BIOCHEM/CBE/GENETICS 915 – COMPUTATION AND INFORMATICS IN BIOLOGY AND MEDICINE
1 credit.

Participants and outside speakers will discuss current research in computation and informatics in biology and medicine. This seminar is required of all CIBM program trainees.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss how methods from computer science, statistics, information science and engineering are applied to problems in biology, medicine and population health
Audience: Graduate

2. Recognize and be able to define applications in translational bioinformatics, clinical informatics and public health informatics
Audience: Graduate

COMP SCI 990 – DISSERTATION
1-6 credits.

Advanced level mentored reading and research for students with dissertator status.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

COMP SCI 999 – DISSERTATOR RESEARCH
1-6 credits.

Advanced level mentored reading and research for dissertators.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022

CONSUMER SCIENCE (CNSR SCI)

CNSR SCI 111 – FINANCIAL LIFE SKILLS
1 credit.

Applied personal finance in college and after graduation. Financial values and behaviors, debt and credit, housing, transportation, retirement planning, investing, spending and saving plans.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define key financial terms and concepts
Audience: Undergraduate

2. Recognize the impact of financial decisions on personal well-being
Audience: Undergraduate

3. Apply critical thinking to financial decision-making and implement strategies for healthy money management
Audience: Undergraduate

4. Explore and analyze investment options and retirement savings
Audience: Undergraduate

CNSR SCI/RELIG ST 173 – CONSUMING HAPPINESS
3 credits.

As the saying goes, money can't buy happiness -- but in modern America, we certainly try. This course will provide an overview of the study of happiness and well-being, examine how consumers engage in consumption in pursuit of happiness, as well as explore the emergence of the experience economy, and the intersection of money and well-being. Students will read academic and popular pieces on positive psychology, prosocial spending and explore the psychology of persuasion in the promises associated with this industry. In addition to integrating visual media, students will have the opportunity to experience first-hand whether the advice works in their own lives.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2024
Learning Outcomes: 1. Differentiate between hedonic and eudaimonic happiness, prosocial spending and pure materialism and the pros and cons of the intersection of faith and happiness
Audience: Undergraduate

2. Theorize via thought-provoking discussions about the quest to "buy happiness" in modern America
Audience: Undergraduate

3. Contrast advice literature with positive and social psychology research
Audience: Undergraduate

4. Evaluate through the research whether one can 'get happier' through consumer culture
Audience: Undergraduate

5. Critique diverse materials including popular and academic readings
Audience: Undergraduate

CNSR SCI 175 – INTRODUCTION TO CONSUMER FINANCE
3 credits.

Introduction to consumer finance and the concepts and methods used in consumer planning and financial management. Topics covered include budgeting, credit, investing, insurance, taxes, retirement, estate planning, mortgages, and an introduction to behavioral finance. Discuss methods for calculating, planning, and allocating resources to attain specific financial objectives.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the basic steps and principles of the financial planning process.
Audience: Undergraduate

2. Implement learned techniques for creating and managing a personal budget, tailored to individual financial goals and circumstances.
Audience: Undergraduate

3. Analyze the impact of economic factors on personal finances, fostering informed decision making in real-world scenarios.
Audience: Undergraduate

4. Evaluate various investment options and strategies, considering risk tolerance, time horizon, and financial objectives.
Audience: Undergraduate

5. Demonstrate proficiency in utilizing financial tools and technologies for effective money management.
Audience: Undergraduate

CNSR SCI 201 – CONSUMER INSIGHTS
3 credits.

Provides basic training in quantitative data analysis, with an emphasis on descriptive and inferential statistics with consumer research applications.
Requisites: (STAT 301, 371, C&E SOC/SOC 360, PSYCH 210, ECON 310, GEN BUS 306, or GEOG 360) and (GEN BUS 106 or A A E 335)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Consider the various approaches to gathering information and methods for conducting consumer research
Audience: Undergraduate

2. Reflect on appropriate data analysis techniques that address problems and inform opportunities
Audience: Undergraduate

3. Develop best practices for crafting messages and stories that inspire audiences to take action
Audience: Undergraduate

CNSR SCI 250 – RETAIL LEADERSHIP SYMPOSIUM
1 credit.

Provides detailed examination of careers in the retailing industry. High level industry experts from leading companies in the retailing industry participate as guest speakers and panel members.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify strengths, skills and certifications necessary to be successful within the industry
Audience: Undergraduate

2. Examine current issues and areas of investigation in the industry
Audience: Undergraduate

3. Define the major and how it relates to Human Ecology and our society
Audience: Undergraduate

4. Connect potential careers in the industry to the major
Audience: Undergraduate

CNSR SCI 251 – FINANCIAL SERVICES LEADERSHIP SYMPOSIUM
1 credit.

Provides detailed examination of careers in the financial services industry. High level industry experts from leading companies in the financial services industry participate as guest speakers and panel members.
Requisites: None
Repeatable for Credit: Yes, for 2 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify strengths, skills and certifications necessary to be successful within the industry
Audience: Undergraduate

2. Examine current issues and areas of investigation in the industry
Audience: Undergraduate

3. Connect potential careers in the industry to the major
Audience: Undergraduate

CNSR SCI 255 – CONSUMER FINANCIAL SERVICES INNOVATION
3 credits.

Experience the current financial services market from the perspective of real families. Design, develop and evaluate innovative solutions to improve service or address unmet needs.
Requisites: None
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Anticipate consumer decisions and likely outcomes given a particular market structure;
Audience: Undergraduate

2. Apply Human Ecology Centered Design Thinking to consumer financial services and the alignment of consumer decisions to consumer preferences.
Audience: Undergraduate

3. Define opportunities or unmet needs as design challenges;
Audience: Undergraduate

4. Describe the financial services available to consumers today and how those came to be;
Audience: Undergraduate

5. Propose effective solutions for those challenges;
Audience: Undergraduate

CNSR SCI 257 – INTRODUCTION TO RETAIL
2 credits.

Foundational knowledge of the retail industry including the retail process, the evolution of the industry, key drivers and trends to provide a framework and set of concepts that will support the remainder of the core retail courses.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define the functions and relationships required to implement retail activity
Audience: Undergraduate

2. Describe where retail has been, is today and where it is headed with an explanation of the drivers of that evolution
Audience: Undergraduate

3. Anticipate the possible and likely outcomes of change in retail strategy or competitive set for retailers & for consumers
Audience: Undergraduate

CNSR SCI 273 – FINANCES & FAMILIES
3 credits.

For the majority of Americans, money and family life is intertwined. Learn about the basics of relationship formation and dissolution, gender and family dynamics and the psychology of money with the goal of encouraging financial equality among members of families of all types.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Critically assess research and media on family dynamics and household finance
Audience: Undergraduate

2. Discuss the social contexts that influence family finances and financial behavior
Audience: Undergraduate

3. Translate research on family finance to a general audience through the development of your professional writing skills
Audience: Undergraduate

CNSR SCI 275 – INTRODUCTION TO PERSONAL FINANCIAL PLANNING
3 credits.

Introduction to consumer finance covering techniques of personal sector cash flow, asset and liability management, life cycle financial planning, investment management, tax planning, retirement, and estate planning. Analysis and evaluation related to personal financial planning.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the financial planning process, techniques and terminology
Audience: Undergraduate

2. Explain time value of money and its importance
Audience: Undergraduate

3. Calculate and solve for future values, present values, rate of return, net present value, and net future value
Audience: Undergraduate

4. Apply time value of money to help consumers achieve their financial goals
Audience: Undergraduate

5. Develop recommendations and evaluate decision making regarding budgets, assets, consumer credit, investments, insurance, retirement, and estate planning
Audience: Undergraduate

CNSR SCI 299 – INDEPENDENT STUDY
1-3 credits.

Directed study projects for freshmen and sophomores as arranged with a faculty member.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

CNSR SCI 301 – CONSUMER ANALYTICS
3 credits.

Leverage data analysis to drive consumer business decisions via the telling of a compelling, evidence-based story. Structured to 1) provide you with a core process by which data analysis can produce effective business actions, 2) build your analytical abilities to execute the process and 3) establish a method by which analytical results can be transformed into effective stories. The process and methods studied will have application across a broad range of careers.
Requisites: CNSR SCI 201
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop the knowledge and tools to carry out meaningful data analysis
Audience: Undergraduate

2. Build analytical abilities
Audience: Undergraduate

3. Establish a process for translating analysis into effective stories and presentations
Audience: Undergraduate

CNSR SCI 340 – BUILDING FINANCIAL ASSETS AND CAPABILITY FOR VULNERABLE FAMILIES
3 credits.

Learn how to assess and prevent household financial problems and improve financial security. Based on the context of vulnerable households, financial services and public policy, focus on skills related to managing cash flow, credit and debt, saving for emergencies and long-term goals.
Requisites: Satisfied Communications A requirement or graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CNSR SCI 355 – FINANCIAL COACHING
3 credits.

Financial coaching is an approach influenced by the fields of positive psychology and behavioral economics to help individuals build financial capability. This experiential course will prepare students for financial, social work, and asset building services.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Differentiate between financial coaching and other financial approaches, including counseling, planning, and financial education.
Audience: Undergraduate

2. Explain financial capability and financial competencies as components of financial well-being, and how to address these components through financial coaching.
Audience: Undergraduate

3. Identify values and biases affecting financial decision-making for themselves and a diverse range of audiences.
Audience: Undergraduate

4. Recognize theories of behavior change and how these theories apply to financial coaching.
Audience: Undergraduate

5. Understand and demonstrate the financial coaching framework and coaching skills, including effective communication techniques and theories of change.
Audience: Undergraduate

CNSR SCI 360 – SUSTAINABLE AND SOCIALLY JUST CONSUMPTION
3 credits.

Examines how consumers influence sustainability and social justice through their purchases and how policy and globalization influence their choices.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Come away able to think beyond binary models and think about sustainability in terms of cycles or circular models
Audience: Undergraduate

2. Have the tools to connect historical narratives to contemporary ones,seeming how societal values set in motion the current relationship american society has to the environment
Audience: Undergraduate

3. Have a greater ability to be an informed consumer, conscious of the ways individual choices have effects on the environment and other societies
Audience: Undergraduate

4. Study environmental issues through a lens of environmental justice, understanding that certain communities are affected at disproportionate rates by all aspects of normative consumer life
Audience: Undergraduate

CNSR SCI 390 – FINANCIAL LIFE SKILLS: PEER EDUCATION TECHNIQUES
2 credits.

Examine student learning and development to become effective peer educators in the Badger$ense Financial Life Skills program. Learn about common financial issues college students face. Develop knowledge and skills related to interpersonal and group communication, the impact of leadership, group learning and how to create a positive financial learning experience.
Requisites: Completion of CNSR SCI 275 OR CNSR SCI 111 OR CNSR SCI 321
Repeatable for Credit: No
Learning Outcomes: 1. Identify and explain the challenges students face with money while in college.
Audience: Undergraduate

2. Describe why peer educating is an effective strategy to help undergraduate students learn about personal finance issues for their lives in college and beyond.
Audience: Undergraduate

3. Assess personal strengths, challenges and skills as it relates to the financial peer educator role.
Audience: Undergraduate

4. Demonstrate how to create a safe, positive learning environment for students enrolled in Financial Life Skills courses.
Audience: Undergraduate

5. Create and present a financial learning experience for a specific student population.
Audience: Undergraduate

CNSR SCI/HDFS 465 – FAMILIES & POVERTY
3 credits.

Introduction to research at the intersection of family and poverty studies. Learn how family behaviors vary by socioeconomic status; how romantic relationships, childbearing, and childrearing may be implicated in poverty; what the consequences of poverty are for family functioning and children; and about the role of policy in influencing families and poverty.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Ability to consider and evaluate how children, adults, and families affect and are affected by policies, media, or other social institutions.
Audience: Undergraduate

2. Demonstrate applied professional skills by practicing working effectively with others.
Audience: Undergraduate

3. Demonstrate professional speaking skills through giving an oral presentation.
Audience: Undergraduate

4. Demonstrate scientific reasoning/critical thinking skills through engaging in critical evaluation of research articles, websites, programs, or policies.
Audience: Undergraduate

5. Knowledge of family and community diversity.
Audience: Undergraduate

CNSR SCI 477 – THE CONSUMER AND THE MARKET
3 credits.

Analysis of the consumer's market, consumer's behavior, and government policies affecting the consumer in the American economy.
Requisites: ECON 101, 111, or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CNSR SCI 501 – SPECIAL TOPICS
1-3 credits.

Specialized subject matter of current interest.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

CNSR SCI 555 – CONSUMER DESIGN STRATEGIES & EVALUATION
3 credits.

Leveraging a combination of design thinking and strategic planning, students will design a clear plan of action with compelling evidence for expected outcomes, implement the proposed plan with contingencies for the inevitable challenges and adjustments, and evaluate impact relative to goals with objective recommendations for future action.
Requisites: CNSR SCI 657 and junior standing, or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Reframe the challenges faced in a given situation from true empathy for the people involved
Audience: Both Grad & Undergrad

2. Formulate and articulate a clear plan of action with compelling evidence for expected outcomes
Audience: Both Grad & Undergrad

3. Design and implement a strong implementation plan with contingencies for the inevitable challenges and adjustments
Audience: Both Grad & Undergrad

4. Craft and execute solid evaluation of impact relative to goals with objective recommendations for future action.
Audience: Both Grad & Undergrad

5. Evaluate the proposed strategic evaluation plan
Audience: Graduate

CNSR SCI 561 – CONSUMER ENGAGEMENT STRATEGIES
3 credits.

Exploring applications of consumer behavior and insights in developing strategies for consumer engagement.
Requisites: CNSR SCI 657
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze current and evolving retail and brand strategies
Audience: Undergraduate

2. Evaluate design strategy approaches retailers and brands can build to obtain competitive advantage
Audience: Undergraduate

3. Examine typical and possible characteristics of the consumer experience
Audience: Undergraduate

4. Articulate how to effectively build brand advocacy
Audience: Undergraduate

5. Develop a compelling point of view and present a justifiable course of action for a brand or retailer
Audience: Undergraduate

CNSR SCI 562 – THE GLOBAL CONSUMER
3 credits.

Key issues in international retailing with consideration of the global consumer.
Requisites: CNSR SCI 257 or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CNSR SCI 564 – RETAIL FINANCIAL ANALYSIS
3 credits.

Provides tools for planning and analyzing retail financial performance. Includes elements of retail financial statements, pricing, purchasing terms and conditions, merchandise planning, inventory control, and economic factors that impact retail businesses.
Requisites: CNSR SCI 257, (ACCT I S 100 or 300 or GEN BUS 310), and (GEN BUS 106 or A A E 335), or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand and define the different roles in merchandising, product development and manufacturing to produce products at the right time, right place, right price, right quantity, and right appeal for customers
Audience: Both Grad & Undergrad

2. Utilize the retail method of inventory to calculate book and physical inventory and explain the cause and effects of overages and shortages
Audience: Both Grad & Undergrad

3. Demonstrate the mathematical calculations and processes frequently used in the retail and manufacturing industry to evaluate inventory performance
Audience: Both Grad & Undergrad

4. Apply negotiation alternatives between retailers and manufactures
Audience: Both Grad & Undergrad

5. Define and calculate measurements of inventory mark-ups & profit indicators
Audience: Both Grad & Undergrad

6. Differentiate inventory pricing and markdowns strategies
Audience: Both Grad & Undergrad

7. Define and calculate measurements of inventory rate of sale
Audience: Both Grad & Undergrad

8. Define and calculate the components of a retailer's merchandise financial plan and forecast based upon market influences
Audience: Both Grad & Undergrad

9. Apply methods for analyzing and correcting problems related to retail assortments, purchases, inventory and sales
Audience: Both Grad & Undergrad

10. Prepare, modify and evaluate merchandising planning methods used to create seasonal inventory budgets
Audience: Both Grad & Undergrad

11. Evaluate the causes and effects of retail pricing adjustments
Audience: Both Grad & Undergrad

12. Evaluate profit and loss statements of retailers and manufacturers and impact of performances
Audience: Both Grad & Undergrad

13. Synthesis speed and profit to create a merchandise plan and forecast along with a full financial plan based upon a set of provided data
Audience: Graduate

CNSR SCI 567 – PRODUCT DEVELOPMENT STRATEGIES IN RETAILING
3 credits.

Merchandise product development planning through market trend analysis, assortment planning sourcing production.
Requisites: CNSR SCI 257
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CNSR SCI 579 – CONSUMER POLICY ANALYSIS
3 credits.

Analysis of consumer policies enacted and proposed at federal, state, and municipal levels; application of economic analysis to consumer laws, public policies and regulations; study of the process of creating and enforcing legislation and impacts on consumers' well-being.
Requisites: Junior standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

CNSR SCI 601 – CONSUMER SCIENCE INTERNSHIP
1-8 credits.

A supervised internship providing hands-on training in a professional experience in consumer science related fields.
Requisites: Consent of instructor
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025
Learning Outcomes: 1. Develop relationships with co-workers and supervisors working as a team member through varied experiences while improving interpersonal relationships
Audience: Undergraduate

2. Enhance knowledge of the industry's systems and procedures, including adapting to changing market trends and technology
Audience: Undergraduate

3. Reinforce educational and career goals while preparing for transition from student to a professional in the workplace
Audience: Undergraduate

4. Apply academic knowledge to the business / personal finance / consumer affairs work environment.
Audience: Undergraduate

5. Develop analytical skills and problem-solving competencies related to the field of personal finance
Audience: Undergraduate

6. Develop professional competencies in written and oral communication.
Audience: Undergraduate

7. Expand awareness of career opportunities and establish professional contacts
Audience: Undergraduate

8. Provide professional work experience regarding the following (but not exclusive to): financial planning, investment management, insurance, banking, sales management, human resource management, consumer mediation, wealth management, business finance, etc.
Audience: Undergraduate

CNSR SCI 603 – RETAILING INTERNSHIP
1-6 credits.

A supervised internship providing hands-on training in a professional experience in retailing related fields.
Requisites: Consent of instructor
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025
Learning Outcomes: 1. Develop relationships with co-workers and supervisors working as a team member through varied experiences while improving interpersonal relationships
Audience: Undergraduate

2. Enhance knowledge of the industry's systems and procedures, including adapting to changing market trends and technology
Audience: Undergraduate

3. Explore career opportunities within a company/organization and industry through real-world situations
Audience: Undergraduate

4. Gain a deeper understanding of how consumerism can be enhanced through retail functions and consumer behavior analytics
Audience: Undergraduate

5. Reinforce educational and career goals while preparing for transition from student to a professional in the workplace.
Audience: Undergraduate

CNSR SCI 627 – ADVANCED CONSUMER FINANCE
3 credits.

Studies financial markets and instruments from the perspective of individual consumers and their portfolio decisions over their lifetime.
Requisites: CNSR SCI 275 or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CNSR SCI 635 – ESTATE PLANNING FOR FINANCIAL PLANNERS
3 credits.

Analysis from a financial planner's perspective of the process of planning the accumulation, conservation, and distribution of an estate, in the manner that most effectively and efficiently accomplishes an individual's personal tax and non-tax objectives.
Requisites: CNSR SCI 275 or FINANCE/ECON 300
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze personal financial situations, evaluating clients' objectives, needs, and values to develop an appropriate strategy within their estate plan
Audience: Undergraduate

2. Apply the CFP Board Financial Planning Practice Standards to the financial planning process as it applies to estate planning
Audience: Undergraduate

3. Collect all necessary and relevant qualitative and quantitative information required to develop an estate plan
Audience: Undergraduate

4. Demonstrate a comprehensive understanding of the content found within the Estate Planning for Financial Planners curriculum and effectively apply and integrate this information in the formulation of an estate plan for sample clients
Audience: Undergraduate

5. Demonstrate logic and reasoning to identify the strengths and weaknesses of various approaches to problems found with client situations

Audience: Undergraduate

6. Effectively communicate the estate plan, including information based on research, peer, colleague or simulated client interaction and/or results emanating from synthesis of material
Audience: Undergraduate

7. Evaluate the impact of economic, political, and regulatory issues with regard to the estate plan
Audience: Undergraduate

CNSR SCI 657 – CONSUMER BEHAVIOR
3 credits.

Analyses from social and psychological perspectives. Motivation, perception, learning and attitude formation. Effects of social class, family structure, cultural backgrounds and reference groups.
Requisites: Sophomore standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CNSR SCI 665 – HOUSEHOLD RISK MANAGEMENT
3 credits.

Application of advanced analytical techniques to examine household financial risk. Implications for financial planning of changes in family structure and earnings. Private and social insurance that guard against economic consequences of death, disability, ill health, retirement, marital dissolution. Use of financial planning software.
Requisites: (ECON 101 or 111) and CNSR SCI 275
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze personal financial situations, evaluating clients' objectives, needs, and values to develop an appropriate strategy within their personal risk management plan
Audience: Undergraduate

2. Apply the CFP Board Financial Planning Practice Standards to the financial planning process as it applies to personal risk management planning
Audience: Undergraduate

3. Collect all necessary and relevant qualitative and quantitative information required to develop a personal risk management plan
Audience: Undergraduate

4. Demonstrate a comprehensive understanding of the content found within the Household Risk Management curriculum and effectively apply and integrate this information in the formulation of personal risk management plan for sample clients
Audience: Undergraduate

5. Demonstrate logic and reasoning to identify the strengths and weaknesses of various approaches to problems found with client situations

Audience: Undergraduate

6. Effectively communicate the personal risk management plan, including information based on research, peer, colleague or simulated client interaction and/or results emanating from synthesis of material
Audience: Undergraduate

7. Evaluate the impact of economic, political, and regulatory issues with regard to the personal risk management plan
Audience: Undergraduate

CNSR SCI 675 – FAMILY FINANCIAL COUNSELING
3 credits.

Systems approach to family financial management, stressing development of interpersonal techniques by professionals who will assist individuals and families to become responsible financial managers.
Requisites: CNSR SCI 275 and 627
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze personal financial situations, evaluate clients' objectives, needs, and values to develop an appropriate strategy within the financial plan
Audience: Undergraduate

2. Apply the CFP Board Financial Planning Practice Standards to the financial planning process
Audience: Undergraduate

3. Collect all necessary and relevant qualitative and quantitative information required to develop a financial plan
Audience: Undergraduate

4. Demonstrate a comprehensive understanding of the content found within the Financial Planning curriculum and effectively apply and integrate this information in the formulation of a financial plan
Audience: Undergraduate

5. Demonstrate logic and reasoning to identify the strengths and weaknesses of various approaches to a specific problem
Audience: Undergraduate

6. Effectively communicate the financial plan, both orally and in writing, including information based on research, peer, colleague or simulated client interaction and/or results emanating from synthesis of material
Audience: Undergraduate

7. Evaluate the impact of economic, political, and regulatory issues with regard to the financial plan
Audience: Undergraduate

CNSR SCI 680 – SENIOR HONORS THESIS
2-4 credits.

Individual study in honors as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2011

CNSR SCI 690 – SENIOR THESIS
2 credits.

Individual study as arranged with a faculty member.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions

CNSR SCI 699 – INDEPENDENT STUDY
1-6 credits.

Directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

CNSR SCI 748 – THE ECONOMIC ORGANIZATION OF THE HOUSEHOLD
3 credits.

Studies family behavior and family outcomes using an economic framework. Covers theoretical models of consumption, fertility, household production, time allocation, and household formation. Knowledge of microeconomic theory [such as ECON 301] recommended.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the theory of household formation and dissolution, labor supply, and child investment from a utility maximizing framework
Audience: Graduate

2. Demonstrate how households make consumption and investment decisions across time using a two period model
Audience: Graduate

3. Identify and critically analyze how public policy affects families, particularly policies focused on children, the labor market, and marriage
Audience: Graduate

CNSR SCI 768 – INTRODUCTION TO QUANTITATIVE METHODS IN SOCIAL SCIENCE
3 credits.

Introduction to empirical consumer science research methods, with an emphasis on application. Covers different types of data structures commonly encountered, statistical properties of data, bivariate and multivariate linear regression models.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Ascertain differences in data structures and key statistical properties to understand types of quantitative data used in consumer science research
Audience: Graduate

2. Master technical proficiency in linear regression and statistical inference by applying these techniques to real-world consumer data
Audience: Graduate

3. Critically assess estimates derived from linear models commonly used in consumer research by evaluating the accuracy, precision, and relevance of model estimates to draw meaningful insights from empirical analyses
Audience: Graduate

4. Discern the suitability of model assumptions for different empirical challenges in consumer research by evaluating assumptions and selecting and modifying models to best fit the specific characteristics of the data and the nature of the research question
Audience: Graduate

CNSR SCI 775 – HOUSEHOLD FINANCE AND WELL-BEING
3 credits.

Provides an overview of major theories in household finance, financial literacy, financial capability. Evaluates programs and strategies designed to improve consumer well-being by changing household financial behaviors, building household financial assets, and regulation of consumer financial markets.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain the contributions and identify opportunities to expand current research on household finance
Audience: Graduate

2. Synthesize and translate information from academic research for varied academic and non-academic audiences
Audience: Graduate

3. Construct a research project that applies your understanding of household finance and well-being based on basic econometric analyses
Audience: Graduate

4. Understand the various professional designations related to financial coaching, counseling, and planning
Audience: Graduate

CNSR SCI 778 – CAUSAL MODELS IN HOUSEHOLD AND CONSUMER RESEARCH
3 credits.

Research on the application of modern econometric techniques commonly used in empirical consumer research with an emphasis on causal inference.
Requisites: CNSR SCI 768
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize and describe common methodological approaches used for causal inference in empirical consumer research.
Audience: Graduate

2. Identify the underlying identification assumptions behind common methodological approaches and describe the key considerations for assessing the validity of these assumptions.
Audience: Graduate

3. Critically evaluate and discuss the methodological approaches in recent empirical consumer research, including being able to identify potential limitations to being able to draw causal inferences from the findings.
Audience: Graduate

4. Interpret and synthize findings from empirical consumer research, enabling them to communicate research outcomes effectively and with the appropriate caveats to both academic and non-academic audiences.
Audience: Graduate

5. Apply modern econometric techniques to analyze observational data in the context of consumer research, with a particular focus on causal inference.
Audience: Graduate

CNSR SCI 820 – HEALTH AND FINANCIAL WELL-BEING
3 credits.

Explores the interrelationships of health, health insurance, the health care system, and financial well-being. Provides an in-depth understanding of how the financing and delivery of health care affects consumer financial health, as well as consumer financial health as a central determinant of individual health.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Discuss health insurance as both a consumer financial product that contributes to consumer financial health and a means of payment for health care that affects consumer financial health
Audience: Graduate

2. Explain how financial well-being affects health and the demand for health care
Audience: Graduate

3. Explain how health, health insurance, and health care produce financial health
Audience: Graduate

4. Propose research questions that explore the interrelationships between health, health insurance, the use of health care, and financial health
Audience: Graduate

CNSR SCI 830 – FAMILIES AND HOUSEHOLDS IN COMMUNITIES
3 credits.

Examines how local communities inform family economic well-being. Explores the intersection of people and organizations using quantitative and qualitative techniques.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize how markets, consumer behavior, and family dynamics are both influenced by and shape social structures and systems within their community
Audience: Graduate

2. Dissect the networked systems that influence neighborhood construction as well as individual, family, and community well-being
Audience: Graduate

3. Differentiate the role of key stakeholders including policymakers, business, nonprofit sector, and individuals in co-creating community
Audience: Graduate

4. Investigate the complex relationship between people and systems within a community using a range of quantitative techniques (e.g., generating indices of segregation, employing spatial data visualization and regression techniques)
Audience: Graduate

5. Investigate the complex relationship between people and systems within a community using a range of qualitative techniques (e.g., in-depth interviews, focus groups, photo elicitation, text analysis)
Audience: Graduate

6. Incorporate community processes and contexts to develop and analyze an empirical research proposal examining the socio-spatial relationships between people and systems within a community
Audience: Graduate

CNSR SCI 851 – MEASURING HOUSEHOLD AND COMMUNITY WELL-BEING
3 credits.

Provides broad knowledge of major quantitative measures of consumer well-being. Investigates construction of and literature on well-being measures across various domains.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and critically analyze the primary measures of consumer well-being
Audience: Graduate

2. Explore how measures of consumer well-being are constructed
Audience: Graduate

3. Compare and contrast measures of well-being
Audience: Graduate

4. Explain how consumer well-being measures are used in research and policy
Audience: Graduate

5. Review major literature on each of these measures
Audience: Graduate

CNSR SCI 852 – ADVANCED CONSUMER POLICY
3 credits.

Studies the intersection of behavioral economics and public policy. Explores the effect of deviations from rational economic behavior on consumer well-being. Analyzes the impact of policy design on consumer well-being across a variety of policy domains.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe some of the ways in which individuals make decisions and exhibit behavior that systematically deviates from the predictions of traditional economic models of rational actors
Audience: Graduate

2. Compare and contrast traditional policy tools and levers with interventions informed by behavioral economics and assess their relative efficacy in addressing a potential policy problem
Audience: Graduate

3. Critically evaluate and discuss policy solutions in recent empirical policy-focused consumer research, including being able to assess the extent to which given solutions may or may not extrapolate to other domains and populations
Audience: Graduate

4. Identify policy issues and generate potential solutions that apply insights from behavioral economics to policy design, drawing on both existing research and behavioral economic theories
Audience: Graduate

CNSR SCI 888 – ADVANCED CONSUMER BEHAVIOR
3 credits.

Provide a broad-based knowledge of the consumer behavior literature. Develop skills to be an active researcher in fields that require an understanding of consumer research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop abilities to identify research problems and to develop conceptual and empirical solutions to problems
Audience: Graduate

2. Develop critical thinking and creative problem solving skills
Audience: Graduate

3. Enhance appreciation of the interdisciplinary and varied methodological orientations of consumer research
Audience: Graduate

4. Become familiar with the primary research streams and knowledge priorities
Audience: Graduate

5. Develop an understanding of the major conceptual and empirical contributions to the field of consumer research
Audience: Graduate

CNSR SCI 901 – GRADUATE SPECIAL TOPICS IN CONSUMER SCIENCE
1-3 credits.

Specialized subject matter of current interest.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

CNSR SCI 920 – CONSUMER SCIENCE GRADUATE WORKSHOP
1 credit.

Develops professional skills. Provides opportunities for presenting research and respectfully critiquing the work of others.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Develop research questions through presenting original research and/or critiquing the research questions of others
Audience: Graduate

2. Develop skills in creating and delivering research presentations through presentation and/or critiquing the presentations of others
Audience: Graduate

3. Receive and/or respond to formal and informal feedback from peers and faculty
Audience: Graduate

4. Create materials for the job market and professional skills through course assignments
Audience: Graduate

CNSR SCI 930 – SEMINAR IN FAMILY ECONOMIC POLICY
3 credits.

Topics on family economic well-being and the social and consumer policies that influence economic behavior and family economic status.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024
Learning Outcomes: 1. Communicate the substance of a real-world policy problem(s) using relevant scholarly studies and practical applications
Audience: Graduate

2. Demonstrate critical thinking skills by retrieving and examining literature

Audience: Graduate

3. Evaluate evidence for and against hypotheses, identify knowledge gaps, strengths and weaknesses in existing literature, synthesize knowledge, and develop conclusions
Audience: Graduate

CNSR SCI 990 – RESEARCH AND THESIS
1-12 credits.

Independent research and writing under the supervision of a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

CNSR SCI 999 – INDEPENDENT STUDY
1-3 credits.

Directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

COUNSELING PSYCHOLOGY (COUN PSY)

COUN PSY 101 – ACADEMIC ENHANCEMENT SEMINAR
1 credit.

Introduction to and development of new skills and behaviors to assist with academic and personal goals. Focus on social competencies, values clarification, and problem-solving to support short- and long-term goals for students on academic probation.
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify personal and academic strengths and obstacles.
Audience: Undergraduate

2. Identify and solve problems using self-reflective processes.
Audience: Undergraduate

3. Apply specific techniques and skills to set and meet academic and personal goals.
Audience: Undergraduate

4. Demonstrate an understanding of campus resources and systems of academic support.
Audience: Undergraduate

5. Write self-reflective assessments of academic processes and university experiences.
Audience: Undergraduate

6. Evaluate academic priorities and develop change strategies for academic success.
Audience: Undergraduate

COUN PSY 105 – HUMAN RESOURCES DEVELOP: AWARENESS PROCESSES-CNSL&GUID PERSPECTIVE
1 credit.

Didactic and experiential learning and exploration to provide basic understanding of inter- and intrapersonal relations. Topics include values clarification, information acquisition, skill acquisition, human relations, self-understanding, self-development, and self-evaluation.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

COUN PSY 110 – HUMAN RESOURCES DEVELOPMENT: CAREER STRATEGIES
1 credit.

Exploration and vocational development through didactic and experiential learning. Career education concerns the place and value of work in the individual's life span and style--development and assessment of self, an understanding of the world of work, and facilitation of decision-making, planning, and preparation.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

COUN PSY 115 – HUMAN RESOURCES DEVELOPMENT: EDUCATIONAL EFFECTIVENESS
1 credit.

Exploration of personal, institutional, and community resources that optimize academic success and persistence. Utilizes didactic and experiential methods to develop higher level learning, skill, and understanding.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

COUN PSY/ASIAN/ED PSYCH/PSYCH 120 – THE ART AND SCIENCE OF HUMAN FLOURISHING
3 credits.

Explore perspectives related to human flourishing from the sciences and humanities; investigate themes such as transformation, resilience, compassion, diversity, gratitude, community; expand self-awareness, enhanced social connectivity, and ability to change; formulate a sense of what it means to lead a flourishing life that sustains meaningful and fulfilling engagement with studies, relationships, community, and career.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze and describe the relevant concepts and theories on the nature and cultivation of human flourishing from multiple intellectual fields including psychology, neuroscience, anthropology, philosophy, and religious studies.
Audience: Undergraduate

2. Describe and engage with the many dimensions of flourishing, and the various extrinsic and intrinsic factors influencing them.
Audience: Undergraduate

3. Formulate an account of human flourishing.
Audience: Undergraduate

4. Employ contemplative practices in an inquiry that cultivates qualities of human flourishing from within.
Audience: Undergraduate

5. Integrate contemplative practice and knowledge of course materials in order to establish a foundation for flourishing in your life and the communities in which you live.
Audience: Undergraduate

COUN PSY 125 — THE WISCONSIN EXPERIENCE SEMINAR
1 credit.

Examine transition to UW-Madison through exploration of the research university and the Wisconsin Experience. A variety of texts, including a novel and textbook, will provide a context for discussion, writing, and experiential assignments.
Requisites: First year students or first year transfer students only
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Appraise the history, culture, and mission of UW-Madison and how those shared reference points may influence your Wisconsin Experience
Audience: Undergraduate

2. Engage with campus resources and opportunities to develop habits that support academic success and psychosocial well-being
Audience: Undergraduate

3. Analyze the multiple dimensions of social identity and how those dimensions impact your and others' experiences at UW-Madison
Audience: Undergraduate

4. Define and design goals to practice Relentless Curiosity, Purposeful Action, Humility and Empathy, and Intellectual Confidence throughout your college experiences
Audience: Undergraduate

5. Plan how you will connect with and contribute to the UW-Madison and greater Madison community during your undergraduate career
Audience: Undergraduate

COUN PSY 200 — LGBTQ+ PEOPLE AND MENTAL HEALTH EQUITY
3 credits.

Theories and research concerning the reasons for sexuality and gender mental health disparities; the significance of contemporary and historical debates over inequality; policies and practices to reduce inequality in health care for LGBTQ+ people.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Critically analyze and evaluate psychological research, policies, and practice in relation sexuality, gender, and inequality in the U.S.
Audience: Undergraduate

2. Analyze the role of health care systems in relation to broader LGBTQ+ inequalities and intersecting systems of oppression, with an understanding of history's impact on present institutional issues
Audience: Undergraduate

3. Connect course concepts and ideas to other courses and to current events, recognizing and questioning one's own assumptions and those of others in the process
Audience: Undergraduate

4. Draw from course concepts to critically reflect upon and analyze one's own personal educational experiences and academic trajectory
Audience: Undergraduate

5. Clearly communicate (in both oral and written form) key course concepts of LGBTQ+ mental health equity to lay audiences.
Audience: Undergraduate

COUN PSY 225 – INTERSECTIONALITIES, SELF AWARENESS, AND SOCIAL ACTIONS FOR SOCIAL CHANGE
3 credits.

An introduction to the intersectionality framework in the United States to enhance skills necessary for culturally responsive awareness and interactions, with specific emphasis on how to think critically about and hold multiple perspectives and how to prepare for service learning. In addition to learning how contexts and social histories matter to situate an understanding of experience, develop self-awareness and understanding of social location as well as learn how contextual factors shape identity, opportunities, and barriers for others. Relevant for all students of different identities, backgrounds, and experiences, who are interested in developing their awareness, knowledge and skills with multiculturalism and diversity.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define and understand intersectionality
Audience: Undergraduate

2. Engage and hold different perspectives
Audience: Undergraduate

3. Develop an understanding of how history, context, and group identities are linked
Audience: Undergraduate

4. Reflect on one's own cultural processes as they define one's identity and sense of self and examine one's own beliefs and attitudes
Audience: Undergraduate

5. Engage in critical dialogue with others about cultural issues, identities, and contemporary social issues within different social context
Audience: Undergraduate

6. Develop capacity to listen, ask questions, and explore differences of opinions and perspectives
Audience: Undergraduate

7. Explore the initial processes of how to resolve differences of opinions in a civil manner
Audience: Undergraduate

8. Explore the initial processes of repairing cultural misunderstandings or gaffes
Audience: Undergraduate

9. Engage in service learning with populations different from oneself
Audience: Undergraduate

COUN PSY 230 – RACE AND THE DEVELOPING CHILD
3 credits.

Children's psychological experience of racial, ethnic and cultural (REC) status, development of their understandings of REC, and implications of this development for discussing, dialoguing, and working with REC diversity with an emphasis on educational contexts.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply developmental frameworks to understand children's conceptions of social worlds with a focus on racial, ethnic, and cultural contexts
Audience: Undergraduate

2. Identify differences in socialization goals across ethnic and racial groups as well as differences across generational and cultural roots in child socialization
Audience: Undergraduate

3. Develop sensitivity to the nature and expressions of racial, ethnic, and cultural bias targeting children and youth
Audience: Undergraduate

4. Acquire knowledge about cultural assumptions and bias and how various racial, ethnic and cultural (REC) scripts are enacted, and how assumptions, bias, and scripts may be different from those of other REC groups
Audience: Undergraduate

5. Gain exposure to Chican@/Latin@ Studies by contextualizing learning with Latinx populations
Audience: Undergraduate

COUN PSY 237 – MENTAL HEALTH, SELF-AWARENESS, AND SOCIAL JUSTICE: WORKING IN DIVERSE COMMUNITIES
3 credits.

Designed to increase knowledge, awareness, and skills of students interested in working on mental health matters within diverse identity groups and communities. Conceptualize mental health and well-being across communities in terms of (a) intersectional identities (individual and groups), (b) mental health and access and utilization of services, and (c) social determinants of health in different contexts and settings. Engage in reflective exercises to understand how their social identities influence their work in different types of communities.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Examine the complex intersections of well-being, mental health, and various social locations (e.g., race, class, gender, sexual orientation, socioeconomic status, religion, spirituality, (dis)ability, generation, language, nationality)
Audience: Undergraduate

2. Engage in reflective processes to develop awareness of self and other within the context of theory, research, and best practices for and within communities (broadly defined) and in relation to various social locations
Audience: Undergraduate

3. Examine the ways in which systems of the personal, psychological, social, cultural, contextual, and institutional influence well-being and mental health across communities
Audience: Undergraduate

4. Examine western concepts of mental health through the lens of other cultures and cultural nosologies and develop a critical cultural understanding of western concepts
Audience: Undergraduate

5. Examine culturally-specific expressions of distress
Audience: Undergraduate

6. Engage in reflective exercises to understand how student's social locations may influence their work across different communities given their own sociocultural positionality
Audience: Undergraduate

7. Examine U.S. mental health equity and disparities across communities and contexts
Audience: Undergraduate

8. Examine ethical considerations in mental health practices across communities
Audience: Undergraduate

COUN PSY 300 – SPECIAL TOPICS: COUNSELING AND COUNSELING PSYCHOLOGY
1-4 credits.

Examines various special topics in Counseling and Counseling Psychology. Students need to submit an application and have sophomore standing in order to be considered for this class.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

COUN PSY 325 – SEMINAR: STUDENTS SEEKING EDUCATIONAL EQUITY AND DIVERSITY (SEED)
3-4 credits.

Use personal experiences, readings, and discussions as frameworks for interrogating social, cultural, and political inequities. Engage in dialogues and experiential activities about social differences to promote critical consciousness and intercultural competence across disciplines.
Requisites: Sophomore standing
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Participate in the process of co-creating a dialogue-based learning community
Audience: Undergraduate

2. Reflect on and engage with complexities of socialization and social group membership, especially as they relate to the UW campus and Madison community
Audience: Undergraduate

3. Examine how differential power manifests at individual, institutional, and systemic levels
Audience: Undergraduate

4. Practice critical dialogue and community-building skills across difference
Audience: Undergraduate

5. Apply knowledge, experiences, and skills gain through the course in current and future academic and/or work environments
Audience: Undergraduate

COUN PSY/CHICLA 331 – IMMIGRANT HEALTH AND WELLBEING
3 credits.

Develop an understanding of immigrant health in the United States from the perspective of social and structural determinants. Applies concepts to a comprehensive framework for the development of health. Describes health assets and risks for specific vulnerable immigrant groups, such as women, children, and undocumented individuals and mixed immigration status families. Provides guidelines for improving immigrant access to quality health care, including language services, provider competence, policy and organizational supports, and community-based collaboration, advocacy, and research.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge of nature of health and well-being as well as concomitant risks for immigrant populations
Audience: Undergraduate

2. Examine the nature of social determinants and the pathways by which they influence health and well-being among immigrant populations
Audience: Undergraduate

3. Synthesize academic and public health data to provide an informed summary of health status of immigrants across domains of mental and physical health and disorders
Audience: Undergraduate

4. Survey personal, interpersonal, familial, and community contributors to health, well-being, resilience, healing/recovery, and disability across sociological contexts of immigrants
Audience: Undergraduate

5. Analyze public policy and health initiatives that address the health concerns specific to immigrant populations
Audience: Undergraduate

6. Identify skills, experiences, training, qualifications, and personal/ethical/professional standards involved in careers supporting health and well-being of immigrant populations
Audience: Undergraduate

COUN PSY 332 – GENDER AND QUEER ISSUES IN PSYCHOLOGY
3 credits.

Explore history, theory, and research related to the psychology of gender and sexuality. A feminist approach is used to deconstruct gender and sexuality within the field of psychology and other mental health fields. Discussions include challenging the current system of psychology, while also integrating concepts to work within the system. An applied approach is used to encourage participation in activities to integrate activism and knowledge into professional identity, bringing in experiences from field placements, internship, and/or places of employment.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Integrate an understanding of definitions, terms, and labels related to gender and/or queer identities.
Audience: Undergraduate

2. Increase knowledge about mental health concerns and psychological treatments for trans, lesbian, gay, bisexual, pansexual, queer, polyamorous, and questioning individuals.
Audience: Undergraduate

3. Understand the theoretical underpinnings of queer and gender psychological theories.
Audience: Undergraduate

4. Increase awareness and knowledge of the diversity within LGBTQ populations.
Audience: Undergraduate

5. Integrate cross-cultural considerations with LGBTQ populations.
Audience: Undergraduate

COUN PSY 333 – ASIAN AMERICAN PSYCHOLOGY
3 credits.

Examines the personality and mental health issues of Asian Americans. Special emphasis is given to how minority group status, adaptation processes, and bicultural development influence various aspects of psychological functioning. Specific topics include stereotypes and racism, acculturation and enculturation, cultural values/behavioral norms, family roles, ethnic identity development, communication styles, gender and interracial relationships, academic and career achievement, stressors and social support systems within Asian communities, psychopathology, and culturally competent mental health treatment and service delivery.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2022
Learning Outcomes: 1. Demonstrate knowledge of one or more methodologies pertaining to Asian American psychological research.
Audience: Both Grad & Undergrad

2. Demonstrate knowledge of one or more theoretical approaches as it pertains to Asian American psychological research.
Audience: Both Grad & Undergrad

3. Synthesize and apply social science concepts.
Audience: Both Grad & Undergrad

4. Demonstrate knowledge of understanding of issues related to Asian American psychology from multiple perspectives.
Audience: Both Grad & Undergrad

5. Articulate how the past has affected present day circumstances regarding race and racial inequalities in the U.S.
Audience: Both Grad & Undergrad

6. Recognize and question cultural assumptions and knowledge claims as they relate to race and ethnicity.
Audience: Both Grad & Undergrad

7. Demonstrate self-awareness and empathy toward the cultural perspectives and worldviews of others.
Audience: Both Grad & Undergrad

8. Apply course concepts to their lives outside the classroom by respectfully participating in our multicultural society.
Audience: Both Grad & Undergrad

9. Demonstrate advanced application of new skills and information to significant issues related to Asian American psychology.
Audience: Graduate

10. Demonstrate an ability to pose questions, facilitate discussions, critically think about Asian American psychology as a past, present, and future construct.
Audience: Graduate

COUN PSY 334 – BLACK PSYCHOLOGY
3 credits.

A critical analysis of the experiences of Black people through the lens of psychology and the role of advocacy rooted in the establishment of the field of Black psychology. Explore a broad range of topics relating to Black people experiences in the United States including the history of Black Psychology, Black identity development, intersectionality theory, gender, as well as Black advocacy. Special emphasis will be given to acknowledging the sociohistorical and political contexts of Black people in the diaspora and how time and space impacts how psychologists study the well-being and psychological outcomes of Black people, understanding positionality, and envisioning the future of Black psychology.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Analyze ideas, arguments, and points of view related to the sociohistorical and political contexts of the field Black Psychology
Audience: Undergraduate

2. Identify various theories and tensions in the psychological study of Black people within the US and the larger Black diaspora
Audience: Undergraduate

3. Articulate how the experiences of multiple dimensions of oppression influence various psychological processes, including identity development, well-being, and health outcomes
Audience: Undergraduate

4. Demonstrate self-awareness of positionality in engaging with Black psychology research
Audience: Undergraduate

5. Examine the knowledge production in Black Psychology by understanding how lived experiences of researchers and activists impact their positions on the study of Black People
Audience: Undergraduate

6. Critically engage with the advocacy inherent in the field of Black Psychology development and ongoing throughout study Black folx in psychology
Audience: Undergraduate

COUN PSY 335 – BODY IMAGE AND EATING DISORDERS IN THE HELPING PROFESSIONS
3 credits.

Frameworks, concepts, and practical approaches to support individuals of all body sizes, with a particular focus on those grappling with eating disorders and body image concerns. Critical topics such as the pervasive issue of weight bias; the complex relationship between identity, culture, and body image; the limitations and strengths of the medical model in treating eating disorders; the principles of Health at Every Size (HAES) and intuitive eating (IE); and the powerful role of advocacy and activism in challenging societal norms on small and large scales.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Define anti-fat bias, fatphobia, and healthism.
Audience: Both Grad & Undergrad

2. Identify key areas in which oppression against fat people permeates contexts across society.
Audience: Both Grad & Undergrad

3. Compare norms and experiences around food and body across cultural contexts and identities.
Audience: Both Grad & Undergrad

4. Recognize the racist roots of fatphobia.
Audience: Both Grad & Undergrad

5. Describe how intersectionality and one's positionality are relevant in the fight for fat liberation.
Audience: Both Grad & Undergrad

6. Summarize the principles of the Health at Every Size (HAES) movement and Intuitive Eating (IE).
Audience: Both Grad & Undergrad

7. Summarize the eating disorders listed with the DSM 5-TR and critique the criteria for these disorders based on the information in other course readings and lived experience.
Audience: Both Grad & Undergrad

8. Compare and contrast medical and HAES/IE frameworks for conceptualizing and treating concerns related to body image and disordered eating.
Audience: Both Grad & Undergrad

9. Assess the connection between fatphobia, anti-fat bias and the perpetuation of body image concerns and disordered eating. Identify the institutions within society that profit from this relationship.
Audience: Both Grad & Undergrad

10. Develop a project at UW Madison to advocate on behalf of people struggling with challenges related to food security, disordered eating, body image, or anti-fat bias.
Audience: Both Grad & Undergrad

11. Integrate course materials and concepts with current academic emphasis and scholarship.
Audience: Graduate

COUN PSY 371 – PSYCHOLOGY OF SUICIDE
3 credits.

Provides a theoretical and research framework for understanding suicide, to develop understanding of the experiences of those who are suicidal, and to introduce prevention, assessment, and treatment approaches. Topics will include common myths related to suicide, and research challenging those myths; suicide assessment, intervention, and prevention strategies; suicide bereavement; ethical and legal issues related to suicide; and the experiences of populations disproportionately affected by suicide.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Apply and integrate knowledge from the course, including theory and research, to explain why people attempt and die from suicide
Audience: Undergraduate

2. Use current, precise, and respectful suicide-related terminology
Audience: Undergraduate

3. Analyze a scenario to recognize individuals at risk for suicide, and know how to respond appropriately and respectfully
Audience: Undergraduate

4. Identify populations disproportionately affected by suicide, and describe some contributing factors
Audience: Undergraduate

5. Describe evidence-based suicide prevention and treatment approaches

Audience: Undergraduate

6. Evaluate the impact of suicide at the individual/familial, societal, and global levels
Audience: Undergraduate

7. Evaluate some of the ethical and legal issues related to suicide and suicide prevention
Audience: Undergraduate

8. Critically evaluate and discuss major issues and controversies within the field, and identify gaps in research
Audience: Undergraduate

COUN PSY 372 – PSYCHOLOGY OF MINDFULNESS
3 credits.

An academic and experiential introduction to mindfulness meditation framed within the perspective of psychology is provided. Scientific research and modern meditation instructions that have formed the basis of a variety of secular mindfulness-based interventions are reviewed. Readings will adopt a variety of perspectives and methodologies, including conceptual/theoretical work, clinical trials, review articles including meta-analyses (i.e., aggregating findings across studies), and measurement-oriented studies. Key topics include: Buddhist and historical underpinnings of secular mindfulness-based stress reduction (MBSR) and similar interventions (e.g., lovingkindness and compassion-based meditation), and empirical literature pertaining to neuroscientific and clinical effects of mindfulness training and related interventions.
Requisites: PSYCH 202, KINES 150, RP & SE 505, COUN PSY 237 or 531
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Gain an experiential understanding of mindfulness and its psychological underpinnings
Audience: Undergraduate

2. Become familiar with interventions that have been developed based on mindfulness
Audience: Undergraduate

3. Gain familiarity with the scientific literature pertaining to these interventions
Audience: Undergraduate

COUN PSY 500 – RADICAL HEALING AND ETHICS OF BILINGUAL LATINX TRAINING
1 credit.

Provide the philosophical foundations and ethical considerations for delivering culturally- and linguistically-appropriate mental health support to multilingual Latinx communities. Build a foundational knowledge of liberatory philosophy, community-engaged work that promotes radical healing, review the ethical codes relevant to their field of study, and discuss how professional values and ethical mandates relate to Latinx cultural values and multilingual psychological service delivery.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Acquire knowledge of liberation psychology, decolonization frameworks, radical healing, and strengths-based approaches to working with Latinx populations
Audience: Graduate

2. Understand the historical and current sociopolitical context that influences psychologically-based bilingual (Spanish/English) service provision to Latinxs as a broad, heterogeneous cultural and ethnic group
Audience: Graduate

3. Learn about the effects of colonization, migration, racism, and racial trauma in facilitating healing with multilingual Latinx populations
Audience: Graduate

4. Examine the ethical standards of helping professions and understand how they relate to broader Latinx values, belief systems and cultural practices
Audience: Graduate

5. Develop cultural humility and self-reflection on student's role in intervening with Latinxs
Audience: Graduate

COUN PSY/CHICLA 525 – DIMENSIONS OF LATIN@ MENTAL HEALTH SERVICES
3 credits.

Provides training for students who aspire to one of the helping, health, or mental health professions and who currently work or who envision themselves working with Latin@ populations. Provides important frameworks for working with Latin@s, including cultural, spiritual, linguistic and historical features relevant to this population and begin to apply their knowledge in service learning placements.
Requisites: Junior standing or 6 credits of CHICLA
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Acquire knowledge of the social, cultural, linguistic, spiritual, ethnic, and racial diversity within Latinx communities
Audience: Undergraduate

2. Develop sensitivity to the forms of bias and discrimination that have historically and continue to impact Latinx communities
Audience: Undergraduate

3. Increase awareness of the strengths and barriers in social services for the Latinxs communities
Audience: Undergraduate

4. Increase skills to address social justice, advocacy, and cultural responsiveness in the context of Latinx communities
Audience: Undergraduate

5. Reflect on students' own social identities and the implications of those identities and identity intersections when serving in Latinx communities
Audience: Undergraduate

COUN PSY 531 – PREVENTION AND INTERVENTION IN MENTAL HEALTH ACROSS THE LIFESPAN
3 credits.

Introduction to mental health concerns and wellbeing, protective and risk factors, and the design and outcomes of evidence-based intervention and prevention programs to promote behavioral and emotional wellbeing across the lifespan. Focus on individual, family, and community health, with particular attention to socioeconomic, cultural, social, and structural mechanisms. Provides an overview of mental health outcomes and prevention programs or interventions aimed to prevent or ameliorate mental illness and distress, and promote positive mental health across the lifespan, including description of issues related to the design, implementation, and evaluation of prevention and intervention programs.
Requisites: KINES 150
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe behavioral, emotional, and drug use problems, as well as psychological resilience and well-being.
Audience: Undergraduate

2. Explain underlying mental health mechanisms and influences.
Audience: Undergraduate

3. Discuss how prevention and intervention programs are classified and conceptualized.
Audience: Undergraduate

4. Use a human development framework to examine outcomes and types of prevention and intervention programs.
Audience: Undergraduate

5. Evaluate the design and implementation of prevention and intervention programs.
Audience: Undergraduate

6. Consider dissemination, policy, advocacy, and collaboration through an interdisciplinary and social justice prevention framework.
Audience: Undergraduate

COUN PSY 550 – STRENGTHENING LATINXS
3 credits.

Develop proficiency in conducting basic psychotherapeutic helping skills in Spanish through role-plays and specialized training that integrates Latinx psychological theories into practical clinical interventions. Demonstrate advanced Spanish proficiency on ACTFL Proficiency Placement Exam
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2024
Learning Outcomes: 1. Discuss characteristics and behaviors that influence helping processes with Latinxs, including individual, cultural, social, political and historical factors
Audience: Graduate

2. Learn basic attentional and interviewing skills in Spanish such as asking questions, paraphrasing, reflecting content and feeling, summarizing, and clarifying
Audience: Graduate

3. Understand how to adapt interviewing abilities to individual differences and incorporate Latinx-centered values and practices
Audience: Graduate

4. Learn how to gather clinical information and complete an initial diagnostic interview in Spanish
Audience: Graduate

5. Understand how to effectively use supervision and consultation in Spanish
Audience: Graduate

6. Develop self-awareness and self-assessment of one's role in psychological service provision with Spanish-speaking Latinxs
Audience: Graduate

COUN PSY 575 – LATINX FOUNDATIONAL PRACTICUM: CASE CONCEPTUALIZATION
1 credit.

Examine the mental health treatment and practice implications of working with Spanish-speaking Latinxs through a culturally affirming, linguistically appropriate, and strengths-based approach. Evaluate different counseling strategies and develop skills to understand and assess Latinx mental health to appropriately guide treatment. Foster reflexivity and examine one's own sociopolitical positionality and influence on the process of psychotherapy with Latinxs.
Requisites: COUN PSY/CHICLA 525 and COUN PSY 550
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop culturally affirming and linguistically appropriate case conceptualization skills with Spanish-speaking Latinxs.
Audience: Graduate

2. Demonstrate skills to solicit information to inform culturally congruent and strengths-based understanding of Latinx clients' presenting concerns.

Audience: Graduate

3. Evaluate your theoretical approach to counseling and culturally tailor to increase psychotherapeutic effectiveness with Latinxs.
Audience: Graduate

4. Engage in group supervision that facilitates critical self-reflection of your role in counseling Latinxs and provides feedback to peers.
Audience: Graduate

5. Demonstrate understanding of your implicit cultural assumptions and how those influence your case conceptualization, interactions with clients and colleagues, and understanding of the therapeutic process.
Audience: Graduate

COUN PSY 580 – LATINX ADVANCED PRACTICUM: TREATMENT PLANNING & INTERVENTIONS
1 credit.

Examine the mental health treatment and practice implications of working with Spanish-speaking Latinxs through a culturally affirming, linguistically appropriate, and strengths-based approach. Evaluate different counseling strategies and develop skills to understand and assess Latinx mental health to appropriately guide treatment. Foster reflexivity and examine one's own sociopolitical positionality and influence on the process of psychotherapy with Latinxs.
Requisites: COUN PSY 575
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop skills to solicit information to inform culturally congruent and strengths-based treatment goals and counseling strategies with Latinxs.
Audience: Graduate

2. Demonstrate culturally affirming and linguistically appropriate case conceptualization skills and treatment interventions with Spanish-speaking Latinxs.
Audience: Graduate

3. Facilitate critical self-reflection of your role in counseling Latinxs and provide feedback to peers.
Audience: Graduate

4. Demonstrate an advanced understanding of your implicit cultural assumptions and how those influence your case conceptualization, treatment interventions, interactions with clients and colleagues, and overall understanding of the therapeutic process.
Audience: Graduate

COUN PSY/CHICLA 590 – ESPERANZA COMMUNITY-ENGAGED RESEARCH WITH LATINES
3 credits.

Introduction to the development and implementation of community-engaged research and programming for Latine populations with "Esperanza," an innovative university-community partnership with Centro Hispano of Dane County. Community-engaged research draws on interdisciplinary research and practice across education, psychology and public health that seeks to disrupt, mitigate, and eliminate mental health disparities among local Latine populations. Learn the principles of community-engaged research and apply them through the development of mutually beneficial, reciprocal, effective, equitable, and justice-oriented community-university projects.
Requisites: CHICLA/COUN PSY 525 or graduate/professional standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 2 number of completions
Learning Outcomes: 1. Identify guiding principles of community-engaged research with Latines based on the social, cultural, linguistic, and historical influences on this population.
Audience: Both Grad & Undergrad

2. Develop equitable, effective, and culturally informed collaborations with Latine-serving community partners.
Audience: Both Grad & Undergrad

3. Apply principles of community-engaged scholarship to develop and implement projects that promote health equity and justice through a strengths-based approach for local Latine communities.
Audience: Both Grad & Undergrad

4. Relate the content and course skills to an interdisciplinary health profession role of scientist-practitioner-advocates to promote effective research with culturally diverse populations.
Audience: Both Grad & Undergrad

5. Integrate trauma-informed scholarly peer-reviewed publication with healing-centered Latine and indigenous epistemologies
Audience: Graduate

COUN PSY 601 – BEST PRACTICES IN COMMUNITY-ENGAGED SCHOLARSHIP
2 credits.

Community-engaged scholarship (CES) captures a broad understanding of the possibilities to learn, teach, and do research through academic-community collaboration. CES encompasses the interaction known as "service-learning" or "community-based learning" (CBL) as well as complex models of academic-community engagement known as "community-based research" or "participatory action research." Staff members from the Morgridge Center for Public Service (MCPS) will introduce the concepts and models of CES, discuss the importance of building and maintaining community relationships, identify challenges and solutions in implementing CES, and assist you in creating your own course, project, or proposal.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand and evaluate different models of community-engaged teaching and research
Audience: Graduate

2. Apply theoretical models of community-engaged scholarship in practice
Audience: Graduate

3. Develop or continue mutually beneficial, reciprocal relationships with community partners
Audience: Graduate

4. Understand how to evaluate community-based teaching and research
Audience: Graduate

5. Develop awareness of resources available to you related to community-engaged scholarship at UW-Madison
Audience: Graduate

6. Create actionable ways to integrate community-engaged scholarship into your research, teaching, and/or service portfolio as a graduate student and beyond
Audience: Graduate

COUN PSY 620 – SPECIAL TOPICS IN COUNSELING AND GUIDANCE
1-6 credits.

Instruction and/or practice in specialized counseling approaches, strategies, and techniques; working with various populations of clients served by counselors.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

COUN PSY 650 – THEORY AND PRACTICE IN INTERVIEWING
3 credits.

Theoretical bases for conducting interviews; types of interviewing; introduction to counseling and interviewing techniques. Limited opportunity to practice.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2019
Learning Outcomes: 1. Increase awareness of one's self as a cultural being in order to understand and engage in effective communication
Audience: Undergraduate

2. Gain familiarity with research and theory on communication
Audience: Undergraduate

3. Become familiar with your own communication style and how it applies in different types of interviews
Audience: Undergraduate

4. Practice basic communication skills of active listening, effective questioning, empathy, and letting others know you understand their point of view
Audience: Undergraduate

5. Conduct video-recorded practice interviews and evaluate your performance
Audience: Undergraduate

6. Develop understanding of the goals and techniques utilized in different types of interviews
Audience: Undergraduate

COUN PSY 655 – CLINICAL COMMUNICATION SKILLS
3 credits.

Designed to help students develop an understanding of the clinical communication process, introduce applications of this process in a variety of contexts, and practice and develop clinical communication skills. Gain familiarity with research and theory on communication in a variety of clinical settings. Provides didactic and experiential training in developing basic competencies in clinical communication and listening skills, including personal and cultural characteristics that impact the communication process.
Requisites: Not open to students with credit for COUN PSY 650
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate familiarity with research and theory on communication in a variety of clinical settings.
Audience: Undergraduate

2. Engage in critical self-reflection and gain an increased awareness of how your personal style and cultural characteristics influence your interpersonal and communication interactions.
Audience: Undergraduate

3. Demonstrate basic communication skills of active listening, effective questioning, reflective listening, and empathy.
Audience: Undergraduate

4. Demonstrate comfort and competence in dealing with client emotion.
Audience: Undergraduate

5. Conduct video-recorded practice interviews and evaluate your performance in demonstrating intentional use of a repertoire of communication skills.
Audience: Undergraduate

6. Demonstrate the ability to give and receive feedback.
Audience: Undergraduate

7. Increase ability to successfully develop and manage professional relationships with clients/patients, colleagues, and others.
Audience: Undergraduate

COUN PSY 665 – CAREER DEVELOPMENT THROUGHOUT THE LIFE SPAN
3 credits.

We are all engaged with, and affected by, the world of work. Career development is a lifelong process that includes tasks and decision-making related to: selecting our dream job at age five, planning our major in college, transitioning to a new field, working as career counselors, and planning for retirement. Surveys foundational and emerging career development theories and interventions. A key component includes exploration of how knowledge from career development scholarship can be applied to students' own lives within a changing socioeconomic context. Requires reflection on personal development (e.g., personalities, identities, life experiences, cultures, interests, skills, needs, and values) and apply this self-knowledge to engage career exploration and planning.
Requisites: Junior standing
Repeatable for Credit: No
Last Taught: Spring 2020
Learning Outcomes: 1. Gain an understanding of your personality, interests, skills, values, and how these relate to occupational options and career development
Audience: Undergraduate

2. Apply career development theory by taking career assessments and gathering occupational information through available resources and informational interviewing
Audience: Undergraduate

3. Become familiar with key career development theories and constructs that assist us in understanding the development, role, and meaning of work in people's lives across the lifespan
Audience: Undergraduate

4. Become oriented to the socioeconomic world of work as it impacts individual and family career systems
Audience: Undergraduate

5. Demonstrate skill in recognizing, understanding, and articulating cultural and contextual factors that shape career development and impact career interventions
Audience: Undergraduate

6. Develop a base knowledge of career-related intervention models and strategies
Audience: Undergraduate

7. Develop lifelong skills associated with career decision making and career management
Audience: Undergraduate

COUN PSY 699 — INDEPENDENT READING
1-3 credits.

Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

COUN PSY 700 — PRACTICUM ACTIVITIES
1 credit.

The foundation structure for first-year Master's students to complete their required 40 hours of practicum. Develop the conceptual and administrative skills to complete practicum hours in collaboration with Counseling Psychology courses and their specific activities. Focuses on gaining the requisite developmental skills to prepare for and practice individual counseling-like interviews with student volunteers.
Requisites: Declared in Counseling
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 2 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Implement basic attending skills in individual interviews.
Audience: Graduate

2. Gain fundamental information about psychosociocultural and contextual narratives.
Audience: Graduate

3. Understand perspective-taking and consciousness specific to diversity and intersectionality.
Audience: Graduate

4. Demonstrate administrative skill with tracking clinical hours and negotiating organizational structure of interviews.
Audience: Graduate

5. Gain personal insight about one's clinical interviewing skills and areas for developmental growth.
Audience: Graduate

COUN PSY/CURRIC/ED POL/ED PSYCH/ELPA/RP & SE 719 — INTRODUCTION TO QUALITATIVE RESEARCH
3 credits.

Provides an overview of qualitative inquiry, examining assumptions, standards, and methods for generating and communicating interpretations. Methodological and theoretical works illustrate case study, ethnography, narrative, and action research. Does not include a field method component.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

COUN PSY/ED PSYCH 723 — DEVELOPMENTAL PROCESSES ACROSS THE LIFE SPAN
3 credits.

Life-span perspective on studying individual development from conception to death. Emphasis on multidisciplinary, multidirectional, and contextual approaches to physical, psychological, social, and intellectual developmental processes.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

COUN PSY/ED PSYCH/HDFS 726 — ETHNIC AND RACIAL DIVERSITY IN SOCIAL DEVELOPMENT
3 credits.

Review of empirical and theoretical research on ethnic/racial diversity in social development across childhood, adolescence and early adulthood with emphasis on implications for counseling and school psychology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021

COUN PSY/PSYCH/RP & SE 729 — ADVANCED SOCIAL PSYCHOLOGY
3 credits.

Intensive examination of theoretical conceptions in contemporary social psychology, including learning-theoretic, reinforcement, incentive, cognitive, and psychodynamic approaches, and research in selected topic areas reflecting these approaches, such as aggression, attitude formation and change, conformity, limitation and modeling, interpersonal attraction, perception of others, prosocial behavior, and social influence.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

COUN PSY/RP & SE 730 — PROFESSIONAL COUNSELING ORIENTATION
3 credits.

Provides a broad understanding of professional counselor roles and functions. Also provides a broad understanding of the ethical and legal standards for professional counselors. Gain familiarity with the ACA Code of Ethics, as well as with credentialing standards and organizations relevant to the practice of mental health counseling.
Requisites: Declared in a Rehabilitation Psychology or Counseling Psychology graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

COUN PSY/ED PSYCH/RP & SE 736 – SEMINAR IN PSYCHOLOGY OF INDIVIDUAL DIFFERENCES
3 credits.

Seminar in the psychology of individual differences, providing broad and general coverage of theory and research related to individual and cultural differences.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

COUN PSY/ED PSYCH/RP & SE 737 – SEMINAR IN HISTORY AND SYSTEMS OF PSYCHOLOGY
3 credits.

Seminar in the history of psychology, providing broad and general coverage of the development of psychology as a scientific discipline. Includes coverage of philosophy of science and systems of psychological inquiry, with applications to current research in psychology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

COUN PSY 740 – ABNORMAL BEHAVIOR AND PSYCHOPATHOLOGY
3 credits.

Covers the research and theory of abnormal psychology, including etiology, manifestation, and diagnosis of mental health disorders. Emphasizes research on developmental psychopathology and cultural issues in assessment and diagnosis.
Requisites: Declared in Counseling, Counseling Psychology, Rehabilitation Counseling, or Rehabilitation Counselor Education
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize signs and symptoms of common forms of psychopathology
Audience: Graduate

2. Formulate a diagnostic conceptualization integrating individual level as well as contextual/cultural/systemic variables
Audience: Graduate

3. Utilize existing resources (DSM-5, scientific literature, assessment) to verify and fully articulate a formal diagnosis, including consideration of differential diagnoses
Audience: Graduate

4. Formulate potential treatment approaches
Audience: Graduate

COUN PSY 745 – CLINICAL MENTAL HEALTH COUNSELING: DIAGNOSIS AND TREATMENT PLANNING FOR COUNSELORS
3 credits.

Examine the treatment and practice implications of different mental health diagnoses and adjustment disorders. Reviews advanced principles of mental health diagnoses based on DSM 5 and ICD 10 nomenclatures and contextualizes this review for the practice of counseling applied and adapted for a diversity of clients and communities. Additionally, counseling strategies are reviewed for challenges with adjustment within various sociocultural contexts. Review empirically supported interventions for specific disorders as well as common factors that have been empirically supported as efficacious across disorders. Includes an examination of the cultural foundation of the counseling profession's and clients' explanatory models for (a) psychological and mental health distress as well as (b) healing and treatment strategies.
Requisites: Declared in Counseling Psychology or Counseling
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Conduct intake assessments that gather comprehensive biopsychosocial data and mental health history
Audience: Graduate

2. Formulate clinical diagnoses with clients on internship within diverse sociocultural contexts and across a broad range of mental health disorders and distress
Audience: Graduate

3. Develop understanding of the sociocultural foundation and diversity associated with the explanatory models used to infer etiological assumptions and treatment implications for clients' mental health distress and healing strategies
Audience: Graduate

4. Demonstrate familiarity with empirically supported interventions associated with specific mental health disorders as well as the empirical support for the common factors approach to counseling interventions
Audience: Graduate

5. Demonstrate skill in soliciting information to inform treatment goals and strategies and in collaborating with clients to formulate treatment plans
Audience: Graduate

6. Demonstrate case management skills, as well as skills to monitor and evaluate client progress, goal attainment, and outcomes in counseling interventions and how to use client feedback to adapt treatment and intervention strategies
Audience: Graduate

COUN PSY 755 – SEMINAR ON META-ANALYSIS
3 credits.

Focus on meta-analysis, a set of techniques for synthesizing the results of multiple studies addressing the same research question. Conduct a "mini" meta-analysis in an area of interest.
Requisites: ED PSYCH 761
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Conduct rigorous literature search for quantitative review using research databases
Audience: Graduate

2. Calculate and interpret effect sizes and statistical tests within quantitative reviews
Audience: Graduate

3. Identify best practices for conducting quantitative reviews from established guidelines
Audience: Graduate

4. Code study characteristics and conduct moderator analyses
Audience: Graduate

5. Interpret and present results of quantitative review
Audience: Graduate

COUN PSY 777 – CRISIS AND TRAUMA COUNSELING
3 credits.

Counseling approaches that effectively address crises and trauma, exploring the impact of trauma and crisis and potential neurobiological responses, the development of skills and techniques for assessment and intervention in specific crisis or trauma situations including suicide assessment and intervention.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Show competency in how to manage crisis response and trauma as a mental health professional
Audience: Graduate

2. Articulate empirical and theoretical support for individual and systems-level interventions in crisis and trauma situations
Audience: Graduate

3. Develop an understanding about the disproportionate impact of crises and trauma on marginalized communities and identify appropriate, culturally relevant interventions
Audience: Graduate

4. Explore the basis for self-care as an ethical and professional standard and develop a personal understanding of self-care through practice
Audience: Graduate

COUN PSY/CURRIC/ED POL/ED PSYCH/ELPA/RP & SE 788 – QUALITATIVE RESEARCH METHODS IN EDUCATION: FIELD METHODS I
3 credits.

Introductory field methods experience in qualitative research. Learn to define good research questions, determine which methods of data collection and analysis are useful for addressing those questions, engage in these methods, reflect on their utility in education research.
Requisites: ED PSYCH/COUN PSY/CURRIC/ED POL/ELPA/RP & SE 719
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

COUN PSY/CURRIC/ED POL/ED PSYCH/ELPA/RP & SE 789 – QUALITATIVE RESEARCH METHODS IN EDUCATION: FIELD METHODS II
3 credits.

Focus on data analysis and translation of finds and implications. Gain theoretical and practical knowledge and skills regarding coding and analysis techniques, use of qualitative analytic tools, strategies for sharing findings with audiences beyond research team.
Requisites: ED PSYCH/COUN PSY/CURRIC/ED POL/ELPA/RP & SE 788
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

COUN PSY 791 – FOUNDATIONS OF CLINICAL MENTAL HEALTH COUNSELING
3 credits.

History development of profession; professional ethics; credentialing; major theories models; roles; and principles including prevention, intervention, consultation, education, advocacy, systems promoting mental health and well-being.
Requisites: Declared in Counseling Psychology or Counseling
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Become familiar with the history of the counseling profession
Audience: Graduate

2. Develop understanding of the roles, functions, preparation standards, credentialing, licensure, and professional identity of clinical mental health counselors
Audience: Graduate

3. Increase understanding of legal and ethical considerations related to the practice of clinical mental health counseling
Audience: Graduate

4. Become familiar with different global and local settings and contexts of mental health counseling
Audience: Graduate

5. Explore advocacy processes on behalf of the profession and clients experiencing inequities in mental health
Audience: Graduate

6. Develop professional presentation skills
Audience: Graduate

COUN PSY 800 – THEORIES OF COUNSELING
3 credits.

Historical and philosophical foundations of counseling. Examination of individual counseling theories, research, roles and practices within the counseling profession.
Requisites: Declared in Counseling Psychology or Counseling
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate an understanding of the history and the major theoretical foundations of the counseling profession
Audience: Graduate

2. Assess theories of counseling regarding their current viability and applicability to various work settings
Audience: Graduate

3. Articulate an awareness of the influence of clients' and counselors' beliefs, attitudes, and biases on the counseling process
Audience: Graduate

4. Demonstrate an understanding of basic counseling skills and their relationship to different theoretical approaches
Audience: Graduate

5. Demonstrate an understanding of ethical issues that should be considered while using each of the theoretical approaches
Audience: Graduate

6. Articulate an understanding of multicultural issues that are embedded in the use of each theoretical approach and demonstrate how these issues might be adequately addressed
Audience: Graduate

7. Articulate your emerging theoretical orientation and worldview and demonstrate a recognition that it is in development as part of an ongoing process
Audience: Graduate

8. Demonstrate self-evaluation skills, writing skills, presentation skills, and critical thinking skills
Audience: Graduate

9. Demonstrate theoretically-based counseling skills, knowledge, and strategies to practiced counseling situations
Audience: Graduate

COUN PSY 802 – GROUP DYNAMICS PROCESSING AND COUNSELING
3 credits.

Reviews practice, theory, and research on group development, dynamics, and group counseling theories; group leadership styles; basic and advanced group counseling methods and skills; and other group approaches.
Requisites: Declared in Counseling Psychology or Counseling
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify therapeutic factors in group interventions, including what groups offer that individual meetings cannot
Audience: Graduate

2. Demonstrate familiarity with a "process" model of group intervention that can be adapted to a variety of problems and settings
Audience: Graduate

3. Articulate an awareness of the influence of clients' and counselors' beliefs, attitudes, cultural assumptions and biases on the group process
Audience: Graduate

4. Describe how the special features of group work can be useful in treating a target problem or population of your choice
Audience: Graduate

5. Demonstrate skills in observing group process and in relating your observations to a) theories of group dynamics and group development and b) therapeutic goals
Audience: Graduate

6. Engage in a process of self-reflection and self-awareness of one's interpersonal style, particularly as it relates to the role(s) one takes within groups of all kinds
Audience: Graduate

7. Identify critical incidents in group and describe effective facilitator responses
Audience: Graduate

8. Demonstrate knowledge of professional ethics and issues involved in group work and in work with systems (e.g., agencies, organizations, etc.) and how these issues may impact your current and future practice
Audience: Graduate

COUN PSY 805 – HELPING RELATIONSHIPS AND TECHNIQUES
3 credits.

Understanding and development of basic and advanced helping, interviewing, and counseling skills; consultation theory and application; development of counselor and client self understanding; facilitation of client or consultee change.
Requisites: Declared in Counseling Psychology or Counseling
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Illustrate an understanding of CACREP 2009 Standards in preparation for practice within counseling
Audience: Graduate

2. Recognize oneself as a means to understanding others through activities aimed at increasing self and cultural awareness
Audience: Graduate

3. Identify core knowledge about counseling and use self as a tool within the counseling and supervisory interactions
Audience: Graduate

4. Develop a range of skills to engage intentionally and effectively within the counseling and supervisory relationships
Audience: Graduate

COUN PSY 806 – SUPERVISED PRACTICUM IN COUNSELING
3 credits.

Introduction to psychotherapy. See volunteer clients and receive individual and group supervision related to their work with volunteer clients. Receive specialized training in case conceptualization and integrating theory into the specific interventions they are using with their volunteer clients.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop intentional and culturally-appropriate counseling skills and processes
Audience: Graduate

2. Demonstrate professional and ethical demeanor and comportment as a counselor-in-training
Audience: Graduate

3. Engage in individual and group supervision
Audience: Graduate

COUN PSY 808 – SUPERVISED INTERNSHIP IN COUNSELING
2-5 credits.

Supervision of Master's internship counseling experience.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Engage in the process of critical self-reflection, feedback, and understanding of how the personal impacts the professional

Audience: Graduate

2. Demonstrate understanding of your role as a person and professional within the counseling process and supervision (both individual and group)
Audience: Graduate

3. Demonstrate understanding of your implicit cultural assumptions and their influences and interactions with the way you conceptualize and work with your clients & colleagues, as well as how you understand the therapeutic process
Audience: Graduate

4. Hone your clinical & diagnostic skills, theoretical case conceptualization, professional demeanor, and ethical practice
Audience: Graduate

5. Develop an understanding of the clinical agency setting with which you are affiliated, and demonstrate the application of clinical, theoretical, and empirical knowledge to psychosocial and psychocultural issues presented by clients
Audience: Graduate

6. Provide a conceptual and experiential base for the delivery of counseling services within a community or college population context, including case management, ethical practice, and demonstration of professional demeanor in professional relationships
Audience: Graduate

7. Prepare for the comprehensive Professional Identity Exercise (PIE)
Audience: Graduate

COUN PSY 810 – PROFESSIONAL DEVELOPMENT AND CLINICAL PRACTICE
1-6 credits.

Full-time involvement. Various assignments. Requires participation in a concurrent seminar.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

COUN PSY 825 – COUNSELING PSYCHOLOGY TECHNIQUES WITH FAMILIES
3 credits.

Approaches to counseling intervention for families across the life-cycle. Specific attention paid to family stress.
Requisites: Declared in Counseling, Counseling Psychology, Rehabilitation Counseling, or Rehabilitation Counselor Education
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Become familiar with evidence-based models of therapy as well as specific strategies relevant to working with families and couples
Audience: Graduate

2. Demonstrate understanding and competence in the application of evidence-based family systems models in intervention and conceptualization of a family system
Audience: Graduate

3. Demonstrate the ability to apply family-based and systems principles to a variety of social and organizational systems, including families and community settings
Audience: Graduate

4. Comprehend the role of power and privilege issues, including issues of oppression and trauma, within the context of family practice
Audience: Graduate

COUN PSY 850 – MENTAL HEALTH CONSULTATION IN HEALTH SERVICE PSYCHOLOGY
3 credits.

Provides an opportunity to understand and practice the process of consultation and to experience how the role of a consulting psychologist differs from other professional roles (i.e., clinician, supervisor, administrator). Includes a review of consultation models and theories for individuals, groups, and organizations, the fundamentals of program development and evaluation, and considerations for working within communities as a consulting psychologist. Additionally, students will begin to explore the role of the clinical supervisor, supervisor development, and models of supervision.
Requisites: Declared in Counseling, Counseling Psychology, Rehabilitation Counseling, or Rehabilitation Counselor Education
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate awareness of yourself and others within the context of consultation and prevention.
Audience: Graduate

2. Demonstrate an understanding of consultation dynamics and the stages of development through which the consulting relationship progresses.
Audience: Graduate

3. Clearly define the nature of consultation and differentiate it from other forms of psychological intervention.
Audience: Graduate

4. Develop an understanding of organizational systems and demonstrate the ability to analyze, plan, implement, and evaluate consultation interventions.
Audience: Graduate

5. Demonstrate an understanding of, and adhere to, the ethical guidelines in consultation.
Audience: Graduate

6. Demonstrate knowledge of consulting strategies and interventions when working with diverse populations.
Audience: Graduate

7. Clearly define the role of clinical supervisor and how it differs from other roles of a professional psychologist.
Audience: Graduate

8. Articulate an understanding of the major models of clinical supervision.
Audience: Graduate

9. Understand the process of becoming an effective clinical supervisor.
Audience: Graduate

COUN PSY 860 – SOCIAL AND CULTURAL FOUNDATIONS OF COUNSELING
3 credits.

Review of theory and research into social identity and cultural foundations of counseling including: (a) the societal context for bias, discrimination and differential treatment of sociocultural groups including but not limited to diversity of sexual orientation, gender expression, social class, cultural/ethnic/racial groups, ability status among other groups; (b) human diversity in social norms, cultural values, social identities, as well as intergroup and intragroup relations; (c) counselors' roles in developing cultural competence, reducing bias and discriminatory treatment of subgroups, and advocating for social justice; and (d) the practice implications of for providing cultural competence in serving across forms of sociocultural diversity.
Requisites: Declared in Counseling, Counseling Psychology, Rehabilitation Counseling, or Rehabilitation Counselor Education
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe attitudes, beliefs, and acculturative experiences; including specific experiential learning activities that are designed to foster students' understanding of self and of the cultural and social identity diversity of clients
Audience: Graduate

2. Develop the ability to respond constructively to others who have different perspectives
Audience: Graduate

3. Evaluate various implications of concepts such as internalized oppression, institutional racism, and the historical and current political climate regarding immigration, poverty, and welfare
Audience: Graduate

4. Analyze the ethical and legal considerations associated with providing services in contexts that represent social and cultural diversity
Audience: Graduate

5. Apply knowledge of counselors' roles in developing cultural self-awareness, promoting cultural social justice, advocacy and conflict resolution, and other culturally-supported behaviors that promote optimal wellness and growth of the human spirit, mind, or body
Audience: Graduate

COUN PSY 865 – LIFESTYLE AND CAREER DEVELOPMENT
3 credits.

Theoretical and practical foundations relating to the practice of lifestyle and career counseling, career guidance, and career development.
Requisites: Declared in Counseling Psychology or Counseling
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate awareness of yourself and others within the context of career development
Audience: Graduate

2. Demonstrate foundational knowledge of theory and constructs that assist us in understanding the development, role, and meaning of work in people's lives across the lifespan
Audience: Graduate

3. Demonstrate familiarity with a variety of assessment measures and tools across career-related domains (e.g., interests, values, skills, etc.) and proficiency using these tools
Audience: Graduate

4. Develop a base knowledge of career-related intervention models and strategies
Audience: Graduate

5. Demonstrate skill in recognizing, understanding, and articulating cultural and contextual factors that shape career development and impact career interventions
Audience: Graduate

6. Demonstrate knowledge of professional ethics and their impact on the work and professional development of career counselors
Audience: Graduate

COUN PSY 890 – ADVANCED ASSESSMENT TECHNIQUES IN COUNSELING PSYCHOLOGY
3 credits.

Methods commonly employed by counseling psychologists in the assessment of the problems of living of normal adults. Diagnostic assessment and assessment of career interests, personality, behavior, and social environment. Development of written individual assessment reports.
Requisites: Declared in Counseling Psychology or Counseling
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop an understanding of psychometric theory and its importance to the construction, administration, and interpretation of psychological tests
Audience: Graduate

2. Evaluate assessment tools critically and make reasoned judgments about their development including standardization and norming processes
Audience: Graduate

3. Evaluate measures for reliability and validity, including across cultural validity and appropriateness for use across groups
Audience: Graduate

4. Select, administer, and interpret tests in response to the referral question and in a manner that minimizes bias, mitigates threats to validity and is ethically sound
Audience: Graduate

5. Administer, score, and interpret at least two tests (e.g., MMPI-3, WAIS-IV) and conduct a clinical interview for assessment
Audience: Graduate

6. Communicate test findings in an integrative, comprehensive, formal written report with recommendations and gain practice with providing verbal and/or written assessment feedback
Audience: Graduate

7. Demonstrate an understanding of contextual and cultural factors that may influence the assessment process, including cultural features of the assessor-client dyad
Audience: Graduate

COUN PSY 900 – COUNSELING PSYCHOLOGY PRACTICUM--FOUNDATIONAL
3 credits.

Foundational practicum and seminar in counseling psychology.
Requisites: Declared in Counseling Psychology
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Develop and recognize your epistemological position, your assumptions about people, your worldview, and how these influence your work as a psychotherapist
Audience: Graduate

2. Review and analyze evidence-based psychotherapy practice.
Audience: Graduate

3. Create and present case conceptualization.
Audience: Graduate

4. Demonstrate use of theory to guide psychotherapy decision-making.
Audience: Graduate

5. Apply knowledge of social justice and multiculturalism to psychotherapy.
Audience: Graduate

6. Understand and apply the APA Code of Ethics to psychotherapy and reflect on ethical issues in psychotherapy and professional decision-making.
Audience: Graduate

7. Identify and discuss your awareness of how contextual and environmental factors impact case conceptualization, clients' problems, clients' psychotherapy experience, and the integration of multiculturalism and social justice into psychology.
Audience: Graduate

8. Use of group and individual supervision processes with respect to your needs as a psychologist-in-training across the various roles you may encounter in practice including therapist, supervisee, consultant, and peer.

Audience: Graduate

COUN PSY 901 – COUNS PSYCH PRACT: GROUP COUNSELING, CONSULTATION, COLLEGE TEACHING
1-6 credits.

Supervised practice in group counseling, consultation, and/or college teaching with a focus on psychosocial development and human relations.
Requisites: Declared in Counseling Psychology or Counseling
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

COUN PSY 902 – COUNSELING PSYCHOLOGY PRACTICUM IN SUPERVISION
4 credits.

Practicum in supervising counselor trainees in laboratory and field settings.
Requisites: Declared in Counseling Psychology
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the ethical, legal, and theoretical underpinnings of effective clinical supervision.
Audience: Graduate

2. Note the ethical, legal, and clinical considerations for telehealth and technologically-mediated clinical supervision.
Audience: Graduate

3. Discuss the essential components and research supporting the development of an effective supervisory relationship.
Audience: Graduate

4. Identify one's strengths and growth areas as a supervisor-in-training.
Audience: Graduate

5. Demonstrate one's approach to supervision from an identified model of supervision through a work sample.
Audience: Graduate

COUN PSY 903 – COUNSELING PSYCHOLOGY PRACTICUM--ADVANCED
3 credits.

Advanced practicum and topical seminar in counseling psychology.
Requisites: Declared in Counseling Psychology or Counseling
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify strengths and areas of growth in clinical skills using multiple self-assessment methods
Audience: Graduate

2. Present and discuss a clinical case using specific theoretical orientation
Audience: Graduate

3. Identify resistances to learning in supervision and utilize the supervisory relationship in more effective ways
Audience: Graduate

4. Demonstrate clinical micro-skills and conceptualizing for treating a variety of mental health problems
Audience: Graduate

5. Articulate clear treatment plan and rationale for therapeutic techniques
Audience: Graduate

6. Demonstrate an increased ability to listen for and attune to emotion from patients
Audience: Graduate

7. Demonstrate an increased and nuanced understanding on mutuality and collaboration in the psychotherapy process
Audience: Graduate

8. Demonstrate greater awareness related to diversity issues and ethics in the practice of psychology
Audience: Graduate

COUN PSY 904 – COUNSELING PSYCHOLOGY EXTERNSHIP
1-3 credits.

Advanced training in counseling psychology assessment, intervention, and/or supervision.
Requisites: Declared in Counseling Psychology or Counseling
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Deepen your understanding of your epistemological position as related to psychological assessment and/or psychotherapy through a supervised clinical experience
Audience: Graduate

2. Investigate implicit cognitive schemas you have (i.e., assumptions and biases) about your clinical work as well as psychology and people
Audience: Graduate

3. Apply psychological theories about mental health treatment as well as psychology and people in a supervised clinical experience
Audience: Graduate

4. Engage in clinical supervision focused on your development as a biological, psychological, social, and cultural being, as evaluated via a developmental framework
Audience: Graduate

5. Increase your awareness of how contextual and environmental factors impact case conceptualization, problems presented by clients, clients' experience of psychotherapy, and the integration of multiculturalism or social justice into psychotherapy
Audience: Graduate

COUN PSY 905 – RESEARCH PRACTICUM IN COUNSELING PSYCHOLOGY
3 credits.

Supervised research experience in the field of counseling psychology. Read about, discuss, and practice research skills that are critical at various phases of the research design and implementation process.
Requisites: Declared in Counseling Psychology or Counseling
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Formulate research questions based on existing quantitative or qualitative research studies
Audience: Graduate

2. Apply research ethics in the development of a human subjects review application
Audience: Graduate

3. Engage in data collection and preparation
Audience: Graduate

4. Use appropriate statistical analyses and interpret results
Audience: Graduate

5. Prepare a manuscript for journal submission or study presentation
Audience: Graduate

COUN PSY 908 – PRE-DOCTORAL INTERNSHIP IN HEALTH SERVICE PSYCHOLOGY PREPARATION SEMINAR
2 credits.

Provides preparation for application to predoctoral internship in Health Service Psychology. Includes modules designed to provide knowledge, skills, and information regarding the application, interview, and decision-making process.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Identify and be able to discuss the theoretical orientation that guides your work in psychotherapy with clients, case conceptualization skills, and areas of strength and growth as a psychologist-in-training
Audience: Graduate

2. Identify and be able to discuss experiences and skills working with diverse clients
Audience: Graduate

3. Identify and be able to discuss research experiences and interests
Audience: Graduate

4. Identify and be able to discuss career goals
Audience: Graduate

5. Match successfully to a predoctoral internship placement for the subsequent year in order to complete requirements of the PhD program in counseling psychology
Audience: Graduate

COUN PSY 926 – SEMINAR IN ETHICAL AND PROFESSIONAL ISSUES IN COUNSELING PSYCHOLOGY
3 credits.

Intended to strengthen students' identities as counseling psychologists. Includes examination of (a) historical and contemporary issues that have affected psychology; (b) training and practice guidelines; and (c) ethical and legal issues, including the American Psychological Association ethics code and ethical decision-making.
Requisites: Declared in Counseling Psychology or Counseling
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop the ability to make ethical decisions using various resources such as the APA's Ethics Code, Guidelines, and Decision-Making Models
Audience: Graduate

2. Gain competence in reading and translating the APA Ethics Code into its component parts (e.g., Principles, Sections, and Standards)
Audience: Graduate

3. Identify professional values, principles, and issues affecting psychologists and psychologists-in-training
Audience: Graduate

4. Practice consulting and collaborating with colleagues on relevant, applied ethical dilemmas and scenarios
Audience: Graduate

5. Expand familiarity with laws and other legal requirements for the provision of psychological services
Audience: Graduate

6. Integrate social justice and multicultural considerations into practical and applied scenarios, presentations, and writings
Audience: Graduate

COUN PSY 950 – RESEARCH METHODS IN COUNSELING PSYCHOLOGY
2-3 credits.

Historical, philosophical, descriptive, experimental, case-study and other models of research in counseling psychology.
Requisites: Declared in Counseling Psychology or Counseling
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Become familiar with the logic of research design and implementation
Audience: Graduate

2. Become knowledgeable of the major designs used in counseling research
Audience: Graduate

3. Evaluate the validity and reliability of measurement used in research studies
Audience: Graduate

4. Gain an introduction to common quantitative and qualitative methodologies
Audience: Graduate

5. Demonstrate knowledge of ethical principles guiding research activity and gain knowledge of IRB procedures at UW
Audience: Graduate

6. Develop the ability to write scientific prose
Audience: Graduate

7. Develop the capacity to participate in a scientific learning community through providing and receiving feedback on your work
Audience: Graduate

8. Gain greater awareness of the implications of design issues when working with diverse populations and multicultural topics
Audience: Graduate

COUN PSY 951 – COUNSELING PSYCHOLOGY RESEARCH IN INDIVIDUAL INTERVENTION
2-3 credits.

Theory and research related to the counseling dyad.
Requisites: COUN PSY 950
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Become familiar with research on individual interventions
Audience: Graduate

2. Recognize principles of scientific inference; develop ability to critique scientific claims and arguments based on evidence
Audience: Graduate

3. Evaluate strengths and limitations of different forms of evidence adduced to support claims regarding intervention effectiveness
Audience: Graduate

4. Apply scientifically informed principles to psychological practice and training
Audience: Graduate

COUN PSY 956 – SEMINAR: RESEARCH IN VOCATIONAL PSYCHOLOGY AND CAREER DEVELOPMENT
2-3 credits.

Theory and research in vocational behavior and career development.
Requisites: Declared in Counseling Psychology or Counseling
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Demonstrate awareness of yourself and others within the context of career development
Audience: Graduate

2. Demonstrate foundational knowledge of theory and constructs that assist us in understanding the development, role, and meaning of work (and lack thereof) in people's lives across the lifespan
Audience: Graduate

3. Develop knowledge of career and life constructs that relate to mental health and to psychologists' work with clients in psychotherapy
Audience: Graduate

4. Demonstrate skill in recognizing, understanding, and articulating cultural and contextual factors that shape career development and impact our understanding of the role of work (and lack thereof) in individuals' lives

Audience: Graduate

5. Develop knowledge of the structure of occupations, individual and societal issues in career development, the role of work in society, and the role of vocational psychology in health service psychology
Audience: Graduate

6. Demonstrate an ability to identify systemic factors that act as barriers and supports to vocational development
Audience: Graduate

7. Demonstrate application and integration of class content to public discourse
Audience: Graduate

8. Recognize key characteristics that are relevant to the future of work
Audience: Graduate

COUN PSY 960 – RESEARCH METHODS IN COUNSELING PSYCHOLOGY, II
3 credits.

Advanced training in research methods in counseling psychology to build skills in conceptualization, research design, data analysis and interpretation.
Requisites: COUN PSY 950
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Select the most appropriate statistical method for a particular research problem
Audience: Graduate

2. Conduct statistical analysis using R programming language
Audience: Graduate

3. Interpret the output from the analysis and draw appropriate conclusions

Audience: Graduate

4. Write up the findings in a form suitable for publication
Audience: Graduate

COUN PSY 990 – RESEARCH OR THESIS
1-12 credits.

Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

COUN PSY/ED PSYCH/PSYCH 995 – PREDOCTORAL INTERNSHIP
0 credits.

Registration for Ph.D. students who have successfully defended the dissertation and are in the process of completing the required predoctoral internship.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

COUN PSY 999 – INDEPENDENT READING
1-3 credits.

Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

CURRICULUM AND INSTRUCTION (CURRIC)

CURRIC 209 – DIGITAL MEDIA AND LITERACY
3 credits.

Explores theories of knowing and learning as they relate to digital media. Focused on digital media in all of its forms - from Wikipedia to YouTube mashups to mobile apps - and how these new ways of doing and making are related to learning.
Requisites: None
Repeatable for Credit: No
Last Taught: Spring 2025

CURRIC 240 – CRITICAL ASPECTS OF TEACHING, SCHOOLING, AND EDUCATION
3 credits.

Investigates aspects of social justice and equity as they relate to teaching, schooling, and education.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025

CURRIC 243 – PRACTICUM IN WORLD LANGUAGES (K-12)
3 credits.

Systematic observation and participation in world language classes (French, German, or Spanish) in the public school.
Requisites: Consent of instructor
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: No
Last Taught: Fall 2020

CURRIC/ED POL/LEGAL ST 250 – INCARCERATION AND EDUCATION
3 credits.

Investigates how the systems of incarceration and education operate alongside, within, around and through one another. Provides a historical examination of how education and incarceration have interacted. Examines how prisons operate as 'teaching institutions,' what it teaches all of us impacted by it, and what interventions have been designed to facilitate particular kinds of learning. Presents firsthand accounts of those who work and live in the carceral system currently.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze the relationship between schooling and incarceration including issues related to discipline, gender, and disability
Audience: Undergraduate

2. Articulate and evaluate your understanding of experiences of incarceration including the sources, assumptions, and implications behind your understanding
Audience: Undergraduate

3. Synthesize the lived experiences of diverse individuals impacted by incarceration to understand the range of forms learning takes place inside carceral facilities;
Audience: Undergraduate

4. Evaluate different policies and practices that operate at the intersections of education and incarceration.
Audience: Undergraduate

CURRIC 274 – CURRICULUM AND INSTRUCTION - STUDY ABROAD
1-3 credits.

Topics vary reflecting the specializations, expertise, and curricula of study-abroad programs.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Gain a deeper knowledge and understanding of other cultures and their environments.
Audience: Undergraduate

2. Develop greater cultural self-awareness and intercultural competence.
Audience: Undergraduate

3. Develop different economic, political, social, and educational perspectives on global issues.
Audience: Undergraduate

4. Increase their capacity to analyze issues with appreciation for disparate viewpoints.
Audience: Undergraduate

5. Develop career readiness and gain leadership skills that are relevant for a global world.
Audience: Undergraduate

6. Communicate appropriately and effectively with diverse individuals and groups.
Audience: Undergraduate

7. Examine their own actions in terms of personal responsibility and ethical, social, and environmental consequences.
Audience: Undergraduate

8. Develop a better understanding of the diversity of the host society and better understand the diversity in their own society.
Audience: Undergraduate

CURRIC 276 – CONTEMPORARY ISSUES IN K-12 SCHOOLS
1 credit.

Introduction to current practices and issues in K-12 school systems as they relate specifically to educational inequality, the concept of "educational debt," and the role of teachers and administrators in system change. Encourages future educators to think critically about these issues while preparing them to serve in culturally and socio-economically diverse schools.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify at least three critical contemporary issues in US PK-12 schooling.
Audience: Undergraduate

2. Identify major sources of educational inequity in schools and across school districts.
Audience: Undergraduate

3. Explain the differences between the concepts of "achievement gap" and "educational debt."
Audience: Undergraduate

4. Describe the crucial roles of teachers in the classroom and administrators in schools and districts for addressing educational inequity.
Audience: Undergraduate

CURRIC 277 – VIDEOGAMES & LEARNING
3 credits.

Explores current research on videogames and learning. Critically reflect on the intellectual and educational merits and drawbacks of videogames and how videogame culture shapes how individuals think and learn.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

CURRIC 292 – GLOBALIZING EDUCATION
3 credits.

Designed to explore the regionally, societally and culturally embedded nature of schooling, impacts of globalization on schooling, the relationship of schooling to increasingly global societies, and how policy, curriculum instruction, both domestically and internationally, are both shaped by and sometimes responsive to globalization.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2022
Learning Outcomes: 1. Identify the relationship of education to people, communities and societies from social, cultural and global perspectives
Audience: Undergraduate

2. Locate schooling within local and global economic, political, social and cultural patterns
Audience: Undergraduate

3. Determine how schools and classrooms do and can reflect and represent global populations, knowledge, perspectives and issues
Audience: Undergraduate

CURRIC/MUSIC 300 — PRINCIPLES OF MUSIC EDUCATION
2 credits.

Principles of music education, including philosophy, history, and current practices and curricular trends. Survey of music education in and out of schools as situated within diverse, pluralistic communities.
Requisites: Declared in Music: Education BM and sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain why music and music education are important, valuable, and meaningful.
Audience: Undergraduate

2. Demonstrate understandings of and dispositions toward music learning and teaching that are mindful, inclusive, respectful, empathic, relevant, and responsive to human difference.
Audience: Undergraduate

3. Develop and demonstrate awareness, sensitivity, and honor for human differences, including gender, sexuality, race, ethnicity, nationality, culture, class, language, religion, and ability.
Audience: Undergraduate

4. Demonstrate developing awareness of the connection between how you think about music learning and teaching and how those beliefs play out in all decisions that you make regarding your music classroom.
Audience: Undergraduate

5. Develop awareness of your own unique musical experiences and personality traits.
Audience: Undergraduate

6. Identify traits of successful music educators and the professional characteristics, expectations, sensitivity, and interpersonal skills required of music educators.
Audience: Undergraduate

CURRIC/MUSIC 301 — MUSIC LEARNING AND TEACHING 1
2 credits.

The learning and teaching of music at the elementary and middle school levels.
Requisites: MUSIC/CURRIC 300 and concurrently enrolled in MUSIC/CURRIC 337 and declared in Music: Education
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

CURRIC/MUSIC 302 — MUSIC LEARNING AND TEACHING 2
2 credits.

The learning and teaching of music at the high school level.
Requisites: MUSIC/CURRIC 301 and MUSIC/CURRIC 337
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

CURRIC/MUSIC 304 — COMPOSITION, ARRANGEMENT, AND ORCHESTRATION FOR THE MUSIC TEACHER
2 credits.

Introduction to the teaching of musical composition, arrangement, and orchestration. Special emphasis on how music technologies interact with conceptions of composition, arrangement, and orchestration; implications for music learning and teaching.
Requisites: MUS PERF 104
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

CURRIC 305 — INTEGRATING THE TEACHING OF READING WITH OTHER LANGUAGE ARTS
3 credits.

Theory, research and instructional practices supporting the teaching of reading, writing, speaking and listening skills in an integrated curriculum from kindergarten through grade twelve.
Requisites: None
Course Designation: Gen Ed - Communication Part B
Repeatable for Credit: No
Last Taught: Fall 2025

CURRIC/CHICLA 306 – LATINX LITERACIES
3 credits.

Addresses how members of Latinx communities have used writing for both personal and social change. Develop a deeper understanding of the political, family, and school contexts in which Latinx peoples in the United States write and read.
Requisites: Satisfied Communications A requirement
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop a theoretical understanding of literacy studies, homing in on concepts, such as "reading the word and reading the world," "funds of knowledge," "mestiz@ scripts," relevant to many Latinx literacy traditions.
Audience: Undergraduate

2. Identify and analyze key social, political, and historical pressures on many Latinx literacies, including the relationship between racism and literacy, legal status and literacy, and linguistic discrimination.
Audience: Undergraduate

3. Identify and analyze central ways that Latinx communities have used and use writing for social change through close readings of ethnographic and literary accounts.
Audience: Undergraduate

4. Create a portfolio of creative, scholarly, and reflective writing connected to course themes, deepening understandings of Latinx literacies, and developing writing and revision techniques that will transfer to other contexts.
Audience: Undergraduate

CURRIC 309 – READING AND WRITING ACROSS THE CONTENT AREAS
3 credits.

Prepares prospective teachers of children 8/9 to 12/13 to teach reading and writing across all content areas.
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Fall 2021

CURRIC 311 – LANGUAGE ACQUISITION FOR MULTILINGUAL LEARNERS
3 credits.

Explore theories of first and second language acquisition (SLA) and factors that impact language, literacy, and academic learning and development for emergent bilinguals (or English Learners). Develop an understanding of theories of language learning and development to build a theoretical foundation that will provide the basis for work with bi/multilingual learners. Analyze the language learning and language use of an emergent bilingual across multiple contexts at a practicum site. Consider the implications of theories for language learning and development for instructional design while learning research tools to enhance teaching practice.
Requisites: Declared in Elementary Education: Kindergarten - 9th Grade, BSE and English as a Second Language Minor
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and summarize major theories of the field of SLA about how language is structured in and through everyday practices and interactions.
Audience: Undergraduate

2. Analyze and evaluate how research in SLA shapes the study of language in context.
Audience: Undergraduate

3. Apply teacher research methods to examine the implications of theories of language learning and development for classroom design and practice.
Audience: Undergraduate

4. Apply critical, reflective thinking skills to the process of teacher research and the improvement of teaching, learning, and curriculum practices.
Audience: Undergraduate

CURRIC 312 – FOUNDATIONS OF ESL EDUCATION
3 credits.

Addresses social, cultural, and educational issues related to schooling for young English learners. Provides an overview of multiple factors that impact teaching and learning. Issues include but are not limited to: theories relating to language use and learning; registers and varieties of English; program structures and designs; school and classroom environments, and connections between families and schools.
Requisites: Declared in Elementary Education BSE, Capstone Certificate in Spanish-English Bilingual-Bicultural Education, Certificate in Preparing to Teach Abroad, or Certificate in Global Cultures, Languages and Education
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate how key topics and issues pertaining to emergent ESL students intersect with differing views about equitable schooling and education.
Audience: Undergraduate

2. Apply theories and concepts about factors related to equitable teaching, learning, and curriculum to assess practicum experiences that involve emergent ESL students.
Audience: Undergraduate

3. Identify and articulate key topics and issues related to the schooling and education of emergent ESL students.
Audience: Undergraduate

4. Evaluate the social, cultural, political and historical contexts of educational policies and programs related to emergent ESL students.
Audience: Undergraduate

CURRIC 314 – BECOMING LITERATE IN AND OUT OF SCHOOLS
3 credits.

Surveys critical issues related to literacy for early childhood teachers including early literacy and language learning, insights into cultural differences related to literacy and language, and knowledge of the social dimensions of literacy.
Requisites: Declared in Elementary Education
Repeatable for Credit: No
Last Taught: Spring 2022

CURRIC 315 – READING AND WRITING ACROSS THE CURRICULUM IN EARLY CHILDHOOD
3 credits.

Provides early childhood educators with information, strategies, and activities for instructing young children with literacy. Teachers explore the multiple sources of information that young readers must orchestrate as they learn to read.
Requisites: CURRIC 314
Course Designation: Gen Ed - Communication Part B
Repeatable for Credit: No
Last Taught: Fall 2022

CURRIC 316 – ESL/BILINGUAL METHODS
3 credits.

Identify and develop methodological approaches and techniques that coordinate instructional practice with current theories on language and learning. Develop criteria for designing, implementing, and evaluating appropriate lessons and materials that integrate with classroom curricula and goals.
Requisites: Declared in Elementary Education: Kindergarten - 9th Grade, BSE and English as a Second Language Minor
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply linguistically and culturally relevant methods of teaching English as a Second Language across the content areas.
Audience: Undergraduate

2. Use a language standards framework to identify and articulate language and content objectives for given teaching and learning tasks, targeting the necessary language demands of the lesson.
Audience: Undergraduate

3. Demonstrate effective use of pre-, mid- and post instruction assessment to inform instruction.
Audience: Undergraduate

4. Apply effective support and differentiation strategies for teaching English as a Second Language across content areas.
Audience: Undergraduate

5. Articulate your own philosophy about being a linguistically and culturally relevant teacher.
Audience: Undergraduate

CURRIC 317 – DIMENSIONS OF LITERACY
3 credits.

Surveys critical literacy issues for elementary teachers. Provides understandings related to literacy and language learning, insights into cultural differences related to literacy and language, and knowledge of the social dimensions of literacy. Addresses various theories that inform literacy teaching including deficit versus strength models of literacy learning, meaning-based models, systematic instruction, and sociocultural approaches.
Requisites: Declared in Elementary Education
Repeatable for Credit: No
Last Taught: Fall 2021

CURRIC 318 – TEACHING READING AND WRITING
3 credits.

Provides information and instructional strategies to support literacy learning. Addresses a wide range of literacy abilities including reading, writing, comprehending, and decoding. Focuses on the continuing developmental processes associated with becoming competent readers and writers.
Requisites: Declared in Elementary Education BSE
Course Designation: Gen Ed - Communication Part B
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand that the alphabetic code stems from oral language first, and that oral language is about communication.
Audience: Undergraduate

2. Recognize that a student's oral language and forms of communication are the most valuable ways to establish an affinity toward reading and writing
Audience: Undergraduate

3. Recognize the complex nature of the reading, writing, and language arts processes as they are influenced by linguistic, sociological, cultural, cognitive, and psychological factors.
Audience: Undergraduate

4. Understand the multiple dimensions of reading, writing, and communicating in the development of a strong theoretical and empirical (research-based) foundation for making instructional decisions.
Audience: Undergraduate

5. Explain the vocabulary, components, and methods of teaching phonological awareness (including but not limited to phonemic awareness), including how phonological awareness relates to emergent reading and later reading and spelling (orthography) skills.
Audience: Undergraduate

6. Explain the vocabulary and concepts involved in teaching phonics and The Alphabetic Principle (i.e., phonemes [sounds] are represented by graphemes [letters])
Audience: Undergraduate

7. Understand and explain word-reading strategies (e.g., phonics, syllabic analysis, morphemic analysis, vocabulary), including how to know (through observation and assessment) precisely when they should be taught to and used by students.
Audience: Undergraduate

8. Explain the vocabulary and methods for teaching reading comprehension as a complex construct (e.g., literal interpretation/recall of single texts to critical readings across multiple texts).
Audience: Undergraduate

9. Explain the vocabulary and conceptual models of the reading process.
Audience: Undergraduate

10. Explain the vocabulary and conceptual models of the writing process
Audience: Undergraduate

11. Understand and define the sociocultural and multidynamic complexities of literacy engagement, including social and emotional factors.
Audience: Undergraduate

12. Demonstrate relationships among reading, writing, listening, and speaking.
Audience: Undergraduate

CURRIC 319 – PEDAGOGICAL CONTENT KNOWLEDGE FOR TEACHING ELEMENTARY MATHEMATICS 1
3 credits.

Develops mathematical knowledge for teaching blending mathematical and pedagogical understandings. Explores topics defined by the Common Core State Standards for Mathematics such as foundations of arithmetic, addition, subtraction, multiplication and division of whole numbers and integers, the base-ten system, number theory, foundations of fraction operations and geometry.
Requisites: Satisfied Quantitative Reasoning (QR) A requirement and classified in pre-Elementary Education, Pre-Elementary Education and Special Education or (declared in Elementary Education BSE or Elementary Education and Special Education BSE)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate proficiency in mathematical knowledge, conceptual foundations, and practices for teaching
Audience: Undergraduate

2. Demonstrate proficiency in understanding children's mathematical thinking and practices for learning
Audience: Undergraduate

CURRIC 320 – PEDAGOGICAL CONTENT KNOWLEDGE FOR TEACHING ELEMENTARY MATHEMATICS 2
3 credits.

Further develop the pedagogical knowledge that elementary and middle school teachers need to appropriately understand and extend students' mathematical ways of knowing as defined by the Common Core State Standards. Critically reflect on personal assumptions about mathematics and think beyond standardized mathematical practices.
Requisites: CURRIC 319
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Deepen their understanding of the reasoning, problem solving strategies, models, mathematical tools, structures, and principles, which underlie core elementary mathematics topics related to fractions, decimals, proportional reasoning, measurement
Audience: Undergraduate

2. Develop the important mathematical practices, or habits of mind, that are also an integral part of the Common Core State Standards. This includes practices that question and critique the assumptions that we make about mathematical knowledge and practices
Audience: Undergraduate

CURRIC/CHICLA 321 – CHICANO/LATINO EDUCATIONAL JUSTICE
3 credits.

Addresses the ways Chican@s/Latin@s in contemporary U.S. society have engaged in social, cultural, political, and ideological struggles for educational justice. Begins with a broad overview of educational issues and examines major social movements, legal cases, and local and national efforts that have established important precedents. Focus on different enactments of resistance, struggle, resilience, self-determination, and educational justice and focus on how these precedents and enactments pertain to teaching, learning, and curriculum practices that reflect key tenets of educational justice for Chican@/Latin@ students.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Summarize substantive educational issues and inequities that pertain to Chicana/o/x and Latina/o/x pupils in schools.
Audience: Undergraduate

2. Analyze underlying social, cultural, historical, and political, ideological dimensions that affect Chicana/o/x and Latina/o/x schooling.
Audience: Undergraduate

3. Apply knowledge about schooling for Chicana/o/x and Latina/o/x pupils to how organizations/entities outside of school advance notions of educational justice
Audience: Undergraduate

4. Identify concrete ways to improve Chicana/o/x and Latina/o/x pupils' learning opportunities, educational advancement, and academic achievement
Audience: Undergraduate

CURRIC 325 – EDUCATING YOUNG ENGLISH LEARNERS
3 credits.

Addresses social, cultural, and educational issues related to schooling for young English learners. Provides an overview of multiple factors that impact teaching and learning for these students.
Requisites: Declared in the Elementary Education: Early Childhood/ English as a Second Language
Repeatable for Credit: No
Last Taught: Fall 2021

CURRIC 326 – LANGUAGE USE AND ACQUISITION IN EARLY CHILDHOOD
3 credits.

Become familiar with aspects of forms and features of the English language and language use in and out of schools. Analysis of language learning and use across settings provides tools to enhance practice.
Requisites: Declared in the Elementary Education: Early Childhood/ English as a Second Language
Repeatable for Credit: No
Last Taught: Spring 2022

CURRIC 327 – METHODS OF TEACHING YOUNG ENGLISH LEARNERS
3 credits.

Identify, develop and implement methodological approaches and techniques for teaching English learners that coordinate instructional practice with current theories on language and learning.
Requisites: Declared in the Elementary Education: Early Childhood/ English as a Second Language
Repeatable for Credit: No
Last Taught: Fall 2022

CURRIC 328 – ARTS INTEGRATION FOR TEACHING AND LEARNING
3 credits.

Prepares prospective educators to integrate the arts into their teaching practices.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025

CURRIC 329 – TEACHING ARTIST PRACTICUM
3 credits.

An opportunity to learn from professional teaching artists, continue to develop practical skills of teaching, and reflect on one's teaching artist practice. Participate in two different teaching artist residencies in order to learn a variety of disciplinary practices. Observe and assist the teaching artists and lead a portion of one class. Engage in collective reflection of residencies and explore relationship to theory. Address classroom challenges and establish the habits of ongoing reflection and effective pedagogical critique. Articulate a personal teaching artist statement, reflect on teaching experiences, and identify ways to make the arts accessible to diverse groups of learners.
Requisites: CURRIC 328
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Experience being a teaching artist through a practicum experience with an out-of-school arts program
Audience: Undergraduate

2. Reflect on your experiences with other emerging teaching artists and compare shared victories and challenges across art forms and arts programs
Audience: Undergraduate

3. Articulate a personal teaching artist statement
Audience: Undergraduate

4. Identify ways to make the arts accessible to diverse groups as learners
Audience: Undergraduate

CURRIC 331 – TAKING EDUCATION OUTSIDE OF SCHOOL
3 credits.

Education is often considered only to take place in formal schooling environments with professionally-trained teachers and students sitting in classrooms. However, research shows - and our intuitions suggest - that education occurs every day in a variety of ways, with a variety of people, and in a variety of spaces. For example, education - or more specifically, teaching and learning - happens in spaces such as museums and libraries but also, perhaps, at sports practice and around the family dinner table. Truly understanding what it means to teach and learn involves delving into and unpacking this variety. Further, if creating change in whether and how different people have opportunities to teach and learn in our society requires exposing and exploiting this variety.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Compare and contrast best practices of teaching and learning in formal school and non-school contexts
Audience: Undergraduate

2. Expand definitions of teaching and learning and explore the affordances and constraints of those definitions
Audience: Undergraduate

3. Synthesize across past and current experiences, as well as the research literature, to identify salient features of non-school contexts including locations, duration, purpose, roles, etc
Audience: Undergraduate

4. Evaluate how teaching and learning outside of schools disrupts and perpetuates structural inequities of formal schooling
Audience: Undergraduate

5. Identify potential career paths involving teaching and learning outside schools
Audience: Undergraduate

CURRIC/MUSIC 337 – PRACTICUM IN TEACHING MUSIC
1 credit.

Observation and participation in K-12 music education settings.
Requisites: Declared in Music: Education and concurrent enrollment in MUSIC/CURRIC 301 or 302
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Workplace - Workplace Experience Course
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

CURRIC 338 – LINGUISTICS FOR TEACHERS
3 credits.

Addresses aspects of forms, features and functions of the English language, including an understanding of multiple varieties and registers of English, and how language use functions in and out of schools. Attention to the emergent bilingual students' use of dual/multiple languages, varieties, registers, and discourses, relationships between first and additional languages, and ways to support students as they develop linguistic repertoires that include particular varieties of language that can help facilitate school success.
Requisites: Declared in Elementary Education: Kindergarten - 9th Grade, BSE and English as a Second Language Minor
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify students' use of diverse forms, features, and functions of language for learning
Audience: Undergraduate

2. Analyze relationships between the classroom and school environment and learner's language practices
Audience: Undergraduate

3. Bring theoretical and empirical work to bear on analysis of learners' language practices
Audience: Undergraduate

4. Develop strategies for leveraging home and school language, varieties, registers, and discourses to provide learners with access to the language of schooling
Audience: Undergraduate

5. Discuss critically social and ideological constructions of classroom and school language practices
Audience: Undergraduate

CURRIC 339 – CULTURAL FOUNDATIONS OF LEARNING AND DEVELOPMENT
3 credits.

Addresses core ideas of learning theory and human development focusing on the middle childhood population. Explores how learning and development are necessarily situated in local and global contexts, offering a cultural frame for understanding the work of teachers. Explores the cultural nature of learning and development and how these understandings can be applied to classroom practice.
Requisites: Sophomore Standing and classified as pre-Elementary Education or Declared in Elementary Education BSE
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the factors that influence students' development and learning using the bioecological model
Audience: Undergraduate

2. Create representations of various components of the model that reflect both your understanding of the abstract ideas as well as personal experiences and practices
Audience: Undergraduate

3. Design your own teaching philosophy and teaching practices by bringing these theoretical ideas and experiences
Audience: Undergraduate

CURRIC 340 – ELEMENTARY EDUCATION PRACTICUM I
3 credits.

Observe, supervise small groups, develop lesson plans for instruction, teach and assess a series of lessons in the related subject matter of science, social studies, literacy, and language acquisition.
Requisites: Declared in Elementary Education BSE
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop an understanding of children as learners and social beings; practice the rhythms and routines of classrooms and schools; and become part of a complex, interdependent learning community.
Audience: Undergraduate

2. Develop teaching identity and build professional relationships with children, staff, families and the neighborhood community.
Audience: Undergraduate

3. Learn the skills to plan, teach, assess and reflect on instruction; collaborate with the cooperating teacher and broader school community to meet the needs of pupils.
Audience: Undergraduate

4. Engage as a member of a school-based instructional team, apply material learned in methods courses to the classroom, and bring classroom experience to bear on topics discussed in courses.
Audience: Undergraduate

CURRIC 342 – TEACHING WORLD LANGUAGES (K-8)
3 credits.

Designed for future teachers of world languages to build their philosophy of education and philosophy of teaching in conjunction with building practical knowledge about teaching and learning, professional standards, and issues facing schools. Provides opportunities to apply theories and standards through the practice of planning for language and child development through the creation of lesson plans, unit plans, and assessment creation. Pass oral proficiency exam, concurrent enrollment in CURRIC 243, and declared in French, German, or Spanish BSE
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Fall 2020

CURRIC 343 – TEACHING WORLD LANGUAGES (6-12)
3 credits.

Theories, principles, and practical applications of instructional strategies and curriculum development for teaching a world language (Spanish, German, French, etc.) in secondary schools. Pass oral proficiency exam, concurrent enrollment in CURRIC 243, and declared in French, German, or Spanish BSE
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Fall 2021

CURRIC/MUSIC 344 – TEACHING VOCAL STYLES IN THE MUSIC CLASSROOM
1 credit.

Introduction to the teaching and learning of diverse vocal styles. Special emphasis on what makes each style distinct, as well as the acquisition practices associated with each style.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2019

CURRIC 346 – FOUNDATIONS OF LANGUAGE AND READING INSTRUCTION IN ELEMENTARY EDUCATION

3 credits.

Provides information and instructional strategies to support literacy learning. Addresses a wide range of literacy abilities including reading, writing, comprehending, and decoding. Focuses on the continuing developmental processes associated with becoming competent readers and writers.
Requisites: Declared in Elementary Education BSE or Elementary Education and Special Education BSE
Repeatable for Credit: No
Learning Outcomes: 1. Recognize the complex nature of early literacy learning processes, including the ways that cultural, linguistic, racial, and ethnic diversity shape these processes.
Audience: Undergraduate

2. Situate diversity as a core asset in early literacy instructional planning, teaching, and selecting texts and materials.
Audience: Undergraduate

3. Explain the centrality of language to literacy learning and identify instructional approaches and materials that support listening, speaking, viewing, and representing skills of young learners.
Audience: Undergraduate

4. Articulate the multiple dimensions of reading development, including concepts of print, phonological awareness, phonics, word recognition, fluency, vocabulary, and comprehension.
Audience: Undergraduate

5. Demonstrate knowledge of instructional approaches that support early reading instruction and understand the strengths and limitations of various informal and formal assessments.
Audience: Undergraduate

CURRIC 347 – THE TEACHING OF WRITING AND OTHER LANGUAGE ARTS

3 credits.

Focuses on written and oral language development of children from infancy through early adolescence. Explores the cognitive, social, cultural, and political implications of literacy education.
Requisites: Declared in Elementary Education BSE or Elementary Education and Special Education BSE
Course Designation: Gen Ed - Communication Part B
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate with the major concepts and approaches to teaching writing.
Audience: Undergraduate

2. Practice various types of writing and develop instructional plans and assessments based on these types of writing.
Audience: Undergraduate

3. Explain oral language development in children and ways that oral language supports literacy learning.
Audience: Undergraduate

4. Explore disciplinary-specific literacy practices across the PK-9 range.
Audience: Undergraduate

5. Discuss the role of texts and children's literature in the literacy classroom.
Audience: Undergraduate

6. Incorporate principles of social justice and equity into the Language Arts curriculum to create lessons with high expectations for all students, honor students' cultures and personal literacies, and also support and encourage their achievement.
Audience: Undergraduate

7. Critically examine research, theories, and practices in literacy education and explore the social, cultural, and political implications of literacy education.
Audience: Undergraduate

CURRIC/CHICLA 354 – RACE AND LANGUAGE IN STEM AND ENVIRONMENTAL EDUCATION
3 credits.

Explores the contestation of ongoing histories of injustice, exclusion, and raciolinguistic hierarchies across science, mathematics, and environmental education. Scholarship from Chicane/Latine Studies, raciolinguistic perspectives, and post/de/anticolonial studies will be examined to critically analyze these school subjects and related hierarchies of knowing, languaging, and being. Applies transdisciplinary perspectives to consider how students, educators, and community activists have challenged those hierarchies and worked to repurpose science, mathematics, and environmental pedagogies toward aims of linguistic, racial, educational, and environmental justice.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Articulate how the past has affected present day circumstances regarding race/ethnicities and related inequities in the U.S., with a focus on histories of science, mathematics, and environmental education in relation to colonial, racializing, linguistic, and curricular hierarchies.
Audience: Undergraduate

2. Demonstrate self-awareness and empathy toward the cultural perspectives and worldviews of others by analyzing how students, educators, or community activists have contested hierarchies of science, mathematics, or environmental education and repurposed pedagogies toward aims of linguistic, racial, or environmental justice.
Audience: Undergraduate

3. Critically evaluate contemporary media (e.g., film) related to STEM or environmental education and draw upon raciolinguistic, Chicane/Latine, or post/de/anticolonial perspectives.
Audience: Both Grad & Undergrad

4. Synthesize course concepts by investigating and developing a critical contribution to contemporary dialogue concerning issues of racial, linguistic, educational and/or environmental justice.
Audience: Undergraduate

5. Recognize and appraise the histories of science, mathematics, and environmental education in relation to colonial, racializing, linguistic, and curricular hierarchies
Audience: Graduate

6. Analyze how students, educators, or community activists have contested hierarchies of science, mathematics, or environmental education and repurposed pedagogies toward aims of linguistic, racial, or environmental justice
Audience: Graduate

7. Demonstrate graduate-level research knowledge of raciolinguistic perspectives, Chicane/Latine Studies, or post/de/anticolonial theories in STEM or environmental education.
Audience: Graduate

CURRIC 357 – GAME DESIGN I
3 credits.

Explores the fundamentals of game design. Develop fundamental skills in designing interactive systems. Applicable to careers in educational game design or in design fields in related settings, such as museums, theme parks, and technology-mediated classrooms.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explore game design skills and methods such as iterative design, playtesting, collaboration, critical analysis, and communication.
Audience: Undergraduate

2. Foster an understanding of digital and non-digital games and how gameplay becomes meaningful for players.
Audience: Undergraduate

3. Explore fundamental concepts relating to games and design, such as rules and play, emergent complexity, long and short-term goals, etc. This includes understanding games as formal systems, experienced human systems, and cultural systems.
Audience: Undergraduate

CURRIC 359 – TEACHING OF HISTORY AND THE OTHER SOCIAL STUDIES
3 credits.

Develop lesson and unit plans, appropriate assessments, and understand what it means to teach social studies for democratic citizenship. Make connections between educational theory and the use of different pedagogical strategies, and be able to critically evaluate and discuss the assigned journal articles and book chapters.
Requisites: Declared in Curriculum and Instruction: Secondary Social Studies Education MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CURRIC/SLAVIC/THEATRE 362 – DRAMA FOR TEACHING AND LEARNING
3 credits.

Methods for all involved in teaching and learning, including foreign languages. Introduction to philosophy, methodology, and practice of the use of drama and performance techniques in any educational or recreational settings. Focus on creativity and embodied and contextual learning, based on current neurological, psychological, and sociological research. A practical class which includes demonstration and practice with children.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Articulate the importance of drama in the education of all children.
Audience: Both Grad & Undergrad

2. Connect drama to multiple forms of expressing and receiving experiences, ideas, and feelings.
Audience: Both Grad & Undergrad

3. Apply the basic terms, skills, philosophies, and methodologies for leading drama sessions
Audience: Both Grad & Undergrad

4. Articulate the difference and similarities between the drama methodologies offered in the course.
Audience: Both Grad & Undergrad

5. Connect the use of drama with current brain based research
Audience: Both Grad & Undergrad

6. Demonstrate ability to design, implement, and evaluate activities and lesson plans with sound objectives and goals.
Audience: Both Grad & Undergrad

7. Connect school and community-making connections between community-based knowledge and school knowledge in theory and practice of drama.
Audience: Both Grad & Undergrad

8. Demonstrate ability to design, implement, and evaluate lesson plans that focus on inclusion and diversity in theory, practice, and pedagogy.
Audience: Graduate

9. Articulate the value of drama in relation to children's social, cultural, cognitive, linguistic, emotional, and moral development.
Audience: Graduate

CURRIC 363 – PRACTICUM IN EARLY CHILDHOOD EDUCATION IN KINDERGARTEN
1-3 credits.

Observation and participation in a classroom setting. Reserve two mornings, two afternoons, or one full day.
Requisites: CURRIC 550 or concurrent enrollment
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: No
Last Taught: Fall 2021

CURRIC 364 – INTRODUCTION TO EDUCATION
3 credits.

Nature of teaching; fundamental issues which confront the teacher and bases for making decisions; overview of the program, field trips to educational sites.
Requisites: Declared in Elementary Education
Repeatable for Credit: No
Last Taught: Fall 2021

CURRIC/RP & SE 365 – TEACHING MATHEMATICS IN INCLUSIVE SETTINGS
3 credits.

Introduction to a variety of approaches for teaching mathematics to students in inclusive schools
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe and implement principles of systematically designed instruction to develop lesson plans that foster high-quality mathematics instruction for students with disabilities.
Audience: Undergraduate

2. Determine a multitude of tools to assess students' mathematical learning and utilize assessment results to adjust instructional practice.
Audience: Undergraduate

3. Identify, employ, and advocate for instructional practices that promote rich learning experiences and meaningful inclusion of students with disabilities in mathematical settings.
Audience: Undergraduate

4. Evaluate mathematics as a practice, as a philosophy, and how it impacts your own identity as a teacher and the identities of students with disabilities
Audience: Undergraduate

5. Articulate key mathematics concepts relevant to special educators' instruction in K-12 settings.
Audience: Undergraduate

CURRIC 366 – INTERNATIONALIZING EDUCATIONAL KNOWLEDGE
3 credits.

Internationalizing education means both internationalizing our thinking and the ways we perceive the world, and internationalizing the field of curriculum and instruction. An introduction to various educational systems around the world, focusing on similarities and dissimilarities in what is taught. Discussions center on curriculum across cultures, and its relation to political systems and religions to build an understanding of diversity in societies and schools. Explores local and indigenous knowledge; the role of international agencies in comparing nation's school systems; the rise of private schools and universities; immigration and the changing borders of society and cultures in the curriculum; questions of sexuality and gender diversity; diversity of families and social exclusions and inequalities in elementary and secondary schools; as well as international opportunities for study with international and local speakers from multiple perspectives.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

CURRIC 367 – ELEMENTARY EDUCATION PRACTICUM II
3 credits.

Observe, supervise small groups, develop lesson plans for instruction, and teach a series of lessons in the related subject matter of math, literacy, language acquisition and inclusive schooling.
Requisites: CURRIC 340
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate an understanding of children as learners and social beings; practice the rhythms and routines of classrooms and schools; and become part of the complex, interdependent learning community at classroom and school levels
Audience: Undergraduate

2. Demonstrate increased skill at interacting as education professionals with families and communities by developing their teaching identity and building professional relationships with children, staff, families and the neighborhood community
Audience: Undergraduate

3. Demonstrate the skills to plan, teach, assess and reflect on instruction in collaboration with the cooperating teacher and broader school community to meet the needs of pupils
Audience: Undergraduate

4. Apply material learned in methods courses to the classroom, and to bring their classroom experience to bear on topics discussed in courses
Audience: Undergraduate

CURRIC 368 – THE TEACHING OF READING
3 credits.

Examines the psycholinguistics of reading; reading in social and cultural contexts in schools, families, communities, and workplaces; and the politics of reading. Provides strategies for teaching all children to read.
Requisites: Declared in Elementary Education
Repeatable for Credit: No
Last Taught: Spring 2022

CURRIC 369 – THE TEACHING OF LANGUAGE ARTS
3 credits.

Focuses on written and oral language development of children from infancy through early adolescence. Explores the cognitive, social, cultural, and political implications of literacy education.
Requisites: Declared in Elementary Education
Course Designation: Gen Ed - Communication Part B
Repeatable for Credit: No
Last Taught: Fall 2022

CURRIC 370 – TEACHING MATHEMATICS
3 credits.

Investigate the mathematics in the elementary school curriculum, how critical mathematics concepts and skills are learned, and how those concepts can be taught.
Requisites: Declared in Elementary Education BSE and (CURRIC 320 or MATH 132)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Support all students to engage in authentic mathematical work
Audience: Undergraduate

2. Cultivate every child's identity as a capable learner
Audience: Undergraduate

3. Create a classroom community in which people related to one another as intellectual equals, who all have valuable knowledge and ideas
Audience: Undergraduate

CURRIC 371 – TEACHING SOCIAL STUDIES
3 credits.

Examines recent trends in the field of social studies. Develop social studies curricula and instructional strategies that help prepare children for active citizenship in a democratic, multicultural, technological society.
Requisites: Declared in Elementary Education BSE or Elementary Education and Special Education BSE
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the five core areas of social studies
Audience: Undergraduate

2. Explain contemporary issues facing elementary social studies today
Audience: Undergraduate

3. Identify conceptual frameworks for how best to teach social studies
Audience: Undergraduate

4. Identify, evaluate, and create elementary social studies resources
Audience: Undergraduate

5. Plan a high-quality social studies inquiry unit
Audience: Undergraduate

6. Commit to integrating social studies instruction into your future practice
Audience: Undergraduate

CURRIC 372 – TEACHING SCIENCE
3 credits.

Explore how children learn science, how to create classrooms where children learn to inquire, and how to assess children's learning. Conduct inquiries as the basis for considering these issues.
Requisites: Declared in Elementary Education BSE or Elementary Education and Special Education BSE
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explore your own identities (as people, as teachers, as scientists) and analyze the impact of those identities on how we see, understand, and interact with students
Audience: Undergraduate

2. Question the idea that science is "objective" by investigating science teaching to identify oppression of non-white, non-male students
Audience: Undergraduate

3. Develop instructional strategies and intuitions to elicit and build on student ideas in a way that redistributes who is seen as a "knower" of science
Audience: Undergraduate

4. Design lessons and redesign curricular units based on research on best-practices in science teaching that will support the equitable learning
Audience: Undergraduate

5. Reflect on science teaching practice in a way that supports both student learning and continued professional development
Audience: Undergraduate

CURRIC 373 – ELEMENTARY TEACHING PRACTICUM III
3 credits.

Observe, supervise small groups, develop lesson plans for instruction, and teach a series of lessons relating theories of learning with the subject matter of mathematics and art.
Requisites: Declared in Elementary Education
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: No
Last Taught: Fall 2025

CURRIC 374 – GENERAL EDUC PRACTICUM & INSTRUCTIONAL PLANNING FOR DIVERSE LEARNERS
2-5 credits.

Develop lesson plans, design an integrated curriculum unit, and employ active and collaborative learning strategies in general education classrooms.
Requisites: Declared in Special Education BSE
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: No
Last Taught: Spring 2023

CURRIC 375 – PROSEMINAR
1-3 credits.

Explore new frontiers in curriculum and instruction.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

CURRIC 390 – TEACHING OF SCIENCE IN SECONDARY SCHOOLS
3 credits.

Explore teaching methods for secondary science education based on extensive research.
Requisites: CURRIC 290 or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CURRIC 393 – THE TEACHING OF SECONDARY SCHOOL MATHEMATICS I
3 credits.

Provides an introduction to issues associated with mathematics curriculum and instruction in secondary schools. Instructional strategies, classroom management, and assessment of learning are examined in the context of current and reformed curricula.
Requisites: Declared in Curriculum and Instruction: Secondary Mathematics Education MS
Repeatable for Credit: No
Last Taught: Fall 2025

CURRIC 394 – THE TEACHING OF SECONDARY SCHOOL MATHEMATICS II
3 credits.

Provides a more in-depth examination of the issues associated with mathematics curriculum and instruction in secondary schools. A special emphasis is on curriculum choices and assessment practices.
Requisites: CURRIC 393 or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

CURRIC 396 – TEACHING OF ENGLISH
3 credits.

Examine pedagogical and curricular issues related to the teaching of English Language Arts in secondary grades. Analyze and construct texts that address multiple aspects related to the teaching of English as reading the word and the world, while attending to notions of equity, cultural funds of knowledge, and strengths-based pedagogies. Use theory and practice to explore effective pedagogical strategies in the teaching of reading, writing, speaking, listening, and thinking using critical lenses
Requisites: Declared in Curriculum and Instruction: Secondary English Education MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CURRIC 399 – INDEPENDENT STUDY
1-3 credits.

Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

CURRIC/C&E SOC/ENVIR ST 405 – EDUCATION FOR SUSTAINABLE COMMUNITIES
3 credits.

How can education - for children and adults, in school and out - help to address crucial environmental and social sustainability challenges? What ideas and strategies have guided environmental and sustainability education over the years? What can individual people do to address environmental challenges, and what can only be accomplished by people working together? What does sustainability have to do with justice - and vice versa? Examine the principles behind behavior change and empowerment, community action and whole-scale social reform. Drawing on research and theory from across the social sciences, we will explore the uncertain relationship between education and advocacy, seeking the means by which education can have the greatest impact without compromising the core ideals of a democratic society.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain and apply the complicated and controversial idea of sustainability
Audience: Undergraduate

2. Articulate a clear definition of education that goes beyond schools and classrooms
Audience: Undergraduate

3. Analyze factors that influence individuals' decisions about sustainability-related action
Audience: Undergraduate

4. Describe how social structure and social context shapes sustainability-related action, and describe how some factors relevant to sustainability can only be seen and changed at the community level
Audience: Undergraduate

5. Identify educational strategies that can be used to make change at the individual and community level, and understand the advantages and limitations of different educational perspectives
Audience: Undergraduate

6. Explain how and why some environmental projects come at the expense of poor, minoritized and otherwise vulnerable groups of people
Audience: Undergraduate

CURRIC/RP & SE 406 – RACE, INTERSECTIONALITY, AND EQUITY IN EDUCATION
3 credits.

Addresses a range of issues to help teachers more thoughtfully and equitably serve their students of color and develop a critical and historical understanding of the racism, marginalization, and exclusion that is endemic to the U.S. public school system. Provides an overview of foundational constructs that are essential for pre-service teachers preparing to teach and serve diverse students and families. Explore how race, racism, and racialization in education intersect with class, gender, dis/ability, religion, sexuality, etc. to shape inequitable schooling conditions and experiences for students of color. Analyze the effects at the individual, interactional, institutional, and societal levels Consider how power always-already enables particular policies and practices that reproduce educational inequities and hence sustain white privilege and dominance.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate self-awareness and empathy toward the cultural perspectives and worldviews of others.
Audience: Undergraduate

2. Recognize and question cultural assumptions and knowledge claims as they relate to race and ethnicity.
Audience: Undergraduate

3. Articulate how the past has affected present day circumstances regarding race and racial inequalities in the U.S.
Audience: Undergraduate

4. Apply course concepts to their lives outside the classroom by respectfully participating in our multicultural society.
Audience: Undergraduate

CURRIC/MUSIC 409 – STUDENT TEACHING IN GENERAL AND VOCAL MUSIC
6-12 credits.

Supervised student teaching in general and vocal K-12 settings.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Workplace - Workplace Experience Course
Repeatable for Credit: No
Last Taught: Fall 2025

CURRIC/MUSIC 410 – STUDENT TEACHING IN GENERAL AND INSTRUMENTAL MUSIC
6-12 credits.

Supervised student teaching in general and instrumental K-12 settings.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Workplace - Workplace Experience Course
Repeatable for Credit: No
Last Taught: Spring 2025

CURRIC 418 – PREPARING TO TEACH ABROAD
3 credits.

Critically approaches a range of complexities entailed in teaching abroad. Power-knowledge relations in pedagogical acts of planning, implementation and reflection will be identified and analyzed. Several basic formats for lesson preparation will be introduced. A variety of teaching techniques for implementing lesson plans will be practiced with peers. Approaches for critically reflecting in verbal and written ways upon teaching/learning and power-knowledge relations integral to curriculum and instruction, student inclusion/exclusion, and cultural responsiveness will be surveyed.
Requisites: Sophomore standing
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Design culturally responsive lesson plans for small group instruction
Audience: Undergraduate

2. Implement lesson plans using different teaching techniques
Audience: Undergraduate

3. Learn to critically reflect upon teaching sessions within a teaching abroad framework
Audience: Undergraduate

4. Recommend modifications and improvements based on power-knowledge analysis
Audience: Undergraduate

5. Map complexities in national-local contexts of interest for teaching abroad.
Audience: Undergraduate

CURRIC 419 – PREPARING TO TEACH ABROAD CAPSTONE
3 credits.

Formulate and reflect on the obligations and responsibilities of teaching in contexts different from the US. Capstone provides field experiences with virtual, community, and campus organizations relevant to planning curriculum, teaching, and cross-cultural comparison of educational contexts. Addresses colonization and power, assumptions of difference, and cross-cultural awareness in teaching and learning.
Requisites: CURRIC 418 and 366
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Reflect on pedagogical and cultural differences relevant to teaching and learning in non-US settings, particularly issues of coloniality, power, and assumptions of difference.
Audience: Undergraduate

2. Participate in field experiences that permit opportunities for cross-cultural learning and reflecting on issues of teaching, curriculum, and learning in non-US settings.
Audience: Undergraduate

3. Consider inclusive practices that account social and cultural qualities of teaching in non-US settings.
Audience: Undergraduate

4. Connect intellectual issues of teaching and learning with field experiences to inform future pedagogical practice in non-US settings.
Audience: Undergraduate

CURRIC/MUSIC 420 – TEACHING POPULAR INSTRUMENTAL MUSIC 1
1 credit.

Development of critical perspectives, musical knowledge, and pedagogical skills needed to teach instrumental popular music. Focus on popular string instruments, their electronic counterparts, and emerging technologies for the performance and production of popular music.
Requisites: Declared in Music: Education BM and sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop basic skills necessary for teaching and learning various popular music styles on the guitar, bass, and drum set.
Audience: Undergraduate

2. Develop a series of instructional strategies for teaching, focusing on lesson plans and curricular units that incorporate instruments commonly used in popular music.
Audience: Undergraduate

3. Develop critical perspectives on popular music by exploring the intersection of popular music with issues of identity, technology, and globalization.
Audience: Undergraduate

CURRIC/MUSIC 421 – TEACHING POPULAR INSTRUMENTAL MUSIC 2
1 credit.

Development of critical perspectives, musical knowledge, and pedagogical skills needed to teach instrumental popular music. Focus on popular percussion instruments, their electronic counterparts, and emerging technologies for the performance and production of popular music.
Requisites: Declared in Music: Education BM and sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop skills associated with digital audio workstations (DAWS), including inputting MIDI, manipulating audio files, and recording.
Audience: Undergraduate

2. Examine and implement pedagogies of popular music associated with DAWs.
Audience: Undergraduate

3. Critically interrogate issues of power and identity (including race, gender, class, and ability) in music education and schooling through popular music.
Audience: Undergraduate

CURRIC/CSCS 428 – PROGRAM PLANNING IN FAMILY AND CONSUMER EDUCATION
3 credits.

Theory and processes of program planning for formal and informal educational settings; relation of vocational education to secondary, adult, and continuing education programs.
Requisites: Junior standing
Repeatable for Credit: No
Last Taught: Fall 2018
Learning Outcomes: 1. Design and implement ethical, inclusive, and culturally appropriate approaches to planning and evaluation that engage a variety of stakeholders together in a participatory process
Audience: Undergraduate

2. Develop program plans that bridge short-term objectives with long-term goals of justice and equity
Audience: Undergraduate

3. Engage in reflective thinking about individual, interpersonal, and organizational power, privilege, and positionality in relation to program planning, strategic planning, and evaluation
Audience: Undergraduate

4. Explain how organizations can propagate systems of injustice and inequity through their programming if they do not address root causes
Audience: Undergraduate

5. Justify the decision to develop a new program plan, adapt an existing program, or take no action, appraising the opportunities and challenges associated with each course of action
Audience: Undergraduate

6. Translate general program planning concepts to a variety of settings, social issues, and audiences
Audience: Undergraduate

CURRIC 432 – GAME DESIGN II
3 credits.

Explore the expressive, social, and cultural impact of games as a medium through focused creation of a single capstone project. Develop an analog or digital game depending on interest and skill set. Designed to build skills in designing interactive games using an iterative approach that incorporates user testing and feedback. Focuses on design practices common to all games which can be applied by a game designer working in any medium, including sports, board games, computer games, and videogames. Opportunities to explore a wide variety of independent games as well as the platforms used to create them.
Requisites: CURRIC 357 or graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CURRIC 435 – FOUNDATIONS OF WORLD LANGUAGE EDUCATION
2 credits.

Examines theoretical, pedagogical, and sociopolitical foundations for the teaching and learning of languages in U.S. schools.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Articulate the sociopolitical evolution of language teaching in U.S. schools in historical and contemporary contexts.
Audience: Graduate

2. Articulate the needs, goals, and benefits of language learning to a variety of stakeholders: students, colleagues, administrators, lawmakers, parents, and community members.
Audience: Graduate

3. Identify and evaluate current trends and innovations in the teaching of languages.
Audience: Graduate

4. Identify and critique their own biases with regard to the teaching and learning of languages.
Audience: Graduate

CURRIC 442 – STUDENT TEACHING IN WORLD LANGUAGES (PK-8)
2-12 credits.

Practice teaching in world languages education classes at the PK-8 school level in elementary and middle schools.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Use a variety of curricular resources (World-Readiness Standards, Can-Do Statements, Social Justice Standards, Intercultural Reflection Tool) to plan and implement justice-oriented language instruction.
Audience: Graduate

2. Establish and maintain an equitable and inclusive classroom environment.
Audience: Graduate

3. Develop meaningful, contextualized, student-centered learning experiences to promote interpersonal, interpretive, and presentational communication.
Audience: Graduate

4. Develop meaningful formative and summative assessments and use data from those assessments to inform instruction.
Audience: Graduate

5. Reflect on instructional and professional practice and discover a sense of personal identity within the teaching profession.
Audience: Graduate

CURRIC 443 – STUDENT TEACHING IN WORLD LANGUAGES (6-12)
2-12 credits.

Practice teaching in world languages education classes at the 6-12 school level in middle and high schools.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Use a variety of curricular resources (World-Readiness Standards, Can-Do Statements, Social Justice Standards, Intercultural Reflection Tool) to plan and implement justice-oriented language instruction.
Audience: Graduate

2. Establish and maintain an equitable and inclusive classroom environment.
Audience: Graduate

3. Develop meaningful, contextualized, student-centered learning experiences to promote interpersonal, interpretive, and presentational communication.
Audience: Graduate

4. Develop meaningful formative and summative assessments and use data from those assessments to inform instruction.
Audience: Graduate

5. Reflect on instructional and professional practice and discover a sense of personal identity within the teaching profession.
Audience: Graduate

CURRIC 454 – STUDENT TEACHING IN THE MIDDLE SCHOOL
1-10 credits.

Supervised student teaching experience in elementary education located in a 5th-9th grade classroom.
Requisites: CURRIC 367 and concurrent enrollment in CURRIC 463
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Deepen individual and collaborative awareness of self as it intersects with communities and schools
Audience: Undergraduate

2. Expand developmental awareness and understanding of institutional and systemic inequities
Audience: Undergraduate

3. Engage in activities that allow for demonstrated proficiency of the UW Teacher Education Performance Standards and Elementary Education Social Justice Mission Statement
Audience: Undergraduate

CURRIC 458 – STUDENT TEACHING IN HISTORY AND SOCIAL STUDIES IN THE MIDDLE SCHOOL
2-12 credits.

Supervised student teaching in the middle school. Employ and evaluate a variety of approaches to social studies curriculum and instruction.
Requisites: Declared in Curriculum and Instruction: Secondary Education MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CURRIC 459 – STUDENT TEACHING IN HISTORY AND SOCIAL STUDIES IN THE HIGH SCHOOL
2-12 credits.

Supervised student teaching in the high school. Employ and evaluate a variety of approaches to social studies curriculum and instruction.
Requisites: Declared in Curriculum and Instruction: Secondary Social Studies Education MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

CURRIC 463 – SEMINAR IN ELEMENTARY EDUCATION
1-2 credits.

Weekly workshop to provide an opportunity to develop skills as critically reflective practitioners and make specific plans for the full-time teaching experience.
Requisites: CURRIC 367 and concurrent enrollment in CURRIC 454, 464 or 468
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Deepen individual and collaborative awareness of self as it intersects with communities and schools
Audience: Undergraduate

2. Expand developmental awareness and understanding of institutional and systemic inequities
Audience: Undergraduate

3. Engage in activities that allow for demonstrated proficiency of the UW Teacher Education Performance Standards and Elementary Education Social Justice Mission Statement
Audience: Undergraduate

CURRIC 464 – STUDENT TEACHING IN THE ELEMENTARY SCHOOL
1-10 credits.

Supervised student teaching semester of the elementary education program in a 4K-6th grade classroom.
Requisites: CURRIC 367 and concurrent enrollment in CURRIC 463
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Deepen individual and collaborative awareness of self as it intersects with communities and schools
Audience: Undergraduate

2. Expand developmental awareness and understanding of institutional and systemic inequalities
Audience: Undergraduate

3. Engage in activities that allow for demonstrated proficiency of the UW Teacher Education Performance Standards and Elementary Education Social Justice Mission Statement
Audience: Undergraduate

CURRIC 468 – EARLY CHILDHOOD/ENGLISH AS A SECOND LANGUAGE STUDENT TEACHING
5-10 credits.

Student teaching specific to Early childhood/English as a Second Language certification
Requisites: CURRIC 367 and concurrent enrollment in CURRIC 463
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Deepen individual and collaborative awareness of self as it intersects with communities and schools
Audience: Undergraduate

2. Expand developmental awareness and understanding of institutional and systemic inequities
Audience: Undergraduate

3. Engage in activities that allow for demonstrated proficiency of the UW Teacher Education Performance Standards and Elementary Education Social Justice Mission Statement
Audience: Undergraduate

CURRIC/MATH 471 – MATHEMATICS FOR SECONDARY SCHOOL TEACHERS
3 credits.

Capstone for future middle and high school teachers, drawing connections between higher mathematics and school mathematics.
Requisites: (MATH 341, 375, or 421) and (MATH 461 or concurrent enrollment)
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Examine the conceptual difficulties, fundamental ideas, and techniques of secondary school mathematics.
Audience: Undergraduate

2. Describe connections between advanced mathematics and the content typically found in middle and high school mathematics curriculum.
Audience: Undergraduate

3. Recall and state alternate definitions, extensions, and constructions of content typically found in middle and high school mathematics curriculum.
Audience: Undergraduate

4. Demonstrate symbolic and computational proficiency.
Audience: Undergraduate

5. Justify mathematical reasoning as a means to deepen understanding.
Audience: Undergraduate

6. Analyze multiple solution strategies from a mathematical perspective (e.g. understanding different approaches to solving a problem, assessing whether a strategy generalizes, making connections between strategies, examining student strategies when appropriate etc.).
Audience: Undergraduate

7. Explain mathematics to others and assess the mathematical understanding of others.
Audience: Undergraduate

CURRIC 472 – STUDENT TEACHING OF ENGLISH IN THE MIDDLE SCHOOL
2-12 credits.

Supervised student teaching in the middle school. Employ and evaluate a variety of approches to English curriculum and instruction.
Requisites: Declared in Elementary Education or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CURRIC 490 – STUDENT TEACHING IN SCIENCE IN THE HIGH SCHOOL
2-12 credits.

Requisites: Declared in Curriculum and Instruction: Secondary Science Education MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

CURRIC/ART ED 493 – PRACTICUM IN SECONDARY SCHOOL ART
3 credits.

Observation and instruction of elementary and secondary pupils in a laboratory setting. Lecture and discussion of topics related to art instruction.
Requisites: Declared in Art Education BSE
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: No
Last Taught: Fall 2022

CURRIC 494 – STUDENT TEACHING IN HIGH SCHOOL MATHEMATICS
2-12 credits.

Requisites: Declared in Curriculum and Instruction: Secondary Mathematics Education MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CURRIC 495 – STUDENT TEACHING IN SCIENCE IN THE MIDDLE SCHOOL
2-12 credits.

Supervised student teaching at the middle school. Employ and evaluate a variety of approaches to science curriculum and instruction.
Requisites: Declared in Curriculum and Instruction: Secondary Science Education MS and CURRIC 390
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CURRIC 496 – STUDENT TEACHING OF ENGLISH IN THE HIGH SCHOOL
2-12 credits.

Requisites: Declared in Curriculum and Instruction: Secondary English Education MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

CURRIC 497 – STUDENT TEACHING IN MIDDLE SCHOOL MATHEMATICS
4-12 credits.

Supervised student teaching at the middle school. Employ and evaluate a variety of approaches to mathematics curriculum and instruction.
Requisites: Declared in Curriculum and Instruction: Secondary Mathematics Education MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CURRIC 500 – LITERACY AND LANGUAGE DEVELOPMENT
3 credits.

Survey and critical analysis of language and literacy development in and out of school, with a focus on the elementary school years.
Requisites: Declared in Elementary Education or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021

CURRIC/COMP SCI 502 – THEORY AND PRACTICE IN COMPUTER SCIENCE EDUCATION
1 credit.

Computer science educational pedagogy and general teaching practices. Practical experience gained through tutoring students. Knowledge of object-oriented programming required.
Requisites: COMP SCI 300 or 302 or declared in Computer Science graduate program
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe and demonstrate best practices in the teaching of computer science.
Audience: Undergraduate

2. Create learning materials that exemplify selected computer science pedagogical topics.
Audience: Undergraduate

3. Identify effective tutoring session strategies.
Audience: Undergraduate

CURRIC 503 – LITERACY ACROSS THE CURRICULUM
3 credits.

Survey and critical analysis of theories and practices for literacy development across the curriculum. Reading, writing, oral language, and technology as situated in the content areas. Focus on middle and high schools.
Requisites: Declared in Elementary Education or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022

CURRIC 504 – LITERACY ASSESSMENT AND INTERVENTION
3 credits.

Theories and practices in regard to assessing and intervening in literacy development for a variety of different sorts of learners, including those facing various reading or writing difficulties.
Requisites: CURRIC 318 or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2019

CURRIC/RP & SE 506 – STRATEGIES FOR INCLUSIVE SCHOOLING
3 credits.

Comparison of historical and current practices in special education; legal, philosophical, and programmatic changes leading to inclusive models of education; emphasis on concepts of collaboration, cooperative learning structures, and curricular and instructional adaptations to accommodate learners with disabilities in general education classrooms.
Requisites: Sophomore standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply disability law to understand students with disabilities in the classroom.
Audience: Both Grad & Undergrad

2. Utilize disability law to create inclusive classroom for students with disabilities
Audience: Both Grad & Undergrad

3. Apply understanding of varied types of disabilities to students
Audience: Both Grad & Undergrad

4. Utilize a general understanding of differentiation and universal deisgn for learning practices
Audience: Graduate

CURRIC 507 – INCLUSIVE EDUCATION IN SECONDARY SCHOOLS
2 credits.

Comparison of historical and current practices in special education; legal, philosophical, and programmatic changes leading to inclusive models of education; emphasis on concepts of universal design for learning, methods of differentiation, collaboration among educators, and responsive instructional strategies for learners with disabilities in general education classrooms.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. explore and engage with strategies and techniques for including students with diverse learning needs in general education schools using concepts of collaborative teamwork, active learning models, Universal Design, and differentiation.
Audience: Graduate

2. collectively build a historical overview of special education services to understand the legal, philosophical, and programmatic changes leading toward and beyond inclusive models of education.
Audience: Graduate

3. apply and analyze a process designed for general educators and specialists to co-plan an upcoming curriculum that is responsive to learners with diverse abilities.
Audience: Graduate

CURRIC 510 – COMMUNITY-BASED PRACTICUM
1-4 credits.

Provides an opportunity to connect teaching and learning theory and research knowledge to community based settings. Explore how community education is organized and educational services are delivered. Interact with children and develop an identity as an educator. Develop the necessary knowledge and skills required to work with students and educational professionals in a supervised community-based educational setting.
Requisites: Declared in Curriculum and Instruction MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

CURRIC 511 – SCHOOL-BASED PRACTICUM
1-4 credits.

Provides an opportunity to connect teaching and learning theory and research knowledge to the practical setting of schools. Explore how schools are organized and educational services are delivered. Interact with students and develop an identity as an educator. Develop the necessary knowledge and skills required to work with students and educational professionals in a supervised school-based setting.
Requisites: Declared in Curriculum and Instruction MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

CURRIC/ED POL/HISTORY/JEWISH 515 – HOLOCAUST: HISTORY, MEMORY AND EDUCATION
3 credits.

Explores the ways in which Holocaust history, memory and education are mutually entangled, politically charged and morally complex. Using primarily American sites of memory, critically analyze a variety of representations of the Shoah--in literature, films, memoirs, monuments, museums and classrooms.
Requisites: Junior standing
Course Designation: Gen Ed - Communication Part B
Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022
Learning Outcomes: 1. Examine and question cultural assumptions and knowledge claims about race, ethnicity, and religion
Audience: Both Grad & Undergrad

2. Improve written and oral communication skills by engaging in critical conversations, making presentations, practicing group projects and writing papers
Audience: Both Grad & Undergrad

3. Demonstrate self-awareness and empathy to other worldviews and cultural differences and apply course concepts outside of the classroom by engaging in respectful conversations about race, ethnicity, and religion in our multi-cultural society
Audience: Both Grad & Undergrad

4. Construct and develop a meaningful project around a topic that interests you
Audience: Both Grad & Undergrad

5. Articulate answers to and pose complex questions regarding ethical issues, connecting historical events to present circumstances regarding racial inequalities
Audience: Undergraduate

6. Develop your academic writing by thinking carefully through your ideas and editing your work and your peers'
Audience: Undergraduate

7. Pose and answer complex historical and ethical questions regarding the Holocaust, genocide, their representations and political uses, connecting historical events to present circumstances regarding racial inequalities
Audience: Graduate

8. Develop interpersonal academic skills by editing peers' work
Audience: Graduate

CURRIC/ED POL/RELIG ST 516 – RELIGION AND PUBLIC EDUCATION
3 credits.

Examines theories and practices related to the role of religion in public schooling and its accompanying tensions: political and philosophical, practical and personal.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021

CURRIC 534 – TOOLS FOR GAME DESIGN
1 credit.

An introduction to tools used to design and develop video games.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024
Learning Outcomes: 1. Build and publish games
Audience: Both Grad & Undergrad

2. Use version control in the building of games
Audience: Both Grad & Undergrad

3. Work both individually and in a team on a game project
Audience: Both Grad & Undergrad

4. Collect player/game data from a game project
Audience: Graduate

5. Calculate play metrics from player/game data
Audience: Graduate

CURRIC 535 – FOUNDATIONS OF LITERACY
2 credits.

Examines key arguments in literacy studies to help future teachers make intentional and informed decisions about teaching literacy.
Requisites: Declared in Curriculum and Instruction MS: Secondary Education Teaching Certification
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Examine key arguments in the history of literacy studies from the perspective of scholars in diverse fields.
Audience: Graduate

2. Analyze their own literacy context critically.
Audience: Graduate

3. Describe the implications of literacy ideologies present at a youth community site.
Audience: Graduate

CURRIC 537 – TEACHING DIVERSE LEARNERS
3 credits.

Designed to foster cultural awareness at the individual and institutional levels, and to promote equitable and anti-racist behaviors as well as social justice in educational practices.
Requisites: Declared in Educational Psychology MS: Professional Educator (MSPE) MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2021

CURRIC 545 – TEACHING WORLD LANGUAGES I
3 credits.

Fundamental elements of curriculum development, instruction, and assessment for teaching world languages in PK-12 contexts.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use a variety of curricular resources (World-Readiness Standards, Can-Do Statements, Social Justice Standards, Intercultural Reflection Tool) to plan and implement justice-oriented language instruction.
Audience: Graduate

2. Develop meaningful, contextualized, student-centered learning experiences to promote interpersonal, interpretive, and presentational communication.
Audience: Graduate

3. Adapt language instruction for a variety of program models: Foreign Language in the Elementary Schools (FLES), Foreign Language Exploratory (FLEX), middle/high school.
Audience: Graduate

CURRIC 546 – TEACHING WORLD LANGUAGES II
2 credits.

Provides in-depth examination of the issues associated with elements of teaching world languages in PK-12 contexts. Focuses on classroom community and procedures as well as advanced elements of instructional design and assessment.
Requisites: CURRIC 545
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Establish and maintain an equitable and inclusive classroom environment.
Audience: Graduate

2. Develop meaningful formative and summative assessments and use data from those assessments to inform instruction.
Audience: Graduate

3. Modify and differentiate instruction for linguistically and racially diverse students (e.g., heritage language learners, minoritized students).
Audience: Graduate

4. Articulate specific ways to diversify language educators and learners in order to pursue and enact a more equitable profession.
Audience: Graduate

CURRIC 550 – METHODS, MATERIALS AND ACTIVITIES IN EARLY CHILDHOOD EDUCATION
3 credits.

Developing strategies for teaching young children. Relationships between development and culture, play, the variety of teachers' roles in learning, the functions of observation and assessment, developmentally appropriate practices, engaging children in their own learning, and constructing a curriculum unit.
Requisites: Declared in Elementary Education BSE, Elementary Education and Special Education BSE, Special Education BSE or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Become familiar with a variety of early childhood methods and materials and their use with children in a variety of learning contexts.
Audience: Both Grad & Undergrad

2. Plan instruction for children ages 3-8 years using strategies that responds to the ways young children learn, addresses an array of subject matter knowledge, and that promotes culturally responsive experience.
Audience: Both Grad & Undergrad

3. Learn teaching strategies for planning an equitable student-centered curriculum.
Audience: Both Grad & Undergrad

4. Identify the equity and developmental theories underlying these methods and materials
Audience: Graduate

CURRIC 559 – ADVANCED PRACTICES IN THE TEACHING OF SOCIAL STUDIES
3 credits.

Explore research and practice on topics such as social studies instruction for diverse pupils, critical thinking, and authentic assessment.
Requisites: CURRIC 359 or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

CURRIC 564 – ADVANCED PROBLEMS ON THE TEACHING OF WORLD LANGUAGES
3 credits.

Recent developments in technologies and methods of teaching world languages; exploration and analysis of teaching practices; critical review of relevant literature and adaptation of materials; recent innovations in elementary and secondary world language teaching.
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Spring 2022

CURRIC 576 – TOPICS IN GAME DESIGN
3 credits.

An exploration of theories, issues, and histories within a specialized area of game design such as developing games for a particular genre, for social impact, or using novel technologies.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Communicate with large teams about complex and specialized tasks using common project management techniques.
Audience: Undergraduate

2. Identify the affordances and constraints of different game design contexts including specific genres, new technologies, and specialized subfields.
Audience: Both Grad & Undergrad

3. Design, describe, and/or implement a ludic exemplar based on a narrow set of design principles.
Audience: Both Grad & Undergrad

4. Articulate possible directions for future experiments within game design.
Audience: Both Grad & Undergrad

5. Put new trends and developments in games into conversation with critical theories of technology, power, and education.
Audience: Graduate

CURRIC 590 – ADVANCED PRACTICES IN THE TEACHING OF SCIENCE
3 credits.

An extended and in-depth analysis of the key themes in science education introduced in the introductory methods course as well as an exploration of additional topics important to beginning science educators.
Requisites: CURRIC 390 or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

CURRIC 596 – ADVANCED PRACTICES IN TEACHING ENGLISH IN SECONDARY SCHOOLS
3 credits.

Explores central issues of theory and practice in the teaching of English in middle and secondary skills using an inquiry framework in which beginning and experienced teachers act as researchers.
Requisites: CURRIC 396 or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

CURRIC 604 – SEMINAR ON LITERACY
3 credits.

Examines current research on reading, writing and varieties of oral language from perspective of sociocognitive and sociocultural literacy studies. Explore various theories of school, community, and workplace literacy, different approaches to literacy pedagogy and curricula, assessment practices, and interventions for learners with various needs.
Requisites: CURRIC 318 or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022

CURRIC 606 – CRITICAL PERSPECTIVES ON DIGITAL MEDIA IN EDUCATION
2-3 credits.

Critical review of literature on digital media and learning; utilization of digital media inside and outside classrooms.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021

CURRIC/L I S 620 – FIELD PROJECT IN LIBRARY AND INFORMATION AGENCIES
3 credits.

Analysis of field experience through seminars, individual conferences, required reading and consultations with cooperating librarians and information specialists. Enrollment limited.
Requisites: L I S 601 and 602 or concurrent enrollment
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CURRIC 625 – BILINGUAL-BICULTURAL EDUCATION PRACTICUM
1 credit.

Field experiences that promote bilingualism-biculturalism and content area learning in K-12 schools; review of pedagogies and methodologies that support bi/multilingual pupils; application of effective pedagogies, methodologies, and instructional practices; taught in Spanish.
Requisites: CURRIC 671 or 676 or concurrent enrollment in CURRIC 671 or 676
Repeatable for Credit: Yes, for 4 number of completions
Learning Outcomes: 1. Identify bilingual pedagogical practices and instructional methods to both draw on and expand bilingual learners' linguistic repertoires
Audience: Undergraduate

2. Apply standards for Spanish language development and English language development as well as content area standards to teaching, learning, and instructional design
Audience: Undergraduate

3. Compose (1) language objectives and (2) content objectives as part of their instructional and assessment implementation practices
Audience: Undergraduate

CURRIC 626 – ACTION RESEARCH IN SCHOOLS
3 credits.

Provides instruction and support for individual research on personal practices in schools.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2020

CURRIC 630 – PROFESSIONAL DEVELOPMENT FOR SCHOOLS AND COMMUNITY EDUCATORS
1-6 credits.

Specific construction and theoretical implications for professional in-service and field student teaching assignments. Learning materials and school systems program needs for children.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

CURRIC 632 – LITERATURE AND LITERACY
3 credits.

Role of literature in literacy development from pre-school to high school. Theories and practices in regard to interpretation, reader response, criticism, genres, multiculturalism, and literature for early literacy and in content learning.
Requisites: Declared in Elementary Education or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2024

CURRIC 635 – EPISTEMOLOGY OF MATHEMATICS FOR TEACHERS
2 credits.

Focuses on the nature of knowing mathematics.
Requisites: Declared in Curriculum and Instruction: Secondary Mathematics Education MS
Repeatable for Credit: No
Last Taught: Summer 2025

CURRIC 645 – FOUNDATIONS OF EDUCATIONAL ASSESSMENT
3 credits.

Gain the ability to think critically and creatively about the role of assessment in our education system, aiming to pave a pathway toward better assessments. Seeks to challenge standard methods in assessment design and development, as well as psychometric notions of what constitutes good assessment. Through the application of critical pedagogies and theories, create assessments that align with the modern understanding of how people learn, placing justice at the core of the commitment and design principles.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Articulate, based on a solid understanding of the existing literature, what educational assessment is and how it has been changing over time.
Audience: Graduate

2. Articulate the qualities pertinent to educational assessment and how they manifest across diverse contexts where educational assessments are utilized to inform both formal and informal decisions.
Audience: Graduate

3. Identify educational systemic structures within society and educational system that have influenced the development of educational assessment over time.
Audience: Graduate

4. Articulate the prevailing trends and emerging themes that have the potential to reshape educational assessment, along with their implications.

Audience: Graduate

5. Utilize assessment design frameworks with critical lenses to propose equitable assessment methods and tools.
Audience: Graduate

6. Employ critical thinking to assess the qualities of assessments, such as validity and fairness.
Audience: Graduate

CURRIC 660 – FOUNDATIONS OF EARLY CHILDHOOD EDUCATION
2-3 credits.

Trends, basic principles, issues, evaluation, and curriculum planning for the group education of preschool children.
Requisites: Junior standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Deepen understanding of young children's lived experiences in social and cultural contexts
Audience: Both Grad & Undergrad

2. Consider your own early learning experiences and those of your classmates
Audience: Both Grad & Undergrad

3. Recognize the power and importance of families and communities in early learning
Audience: Both Grad & Undergrad

4. Examine varied approaches to the schooling of young children
Audience: Both Grad & Undergrad

5. Acknowledge issues of injustice and inequity in early childhood classrooms
Audience: Both Grad & Undergrad

6. Reimagine early childhood classrooms in ways that sustain young children's languages, abilities, and racial identities
Audience: Both Grad & Undergrad

7. Examine the roles of early childhood theory and research on practice
Audience: Graduate

CURRIC 663 – LEARNING ENVIRONMENTS FOR INITIAL EDUCATION PROGRAMS
3 credits.

Historical foundations, basic theories, and contemporary patterns of instruction underlying educational programs for young children (3-9). Integrating and contrasting features of comprehensive curricula for the very young: play, communication, self concepts, health, arts, motor, literacy numeracy, science, and other areas of educational concern.
Requisites: Junior standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the nature of high-quality (culturally, linguistically, and developmentally responsive) environments in early education (ECE)
Audience: Both Grad & Undergrad

2. Understand the teaching practices for implementing and sustaining high-quality environments for ECE
Audience: Both Grad & Undergrad

3. Understand the relationships between children and environment
Audience: Both Grad & Undergrad

4. Recognize what children and teachers do in learning environments
Audience: Both Grad & Undergrad

5. Evaluate and plan quality learning environments
Audience: Both Grad & Undergrad

6. Understand how teachers promote student engagement and belonging in environments for ECE
Audience: Both Grad & Undergrad

7. Understand how a learning environment relates to equity and agency
Audience: Both Grad & Undergrad

8. Describe and analyze the historical and theoretical foundations for different types of classroom environment for ECE
Audience: Graduate

CURRIC 670 – THEORIES OF BILINGUALISM AND BILITERACY
3 credits.

Study of contemporary theoretical perspectives, constructs, models, and frameworks related to bilingualism and biliteracy development and relationship between home/first languages (i.e., Spanish) and second/additional languages (i.e., English); review of cultural backgrounds and experiences, transnational experiences and mobility, and social and linguistic identities; application of theory to curriculum and instructional decision-making for K-12 bilingual learners; taught in Spanish. Demonstrate advanced-low Spanish language proficiency
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Demonstrate understanding of bilingualism and biliteracy as dynamic sociocultural processes that vary widely from student to student
Audience: Both Grad & Undergrad

2. Demonstrate theoretical understandings of bilingualism and biliteracy, including relevant constructs, frameworks, and models
Audience: Both Grad & Undergrad

3. Articulate, critique, and justify implications of particular constructs, frameworks, and models on bi/multilingual pupils' schooling experiences
Audience: Both Grad & Undergrad

4. Articulate, critique, and justify implications of particular constructs, frameworks, and models on teaching, learning, and curriculum for bi/multilingual pupils
Audience: Both Grad & Undergrad

5. Articulate, critique, and justify how particular theoretical constructs, frameworks, and models can help realize equitable and humanizing schooling for bi/multilingual pupils
Audience: Both Grad & Undergrad

6. Articulate and justify critical perspectives about varied and shifting definitions of what counts as bilingualism and biliteracy, and who has the power to define them
Audience: Graduate

7. Synthesize latest research and scholarship about relevant course topics to identify pressing theoretical/conceptual inquiries in bilingual-bicultural education
Audience: Graduate

CURRIC 671 – EDUCATIONAL LINGUISTICS FOR BILINGUAL TEACHERS
3 credits.

Study of applied linguistics in in relation to Spanish, English, and bilingualism; introduction to the basic structures of language (i.e., phonetics and phonology, morphology and semantics, syntax, pragmatics); application of educational linguistics to curriculum and instructional decision-making for K-12 bilingual learners; taught in Spanish. Demonstrate advanced-low Spanish language proficiency
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Demonstrate knowledge of basic forms and structures of Spanish, English, and bilingual language practices
Audience: Both Grad & Undergrad

2. Identify and analyze bilingual-biliteracy processes and how multiple languages relate, shape, and reinforce one another
Audience: Both Grad & Undergrad

3. Analyze and differentiate bilingual learners' linguistic repertoires and how they are shaped by their contexts for language use, learning, and development
Audience: Both Grad & Undergrad

4. Analyze bilingual learners' language practices by applying knowledge of Spanish, English, and bilingual language practices
Audience: Both Grad & Undergrad

5. Articulate and justify critical perspectives about historical perspectives on bilingualism and biliteracy, and who has the power to define them
Audience: Graduate

6. Synthesize latest research and scholarship in educational linguistics to identify pressing theoretical/conceptual and empirical inquiries in bilingual-bicultural education
Audience: Graduate

CURRIC 673 – LEARNING SECOND LANGUAGE AND LITERACIES
1-6 credits.

Explores theoretical and practical aspects of second language and literacy development in schooling for English learners. Includes a fieldwork component. Informed by theories, students conduct and analyze data from classroom-based research, investigating implications for learning and teaching.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CURRIC 674 – ADVANCED METHODS IN TEACHING ENGLISH AS A SECOND LANGUAGE
3-6 credits.

Designed to help identify/develop and implement methodological appraoches and techniques for uspporting the language and literacy development of English learners that coordinate with current theories on language and learning.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

CURRIC 675 – GENERAL SEMINAR
1-3 credits.

Subjects of current interest. Recent topics have included educational linguistics, language awareness, understanding language, foundations in teaching English or social studies.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

CURRIC 676 – BILINGUALISM AND BILITERACY IN SCHOOLS
3 credits.

Study of pedagogies, frameworks, and methodologies appropriate for bilingual-bicultural education; review of contemporary scholarship about rigorous, responsive, and effective practices with K-12 bilingual learners; review of Spanish and English language standards and bilingual standards-based teaching and learning; taught in Spanish.
Requisites: Declared in Elementary Education BSE, Capstone Certificate in Spanish-English Bilingual-Bicultural Education or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and summarize broad issues related to equitable teaching and learning in/across two (or more) languages
Audience: Both Grad & Undergrad

2. Integrate knowledge of teaching, learning, and curriculum to support bi/multilingual learning and development and K-12 bi(multi)lingual students
Audience: Both Grad & Undergrad

3. Analyze strategies that build and develop students linguistic repertoires to facilitate content area learning and meaning making
Audience: Both Grad & Undergrad

4. Articulate theoretical and methodological justifications about when, why, and how to teach in/across two (or more) languages across content areas
Audience: Graduate

5. Compose (1) language objectives and (2) content objectives as part of their instructional and assessment planning practices
Audience: Graduate

CURRIC 690 – INDEPENDENT FIELD WORK
1-9 credits.

Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2020

CURRIC 699 – INDEPENDENT READING
1-3 credits.

Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

CURRIC 702 – SOCIOCULTURAL THEORY
3 credits.

Sociocultural theories posit that the fundamental mechanism for teaching and learning is social interaction. Examine the varying positions within this genraly body of theoretical liturature, compare and contrast how each position construes the fundamentally social nature of thinking and learning, and consider the methods entailed by each given theory.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

CURRIC 704 – CURRICULUM PLANNING
3 credits.

The concept of curriculum in modern American education.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CURRIC 709 – DIGITAL MEDIA & TECHNOLOGY IN SCHOOLS
1 credit.

Introduction for secondary educators to the role of digital media technologies in their classrooms. Covers major topics in digital media in teaching and design several instructional units that incorporate technology meaningfully into the classroom.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

CURRIC 712 – INTRODUCTION TO CURRICULUM AND INSTRUCTION: RESEARCH AND RESOURCES
3 credits.

Become familiar with faculty, procedures, policy, and the wide range of research in curriculum and instruction.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CURRIC 713 – TECHNOLOGY INTEGRATION FOR TEACHING AND LEARNING
1-3 credits.

A broad introduction to the field of Educational Communications and Technology (ECT) and attempts to balance theoretical inquiry with "hands on" design work. Cover the theoretical foundations of ECT and explore new developments in technology, theory and practice. Identifies new horizons for practicing and pre-service teachers to leverage technology for their own professional and personal empowerment through thinking systematically about technology and the classroom.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2020

CURRIC 714 – RESEARCH AND EVALUATION PARADIGMS IN CURRICULUM AND INSTRUCTION
3 credits.

An analysis of differing orientations to evaluation and research. Emphasis on assumptions, attitudes, and expectations of what constitutes scientific knowledge and explanation; relationship of research orientation, methods of inquiry, theory, and practice.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020

CURRIC 715 – DESIGN OF RESEARCH IN CURRICULUM AND INSTRUCTION
3 credits.

Introductory survey of empirical foundations of research. Development of methods and tools of research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

CURRIC 716 – REFORM AND CHANGE IN CURRICULUM AND INSTRUCTION
3 credits.

Social, political and epistemological assumptions underlying current efforts towards curriculum and instructional reform in elementary and secondary schools.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021

CURRIC 718 – INTRODUCTION TO NARRATIVE INQUIRY
3 credits.

Introduction to material on framing, generating, gathering, and analyzing stories that people tell.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022

CURRIC/COUN PSY/ED POL/ED PSYCH/ELPA/RP & SE 719 – INTRODUCTION TO QUALITATIVE RESEARCH
3 credits.

Provides an overview of qualitative inquiry, examining assumptions, standards, and methods for generating and communicating interpretations. Methodological and theoretical works illustrate case study, ethnography, narrative, and action research. Does not include a field method component.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CURRIC 723 – LIFE HISTORY: THEORIES & METHODS
3 credits.

Focuses on framing, generating, collecting, and analyzing data gathered from interviews and documents related to people's lives.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

CURRIC 726 – QUALITATIVE METHODS OF STUDYING CHILDREN AND CONTEXTS
3 credits.

Examines the theoretical, methodological, and ethical issues in studying children from interpretive perspectives. A small group research project, focused on examination of an individual child and context, provides an introduction to qualitative methods within fieldwork.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CURRIC 727 – INTERNATIONALIZING EDUCATIONAL KNOWLEDGE
3 credits.

Starts with a simple proposition that 19th century modern school curriculum is concerned with making kinds of people: "the citizen", "a worker", "civic minded", "life-long learner", "motivated", "with grit", etc. Discussions explore "the building (and disseminating) of knowledge" in schools (curriculum) across nations, cultures, and within political and religious modes of thought, to understand how differences in the self and others are produced through schooling. Internationalizing education means understanding how curriculum, pedagogy, theories of learning, and notions of childhood from schooling generate "ways of thinking" about "kinds of people". Internationalizing the field of curriculum and instruction shows how difference is produced and categorized. Facilitates thinking about how regional and national representations of people go unexamined in school curriculums when studying "others".
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CURRIC 729 – CLASSROOM MANAGEMENT FOR SECONDARY EDUCATORS
1 credit.

Designed to inform students of basic principles of good classroom management within a social justice framework. Learn about motivating student learning through clear classroom management strategies, communicating with parents and families regarding student behavior, establishing positive teacher-student relationships, responding to challenging student behaviors, and responding to bullying.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CURRIC 731 – COLLABORATIVE TEAMWORK FOR INCLUSIVE SCHOOL REFORM
3 credits.

Critically examine the process of collaboration and its multiple forms among professionals in the creation of inclusive school communities. Explore various methods and tools for collaboration that promote effective team relationships, problem solving, and co-planning of differentiated curriculum and instruction. Activities and projects are problem-based and focus on generating solutions to programmatic, student-specific, or school-wide issues related to inclusive education. Acquire skills to engage in collaborative teamwork and act as change facilitators within a school system.
Requisites: Declared in Educational Psychology MS: Professional Educator (MSPE) MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

CURRIC/STS 733 – PUBLIC ENGAGEMENT WITH SCIENCE
3 credits.

Examines the influence of science in everyday life. Provides both academic context (research and theory) and a firsthand look at how science matters to people who are not themselves scientists.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Identify and critique common claims about the importance and value of science literacy, public understanding of science, and public engagement with science
Audience: Graduate

2. Describe the different ways in which researchers have attempted to measure and otherwise evaluate science literacy etc.
Audience: Graduate

3. Understand and be able to recognize the implications of social and cultural forces that shape particular episodes of public engagement with science.
Audience: Graduate

4. Describe and discuss the complex relevance of science in one particular public setting.
Audience: Graduate

5. Discuss the merits and challenges associated with common strategies for improving public engagement with science through formal education, museums, and sponsored outreach activities.
Audience: Graduate

CURRIC/STS 734 – SCIENCE STUDIES AND SCIENCE EDUCATION
3 credits.

Examination of the key ideas from the field of science and technology studies (history, philosophy, sociology of science, etc.) and how they have been taken up in both the school science curriculum as well as the science education research community.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023

CURRIC 735 – EPISTEMIC PRACTICE AND SCIENCE TEACHING
2 credits.

Pursues the following questions: Where does our scientific knowledge come from and how does science work to generate that knowledge? In what ways might science education meaningfully engage learners in science?
Requisites: Declared in Curriculum and Instruction: Secondary Science Education MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

CURRIC 736 – EDUCATING LINGUISTICALLY AND CULTURALLY DIVERSE LEARNERS
2-3 credits.

Overview of issues that influence and determine the language and academic developmet of English language learners. Explore social, cultural and educational contexts and practices as they relate to the education of this population.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Identify the complexities of the terrain of schooling for multilingual learners.
Audience: Graduate

2. Know and analyze both concepts/theories and specific factors that affect the English learning and academic success of multilingual learners, and how they mutually inform one another.
Audience: Graduate

3. Apply concepts and theories from class to represented teachers, students, families, programs and practices, in order to see theory in practice.
Audience: Graduate

4. Critically reflect on current ideas and concepts in the field of ESL and language studies to examine the impact on linguistically and culturally diverse (and all) students.
Audience: Graduate

CURRIC 737 – LINGUISTICS FOR EDUCATORS
2 credits.

An introduction to language, literacy and linguistic diversity for teachers. Provides an overview of the components of language, the structure of the English language and how language functions, with special emphasis on how language is used in schools, with the goal of supporting teachers' work with multilingual learners. Through exploration of language(s) and a critical reflection of personal experiences as language users, language learners, language analysts and language advocates, enhance understanding of communicative repertoires as dynamic, fluid, and complex.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Engage in critical reflection of their own communicative repertoires, as well as those of others
Audience: Graduate

2. Develop explicit knowledge about language forms and functions in teaching and learning.
Audience: Graduate

3. Develop a responsive and expansive multilingual orientation to teaching and learning language(s) and content in the classroom
Audience: Graduate

4. Identify the components of language and how they relate to one another to produce meaning
Audience: Graduate

CURRIC 744 – PERSPECTIVES IN MULTICULTURAL EDUCATION
3 credits.

A critical examination of the conceptual and theoretical traditions that contribute to the educational reform and ideology known as multicultural education. Includes readings from ethnic studies, black studies, feminist theory, antiracist pedagogy, bilingual education, and critical race theory.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

CURRIC 747 – MASTERS CAPSTONE IN TEACHER EDUCATION
3 credits.

Develop and complete a synthetic, research-based project. Projects are individualized to professional interests and draw from the knowledge gained from previous coursework and the experiences in practicum and student-teaching placements in area schools.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Understand how current ideas in educational research contribute to best practices in teaching through the development of a masters project that furthers their professional interests.
Audience: Graduate

2. Develop an integrated understanding of the theory and practice of some aspect of teaching and/or student learning as a result of completing their projects.
Audience: Graduate

3. Understand the conventions of various modes of reporting research/project findings including written reports, research talks and roundtables, and poster presentations.
Audience: Graduate

CURRIC/GEN&WS 760 – SEX/GENDER-RELATED ISSUES IN CURRICULUM AND INSTRUCTION
3 credits.

A poststructural feminist analysis of educational discourse and practice; examines selected sex/gender issues in curriculum and instruction; explores some implications for classroom teaching of the complex interrelationships between sex/gender, race, social class, sexuality, and ability/disability.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

CURRIC 764 – GLOBALIZATION AND LINGUISTIC HUMAN RIGHTS IN EDUCATION
2-3 credits.

An introduction to language instruction policies and linguistic human rights. Examines teaching and learning in a multilingual society. Explores the various dimensions of the language used in the schools for instruction in different countries during the globalization process.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2019

CURRIC 775 – THEORIES OF RACE, RACISM, AND RACIALIZATION IN EDUCATION RESEARCH
3 credits.

Studies of race-related issues in education often borrow from a narrow conceptual field that can limit how the researcher forms and investigates questions. It is important for education researchers to develop a solid conceptual understanding of race, racism, and racialization, and the analytical concepts that relate to these ideas determine appropriate questions and theories to apply to the analysis of educational phenomena. Bringing together concepts related to race, racism, and racialization via core conceptual literature from philosophy, sociology, and cultural studies supports the design of education research that attends to these issues.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define race, racism, racialization, and related concepts.
Audience: Graduate

2. Synthesize core literature related to race, racism, and diversity across disciplines.
Audience: Graduate

3. Evaluate methodological implications of race, racism, and racialization for education research.
Audience: Graduate

CURRIC 778 – TEACHING, LITERACIES, AND IDENTITIES
3 credits.

Examines issues related to identity through three interrelated concepts--teaching, literacies, and diversity--from a variety of perspectives, including psychology, sociology, narrative studies, and sociocultural perspectives. Explore what "identity" means and how each conceptualization is related to teaching and learning, especially for children from diverse communities and backgrounds.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020

CURRIC/COUN PSY/ED POL/ED PSYCH/ELPA/RP & SE 788 – QUALITATIVE RESEARCH METHODS IN EDUCATION: FIELD METHODS I
3 credits.

Introductory field methods experience in qualitative research. Learn to define good research questions, determine which methods of data collection and analysis are useful for addressing those questions, engage in these methods, reflect on their utility in education research.
Requisites: ED PSYCH/COUN PSY/CURRIC/ED POL/ELPA/RP & SE 719
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

CURRIC/COUN PSY/ED POL/ED PSYCH/ELPA/RP & SE 789 – QUALITATIVE RESEARCH METHODS IN EDUCATION: FIELD METHODS II
3 credits.

Focus on data analysis and translation of finds and implications. Gain theoretical and practical knowledge and skills regarding coding and analysis techniques, use of qualitative analytic tools, strategies for sharing findings with audiences beyond research team.
Requisites: ED PSYCH/COUN PSY/CURRIC/ED POL/ELPA/RP & SE 788
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CURRIC 790 – MASTER'S PROJECT OR THESIS
1-9 credits.

Planning and completing a master's project or thesis.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

CURRIC 799 – MASTER'S INDEPENDENT STUDY
1-3 credits.

Student-designed opportunity to explore a subject in depth.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

CURRIC 802 – DISCOURSE ANALYSIS
3 credits.

Theories and methods for analyzing "discourse" or language in use. Covers formal and informal written text, formal and informal oral speech, and face-to-face and online social interaction, with particular focus on cultural and social institutions and norms (such as school) and learning through social interaction.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

CURRIC/ED PSYCH/L I S 803 – COMPUTATIONAL RESEARCH METHODS
3 credits.

Provides a broad overview of ways of formulating and investigating novel questions with tools from educational data mining and learning analytics including social network analysis, natural language processing, Markov modeling, Bayesian inference, and agent-based modeling.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

CURRIC 805 – GUIDING AND DIRECTING THE SCHOOL READING PROGRAM
3 credits.

Issues and practices in reading program development from first through twelfth grade. Emphasis on the various roles and responsibilities of instructional leaders in reading program development.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023

CURRIC 809 – POLITICS OF STEM EDUCATION
3 credits.

In recent years, there has been an increase in attention to what has come to be known as STEM education in education circles and in the public sphere. Although this focus on STEM may seem recent, it is part of a long history of interest in the STEM disciplines. Consider STEM education from a political perspective by examining its histories, philosophies, policies, and effects.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Read and interpret federal, state, and local policy documents and reports related to STEM education and how these policies differ based on their authors and intended audience.
Audience: Graduate

2. Explore the history and philosophy of STEM education in the United States and, to a lesser extent, globally.
Audience: Graduate

3. Explore how STEM education coincides with other elements of education such as teacher education, pedagogy, curriculum, and policymaking.
Audience: Graduate

4. Consider how STEM education interacts with its component subjects (i.e., science, technology, engineering, and mathematics, the arts [in part]) as well as the subjects that are not implied in the acronym (e.g., social studies, literacy).
Audience: Graduate

CURRIC 810 – GOALS, CONTENT AND PROGRAMS IN MATHEMATICS EDUCATION
3 credits.

Analysis of current programs and the identification of the mathematical content of K-12 education.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023

CURRIC 811 – THE INSTRUCTION OF MATHEMATICS
3 credits.

Analysis of current research and examination of current programs to identify how they reflect different theories of learning and instruction.
Requisites: CURRIC 810
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2019

CURRIC 818 – TEACHING CONTROVERSIAL ISSUES
3 credits.

Critically examines different lines of research in controversial issues instruction such as the contextual factors affecting the teaching of controversial topics, and the instructional practices involved in teaching controversial issues. Contextual factors affecting teachers' decisions to teach controversial issues or topics include official curricular policies, community beliefs, emotional histories, and teachers' differing beliefs and sense of purpose. Examines the affordances and constraints of different pedagogical approaches to teaching controversial issues such as the use of discussion and deliberation, as well as pedagogies that recognize the importance of trust, power, emotion, and personal connections.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Evaluate the different contextual factors affecting teachers' decisions to teach controversial issues or topics
Audience: Graduate

2. Assess the affordances and constraints of different pedagogical approaches to teaching controversial issues
Audience: Graduate

CURRIC/ED PSYCH 821 – CONSTRUCTIONISM
3 credits.

Survey of constructionist theory, research, and tools. Develop a deeper understanding of the history, theories, philosophies, tools, research, and technologies of constructionism and its children.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

CURRIC 823 – COLONIALITY OF LANGUAGE AND SCIENCE IN EDUCATION
3 credits.

Explores interdisciplinary theories on coloniality used in education research, with a focus on historicizing and interrogating hierarchies of language, race, and scientific reason. Examines distinct analytics of power offered by raciolinguistic perspectives, postcolonial science studies, and postfoundational curriculum studies.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Read and discuss core literature related to postcolonial science studies, raciolinguistic studies, and cultural studies, and articulate implications of these theories for education research, policy, or practice.
Audience: Graduate

2. Describe how science, language, voice, race, and coloniality have been theorized across literatures.
Audience: Graduate

3. Analyze assumptions of science, language, race, or coloniality in an educational artifact and makes explicit the analytic of power
Audience: Graduate

4. Research and write a paper examining the coloniality or racialization of language, science, and education in relation to the student's research interests.
Audience: Graduate

CURRIC 829 – PROSEMINAR IN AMERICAN CURRICULUM THEORY: 1890-PRESENT
3 credits.

Major movements in the field such as Herbartianism, scientific curriculum planning, rational decision making, group process, and structure of the disciplines. Analysis of major documents and leading figures.
Requisites: CURRIC 662, 704, or 706
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

CURRIC 830 – THEORY AND DESIGN OF THE CURRICULUM
3 credits.

Dimensions of theory and their interrelationships with reference to the curriculum field.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

CURRIC 835 – FOUNDATIONS OF SOCIAL STUDIES EDUCATION
2 credits.

Focuses on helping pre-service teachers understand what it means to teach social studies for democratic citizenship. Focuses on central debates within social studies education and considers how different national, historical, economic, and political contexts have shaped social studies curricula. Offers an opportunity to compare and contrast social studies education curricula and approaches in diverse national contexts.
Requisites: Declared in Curriculum and Instruction MS: Secondary Education Teaching Certification
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Assess the central debates within social studies and consider how these debates have shaped the structure and goals of social studies curricula in different educational contexts.
Audience: Graduate

2. Make connections between educational theory and the use of different pedagogical strategies.
Audience: Graduate

3. Evaluate and discuss relevant journal articles and book chapters.
Audience: Graduate

CURRIC 840 – FIELD WORK IN SCHOOL READING PROGRAMS
2-7 credits.

Supervised field experience in working with school-wide reading programs.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023

CURRIC 844 – CULTURALLY RELEVANT PEDAGOGY
3 credits.

Pedagogy that explores the relationships between culture and learning as well as teacher ideology and beliefs systems. Examines critical pedagogy and pedagogies of resistance.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021

CURRIC 860 – SUPERVISION IN TEACHER EDUCATION
1-3 credits.

For those who are or wish to be university supervisors or cooperating teachers in practicum or student teaching programs. Study and discussion of factors which enter into the supervision of prospective teachers.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

CURRIC 864 – SEMIOTICS FOR EDUCATION
1-3 credits.

Dedicated to Semiotics or the study sign action for Education purpose, described as any activity or process including the production of meaning and apprenticeship.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2019

CURRIC 900 – ADVANCED SEMINAR IN DIGITAL MEDIA
2-3 credits.

Survey and critical analysis of selected research and other literature in the major divisions of the field, with emphasis according to individual interest.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

CURRIC 912 – WRITING IN EDUCATIONAL RESEARCH
3 credits.

Examination of substantive and stylistic elements of writing in the field of education research. Development of individual skills within and mastery through analysis, practice, and peer editing.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Identify writing in education and its primary purpose within the scholarly community
Audience: Graduate

2. Identify the main elements of high-quality writing in education and recognize how they work together to accomplish an author's purpose
Audience: Graduate

3. Produce a piece of scholarly writing in their own field of study within education that is of publication quality
Audience: Graduate

CURRIC/COM ARTS 914 – HOW GAMES CHANGE US
3 credits.

Video games can be powerful experiences that take us to new worlds, teach us about complex systems, and provoke a range of emotions. Games transform us while we play, and some of these changes can be hard to predict and understand. Games can disrupt our sense of self, reshape our pleasures and feelings, lead us to question deeply held values, and allow us to experience new forms of embodiment through an avatar. A growing body of research in game studies engages with this potential for expansive change by focusing on player experience from a variety of methodological perspectives, including phenomenological, feminist and queer theory, critical disability studies, learning sciences, ecocriticism, and media archeology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Devise, plan, and begin a research project in game studies.
Audience: Graduate

2. Articulate the disciplinary tenets and controversies of game studies and position your work in relation to other game scholars.
Audience: Graduate

3. Use strategic and purposeful reading methods to approach dense theoretical texts.
Audience: Graduate

4. Make clear and theoretically informed arguments about how a player is changed in the process of playing a game.
Audience: Graduate

5. Describe some of the common ways game designers have used the transformative potential of games and other design choices that have not been explored.
Audience: Graduate

CURRIC 916 – SMR: SPECIAL TOPICS IN RESEARCH & EVALUATION IN CURRICULUM & INSTRUCTION
3 credits.

In the past few decades, social thought and philosophy have provided alternative arguments and styles of reasoning in thinking about the history and sciences of education. Explores readings and the importance of this literature to education is in multiple layers; provides ways of thinking about difference outside of theories of representation and identity; embodies ways of engaging the knowledge of science and the political in schooling; provides alternative strategies for discourse analyses; problematizes the givenness of the subject of schooling as the object of change; (re)vises notions of materialism and power in understanding the effects of schooling; provides ways of thinking about knowledge and language as not merely an epiphenomena to structures; and historically explores the limits of theories of practice that are given as what is real and useful.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023

CURRIC/ENVIR ST 932 – FOUNDATIONS OF ENVIRONMENTAL AND SUSTAINABILITY EDUCATION
3 credits.

Education is often portrayed as a critical part of the solution to the intertwined problems of environment and society. Examines environmental education and related traditions such as nature study, conservation education, and outdoor education, as well as more recent movements such as place-based education and education for sustainability. Grounds discussions in concrete examples of educational practice, considers historical and contemporary critiques of environmental education.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022

CURRIC 943 – MOBILITY, LANGUAGE & EDUCATION
3 credits.

Engages in consideration of and deep dialog around cutting-edge theoretical approaches and framings to languages, literacies, mobility, communication, learning and teaching globally, and to show what different perspectives may offer to understandings of language-in-use across varied global educational and life contexts.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021

CURRIC/MUSIC 946 – PAST PERSPECTIVES ON MUSIC EDUCATION
3 credits.

Focus on analysis of music education in primary and secondary schools via examination of historical, philosophical, and psychological sources. Explore ideas that have shaped the field in the past and investigate the influence of these ideas on current thinking and practice.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the history of music education
Audience: Graduate

2. Articulate the concept of interest convergence and how it can apply to the history of music education
Audience: Graduate

3. Demonstrate ability to connect theory and practice in music educational approaches
Audience: Graduate

CURRIC 947 – CURRENT ISSUES IN MUSIC EDUCATION
3 credits.

An exploration of current issues facing music education and an examination of future directions for the field. Identify and investigate individual topics.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

CURRIC 950 – SEMINAR IN THE STUDY OF TEACHER EDUCATION
3 credits.

Examination of issues related to preservice teacher education and teacher education reform.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

CURRIC 964 – SEMINAR IN WORLD LANGUAGE EDUCATION
1-3 credits.

Develop a review of literature and a research project related to Second Language acquisition.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2020

CURRIC 975 – GENERAL SEMINAR
2-3 credits.

For the exploration of new frontiers.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

CURRIC 976 – SEMINAR IN READING
2-3 credits.

Series of advanced seminars on such topics as: diagnostic and remedial teaching; sociology of reading; developmental reading; linguistics in the teaching of reading; or others as designated.
Requisites: CURRIC 500 or 503
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2022

CURRIC 990 – DISSERTATION RESEARCH
1-12 credits.

Planning and completing a doctoral dissertation.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

CURRIC 991 – POST-SECONDARY TEACHING PRACTICUM
3 credits.

Opportunity to gain an understanding about the design and instruction of teacher education courses.
Requisites: Declared in Curriculum and Instruction PhD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

CURRIC 999 – DOCTORAL INDEPENDENT STUDY
1-3 credits.

Student-designed opportunity to explore a subject in depth.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

DAIRY SCIENCE (DY SCI)

DY SCI/AN SCI 101 – INTRODUCTION TO ANIMAL SCIENCES
3 credits.

An overview of animal sciences covering anatomy, physiology, nutrition, reproduction, genetics, management, animal welfare, and behavior of domesticated animals. Food animals are emphasized to discuss their contributions to humans.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate a uniform background of animal agriculture including animal growth, nutrition, reproduction, behavior, and breeds to facilitate learning in subsequent animal science courses
Audience: Undergraduate

2. Accurately use terminology associated with animal agriculture including but not limited to animals, management practices, industry, and equipment
Audience: Undergraduate

3. Identify major animal groups and breeds in the topic areas of companion, service, draft, food, and biomedical, their uses, and their care
Audience: Undergraduate

4. Critically analyze past, current, and future controversial issues in animal agriculture and demonstrate capacity for ethical reasoning and action
Audience: Undergraduate

5. Situate common contemporary animal production systems within the context of economic, social, and environmental sustainability
Audience: Undergraduate

6. Characterize the impacts of animal agriculture at global, national, regional, and local levels
Audience: Undergraduate

DY SCI/AN SCI 102 – INTRODUCTION TO ANIMAL SCIENCES LABORATORY
1 credit.

Hands-on experience and demonstrations to develop practical skills with animals and to better understand the application of science to food production animals. It covers anatomy, physiology, nutrition, reproduction, genetics, management, animal welfare, and behavior of domesticated animals.
Requisites: DY SCI/AN SCI 101 or concurrent enrollment
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall and summarize fundamental concepts in animal growth, nutrition, reproduction, and behavior to facilitate learning in subsequent animal science courses
Audience: Undergraduate

2. Accurately use terminology associated with animal agriculture including but not limited to animals, management practices, industry, and equipment
Audience: Undergraduate

3. Demonstrate proper handling, restraint, care, and management of food animals
Audience: Undergraduate

4. Identify anatomical parts of animal gastrointestinal and reproductive tracts, and explain the key functions of each part
Audience: Undergraduate

5. Classify common feedstuff and nutritional analysis used in the livestock industry
Audience: Undergraduate

6. Effectively engage in collaborative problem-solving and reflective practice
Audience: Undergraduate

7. Interpret and discuss scientific literature
Audience: Undergraduate

DY SCI 205 – DAIRY CATTLE IMPROVEMENT PROGRAMS
2 credits.

Dairy cattle evaluation and selection, including: linear type appraisal, dairy cattle judging, mating programs, breed comparisons, cattle marketing, and national genetic improvement programs.
Requisites: DY SCI/AN SCI 101
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate knowledge about the organizations that play major roles in the US dairy cattle genetics industry.
Audience: Undergraduate

2. Apply dairy cattle appraisal systems for evaluating functional conformation.
Audience: Undergraduate

3. Use dairy management scorecards that contribute to animal welfare and productivity.
Audience: Undergraduate

4. Identify characteristics associated with the North American dairy breeds and analyze their genetic progress.
Audience: Undergraduate

5. Recognize factors that influence dairy cattle values for merchandising and herd management purposes.
Audience: Undergraduate

6. Integrate herd level genetic improvement strategies, including corrective mating systems, to foster genetic progress and achieve producer goals.
Audience: Undergraduate

DY SCI 233 – DAIRY HERD MANAGEMENT I
3 credits.

Overview of practical dairy herd management with components of reproduction, nutrition, milk quality, raising dairy replacements, facilities and records. Laboratories emphasize practical applications, analyses of alternatives and decision making.
Requisites: DY SCI/AN SCI 101
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply dairy management terms and systems to real-world situations.
Audience: Undergraduate

2. Evaluate farm management practices using dairy industry benchmarks.
Audience: Undergraduate

3. Identify, formulate and solve dairy management related problems using appropriate information and approaches.
Audience: Undergraduate

4. Assess effective dairy herd management using dairy records.
Audience: Undergraduate

5. Work productively in teams to provide constructive input and leadership on dairy management related problems.
Audience: Undergraduate

6. Communicate effectively through written reports, oral presentations and discussions.
Audience: Undergraduate

DY SCI 234 – DAIRY HERD MANAGEMENT II
3 credits.

The second of a two course sequence designed as an overview of practical dairy herd management with components of animal welfare and handling, health, calf and heifer rearing, facilities and production economics. Laboratories emphasize practical applications, investigation of alternatives and decision making.
Requisites: DY SCI 233
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply dairy management terms and systems to real-world situations.
Audience: Undergraduate

2. Evaluate farm management practices using dairy industry benchmarks.
Audience: Undergraduate

3. Identify, formulate and solve dairy management related problems using appropriate information and approaches.
Audience: Undergraduate

4. Assess effective dairy herd management using dairy records.
Audience: Undergraduate

5. Work productively in teams to provide constructive input and leadership on dairy management related problems.
Audience: Undergraduate

6. Communicate effectively through written reports, oral presentations and discussions.
Audience: Undergraduate

DY SCI 289 – HONORS INDEPENDENT STUDY
1-2 credits.

Honors research work under direct guidance of a faculty member in an area of Dairy Science. Students are responsible for arranging the work and credits with the supervising instructor.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 1998
Learning Outcomes: 1. Demonstrate content knowledge and skills as signified in an honors project or scholarly honors work.
Audience: Undergraduate

2. articulate their honors experience to peers
Audience: Undergraduate

3. apply perspectives to composed work through engagement in academic experiences
Audience: Undergraduate

DY SCI 299 – INDEPENDENT STUDY
1-3 credits.

Individual introductory to intermediate work under direct guidance of a faculty member in an area of Dairy Science. Students are responsible for arranging the work and credits with the supervising instructor.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Summarize intellectual growth associated with independent study work through mentor discussion
Audience: Undergraduate

2. Identify diversity of viewpoints through critical thinking.
Audience: Undergraduate

3. Illustrate growth in reading, writing, and communication skills
Audience: Undergraduate

DY SCI/AN SCI/NUTR SCI 311 – COMPARATIVE ANIMAL NUTRITION
3 credits.

Nutrients and their assimilation, function, and interactions that affect metabolism in mammals. Differences among species will be used to emphasize unique digestive and physiological functions and how these differences affect metabolism of nutrients. Humans will be used in some comparisons. Follows physiological progression of nutrients, starting with an overview of the digestive tract followed by water and builds on specific roles of nutrients and substrates needed to provide basic processes required for maintenance, tissue accretion, and homeostatic regulation of nutrients.
Requisites: CHEM 341, 343, (BIOCHEM 301 or concurrent enrollment), or (BIOCHEM 501 or concurrent enrollment)
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recall and summarize the cellular, tissue, and whole-body metabolism and function of nutrients
Audience: Undergraduate

2. Identify key elements of digestive anatomy that enable digestion and absorption of consumed nutrients
Audience: Undergraduate

3. Explain the physiological processes required for assimilation of consumed macro- and micro-nutrients
Audience: Undergraduate

4. Compare the similarities and differences in nutritional and metabolic strategies across species
Audience: Undergraduate

5. Evaluate the interactions between nutrients, animals, environment, physiological status, and functions and integrate these interactions to understand whole-animal nutrition
Audience: Undergraduate

DY SCI/AN SCI 320 – ANIMAL HEALTH AND DISEASE
3 credits.

Provides an introduction to and exploration of the interconnectivity between factors that affect health and disease and the central role of the immune system using infectious disease in animals as a key focus. Explores principal causes and identification of animal diseases, common diseases of farm animals, zoonoses and public health, disease prevention and management including biosecurity measures and host immune responses. Fosters appreciation for the translatability and universality of knowledge between human and animal health and disease.
Requisites: ZOOLOGY/BIOLOGY/BOTANY 151, (ZOOLOGY/BIOLOGY 101 and 102), BIOCORE 383, or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the interconnectivity and interdependence between factors that influence health and disease
Audience: Both Grad & Undergrad

2. Discuss fundamental biological and scientific concepts valuable for a career in animal agriculture, veterinary medicine, human medicine or biomedical animal research
Audience: Both Grad & Undergrad

3. Translate novel knowledge of health and disease in one species to another
Audience: Both Grad & Undergrad

4. Integrate concepts covered in the course and explore in depth how they are relevant to a specific challenge currently faced in animal health or disease.
Audience: Graduate

DY SCI/AN SCI 361 – INTRODUCTION TO ANIMAL AND VETERINARY GENETICS
2 credits.

The molecular basis for inheritance of monogenic and polygenic traits related to animal disease and production. An introduction to the principles of improving animal health and performance by selection and mating systems in companion animals, horses, livestock, and poultry.
Requisites: ZOOLOGY/BIOLOGY/BOTANY 151, (ZOOLOGY/BIOLOGY 101 and 102), or (BIOCORE 382, 383, and 384) or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Retrieve, analyze and interpret gene and genomic data for species conservation, genetic variants and gene function
Audience: Both Grad & Undergrad

2. Apply genotype data to determination of animal parentage and mapping of variants underlying genetic variation for animal traits
Audience: Both Grad & Undergrad

3. Articulate knowledge of methods used to discover and modify genetic information for purposes of altering phenotypes
Audience: Both Grad & Undergrad

4. Identify the key components of the basic genetic model describing the expression of phenotypic traits
Audience: Both Grad & Undergrad

5. Explain the four forces that change gene frequency: selection, drift, mutation and migration
Audience: Both Grad & Undergrad

6. Calculate and interpret the coe#cients of a simple linear regression to determine the expected genetic change from phenotypic selection
Audience: Both Grad & Undergrad

7. Calculate the detection probability of a recessive genotype for some simple mating systems
Audience: Both Grad & Undergrad

8. Examine opportunities for genetic improvement of a trait in a species of interest using knowledge gained in the course, comparing alternative strategies and expected outcomes with the results of their analysis
Audience: Graduate

DY SCI/AN SCI 362 – VETERINARY GENETICS
2 credits.

The genetic basis for predisposition to disease or resistance to disease in livestock and companion animal species. Genetic defects, their discovery, diagnosis and treatment.
Requisites: DY SCI/AN SCI 361 or concurrent enrollment
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Evaluate critically the primary literature in the genetic variants and their role in animal phenotypes and disease
Audience: Both Grad & Undergrad

2. Describe how gene x environment interactions affect gene expression and how these effects can be transmitted to the next generations
Audience: Both Grad & Undergrad

3. Use animal biotechnology knowledge and biomedical models to design experiments to treat animal diseases and alter phenotypes
Audience: Both Grad & Undergrad

4. Explain the processes by which epigenetic marks regulate gene expression and how these marks can be manipulated
Audience: Both Grad & Undergrad

5. Generate a hypothesis from a set of observations related to the genetic basis of animal production and then design experiments to test the hypothesis
Audience: Graduate

DY SCI/AN SCI 363 – PRINCIPLES OF ANIMAL BREEDING
2 credits.

Application of the principles of quantitative genetics to the improvement of livestock and poultry; breeding value estimation and selection techniques; effects of inbreeding and hybrid vigor; crossbreeding systems.
Requisites: DY SCI/AN SCI 361 or concurrent enrollment
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Calculate and interpret the values of narrow and broad sense herdabilities as well as repeatability of quantitative traits given their genetic and environmental variance components
Audience: Both Grad & Undergrad

2. Apply additive and multiplicative adjustments on phenotypic traits to correct for environmental effects
Audience: Both Grad & Undergrad

3. Interpret key components of sire summaries
Audience: Both Grad & Undergrad

4. Calculate expected correlated response to selection
Audience: Both Grad & Undergrad

5. Calculate retained hybrid vigor for various crossbreeding schemes in livestock
Audience: Both Grad & Undergrad

6. Perform quantitative genetic analysis of family data using linear regression and analysis of variance techniques
Audience: Graduate

DY SCI/AN SCI 370 – LIVESTOCK PRODUCTION AND HEALTH IN AGRICULTURAL DEVELOPMENT
3 credits.

Physical, biological and social nature of animal agriculture systems and their improvement in developing countries; analysis of the state of livestock research and development in the developing countries and the world role of U.S. animal agriculture.
Requisites: DY SCI/AN SCI 101, ZOOLOGY/BIOLOGY/BOTANY 151, ZOOLOGY/BIOLOGY 101, or (BIOCORE 381 and 382), or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Describe the physical, biological and social nature of animal agriculture and its improvement in developing countries.
Audience: Both Grad & Undergrad

2. Analyze the constraints to improving livestock production on resource poor farms in developing countries.
Audience: Both Grad & Undergrad

3. Demonstrate knowledge about institutional infrastructures involved in research, education, and development projects in animal agriculture.
Audience: Both Grad & Undergrad

4. Develop skills needed to analyze and project strategies for improvement of a a production system in a developing country.
Audience: Graduate

DY SCI/AN SCI 373 – ANIMAL PHYSIOLOGY
3 credits.

Covers physiological processes that regulate the body and the anatomy and function of different physiological systems. Includes interactions between organ systems, analysis of a single organ system from the molecular to the organismal, and comparisons and contrasts of organ systems among different domestic animal species.
Requisites: ZOOLOGY/BIOLOGY/BOTANY 151, (ZOOLOGY/BIOLOGY 101 and 102), or BIOCORE 383
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Integrate the physiological processes that regulate the body of different animal species (largely domestic animals and humans)
Audience: Undergraduate

2. Synthesize the regulation of an organ system from the molecular level all the way to the whole animal level and apply knowledge of a physiological mechanism to explain how a whole animal physiological process occurs
Audience: Undergraduate

3. Integrate interactions between different organ systems (homeostasis) and explain the anatomy of different physiological systems and their specific functions
Audience: Undergraduate

4. Determine how changes in internal or external environment will alter physiologic processes to deal with these changes
Audience: Undergraduate

5. Determine how changes in one physiological system may impact a different physiological system
Audience: Undergraduate

6. Describe similarities and differences in physiologic systems between animal species (with emphasis on domestic animals and humans)
Audience: Undergraduate

DY SCI 375 – SPECIAL TOPICS
1-4 credits.

Various topics in Dairy Science of current interest to undergraduate students.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Explain concepts and processes related to specific topics in Dairy Science
Audience: Undergraduate

2. Integrate and apply knowledge to understand issues associated with in Dairy industry
Audience: Undergraduate

3. Synthesize scientific literature to develop critical thinking skills
Audience: Undergraduate

DY SCI 378 – LACTATION PHYSIOLOGY
3 credits.

Focuses on lactation physiology across mammalian species. Structure and function of mammary glands; hormonal control of mammary development and lactation; cellular mechanisms of milk synthesis; the chemistry of milk synthesis; mastitis and other abnormalities of mammary functions.
Requisites: (BIOCHEM 301, 501, BMOLCHEM 314, or concurrent enrollment) and (ZOOLOGY/BIOLOGY 101 and 102), ZOOLOGY/BIOLOGY/BOTANY 151, or (BIOCORE 382, 383, and 384), or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain mammary gland macro- and microanatomy and physiology
Audience: Undergraduate

2. Distinguish mammary gland development (in utero all the way through the lactation cycle)
Audience: Undergraduate

3. Explain the mechanisms governing mammalian milk synthesis and secretion
Audience: Undergraduate

4. Articulate the distinctive roles of systemic (i.e., hormonal) and local (i.e., autocrine) factors governing lactation and mammary gland development
Audience: Undergraduate

5. Discriminate components management interventions that might comprise or potentiate milk production in dairy cattle
Audience: Undergraduate

6. Assess the diseases that affect the mammary gland (i.e., mastitis) and learn proper milking routines to ensure high quality milk standard and welfare of dairy cattle
Audience: Undergraduate

7. Formulate a position on a research topic of societal debate using scientific literature and popular media
Audience: Graduate

8. Audit common dairy practices by evaluating the primary literature critically and using research-based knowledge acquired in class.
Audience: Graduate

DY SCI 399 – COORDINATIVE INTERNSHIP/COOPERATIVE EDUCATION
1-8 credits.

An internship under guidance of a faculty or instructional academic staff member in Animal and Dairy Sciences and internship site supervisor. Students are responsible for arranging the work and credits with the faculty or instructional academic staff member and the internship site supervisor.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Workplace - Workplace Experience Course
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Establish a network of mentors to support academic and professional growth
Audience: Undergraduate

2. Develop and illustrate specialized skills relevant to the focus of study associated with internship program
Audience: Undergraduate

3. Differentiate a diversity of disciplinary approaches and viewpoints in the agriculture industry
Audience: Undergraduate

DY SCI 400 – STUDY ABROAD IN DAIRY SCIENCE
1-6 credits.

Provides an area equivalency for courses taken on Madison Study Abroad Programs that do not equate to existing UW courses.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions

DY SCI/AN SCI 414 – RUMINANT NUTRITION & METABOLISM
3 credits.

Integrates nutritional and biochemical concepts to understand digestive and metabolic processes in dairy and beef cattle, which are then quantitatively represented to predict and manipulate production and health outcomes.
Requisites: DY SCI/AN SCI/NUTR SCI 311, (BIOCHEM 301 or 501) or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Integrate nutritional and biochemical concepts to understand digestion and metabolism of nutrients.
Audience: Both Grad & Undergrad

2. Predict quantitative metabolic and production outcomes in ruminants.
Audience: Both Grad & Undergrad

3. Determine the role of metabolism in feed efficiency, animal production and health, and environmental load of ruminant production systems.
Audience: Both Grad & Undergrad

4. Investigate, interpret, summarize, and debate findings from scientific literature in order to develop and communicate recommendations for ruminant diets to identified audiences.
Audience: Both Grad & Undergrad

5. Apply research models to experimental and production data to predict metabolic outcomes
Audience: Graduate

DY SCI/AN SCI 434 – REPRODUCTIVE PHYSIOLOGY
3 credits.

Principles of reproductive physiology, improvement of fertility, and artificial insemination.
Requisites: ZOOLOGY/BIOLOGY/BOTANY 152, (ZOOLOGY/BIOLOGY 101 and 102) or (BIOCORE 382, 383, and 384) or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify structures and function of reproductive anatomy in the male and female of all livestock species, humans, pets and wildlife
Audience: Both Grad & Undergrad

2. Identify hormones, their production site, physiology impacts and how to manipulate specific hormones to control reproduction either positively or negatively
Audience: Both Grad & Undergrad

3. Summarize critical components of reproductive technologies involved in breeding, semen collection, gamete biology and embryonic development. Demonstrate ability to monitor and manipulate cyclicity, artificial insemination, and pregnancy detection in both horses and pigs
Audience: Both Grad & Undergrad

4. Summarize events in reproduction from the cellular to whole animal level in livestock species, humans, pet species and wildlife
Audience: Both Grad & Undergrad

5. Communicate via oral, written, podcast, and website modalities
Audience: Both Grad & Undergrad

6. Solve reproductive physiology problems associated with a foreign country or novel region of U.S. including how to digitally communicate with local residents who may not speak English
Audience: Both Grad & Undergrad

7. Identify how ethical issues in global agriculture, wildlife management, and federal grazing lands impact reproductive management of livestock
Audience: Both Grad & Undergrad

8. Evaluate effective learning outcomes of a specific lab and access its impact on undergraduate students
Audience: Graduate

DY SCI 448 – DAIRY CHALLENGE
1 credit.

Analyze dairy farm management systems, apply industry benchmarks, and make informed recommendations. Work in small teams to perform a case study and a strengths, weaknesses, opportunities, and threats (SWOT) analysis on a commercial dairy farm.
Requisites: Consent of instructor
Repeatable for Credit: No

DY SCI 471 – FOOD PRODUCTION SYSTEMS AND SUSTAINABILITY
3 credits.

Delves into aspects of natural sciences (biology and agricultural sciences) and social sciences underpinning the assessment of food production systems as related to a variety of outcomes including but not restricted to human and environmental health, air and water quality, greenhouse gases emission, land use, economic opportunity, social justice, as well as mitigation and adaptation to climate change, locally, regionally, domestically, across continents, and globally.
Requisites: (Graduate/professional standing) or junior standing and satisfied Quantitative Reasoning (QR) B requirement
Course Designation: Breadth - Either Biological Science or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain the social, economic, and/or environmental dimension ofsustainability challenges associated with food production systems.
Audience: Both Grad & Undergrad

2. Evaluate food production systems for their contribution to, mitigation potential of, and adaption to climate change.
Audience: Both Grad & Undergrad

3. Identify ways in which social structures profoundly affect not only people, but also biology, ecology, and our very climate. And the complement: how people's race/class/gender/occupation/nation status within the global social structure, as well as the nature of the global social structure itself, profoundly impacts their ability to cope with changing climate.
Audience: Both Grad & Undergrad

4. Critically evaluate the scientific literature and other sources of information related to the sustainability of food systems.
Audience: Both Grad & Undergrad

5. Analyze the causes of and solutions for the sustainability of food production,distribution, marketing, consumption, and waste disposal.
Audience: Both Grad & Undergrad

6. Develop analytical and problem#solving skills individually and in teams ofclassmates with diverse worldviews.
Audience: Both Grad & Undergrad

7. Communicate effectively information to multiple audiences through multiple medias
Audience: Both Grad & Undergrad

8. Develop an aptitude for working with mixed teams including undergraduatestudents
Audience: Graduate

9. Demonstrate research and writing skills to produce academically rigorousliterature reviews
Audience: Graduate

DY SCI/AN SCI/FOOD SCI/SOIL SCI 472 – ANIMAL AGRICULTURE AND GLOBAL SUSTAINABLE DEVELOPMENT
1 credit.

Examines issues related to global agriculture and healthy sustainable development. Using a regional approach and focusing on crops and livestock case studies, students will learn the interdependence between US agriculture and agriculture in emerging economies. Some topics covered include population and food, immigration, the environment; crop and livestock agriculture; global trade; sustainability; food security, the role of women in agriculture, and the role of dairy products in a healthy diet.
Requisites: None
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Apply sustainability principles and/or framework to addressing the challenge of feeding an increasing world population sustainably.
Audience: Undergraduate

2. Define and characterize sustainability, sustainable agriculture and Sustainable Development
Audience: Undergraduate

3. Analyze the contributions of animal agriculture to the Sustainable Development Goals both in developing and developed countries.
Audience: Undergraduate

4. Explain the social, economic, and/or environmental dimensions of the sustainability challenges of diverse animal agricultural systems both in developing and developed countries.
Audience: Undergraduate

5. Evaluate the role of livestock in communities where poverty, hunger and marginalization are embedded as a way of life.
Audience: Undergraduate

6. Critically evaluate the causes of —and ways to break— the chains of hunger and poverty among the poorest of the poor.
Audience: Undergraduate

DY SCI/AN SCI/FOOD SCI/SOIL SCI 473 – INTERNATIONAL FIELD STUDY IN ANIMAL AGRICULTURE AND SUSTAINABLE DEVELOPMENT
2 credits.

Examines issues related to global agriculture and healthy sustainable development. Using a regional approach and focusing on crops and livestock case studies, students will learn the interdependence between US agriculture and agriculture in emerging economies. Some topics covered include population and food, immigration, the environment; crop and livestock agriculture; global trade; sustainability; and the role of women in agriculture and the role of dairy products in a healthy diet.
Requisites: DY SCI/AN SCI/FOOD SCI/SOIL SCI 472
Repeatable for Credit: No
Learning Outcomes: 1. Improve communication and interpersonal skills associated with participating in team-based intercultural experiences
Audience: Undergraduate

2. Be better prepared for professional success in an interconnected world by navigating unfamiliar cultural norms and societal differences
Audience: Undergraduate

3. Reflect on US-centric personal and cultural values while building an appreciation and respect for the Latin America culture.
Audience: Undergraduate

4. Explain the social, economic, and/or environmental dimensions of the sustainability challenge of alleviating poverty and malnutrition in Mexico
Audience: Undergraduate

5. Apply sustainability principles and/or framework to addressing the challenge of fostering prosperity in marginalized indigenous communities
Audience: Undergraduate

6. Analyze both from their own disciplinary lens and from an interdisciplinary lens the contributions of dairy farming to the Sustainable Development Goals
Audience: Undergraduate

7. Evaluate the sustainability of subsistence, market-oriented, and industrial-scale farming systems
Audience: Undergraduate

DY SCI 534 – REPRODUCTIVE MANAGEMENT OF DAIRY CATTLE
3 credits.

Provides the technical knowledge and practical skills to design and execute an effective reproductive management program for dairy cattle. Study key reproductive physiology and practical research results that underlie reproductive management programs. Participate in hands-on laboratories to learn, practice, and demonstrate practical reproductive management techniques including: semen handling, artificial insemination, and ultrasound of ovaries and uterus.
Requisites: DY SCI/AN SCI 434
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Identify female reproductive tract structures, reproductive hormones, and know the changes during the estrous cycle
Audience: Both Grad & Undergrad

2. Design a reproductive management program for cows or heifers
Audience: Both Grad & Undergrad

3. Identify use of different pregnancy diagnosis procedures in a reproductive management program
Audience: Both Grad & Undergrad

4. Evaluate reproductive efficiency in dairy farms. Design new reproductive management programs based on evaluation of farm data
Audience: Both Grad & Undergrad

5. Design and execute a superovulation program
Audience: Both Grad & Undergrad

6. Describe process used for artificial insemination of dairy cattle
Audience: Both Grad & Undergrad

7. Describe and interpret an ultrasound of the ovaries and uterus of dairy cattle.
Audience: Graduate

8. Complete a research project using ultrasound
Audience: Graduate

DY SCI 535 – DAIRY FARM MANAGEMENT PRACTICUM
3 credits.

Principles of nutrition, breeding, reproduction, and management at the farm level are integrated. Develop skills in decision making, information gathering, problem solving, and interpersonal communication through field trips to working commercial dairy operations.
Requisites: DY SCI 234 or GRAD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify, formulate and solve problems using appropriate information and approaches
Audience: Both Grad & Undergrad

2. Communicate effectively through written reports, oral presentations and discussions
Audience: Both Grad & Undergrad

3. Work effectively in teams to provide constructive input and leadership on dairy management related problems
Audience: Both Grad & Undergrad

4. Evaluate farm management and performance using dairy industry benchmarks
Audience: Both Grad & Undergrad

5. Demonstrate an understanding of business concepts and thinking
Audience: Both Grad & Undergrad

6. Synthesize knowledge and apply peer reviewed research to solve dairy management problems
Audience: Graduate

DY SCI 681 – SENIOR HONORS THESIS
2-4 credits.

Individual study for majors completing theses for Honors degrees as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Develop objectives and formulate hypothesis into experimental methods
Audience: Undergraduate

2. Participate in a supportive community of academically engaged peers
Audience: Undergraduate

3. Develop a research proposal and implement research project under supervision of an honors faculty mentor
Audience: Undergraduate

4. Demonstrate intellectual curiosity through engagement in challenging academic experiences
Audience: Undergraduate

DY SCI 682 – SENIOR HONORS THESIS
2-4 credits.

Second semester of individual study for majors completing theses for Honors degrees as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate advanced content knowledge as reflected in an honors thesis, publication, performance, or scholarly work.
Audience: Undergraduate

2. Articulate the value of the honors experience to peers and to a broader community
Audience: Undergraduate

DY SCI 699 – SPECIAL PROBLEMS
1-3 credits.

Individual advanced work in an area of Dairy Sciences under the direct guidance of a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Integrate and apply knowledge to understand issues associated with in Dairy industries or associated with animal scientific research
Audience: Undergraduate

2. Develop and illustrate specialize skills relevant to a focused body of work associated with a specific learning experience
Audience: Undergraduate

3. Report findings through divers means of communication
Audience: Undergraduate

4. Summarize intellectual growth associate with independent study work
Audience: Undergraduate

DY SCI 799 – PRACTICUM IN DAIRY SCIENCE TEACHING
1-3 credits.

Instructional orientation to teaching at the higher eductation level in the agricultural and life sciences, direct teaching experience under faculty supervision, experience in testing and evaluation of students, and the analysis of teaching performance.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate learning goals of the practicum separately from the main educational goals of the course in which the practicum takes place.
Audience: Graduate

2. Gain experience in creating, revising, critiquing course syllabi, that is, get firsthand experience in developing course requirements and policies
Audience: Graduate

3. Develop a strategy process to align course materials and course assignments with course objectives.
Audience: Graduate

4. Practice teaching under distinct instructional modalities; lecture vs discussion vs labs; synchronous vs asynchronous remote instruction
Audience: Graduate

5. Prepare and implement lesson plans of a class period, a week of instruction, or a module of the class
Audience: Graduate

6. Acquire classroom management skills including how to deliver content, lead a discussion, handle questions and answers
Audience: Graduate

7. Develop both formative and summative evaluation instruments to gain feedback on how to assess and improve the teaching and learning process
Audience: Graduate

DY SCI/AN SCI 824 – RUMINANT NUTRITIONAL PHYSIOLOGY I
4 credits.

Focuses on rumen microbiology, metabolite modeling, as well as protein and VFA nutrition and metabolism.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Assess source, digestion, absorption, utilization, and metabolism of nutrients in ruminants
Audience: Graduate

2. Integrate concepts of carbon and nitrogen tracing and flux through ruminant body systems
Audience: Graduate

3. Develop a command of modeling nutrient flux through tissues and be able to apply and extrapolate concepts to nutrient utilization and tracing methodology
Audience: Graduate

4. Clearly communicate the conceptual basis, assumptions, and limitations of techniques and methodology necessary to quantify digestive and metabolic processes
Audience: Graduate

5. Evaluate nutritional recommendations and current topics in ruminant nutrition
Audience: Graduate

DY SCI/AN SCI 825 – RUMINANT NUTRITIONAL PHYSIOLOGY II
4 credits.

Focuses on calf and heifer nutrition, regulation of dry matter intake, plant and forage chemistry, vitamins, lipids, and starch.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Assess source, digestion, absorption, utilization, and metabolism of nutrients in ruminants
Audience: Graduate

2. Integrate concepts of carbon and nitrogen tracing and flux through ruminant body systems
Audience: Graduate

3. Develop a command of modeling nutrient flux through tissues and be able to apply and extrapolate concepts to nutrient utilization and tracing methodology
Audience: Graduate

4. Clearly communicate the conceptual basis, assumptions, and limitations of techniques and methodology necessary to quantify digestive and metabolic processes
Audience: Graduate

5. Evaluate nutritional recommendations and current topics in ruminant nutrition
Audience: Graduate

DY SCI 875 – SPECIAL TOPICS
1-4 credits.

Specialized subject matter of current interest to graduate students.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024
Learning Outcomes: 1. Analyze and critique research results, interpretations and proposals
Audience: Graduate

2. Articulate critical thinking and knowledge about the significance of current research in the fields of animal and dairy science by presenting and/or critiquing scientific presentations
Audience: Graduate

DY SCI 900 — SEMINAR
1 credit.

Comprehensive reviews of research aimed at broadening understanding of dairy science.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze and critique research results, interpretations and proposals
Audience: Graduate

2. Articulate critical thinking and knowledge about the significance of current research in the fields of animal and dairy science by presenting and/or critiquing scientific presentations
Audience: Graduate

DY SCI/AN SCI 931 — SEMINAR IN ANIMAL NUTRITION
1 credit.

Discussion of literature that has a bearing on animal nutrition. Students are to survey the literature and present a seminar.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

DY SCI/AN SCI/GENETICS 951 — SEMINAR IN ANIMAL BREEDING
0-1 credits.

Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020

DY SCI 990 — RESEARCH
1-12 credits.

Independent research in preparation of a graduate thesis under supervision of a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

DANCE (DANCE)

DANCE 100 — UNDERSTANDING DANCE
1 credit.

Builds understanding and appreciation for the field of Dance. Delves into dance and its' many facets, integrating, theoretical, historical, and embodied learning through viewing, reading, reflecting, discussing and finally, creating. Develops students into an informed audience and encourages relevance to other disciplines.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

DANCE 101 — SOCIAL DANCE I
1 credit.

Introduction to basic movement concepts and skills involved in social dancing. Covers the fundamental skills in leading and following, rhythm, and style of the Waltz, Fox Trot, Jitterbug/Swing, Tango, and Cha-Cha. Many social dance forms require that participants work in pairs, which will switch throughout the semester. Other dances may be explored.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop awareness of proper body alignment and its relationship to efficient and coordinated movement
Audience: Undergraduate

2. Develop the rhythmic skills needed to move accurately with the specific rhythmic structure of dance and music forms
Audience: Undergraduate

3. Develop competency in performing the basic social dance steps and variations presented in class.
Audience: Undergraduate

4. Develop "leading and following" skills and performance in each designated role
Audience: Undergraduate

5. Develop and apply a proper social dance style and technique
Audience: Undergraduate

6. Develop confidence in the ability to dance socially outside the classroom situation
Audience: Undergraduate

DANCE 102 – SOCIAL DANCE II
1 credit.

Improves and expands social dance skills. Covers the fundamental skills in leaning and following, rhythm, and style of the Fox Trot, Jitterbug/Swing, Waltz, Cha-Cha, Tango, Rumba, Merengue, and Polka. Other social dances may be explored.
Requisites: DANCE 101
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Improve style and rhythm.
Audience: Undergraduate

2. Learn to manipulate rhythm in a dance.
Audience: Undergraduate

3. Increase social dance vocabulary.
Audience: Undergraduate

4. Gain ability to adapt to various tempos and types of music.
Audience: Undergraduate

5. Increase confidence in the ability to create dance steps.
Audience: Undergraduate

6. Create notations for recording learned and original dance steps.
Audience: Undergraduate

7. Translate skills to social dance settings outside of the classroom.
Audience: Undergraduate

8. Share knowledge with community.
Audience: Undergraduate

DANCE 103 – MODERN JAZZ DANCE
1 credit.

Introduction to Modern Jazz Dance with emphasis on practical application, including center work, traveling, and memorized movement sequences.
Requisites: None
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Exhibit a basic knowledge of modern jazz techniques and vocabulary.
Audience: Undergraduate

2. Show physical development of strength, flexibility, and endurance.
Audience: Undergraduate

3. Increase spatial awareness, definition and execution of line and form, and rhythmical acuity/musicality.
Audience: Undergraduate

4. Learn to prevent injuries while participating in dance and other physical activities.
Audience: Undergraduate

5. Demonstrate ability to understand and employ self-evaluation skills
Audience: Undergraduate

6. Display an understanding of the discipline, motivation, and concentration.
Audience: Undergraduate

7. Display self-awareness and confidence.
Audience: Undergraduate

DANCE 105 – BALLET I
1 credit.

Emphasizes the study and practice of the fundamental principles of Ballet technique and exploration of the body as a creative and expressive instrument. Movement based experiential learning.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Increase the understanding of concepts fundamental to Ballet technique.
Audience: Undergraduate

2. Apply Anatomy and Biomechanics to alignment, efficiency, safety, and aesthetic line in the art form of Ballet.
Audience: Undergraduate

3. Practice evaluation and critique of movement execution.
Audience: Undergraduate

4. Perform movement qualities with clarity.
Audience: Undergraduate

5. Build speed, strength, fluidity, and flexibility in the execution of movement.
Audience: Undergraduate

6. Demonstrate a working vocabulary and technical skills for further study of Ballet technique.
Audience: Undergraduate

DANCE 106 – BALLET II
1 credit.

Emphasizes the study and practice of the fundamental principles of Ballet technique and exploration of the body as a creative and expressive instrument.
Requisites: None
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate understanding of concepts fundamental to Ballet technique.
Audience: Undergraduate

2. Apply Anatomy and Biomechanics concepts to alignment, efficiency, safety, and aesthetic line in the art form of Ballet.
Audience: Undergraduate

3. Evaluate and critique movement execution.
Audience: Undergraduate

4. Perform movement qualities with clarity.
Audience: Undergraduate

5. Demonstrate speed, strength, fluidity, and flexibility in the execution of movement.
Audience: Undergraduate

6. Learn a working vocabulary and technical skill for further study of Ballet technique.
Audience: Undergraduate

DANCE 107 – CONTEMPORARY DANCE I
1 credit.

Emphasizes the study and practice of the Contemporary dance technique and exploration of the body as a creative and expressive instrument capable of gaining new understanding through the art of dance.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop an appreciation and understanding of dance as an art form
Audience: Undergraduate

2. Develop an understanding and awareness of the body's movement potential
Audience: Undergraduate

3. Increase movement efficiency and expressiveness as individual dance artists
Audience: Undergraduate

4. Explore varying elements of dance and how to manipulate and/or utilize those elements for creative and expressive communication
Audience: Undergraduate

DANCE 108 – CONTEMPORARY DANCE II
1 credit.

Emphasizes the study and practice of the Contemporary dance technique and exploration of the body as a creative and expressive instrument capable of gaining new understanding through the art of dance.
Requisites: None
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate understanding of concepts fundamental to Contemporary dance technique.
Audience: Undergraduate

2. Manipulate the elements of dance for creative and expressive communication and understanding: space, time, force/energy/movement qualities
Audience: Undergraduate

3. Develop personal expression and group awareness through movement
Audience: Undergraduate

4. Increase the body's facility for health and expression
Audience: Undergraduate

5. Apply a working vocabulary and technical skills for further study of Contemporary technique; a survey of Contemporary Dance Technique Principles.
Audience: Undergraduate

6. Apply basic skills: basic locomotion, simple pathways, and direction changes.
Audience: Undergraduate

DANCE 110 – WORKSHOP IN DANCE ACTIVITY
1-2 credits.

Explores the creative and expressive aspects of dance movement. Develops technical skills and creative ability through whole body work on flexibility, strength, alignment, endurance, movement and improvisation. Develops appreciation of dance as an art form.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Gain awareness of Contemporary Dance as an expressive art form.
Audience: Undergraduate

2. Develop Contemporary Dance techniques.
Audience: Undergraduate

3. Manipulate the elements of dance for creative and expressive communication: space, time, force/energy/movement qualities.
Audience: Undergraduate

4. Develop personal expression and group awareness through movement.
Audience: Undergraduate

5. Gain skills for improvising with movement.
Audience: Undergraduate

6. Increase the body's facility for health and expression through Bartenieff's Six Body Connectivity Patterns.
Audience: Undergraduate

7. Learn a working vocabulary and technical skills for further study of Contemporary technique.
Audience: Undergraduate

8. Apply basic skills in Contemporary Dance, including basic locomotion, simple pathways, and direction changes.
Audience: Undergraduate

DANCE 111 – CONTEMPORARY DANCE TECHNIQUE AND THEORY I
1-3 credits.

Level I Core course in technique. Study and practice of the fundamental principles of contemporary dance technique and theory. Exploration of the body as a creative and expressive instrument. Audition at first class meeting determines course eligibility and placement.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

DANCE 112 – CONTEMPORARY DANCE TECHNIQUE AND THEORY II
1-3 credits.

Level I Core course in technique. Study and practice of the fundamental principles of contemporary dance technique and theory. Exploration of the body as a creative and expressive instrument. Audition at first class meeting determines course eligibility and placement.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

DANCE 115 – HIP-HOP DANCE TECHNIQUE AND THEORY 1
1-2 credits.

Provides an introduction to foundational movement technical knowledge necessary to perform Hip-Hop dance safely with form and skill. Introduces the theory, practice, aesthetics, and historical foundations of hip-hop dance. Hip-Hop dance is an artistic manifestation of Hip-Hop culture with dances and movement activities related to histories and philosophies as well as improvisatory states of expression. Engage with the history, theory and philosophy surrounding the dance vocabulary, which directly impacts the physical intelligence of the dancer. Explore the roots of funk and Hip-Hop dance in the social fabric of African, Caribbean, and Afro-Latin cultures while examining reinventions of ragtime, swing, and rock n' roll throughout the 20th and 21st centuries in America.
Requisites: None
Repeatable for Credit: Yes, for 2 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate sound knowledge of Hip-Hop/funk vocabulary with technical clarity and rhythmic accuracy - use technical approaches to encourage safe and efficient movement articulation
Audience: Undergraduate

2. Demonstrate knowledge and understanding of terminology and historical foundation of technique and codified language in Hip-Hop/funk movement vocabulary
Audience: Undergraduate

3. Develop interpretation and communication skills as a dance artist. Use African aesthetics hip hip/funk vocabulary to develop personal artistry through improvisation
Audience: Undergraduate

4. Explain the deep-rooted structure and retention of language, music and movement in the African Diaspora
Audience: Undergraduate

DANCE 118 – AFRICAN DANCE
1 credit.

Technique and practice of several basic African dance forms with study of their musical, historical and cultural contexts.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

DANCE/ASIAN AM 121 – ASIAN AMERICAN MOVEMENT
3 credits.

Techniques of exercises and movement forms derived from several Asian cultures as taught in the United States. Studied in the context of the construction and expression of ethnic and cultural identity.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

DANCE 125 – BALLET TECHNIQUE I
1-2 credits.

Introduction to basic skills and terminology; includes barrework, center work, petit allegro, grand allegro; focus on form, kinesthetic principles and aesthetic values.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

DANCE 126 – BALLET TECHNIQUE I-B
1-2 credits.

Level I Core continued expanding terminology, further developing barre work, center work, petit allegro, grand allegro; focus on form, kinesthetic principles and aesthetic values.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate technical specificity, musicality and artistic confidence in ballet technique through sequenced skill level progressions
Audience: Undergraduate

2. Demonstrate growth in theoretic, performance, and creative work through reflective and critical assessment approaches
Audience: Undergraduate

DANCE 131 – SOMATIC THEORY AND PRACTICES
2 credits.

Integration of body and mind is explored through various somatic practices.
Requisites: None
Repeatable for Credit: No
Last Taught: Spring 2025

DANCE 132 – WORKSHOP IN BODY STUDIES AND PRACTICES
1 credit.

A laboratory in mind-body practice. Topics titles reflect the type of body practices or modalities covered. Each specific practice focuses on increased bodily awareness and function for the performing artist. Includes movement practices, readings, discussion, writing assignments, videos and performances/lectures.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

DANCE 133 – RELAXATION TECHNIQUES FOR EMBODIMENT AND STRESS MANAGEMENT
1 credit.

Study and practice of neuro-muscular relaxation, self-regulation, focus/concentration, stress/anxiety management, and body awareness. Exploration of the body as a creative tool to facilitate ease of movement and flexible approaches to stressors.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop an ability to consciously achieve a deep state of muscular relaxation.
Audience: Undergraduate

2. Cultivate ease of movement and maintain or improve flexibility.
Audience: Undergraduate

3. Develop awareness of the stress response on overall functioning and techniques for maximizing ability to deal with it positively.
Audience: Undergraduate

4. Learn and understand the basic principles of neuro-muscular relaxation, flexibility and the physiology of stress.
Audience: Undergraduate

5. Learn multiple methods of relaxation and through exploration find the techniques that work best.
Audience: Undergraduate

6. Develop and utilize a stress management plan and a regular practice of relaxation and movement.
Audience: Undergraduate

DANCE 135 – PILATES MAT I
1 credit.

Pilates is a physical conditioning program that creates balance, improves posture, decompresses joints and creates elongated, toned muscles. The exercises focus on core strength, breath, and a flexible spine. Incorporates Level I-III Mat exercises. Explore functional anatomy and imagery-based alignment.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

DANCE 136 – PILATES EQUIPMENT I
2 credits.

Focuses on learning Level I II (Lab I) exercises on the Pilates equipment, which includes the Reformer, Cadillac, Low Chair, and High Barrel.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate clear body awareness by responding to verbal, visual and kinesthetic cuing
Audience: Undergraduate

2. Execute Pilates exercises with attention to detail and efficient musculoskeletal alignment
Audience: Undergraduate

3. Develop strength, coordination and flexibility
Audience: Undergraduate

4. Implement different strategies for breathing and coordinate movement with breath
Audience: Undergraduate

5. Maintain consistent mental focus while exercising, effectively applying imagery and anatomical concepts
Audience: Undergraduate

6. Memorize and perform the Intermediate Pilates Reformer flow
Audience: Undergraduate

DANCE 140 – DANCE PRODUCTION
2 credits.

Introduction to design and production for the performing arts with emphasis on dance. Covers the use of lighting, sound and other scenographic elements in theory and with practical experience.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025

DANCE 156 – MOVEMENT AS MATERIAL THROUGH IMPROVISATION
2 credits.

Use of improvisation to develop a personal movement vocabulary and explore compositional form.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

DANCE 157 – INTRODUCTION TO MOVEMENT ANALYSIS
2 credits.

An examination of the qualitative variations in movement processes as they relate to human function and expression.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025

DANCE 162 – FIRST YEAR WORKSHOP
1 credit.

Introduction to the world of contemporary dance, and covers topics in contemporary dance performance and professionalism.
Requisites: Declared in Dance or Dance
Repeatable for Credit: No
Last Taught: Fall 2025

DANCE 165 – INTRODUCTION TO THE HISTORIES OF DANCE
3 credits.

A survey providing a framework for understanding and appreciating the significance of dance in and as human culture.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand dance as a form of human expression and communication.
Audience: Undergraduate

2. Investigate dances in relation to their larger social, cultural, and political contexts.
Audience: Undergraduate

3. Investigate the differences and similarities of dance in various cultures and historical periods
Audience: Undergraduate

4. Appreciate the infinite variety of human movement that can be called dance.
Audience: Undergraduate

5. Understand critical issues in dance and culture historically and at present
Audience: Undergraduate

6. Apply criteria and methods for observing, interpreting, and explaining dance in historical contexts to written critique.
Audience: Undergraduate

DANCE 168 – DANCING GENDER: EMBODIMENT, POLITICS AND FEMINIST THEORY
3 credits.

Gender theories and feminist theories focus on the body as the main site where gender distinctions are understood. As the body holds a central position in the art of dance and the academic discipline of dance studies, explores gender and feminist theories through the lens of dance. Drawing on a wide array of examples and dance genres ranging from across the globe (such as Ballroom, Bollywood, Folk Dance, Ballet and more) introduces the cultural specificity of gender norms and the ways that dance has the potential to challenge heteronormativity through performance.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

DANCE 200 – WRITING THE MOVING BODY
3 credits.

Examines performance texts from the 20th century to the present, and applies them through written analyses.
Requisites: None
Course Designation: Gen Ed - Communication Part B
Repeatable for Credit: No
Last Taught: Fall 2025

DANCE 211 – CONTEMPORARY DANCE TECHNIQUE AND THEORY III
1-3 credits.

Continuation of DANCE 111 and DANCE 112. Exploration of dance dynamics and quality through improvisation and the practice of set dance sequences.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

DANCE 212 – CONTEMPORARY DANCE TECHNIQUE AND THEORY IV
1-3 credits.

Continuation of DANCE 211. Further development of skills. Development of dance phrases and movement vocabulary for invention.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

DANCE 213 – NEW MOVEMENT TECHNIQUES
1-2 credits.

Exploration of new movement techniques in dance outside of traditional forms and methods.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

DANCE 215 – HIP HOP TECHNIQUE AND THEORY II
1-2 credits.

Develop safe, skilled hip-hop dance execution. Emphasis is placed on applying technique in the improvisational space of the cypher-a sacred circle for exchanging movement knowledge. This space embodies the theory of ritual and play, where ritual is the structure and play is the expressive exchange, ranging from collaborative to competitive. Focuses on cypher training and choreographic retention while exploring hip-hop dance as a cultural and artistic expression. Examine the historical, philosophical, and improvisational roots of Hip-Hop, tracing its lineage through African, Caribbean, and Afro-Latin cultures, as well as its connections to ragtime, swing, and rock n' roll in 20th- and 21st-century America.
Requisites: DANCE 115
Repeatable for Credit: Yes, for 2 number of completions

DANCE 225 – BALLET TECHNIQUE II
1-2 credits.

Emphasis on basic skills; barrework, center work, petit and grand allegro, adagio, and increased use of demi-pointe. Focus on form, kinesthetic principles and aesthetic values.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

DANCE 226 – BALLET TECHNIQUE II-B
1-2 credits.

Level II Core continued expanding terminology, further developing barre work, center work, petit allegro, grand allegro; focus on form, kinesthetic principles and aesthetic values.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate technical specificity, musicality and artistic confidence in ballet technique through sequenced skill level progression
Audience: Undergraduate

DANCE 231 – INTRODUCTION TO DANCE/MOVEMENT THERAPY
3 credits.

Orientation to the scope of dance therapy as a profession. Historical framework, theoretical rationale, and present application of dance/movement therapy.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Gain factual knowledge of the history of dance/movement therapy and the requirements for practicing in the field. This Includes learning about the American Dance Therapy Association
Audience: Undergraduate

2. Understand how DMT is used with a variety of issues, e.g. autism, learning disabilities, abuse, woman's issues, etc. & within a number of structures such as individuals, groups, families, classrooms.
Audience: Undergraduate

3. Understand movement connections between body, mind, and spirit. Gain a sense of what DMT has to offer without actually doing therapy in class.
Audience: Undergraduate

4. Develop awareness of the various applications of basic dance therapy theory & concepts to other related fields such as counseling, teaching, occupational and physical therapy, violence prevention, etc.
Audience: Undergraduate

5. Apply concepts and skills from the Violence Prevention through Movement Curriculum to therapy and education.
Audience: Undergraduate

6. Develop knowledge of different cultural approaches to child development.
Audience: Undergraduate

7. Understand connections between theories that use creativity to explore feelings and create change in other creative art therapies such as music, art, and drama therapy.
Audience: Undergraduate

DANCE 232 – INTRODUCTION TO DYNAMICS OF DANCE THERAPY
3 credits.

Continued development of the field of dance/movement therapy with specific emphasis on DMT with specific populations and research in the field. Fieldwork in community programs is required.
Requisites: DANCE 231
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Cultivate body-mind connections through movement experiences, somatic explorations, journaling, art, and discussions.
Audience: Undergraduate

2. Gain knowledge of the efficacy of DMT through reading, writing and discussing research in the field.
Audience: Undergraduate

3. Gain factual knowledge about the needs of different populations that DMT is effective with e.g. autism, learning disabilities, abuse, woman's issues, elderly, physical disabilities, handicapped, pain, anxiety, depression, etc. through readings, discussion and movement activities. This includes exploring different structures such as individuals, small groups, families and classrooms.
Audience: Undergraduate

4. Create a document of movement experiences using props to work on specific goals through movement exploration and discussion.
Audience: Undergraduate

5. Understand the flow of a DMT session –role of the beginning, middle and end of a session through movement exploration, videos of actual DMT sessions, and readings.
Audience: Undergraduate

DANCE 233 – DISARMING THE PLAYGROUND: VIOLENCE PREVENTION THROUGH MOVEMENT
1 credit.

Study and Practice of using movement, body awareness, creativity and discussion to experience and develop skills to teach others embodied practices for handling stress, anxiety, conflicts, etc. in a peaceful, healthy way. Learn how to use tools to set healthy boundaries and deal with conflicts in the classroom or your life. Receive a thorough introduction to the Disarming the Playground Curriculum, a school violence prevention program rooted in the principles of dance/movement therapy. Learn to adjust activities and experiences for different age groups and different populations.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Gain cognitive and bodily knowledge of the Disarming the Playground curriculum.
Audience: Undergraduate

2. Gain skill in expressing movement and understanding its connection to emotion.
Audience: Undergraduate

3. Develop lesson plans and lead activities in the following six units: Spatial Awareness viewed through a multi-cultural lens, Self-Regulation, Focus and Attention, Impulse or Self-Control, Awareness of and response to dangerous or tense situations, Building Empathy, Managing strong feelings such as anger and anxiety, and other issues, i.e. peer pressure, alienation, cyber bullying, prejudice.
Audience: Undergraduate

4. Develop skills for adapting curriculum for different age groups and different types of sessions, i.e. classroom, therapy groups, family work
Audience: Undergraduate

5. Develop collaboration skills w/fellow students, providing support and constructive observations
Audience: Undergraduate

DANCE 235 – PILATES MAT II
1 credit.

Continuation of DANCE 135. Learn the intermediate to advanced level mat exercises, which continue to focus on core strength, breath and spinal flexibility while challenging upper body strength, range of motion in the hips and spine, spinal extension and inverted balance.
Requisites: DANCE 135
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

DANCE 236 – PILATES EQUIPMENT II
2 credits.

Covers the Intermediate to Advanced exercises (Level IV and V) on all equipment. The V exercises challenge a body's uniform development, range of motion in all actions of the spine, hips and shoulders, and require significant control and balance. These exercises are great cross-training for athletes, dancers or Pilates enthusiasts who wish to feel the advanced movement potential of their own bodies. Achieving mastery over these exercises requires more practice and commitment than the Beginner-Intermediate exercises as the body is expected to move beyond its average range of strength and flexibility.
Requisites: DANCE 136
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate clear body awareness as evidenced by physical responses to verbal, visual and kinesthetic cuing
Audience: Undergraduate

2. Execute Pilates exercises with precise form, efficient musculoskeletal alignment, and intentional core muscle recruitment
Audience: Undergraduate

3. Develop coordinated strength, flexibility and balance
Audience: Undergraduate

4. Demonstrate knowledgable and safe use of equipment, while setting-up, performing and transitioning through exercises
Audience: Undergraduate

5. Apply anatomical knowledge and imagery in order to integrate breath and refine personal alignment
Audience: Undergraduate

6. Use and maintain consistent mental focus while exercising
Audience: Undergraduate

7. Memorize and perform any Pilates Equipment exercise with technical skill
Audience: Undergraduate

DANCE 237 – PILATES STUDIO I
3 credits.

Experience in teaching Pilates, which includes private, semi-private, and small group sessions.Gives student-teachers class structure formats, including an understanding of the instructor to student relationship, pacing of class sessions, and the physical detail with which Pilates is taught.
Requisites: DANCE 236
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

DANCE 240 – DANCE PRODUCTION LABORATORY
1 credit.

Provides hands-on experience working with the technical aspects of dance program performances.
Requisites: DANCE 140
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

DANCE 241 – MUSIC FUNDAMENTALS FOR DANCERS
3 credits.

Study of the elements of music and their relationship to movement, a history of contemporary music and modern dance and an introduction to digital audio applications for choreography.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Create and Design in related collaborative arts in the context of music, video and screen, and technical aspects of dance performance
Audience: Undergraduate

2. Articulate how design translates abstract ideas into visual and aural support for performance
Audience: Undergraduate

DANCE 255 – MOVEMENT COMPOSITION FOR THE PERFORMING AND VISUAL ARTS
2 credits.

Basic principles of solo composition explored and applied to movement in visual and performing arts.
Requisites: DANCE 156
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

DANCE/THEATRE 259 – COLLABORATIVE ARTS PERFORMANCE LAB: DEVISING COLLABORATIVE PERFORMANCE THROUGH HIP HOP ARTS
1-2 credits.

Work together to create a repertory company which produces performances of short hip hop theater and other collaborative performance art works for public viewing. Experimental works are researched and developed. Involves the development of collaborative and small group pieces as well as artistic training with a focus on individual and multi-voice work, theater improvisation, dance/movement.
Requisites: None
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023

DANCE 265 — DANCE HISTORY I: DANCE IN THE MODERN ERA
3 credits.

Surveys dance history from about 1500 through the 1900s. Through research, discussion, and viewing images and video, students will analyze and understand dance in relation to the fundamental changes to human experiences that arose in the modern era.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand dance in social, cultural, political, and economic contexts from the 16th through the 19th centuries
Audience: Undergraduate

2. Analyze, discuss, and compare dance practices and discourses in relation to historical and global contexts
Audience: Undergraduate

3. Analyze, discuss, and compare their technical, choreographic, and theoretical training within a greater historical context
Audience: Undergraduate

4. Respond critically and thoughtfully to dance scholarship
Audience: Undergraduate

5. Find and analyze primary sources to reflect upon and synthesize a personal interaction with historical artifacts with knowledge gained from secondary sources
Audience: Undergraduate

DANCE 268 — POLITICAL AND CULTURAL PERSPECTIVES IN DANCE STUDIES
3 credits.

Examines the role of dance as a cultural form of expression within the political sphere. Draws on a variety of case studies ranging from popular dance TV shows, to European modern dance and from hip-hop to dancing at public protests and asks the question of what constitutes dance and what is its social and political function.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

DANCE 274 — METHODS IN DANCE EDUCATION
3 credits.

Study of principles in dance curriculum planning, instruction, assessment, classroom management, and learner diversity through a trauma-informed and culturally responsive-sustaining lens.
Requisites: DANCE 156
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Identify, analyze, and apply trauma-informed and culturally responsive-sustaining practices, styles, and methods of successful teaching in lesson and curricula planning.
Audience: Undergraduate

2. Critically reflect on and constructively respond to lesson and curricula designs.
Audience: Undergraduate

3. Develop student-centered, process-based lesson plans and curricula.
Audience: Undergraduate

4. Construct sequential, artistic, and age appropriate dance experiences.
Audience: Undergraduate

5. Examine and analyze dance pedagogical theories in education.
Audience: Undergraduate

6. Create and analyze assessments for student learning.
Audience: Undergraduate

DANCE 311 — CONTEMPORARY DANCE TECHNIQUE AND THEORY V
1-3 credits.

Level III. Contemporary dance technique and theory on the intermediate level. Emphasis on movement skills employing proper body alignment.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

DANCE 312 — CONTEMPORARY DANCE TECHNIQUE AND THEORY VI
1-3 credits.

Continuation of DANCE 311.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

DANCE/AFROAMER/MUSIC 318 – CULTURAL CROSS CURRENTS: WEST AFRICAN DANCE/MUSIC IN THE AMERICAS
3 credits.

The influence of traditional West African dance/music heritage in historical, artistic, social contexts in the development of new hybrid forms of music/dance created by cross-pollination of cultures of Africans, Europeans and indigenous peoples in the New World.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

DANCE/AFROAMER/ASIAN AM/FOLKLORE 319 – AFRO ASIAN IMPROV: FROM HIP HOP TO MARTIAL ARTS FUSION
3 credits.

An Afro Asian perspective provides a lens through which intersections between Asian American and African American dance and martial arts are studied and practiced. Asian American and African American movement genres provide tools to explore dance fusion, choreography, and improvisation, to create dances informed by African American and Asian American legacies of struggle, innovation and transformation, while cognizant of historical forces of oppression and racism. Building connections through respectful communication with others are learned through dance practice, discussion and writing about concepts learned through readings, videos, and guest artist visits. Engagement with dance as a cultural vehicle for creative problem-solving and risk-taking occurs through guided class or smaller group activities.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Articulate perspectives on the diversity of the human condition through critical andinterpretive skills to analyze the past, present, and future of human movement in a complex world
Audience: Undergraduate

2. Prepare for participation in a multicultural society through developing a consciousness of self and other and building empathy towards others' perspective, thinking critically and questioning assumptions of certain valued or devalued histories, and analyzing how these differences have promulgated disparities in contemporary American society
Audience: Undergraduate

3. Demonstrate skills in writing and speaking about dance in its historical, contemporary and cultural contexts
Audience: Undergraduate

4. Articulate Afro Asian perspectives on the intersections of Asian American and African American cultural, social and historical knowledge, and communicate important ideas through dance and story-telling performance
Audience: Undergraduate

5. Practice Asian American and African American foundational movement toolboxes as a basis for improvisation and dance choreography supported by concepts of theater and culturally-based learning traditions
Audience: Undergraduate

6. Engage in imagination-led and creative problem-solving movement activities
Audience: Undergraduate

7. Build connections with others through class practice, discussions, working groups within and outside of class
Audience: Undergraduate

8. Use the skills you learn to lead a calmer, more focused, responsible and productive life
Audience: Undergraduate

DANCE 325 – BALLET TECHNIQUE III
1-2 credits.

Intermediate: barrework, center work, petit and grand allegro, adagio, demi-pointe, and more complex combinations and skills. Focus on form, kinesthetic principles, and aesthetic values.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

DANCE 326 – BALLET TECHNIQUE III-B
1-2 credits.

Intermediate level continued: barrework, center work, petit and grand allegro, adagio, demi-pointe, and more complex combinations and skills. Focus on form, kinesthetic principles, and aesthetic values.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

DANCE 330 – FUNCTIONAL ANATOMY FOR MOVEMENT PRACTICES
2 credits.

Provides an understanding of functional anatomy in kinetic terms, exploring efficient musculoskeletal function as it relates to pedestrian movement and vigorous movement. Learn how to see and feel the difference between healthy movement and movement pathology.
Requisites: DANCE 131, 135, or 136
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Memorize basic musculoskeletal anatomy and functions
Audience: Undergraduate

2. Comfortably execute touch-based partner work with maturity and skill
Audience: Undergraduate

3. Demonstrate clear body awareness by responding to instructor and peer corrections and through self-correction
Audience: Undergraduate

4. Develop visual and kinesthetic skill for identifying anatomical pathways and patterns in others
Audience: Undergraduate

5. Identify and distinguish pathological vs healthy movement patterns theoretically and in live bodies
Audience: Undergraduate

6. Create imagery-based movement exercises that address specific movement concepts
Audience: Undergraduate

DANCE 331 – DYNAMICS OF DANCE THERAPY
3 credits.

Movement lab integrating theory and techniques of dance therapy. Field work in community service projects.
Requisites: DANCE 231
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

DANCE 337 – PILATES STUDIO II
3 credits.

Cover the Pilates Level IV-V (Intermediate-Advanced) material on the equipment and continues work from DANCE 237.
Requisites: DANCE 235, 237, and 336
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

DANCE/ART 341 – SOUND DESIGN FOR THE PERFORMING AND VISUAL ARTS
3 credits.

Production of audio soundtracks to complement the work of artists. The relationship of sound and music to dance, video, film, computer art, and other interdisciplinary forms.
Requisites: Declared in an Art, Dance, or Communication Arts program
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

DANCE 345 – SCREENDANCE PRODUCTION
3 credits.

Provides technical and aesthetic knowledge of the use of video camera and editing techniques, the introduction to digital video, and the relationship of video to the performing and visual arts.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate how design translates abstract ideas into visual and aural support for performance
Audience: Both Grad & Undergrad

2. Compose dance work for the concert stage and/or alternate spaces
Audience: Both Grad & Undergrad

3. Develop and practice a critical vocabulary for communicating about one's own work and that of others
Audience: Graduate

DANCE 355 – DANCE COMPOSITION II
3 credits.

Composition and performance of dances based on pre-classic and modern dance forms to include practical application of theater production, costuming, and stage design.
Requisites: DANCE 156 or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Generate and manipulate innovative movement material quickly
Audience: Both Grad & Undergrad

2. Create meaning and context for work through thoughtful and informed structural development
Audience: Both Grad & Undergrad

3. Make effective editing choices about choreography
Audience: Both Grad & Undergrad

4. Demonstrate discipline and consistency in the working process
Audience: Both Grad & Undergrad

5. Take risks and exhibit confidence in creative work and performance
Audience: Both Grad & Undergrad

6. Lead dancers effectively in the rehearsal process
Audience: Both Grad & Undergrad

7. Offer astute and useful feedback to classmates
Audience: Both Grad & Undergrad

8. Consciously integrate other dance studies into the choreographic process
Audience: Both Grad & Undergrad

9. Demonstrate an increased literacy in contemporary dance/performance
Audience: Both Grad & Undergrad

10. Write and speak articulately about one's creative point of view and progress in the context of contemporary dance/performance
Audience: Both Grad & Undergrad

11. Present a complete work of three or more dancers (not including the choreographer)
Audience: Both Grad & Undergrad

12. Integrate ideas, frameworks, or questions drawn from knowledge outside the field of dance into the choreographic process.
Audience: Graduate

13. Write and speak about one's creative point of view and progress in an interdisciplinary context that includes contemporary dance and related areas of knowledge.
Audience: Graduate

DANCE 365 – DANCE HISTORY II: DIRECTIONS AND ISSUES OF CONTEMPORARY DANCE
3 credits.

Surveys dance history from the 1960's to the present. Through research, video viewing, and discussions, grasp aesthetic ideas of modern dance; contextualize the major components of contemporary dance; and characterize trends and styles relative to underlying philosophies.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify key approaches and pioneers in dance practices of the 20th and 21st century
Audience: Undergraduate

2. Analyze, discuss, and compare performance in various geographical and historical contexts
Audience: Undergraduate

3. Situate performance practices and choreographic approaches in broader historical contexts
Audience: Undergraduate

4. Critically contextualize performance approaches in relation to prevalent dance studies discourses
Audience: Undergraduate

5. Research and critically evaluate and compare primary and secondary sources
Audience: Undergraduate

DANCE 368 – DANCING CULTURES IN GREECE
3 credits.

Examine the construction of Greek national identity and cultural heritage through dance, embodied practices, and art creation practices by utilizing dance studies frameworks and ethnographic research tools. Experiential multi-sited research to be completed in Greece, conducted through dance workshops, performances, museum visits, attendance to regional dance festivals, and in conversation with local experts featured as guest lecturers, such as dance historians, folklorists, choreographers, teachers, and performers. Genres covered include folk dance, social dance, concert dance, and other somatic practices that foster a sense of belonging, community, and unity amongst practitioners. Must have sophomore standing and a valid passport that does not expire 6 months past the Greece travel dates.
Requisites: Consent of instructor
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Describe the role of dance in varying cultural contexts: traditional folk dance, community practices, and contemporary concert dance performance.
Audience: Undergraduate

2. Engage in a range of embodied experiences through critical dance studies frameworks
Audience: Undergraduate

3. Identify how a country's cultural history and national identity impact artistic practices of the present both locally and internationally through the case study of Greece.
Audience: Undergraduate

4. Identify cultural specificity in institutional structures and frameworks (such as dance in education, festival curation, arts-funding structures) using Greece as a case study.
Audience: Undergraduate

DANCE 373 – INTRODUCTION TO DANCE AND COMMUNITY
3 credits.

Introduction to community engagement through dance and movement. Focus on skills to work within service-oriented programs that engage communities in transformative, decolonizing, and humanizing dance practices. Investigate theory, practice, and empirical research to support ethnographic approaches with feminist and critical perspectives when working with dance in communities.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Devise dance/movement choreography through community engagement.
Audience: Undergraduate

2. Devise teaching strategies based on community interests/needs.
Audience: Undergraduate

3. Recognize complex identities that create obstacles or privileges for individuals and communities.
Audience: Undergraduate

4. Foster inclusive environments.
Audience: Undergraduate

DANCE 374 – TEACHING DANCE
3 credits.

Provides methods and materials for appropriate dance instruction in the public and private sectors for an array of ages. Advocates for Dance Education in both public and private settings and emphasizes the value of Dance in enhancing the quality of life for all people.
Requisites: DANCE 156 and 274
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Emphasize the value of Dance in enhancing the quality of life for all people.
Audience: Undergraduate

2. Advocate for Dance Education in public and private settings.
Audience: Undergraduate

3. Provide methods and material appropriate for teaching and facilitating dance instruction in public and private sectors for an array of ages.
Audience: Undergraduate

4. Create proper progressions, building blocks, and underlying concepts for teaching dance technique.
Audience: Undergraduate

5. Use laboratory settings for teaching and observing students that will deepen the understanding for, and appreciation of, a variety of populations.
Audience: Undergraduate

6. Promote understanding of developmentally appropriate dance skills, movement concepts, and progressions for varied ages.
Audience: Undergraduate

7. Provide Dance movement and teaching experiences to help develop personal teaching techniques.
Audience: Undergraduate

8. View creative dance education as a viable tool for teaching cross-curriculum, integrative academic/vocational education.
Audience: Undergraduate

9. Understand teaching and learning through the arts in an Arts Integration framework.
Audience: Undergraduate

DANCE 375 – PILATES TEACHING METHODS
1 credit.

Designed to provide an understanding of the practice of teaching and learning Pilates. Develops understanding of body mechanics as well as an appreciation of the variety of movement possibilities and compensatory patterns present in individual bodies. Consists of lecture, discussion, practice teaching and mentorship as students begin the process of teaching Pilates.
Requisites: DANCE 135
Repeatable for Credit: No
Last Taught: Spring 2025

DANCE 376 – PILATES TEACHING I
2 credits.

Emphasizes private session teaching, applied anatomy and imagery, and overall Pilates pedagogy.
Requisites: Declared in Certificate in Pilates
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate personal knowledge and understanding of Pilates material
Audience: Undergraduate

2. Develop a personal teaching style and emphasis
Audience: Undergraduate

3. Demonstrate clear teacher/student relationships, professional etiquette, and skillful rapport
Audience: Undergraduate

4. Design clear thematic lessons and improvise on that theme
Audience: Undergraduate

5. Effectively communicate personalized feedback that catalyzes client growth
Audience: Undergraduate

6. Become thoughtful, articulate, and effective teachers
Audience: Undergraduate

DANCE 379 – DANCE TEACHING PRACTICUM
3 credits.

Supervised practicums; teaching dance or movement integrated strategies from a trauma-informed, culturally responsive-sustaining lens. Practicums take place in public schools, private studios, community centers, or Lathrop Hall depending on interests and experiences.
Requisites: DANCE 274, 373, and 374
Repeatable for Credit: No
Learning Outcomes: 1. Design and implement dance or movement integrated strategies in a variety of settings.
Audience: Undergraduate

2. Critically reflect on and constructively respond to teaching observations.
Audience: Undergraduate

3. Design and implement trauma-informed, culturally responsive-sustaining dance and movement experiences for diverse student populations.
Audience: Undergraduate

DANCE 399 – INDEPENDENT PROJECT
1-3 credits.

Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

DANCE 410 – CONTEMPORARY DANCE FORMS
1-3 credits.

Contemporary dance technique and theory at the advanced level. Emphasis on movement skills employing proper body alignment and artistry.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate technical specificity, musicality, and artistic confidence inballet and contemporary dance techniques through sequenced skill level progressions.
Audience: Both Grad & Undergrad

2. Recognize, identify, and embody a wide range of somatic theories andpractices and produce work investigating its impacts and uses in contemporary dance as practice.
Audience: Both Grad & Undergrad

3. Demonstrate an advanced level of contemporary dance literacy andartistry.
Audience: Both Grad & Undergrad

4. Assess theoretic work, performance growth, and creative work by utilizing curricular scaffolded reflective and critical assessment approaches.
Audience: Both Grad & Undergrad

5. Compose dance work for the concert stage and/or alternate spaces.
Audience: Undergraduate

6. Choreograph combination variation that demonstrates an extended challenge (appropriately scaffolded) for performance and to teach to undergraduate peers in class.
Audience: Graduate

DANCE 431 – DANCE THERAPY PRACTICUM
3 credits.

One semester supervised experience in psychiatric setting, i.e., special school, hospital, or community mental health center, and one semester of independent study.
Requisites: DANCE 331
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Workplace - Workplace Experience Course
Repeatable for Credit: No
Last Taught: Spring 2024

DANCE 440 – ADVANCED PRODUCTION LABORATORY
1 credit.

Provides hands-on experience working with the technical aspects of dance program performances.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Practice previously acquired skills necessary to the specific artistic staff role assumed for the assigned Dance Department production.
Audience: Both Grad & Undergrad

2. Demonstrate mentorship and guidance in practice of craft.
Audience: Both Grad & Undergrad

3. Demonstrate artistic competency by completing assigned production role.
Audience: Both Grad & Undergrad

4. Identify problems/challenges, solutions, and evaluate of how well the solution worked.
Audience: Graduate

DANCE 449 – SURVEY OF INTERARTS AND TECHNOLOGY
3 credits.

Overview of the history and practice of interdisciplinary work by artists working alone or in collaboration with others. Explores work that relies on or has a contingent relationship to the technology of the era in which it was created. Covers the history of Interarts and Technology from the early 1900's to the present with additional lectures focusing on relevant topics from earlier periods of history, e.g. Guttenburg's printing press, Da Vinci's flying machines, etc. Individual artists and movements will be profiled with a focus on the Futurists, Dada, and Surrealists in the early half of the century, dance and technology in general and the crossover of contemporary avant garde theater and performing artists such as Laurie Anderson and others whose work is dependent on high tech electronics.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Contextualize the contemporary hybrid of art and technology within a historical framework which the student will learn through lecture, screenings, and readings.
Audience: Both Grad & Undergrad

2. Develop a firm grasp of the relationship of technology to the arts throughout history.
Audience: Both Grad & Undergrad

3. Analyze both the philosophical and aesthetic strategies at work within the various methodologies chosen by artists within the framework of art and technology.
Audience: Graduate

DANCE 451 – DANCE REPERTORY THEATER
1-3 credits.

Study of choreography created by member of the faculty and guest artists, leading to public performance. Must take a 100 level or higher dance technique or theory course concurrently. Must be cast in the Faculty Concert or Guest Artist work. Audition at first class meeting.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

DANCE 452 – DANCE REPERTORY THEATER
1-3 credits.

Study of choreography created by member of the faculty and guest artists, leading to public performance. Must take a 100 level or higher dance technique or theory course concurrently. Must be cast in the Faculty Concert or Guest Artist work. Audition at first class meeting.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

DANCE 453 – DANCE REPERTORY THEATER
1 credit.

Study of choreography created by member of the faculty and guest artists, leading to public performance.
Requisites: Declared in Dance MFA, Dance BS, or Dance BFA and must be concurrently enrolled in one of the following: DANCE 111, 112, 115, 118, 125, 126, 211, 212, 213, 218, 225, 226, 231, 311, 312, 325, 326 or 410
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025
Learning Outcomes: 1. Collaborate in the choreographic process
Audience: Both Grad & Undergrad

2. Utilize tools for generating and developing performance material from across disciplines
Audience: Both Grad & Undergrad

3. Work with others toward a common goal in the context of dance performance
Audience: Both Grad & Undergrad

4. Identify and prioritize skills required to realize choreographic vision
Audience: Both Grad & Undergrad

5. Embody choreographic material
Audience: Both Grad & Undergrad

6. Demonstrate effective rehearsal practice and effort
Audience: Both Grad & Undergrad

7. Implement qualitative movement skills to enhance performance
Audience: Both Grad & Undergrad

8. Examine your role as a performer in the artistic process of creating dance.
Audience: Graduate

DANCE 455 – DANCE COMPOSITION III
2-3 credits.

Principles of organization in group composition. Planning, composing and presenting of group dances.
Requisites: DANCE 255, DANCE 355, or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024
Learning Outcomes: 1. Develop one's creative habit
Audience: Both Grad & Undergrad

2. Develop one's personal and unique voice as a dancemaker
Audience: Graduate

3. Build one's compositional toolbox
Audience: Both Grad & Undergrad

4. Create dance works with different methods of generating, forming, and shaping
Audience: Both Grad & Undergrad

5. Stretch and expand: take risks, be daring, try out the unfamiliar, explore new concepts, work out of the box
Audience: Both Grad & Undergrad

6. Create work inspired by or in response to different stimuli
Audience: Both Grad & Undergrad

7. Increase one's understanding of the art and craft of movement composition
Audience: Both Grad & Undergrad

8. Communicate one's ideas effectively in written and spoken form--on paper and in person, in words and in dance.
Audience: Graduate

9. Display organizational skills: work alone and with groups, prepare, schedule, and hold rehearsals
Audience: Both Grad & Undergrad

10. Meet deadlines; complete projects or studies, take an idea and carry it through to the end
Audience: Both Grad & Undergrad

DANCE 462 – SENIOR SEMINAR
3 credits.

Reflect on the entirety of dance coursework, develop current work in performance and dance scholarship, and prepare for future engagement with the discipline outside the university.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and hone personal strengths in relation to their dance studies (Dance Department Learning Goal 2.3)
Audience: Undergraduate

2. Develop career goals, with more in-depth exploration of one specific option (Dance Department Learning Goal 2.3)
Audience: Undergraduate

3. Be introduced to some of the skills, strategies, and processes needed for success in the professional world (Dance Department Learning Goal 2.3)
Audience: Undergraduate

4. Produce high-quality professional materials that represent themselves and their work well (Dance Department Learning Goal 2.3)
Audience: Undergraduate

5. Be exposed to the comprehensiveness of dance and the wide range of professions and professional options related to dance (Dance Department Learning Goals 2.1 & 2.2)
Audience: Undergraduate

6. Demonstrate critical thinking, leadership, and facilitation skills through a student-led seminar (Dance Department Learning Goal 2.3)
Audience: Undergraduate

7. Increase confidence in themselves and their work demonstrated through oral presentation (Dance Department Learning Goal 2.3)
Audience: Undergraduate

DANCE 463 – SENIOR PROJECT
1-2 credits.

Focuses on artistic and scholarly senior dance projects such as choreography, performance, pedagogy, research studies, papers, and articles.
Requisites: Senior standing
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Design a semester-long research project in collaboration with the professor.
Audience: Undergraduate

2. Plan a project using purpose/problem statements, methods, and literature review.
Audience: Undergraduate

3. Engage with scholarly research on the relevant issues.
Audience: Undergraduate

4. Present a project at the end of the course for peers and invited faculty.
Audience: Undergraduate

DANCE 466 – CURATING THE PRACTICE
4 credits.

Explores the evolving practice of performance curation in the 21st century, emphasizing the role of curators and artists in shaping contemporary performance art. Critical engagement with diverse curatorial practices, considering both historical and emerging models influenced by the 2020 global lockdown, digital platforms, and virtual spaces. Exploration of how performance reception, access, and curation have been reshaped since 2020, and investigation of new paradigms such as digital and technologically mediated sites for performance through interdisciplinary discussions, presentations, and guest speakers.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Analyze the history and evolution of curatorial practices in performance art.
Audience: Graduate

2. Identify and integrate issues of inclusion, exclusion, and representation in curatorial practices.
Audience: Graduate

3. Evaluate the impact of the pandemic and global lockdown on performance curation and explore digital and virtual platforms as new sites for performance.
Audience: Graduate

4. Develop a curatorial proposal or creative project that incorporates contemporary issues such as accessibility, digital adaptation, and community care.
Audience: Graduate

5. Present and defend curatorial decisions in both written and oral formats, drawing from theoretical and practical case studies.
Audience: Graduate

DANCE 469 – INTERDISCIPLINARY STUDIES IN THE ARTS
1-4 credits.

Guest artists present topics appropriate to their specializations.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2022

DANCE 476 – PILATES TEACHING II
3 credits.

Complete a minimum of 3 hours of teaching per week (or equivalent) working with individuals one on one or with group classes. Teach Pilates coursework Level I-V. Attend weekly seminars and mentor meetings.
Requisites: Declared in Pilates Certificate, DANCE 337 and 376
Repeatable for Credit: No
Last Taught: Fall 2025

DANCE 551 – ADVANCED DANCE AND REPERTORY PERFORMANCE I
1 credit.

Focuses on the creation and performance of dance repertory, whether through the development of new choreographic works or the re-staging of existing pieces. Emphasizes live performance as a process to contribute to both the creative and performance aspects of the work. Collaboratively engage in critical discussions and provide expert feedback, reinforcing arguments around artistry, excellence, and the role of live performance in contemporary dance. Hands-on experience in contemporary performance skills and techniques related to dance repertory, emphasizing collaboration in the creation and practice of live dance. Requires concurrent enrollment in DANCE 311, 312, 325, or 326 and audition at first class meeting.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Demonstrate enhanced skills in the creation, rehearsal, and performance of repertory, contributing to both the development and execution of choreographic works.
Audience: Graduate

2. Analyze traditional, folk, and popular dance vocabularies from the African Diaspora and explore their relevance in contemporary concert dance.
Audience: Graduate

3. Develop an understanding of artistry and excellence in live performance, developing the ability to articulate and apply these concepts in their work.
Audience: Graduate

4. Evaluate the contributions of others in the collaborative process to provide constructive, expert feedback.
Audience: Graduate

5. Investigate the potential impact of future technologies on live performance.
Audience: Graduate

DANCE 552 – ADVANCED DANCE REPERTORY AND PERFORMANCE II
1 credit.

Focuses on the creation and performance of dance repertory, whether through the development of new choreographic works or the re-staging of existing pieces. Emphasizes live performance as a process to contribute to both the creative and performance aspects of the work. Collaboratively engage in critical discussions and provide expert feedback, reinforcing arguments around artistry, excellence, and the role of live performance in contemporary dance. Hands-on experience in contemporary performance skills and techniques related to dance repertory, emphasizing collaboration in the creation and practice of live dance. Requires concurrent enrollment in DANCE 311, 312, 325, or 326 and audition at first class meeting.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Demonstrate enhanced skills in the creation, rehearsal, and performance of repertory, contributing to both the development and execution of choreographic works.
Audience: Graduate

2. Analyze traditional, folk, and popular dance vocabularies from the African Diaspora and explore their relevance in contemporary concert dance.
Audience: Graduate

3. Develop an understanding of artistry and excellence in live performance, developing the ability to articulate and apply these concepts in their work.
Audience: Graduate

4. Evaluate the contributions of others in the collaborative process to provide constructive, expert feedback.
Audience: Graduate

5. Investigate the potential impact of future technologies on live performance.
Audience: Graduate

DANCE 560 – CURRENT TOPICS IN DANCE: WORKSHOP
1-3 credits.

Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023

DANCE 567 – HISTORY OF SCREENDANCE
3 credits.

Focus on the history and practice of screendance in its myriad forms including, but not limited to, performance made for the camera, first person narrative, spoken word, fictional cinema, experimental documentary and other forms of mediated performance practice within the broadly defined context of dance. Interdisciplinary approach to making performative work for the screen.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Analyze history of screendance within a historical framework which the student will learn through lecture, screenings, and readings.
Audience: Both Grad & Undergrad

2. Demonstrate strong written skills to communicate grasp of the myriad forms of this hybrid art form and the various approaches and concerns over time.
Audience: Both Grad & Undergrad

3. Analyze socio-political and cultural perspectives, as well asphilosophical and aesthetic strategies at work within the form and content explored by the directors and choreographers.
Audience: Both Grad & Undergrad

4. Demonstrate conceptual rigor, research, and critical analysis to gain knowledge and skills in cross-cutting methodologies and approaches.
Audience: Graduate

DANCE 665 – DANCE HISTORY AND THEORY
3 credits.

Examines dance historical work in the changing field of Dance Studies since the mid-1980s. Introduces significant perspectives on dance history and dance theory, and considers how these impact and relate to dance creation and pedagogy. Engage with new research in dance history, practice archival research methods, and form a teaching approach to dance history that is responsive to the current direction and needs of the field.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Explain the impact of the field of Dance Studies on dance historical research and discourses.
Audience: Graduate

2. Execute archival research methods.
Audience: Graduate

3. Synthesize materials into a preliminary interpretation and suggestions for formulating an argument from the documents.
Audience: Graduate

4. Examine current dance historical literature.
Audience: Graduate

5. Formulate a creative approach to literature.
Audience: Graduate

DANCE 675 – DANCE AND COMMUNITY
2-3 credits.

Engages with dance arts for and in communities. Working in relation to core ideas about the value of dance/movement in community, covers interdisciplinary research, scholarship, and praxis within this diverse area of work. Investigates how dance and interrelated arts serve as vehicles for social and environmental change in diverse communities. Specific themes might include racial justice, environmental justice, indigenous survival struggles, and how these themes impact or galvanize communities. Theory and practice reaches beyond campus and connects to the H'Doubler legacy as well as the Wisconsin idea.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Learn to listen to learn
Audience: Graduate

2. Become self-reflective, respectful, and thoughtful
Audience: Graduate

3. Develop understanding and appreciation of community groups through breadth and depth approach to this area of study
Audience: Graduate

4. Gain perspective on space, place, and identity
Audience: Graduate

5. Demonstrate awareness of issues and show sensitivity to access and accommodations
Audience: Graduate

6. Apply skills in working with community groups and diverse populations
Audience: Graduate

7. Design and use strategies to effectively engage, coordinate, communicate, collaborate, create with different groups
Audience: Graduate

DANCE 679 – DANCE FIELD WORK
2-4 credits.

Off-campus, in-the-field experience pursuing an intensive, self-directed study or project under faculty guidance and mentorship. Research directly leads to the development of a creative performance project. May be conducted in a local, national, or international community or professional settings as related to student's practice-as-research work. One-on-one high-value creative research activity, individual-level feedback, and model the behavior and norms of academia and professional life. Devise a research project while guided through the research and creative process.
Requisites: Declared in Dance MFA
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 3 number of completions
Learning Outcomes: 1. Identify critical perspectives on dance through cultural, philosophical, aesthetic, historical, social, political, and scientific perspectives.
Audience: Graduate

2. Integrate knowledge of the field of dance and innovative methods in dance research.
Audience: Graduate

3. Apply specific knowledge and skills related to one's chosen path of inquiry.
Audience: Graduate

4. Utilize qualitative, quantitative, and mixed methods for conducting dance research.
Audience: Graduate

5. Utilize analytical skills for conducting research including auto-ethnography and considerations for information gathering, documentation, data collection, analysis, and reporting.
Audience: Graduate

DANCE 699 – INDEPENDENT PROJECT
0-3 credits.

Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

DANCE 762 – RESEARCH METHODS
3 credits.

Examines different research methodologies and approaches to researching dance. Topics range from studio-based research to theoretical research and include: Practice as Research, Embodied Approaches to Research, Ethnographic Methodologies, Dramaturgy, Critical Theory, and Issues in Dance Studies.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Identify approaches for engaging in dance research.
Audience: Graduate

2. Summarize main trends and latest scholarship in the field of dance and dance studies.
Audience: Graduate

3. Analyze scholarly sources and critically evaluate research tools.
Audience: Graduate

4. Conduct a large research project that aligns with individual interests.
Audience: Graduate

DANCE 776 – DANCE CURRICULUM AND TEACHING PRACTICES
1 credit.

Foundational structure engaging in various dance teaching experiences. Cultivate self-reflective, student-centered teaching skills through discussions, integrating an awareness of current issues and developments impacting the field with personal artistry. Investigage the expansion and evolution of dance pedagogy to explore and address the evolution of the field at local, regional, national, and global levels.
Requisites: Declared in Dance MFA
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 3 number of completions
Learning Outcomes: 1. Communicate clearly and effectively enact pedagogy to the dance community, the public, and in teaching situations.
Audience: Graduate

2. Work collaboratively and productively within a diverse global community of artists and to acknowledge and respect diverse aesthetic viewpoints.
Audience: Graduate

3. Integrate, and synthesize information a breadth of understanding of dance and related disciplines within the dance discipline and across disciplines.
Audience: Graduate

4. Develop and implement arts integrated curricula, including cross-curricular interdisciplinary focus
Audience: Graduate

5. Enact pedagogical approaches appropriate for various dance teaching experiences.
Audience: Graduate

DANCE 990 – CREATIVE PROJECT FOR RESEARCH
3 credits.

Individual research projects following the approval stage of thesis proposal. Create research plans and schedules determined by the particulars of creative research, whether methodologies and approaches are studio-based or theory-based. Early through final stages of thesis projects are guided with faculty mentorship.
Requisites: DANCE 762
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Demonstrate a critical awareness of the relationship of their artwork to its social, cultural, historical, theoretical and contemporary contexts.
Audience: Graduate

2. Develop, polish, and clearly articulate artistic goals, manifested in a substantial body of artwork and communicated through oral presentations and thesis writing.
Audience: Graduate

3. Organize and conduct a large creative research project.
Audience: Graduate

4. Track and complete all tasks connected to implementation.
Audience: Graduate

5. Engage with feedback and discussion of relevant topics.
Audience: Graduate

6. Create a visual and oral presentation of one's body of work that is shared with peers and faculty, addressing any issues or questions that arise.
Audience: Graduate

DANCE 999 – INDEPENDENT PROJECT
1-3 credits.

Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 1991

DERMATOLOGY (DERM)

DERM 601 – SKIN BIOLOGY AND SKIN DISEASES
3 credits.

Introduction to basic science principles of skin biology and skin diseases (biochemistry, molecular biology, genetics, etc.). Provides a strong base and training to future scientists, physicians, and industrial leaders in skin sciences and skin care, as well as drug and device development.
Requisites: (ZOOLOGY/BIOLOGY/BOTANY 151 or ZOOLOGY/BIOLOGY 101), (CHEM 104, CHEM 109 or BIOCHEM 501), or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Learn and demonstrate advanced knowledge of the fundamentals of skin biology.
Audience: Both Grad & Undergrad

2. Demonstrate knowledge of cutaneous disorders and diseases.
Audience: Both Grad & Undergrad

3. Demonstrate advanced knowledge of innovation, technology, and regulations in the field of skin biology.
Audience: Both Grad & Undergrad

4. Enhance communication and presentation skills related to evaluating and sharing scientific knowledge.
Audience: Both Grad & Undergrad

5. Design experiments applicable to one's own research.
Audience: Both Grad & Undergrad

6. Demonstrate critical understanding of skin biology that helps ongoing or future research projects and/or career development.
Audience: Graduate

7. Lead journal club discussions.
Audience: Graduate

DERM 602 – ADVANCES IN SKIN BIOLOGY AND SKIN DISEASES
2 credits.

Offers an interactive platform to critically analyze classic and state-of-the-art research articles in skin biology and skin diseases, as well as the opportunity to present journal articles. Provides a strong base and training for future scientists, physicians, and industrial leaders in skin sciences, skincare, and drug development.
Requisites: ZOOLOGY/BIOLOGY/BOTANY 151, ZOOLOGY/BIOLOGY 101, BOTANY/BIOLOGY 130, BIOCORE 381, CHEM 104, 109, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand the motivations and thought processes in classic papers.
Audience: Both Grad & Undergrad

2. Keep up to date with the latest developments and research findings in skin biology and skin diseases.
Audience: Both Grad & Undergrad

3. Develop the skills to critically evaluate and assess research methodologies, results, and conclusions in journal articles.
Audience: Both Grad & Undergrad

4. Demonstrate advanced knowledge of innovation, technology, and regulations in the field of skin biology.
Audience: Both Grad & Undergrad

5. Enhance communication and presentation skills related to evaluating and sharing scientific knowledge.
Audience: Both Grad & Undergrad

6. Demonstrate critical understanding of skin biology that helps ongoing or future research projects and/or career development.
Audience: Graduate

7. Lead journal club discussions.
Audience: Graduate

DERM 904 – SCIENCE OF CUTANEOUS DISEASE
2 credits.

The practice of Dermatology encompasses diseases of the skin, mucosal surfaces, hair and nails. The scientific specialty integrates cellular and molecular biology, immunology, microbiology, and physiology to support patient care decisions. Learn basic science principles of normal and abnormal cutaneous functioning, building on the principles introduced in the MED SC-M 774. These core concepts will be applied though interactions with patients in the clinical setting, building foundational basic science knowledge to diagnose and treat dermatologic diseases.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the process of normal keratinization and cellular factors that lead to disorders of keratinization
Audience: Graduate

2. Explain the immunologic mechanisms underlying inflammatory dermatoses, including atopic dermatitis, allergic contact dermatitis, psoriasis, immunobullous disease, urticarial and acne vulgaris
Audience: Graduate

3. Describe the cellular mechanisms of cutaneous malignancies, including non melanoma skin cancer, melanoma and cutaneous lymphoma
Audience: Graduate

4. Explain normal hair and nail physiology
Audience: Graduate

5. Identify key histologic features of normal skin
Audience: Graduate

6. Recognize histologic patterns of cutaneous disease and explain the cellular mechanisms underlying these changes
Audience: Graduate

7. Explain the mechanism of action of various dermatology medications and vaccines in the treatment and prevention of cutaneous diseases
Audience: Graduate

8. Critically appraise primary literature as it relates to the etiology and/or treatment of skin diseases
Audience: Graduate

DERM 910 – INDEPENDENT READING AND RESEARCH IN DERMATOLOGY
2-8 credits.

Independent research under the direct supervision of Dermatology faculty. Each student's research project is individualized to meet student research goals within the context of faculty research needs.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Engage in clinical research through an apprenticeship-style learning experience with a research mentor.
Audience: Graduate

2. Formulate a hypothesis (or specific study objective if project does not involve hypothesis testing).
Audience: Graduate

3. Conduct a thorough literature review of the specific research question.
Audience: Graduate

4. Develop skills in research design by writing or contributing to a research proposal.
Audience: Graduate

5. Develop skills in the analysis of research data.
Audience: Graduate

6. Select and apply statistical methodologies appropriate for the proposed analyses.
Audience: Graduate

7. Interpret results correctly and in context of previous findings from literature review.
Audience: Graduate

8. Develop a plan for disseminating the results of the research project.
Audience: Graduate

9. Improve verbal and written communication skills by preparing findings for presentation.
Audience: Graduate

DERM 919 – INDIVIDUALIZED CLINICAL ELECTIVE IN DERMATOLOGY
2-4 credits.

Experience blends medical and procedural dermatology, dermatopathology and basic science topics. Advance patient care skills through exposure to a broad array of common and complex cutaneous diseases, formulation of basic differential diagnoses and treatment plans, and performance of common diagnostic procedures. Experience via rotations through general adult and pediatric dermatology clinics, as well as specialty clinics. Opportunities may arise for participation in inpatient dermatology consults. All clinical activities will be completed under the direct supervision of attending physicians and residents. Participate in additional educational activities, including faculty lectures, Grand Rounds conference, and reading or on-line assignments. Additional patient care related learning activities may be assigned by instructors (e.g., literature reviews, presentations on specific topics); these are dependent on the individual student, attending physician, and clinical site.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a hypothesis driven history and complete a targeted exam.
Audience: Graduate

2. Describe clinical findings using accurate descriptive terminology.
Audience: Graduate

3. List the features of common dermatologic disorders and recognize them in the clinical setting.
Audience: Graduate

4. Formulate di#erential diagnosis for common skin diseases.
Audience: Graduate

5. List the steps for performing o#ce-based tests, including potassium hydroxide (KOH) examination and scabies prep.
Audience: Graduate

6. Formulate a basic treatment plan for common dermatologic disorders, including selecting the appropriate strength of topical steroids.
Audience: Graduate

7. Counsel patients on principles of photoprotection, signs of skin cancer, side e#ects of topical steroids and appropriate use of oral antibiotics in the care of dermatology patients.
Audience: Graduate

8. Use clinical and histologic evidence, adapt and justify the working diagnosis.
Audience: Graduate

9. Complete written documentation in a comprehensive, concise, accurate and timely manner.
Audience: Graduate

10. Review, interpret and present current literature to support patient care.

Audience: Graduate

11. Engage patients in shared decision-making regarding tests, orders and procedures.
Audience: Graduate

DERM 953 – DERMATOLOGY ELECTIVE
2-4 credits.

Experience blends medical and procedural dermatology, dermatopathology and basic science topics. Advance patient care skills through exposure to a broad array of common and complex cutaneous diseases, formulation of basic differential diagnoses and treatment plans, and performance of common diagnostic procedures. Experience via rotations through general adult and pediatric dermatology clinics, as well as specialty clinics. Opportunities may arise for participation in inpatient dermatology consults. All clinical activities will be completed under the direct supervision of attending physicians and residents. Participate in additional educational activities, including faculty lectures, Grand Rounds conference, and reading or on-line assignments. Additional patient care related learning activities may be assigned by instructors (e.g., literature reviews, presentations on specific topics); these are dependent on the individual student, attending physician, and clinical site.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a hypothesis driven history and complete a targeted exam.
Audience: Graduate

2. Describe clinical findings using accurate descriptive terminology.
Audience: Graduate

3. List the features of common dermatologic disorders and recognize them in the clinical setting.
Audience: Graduate

4. Formulate differential diagnosis for common differential diagnosis
Audience: Graduate

5. List the steps for performing office-based tests, including potassium hydroxide (KOH) examination and scabies prep.
Audience: Graduate

6. Formulate a basic treatment plan for common dermatologic disorders, including selecting the appropriate strength of topical steroids.
Audience: Graduate

7. Counsel patients on principles of photoprotection, signs of skin cancer, side effects of topical steroids and appropriate use of oral antibiotics in the care of dermatology patients
Audience: Graduate

8. Using clinical and histologic evidence, adapt and justify the working diagnosis.
Audience: Graduate

9. Complete written documentation in a comprehensive, concise, accurate and timely manner.
Audience: Graduate

10. Review, interpret and present current literature to support patient care.

Audience: Graduate

11. Engage patients in shared decision making regarding tests, orders and procedures.
Audience: Graduate

DERM 954 – AMBULATORY DERMATOLOGY ELECTIVE
2-4 credits.

Outpatient dermatology experience provides exposure to a typical private practice where patients present with a broad array of problems. Learn to diagnose, treat, and/or appropriately refer common dermatologic conditions and to be aware of cutaneous manifestations of serious and significant systemic disease.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Accurately describe skin lesions including morphology, configuration and distribution.
Audience: Graduate

2. Recognize cutaneous manifestations of systemic diseases.
Audience: Graduate

3. Demonstrate familiarity with common diagnostic and therapeutic procedures used in dermatology, including cryotherapy, shave and punch skin biopsy, potassium hydroxide mounts, scabies oil mounts, Tzanck smear, and dermoscopy.
Audience: Graduate

4. Describe 1st and 2nd lines of therapy for common and important lesions and eruptions.
Audience: Graduate

5. Identify risk factors for melanoma and non-melanoma skin cancers.
Audience: Graduate

6. Perform supervised full-body skin exams for high-risk patients.
Audience: Graduate

7. Demonstrate ability to write appropriate clinical notes and communicate effectively with the health care team.
Audience: Graduate

8. Identify clinical situations in which a dermatologist should be consulted and other clinical situations which may be managed in a primary care clinic without referral.
Audience: Graduate

DERM 955 – PUBLIC HEALTH IN DERMATOLOGY SELECTIVE
2 credits.

Explore the difficulties and opportunities available in improving public health in the specialized field of dermatology. Topics and readings have been developed with public health experts from around the country, and include discussions surrounding skin cancer screening and overdiagnosis, as well as dermatologic challenges in LGBTQ+, skin of color, rural, and inmate communities.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply the social ecological model framework to examine factors that influence dermatologic health outcomes
Audience: Graduate

2. Identify and discuss principles of screening and surveillance of skin cancer, and relate this to screening and surveillance of other medical conditions
Audience: Graduate

3. Examine equity issues in dermatology with respect to diverse communities, including: rural vs. urban, LGBTQ+, skin of color, and inmate populations
Audience: Graduate

4. Critically appraise medical literature focused on dermatologic public health
Audience: Graduate

5. Respectfully engage with community organizations around the topic of dermatology
Audience: Graduate

6. Communicate public health-oriented dermatology messaging to a variety of audiences
Audience: Graduate

DESIGN STUDIES (DS)

DS 101 – INTRODUCTION TO TEXTILE DESIGN
3 credits.

This survey class will be an introduction to the technical and conceptual ways of working in Textile Design. Students will participate in three five week modules: one module introducing print and dye concerns, one module introducing off-loom processes, and one module introducing structural enrichment techniques and concepts. Each module will include a series of introductory exercises leading to a final larger project. The work in each module will be supported by short readings and slide lectures highlighting historical and contemporary work. Course fee: yes.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025

DS 120 – DESIGN: FUNDAMENTALS I
3 credits.

Elements and principles of design relevant to design of the visual environment.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

DS 123 – WHAT IS DESIGN?
3 credits.

Design is a key component of our daily lives and can profoundly affect all people. But how? And to what end? What does design mean and what can it do for us? Interrogate those questions by looking broadly at the place of design in everyday life, and how design intersects with society, economics, politics, the environment, and culture. Study the form, function, and philosophy of design, from what we wear on our bodies to how we move through the world. Ground discussions in close observation and analysis of previous design solutions, leading to innovative approaches to the roles, and responsibilities, of design for the future.
Requisites: None
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Interrogate design in the context of everyday life, including social, cultural, political, economic, technological, and environmental circumstances that both influence and are influenced by the design sector.
Audience: Undergraduate

2. Use methods of observation, analysis, and application to assess the role of design in everyday life.
Audience: Undergraduate

3. Analyze primary and secondary research sources across a range of media (eg, written texts, visual and material culture, oral testimony, embodied experience, etc) to promote awareness and understanding of design.
Audience: Undergraduate

4. Demonstrate knowledge of design practice, purpose, uses, outcomes, and responsibilities, across scales of human experience.
Audience: Undergraduate

5. Communicate clearly, effectively, and critically using terminology appropriate to the field of design, across a variety of modes of expression (eg, academic writing, peer discussion, public commentary, visual storytelling, etc).
Audience: Undergraduate

DS 130 – INTRODUCTION TO INTERIOR ARCHITECTURE
3 credits.

Introduction to interior architecture, as a discipline and as a profession. Examine the ways in which interior environments impact our lives, and the challenges and responsibilities faced by those who work in this field. Topics include: the history of interior design as a profession; the increased professionalization of interior design; the relation of interior design to other design disciplines (such as architecture and furniture design); the social, economic, and environmental issues that impact design; the role of emerging technologies (including digital media); design research and documentation; the elements and principles of design; the identification and observation of quality work in both commercial and residential settings; contemporary trends in taste and aesthetics; and the application of design research methods to a real-world project.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2020

DS 140 – VISUAL THINKING - FORM AND SPACE
3 credits.

Manual and digital techniques for idea exploration, concept development, and design presentation using a variety of media. Projects in hand drawing techniques and professional design software. Gain heightened attention to detail; understand the relationship of two-dimensional drawings and three-dimensional objects; explore multiple design solutions visually; convey technical information, and professionally communicate design concepts. Introduce visual communication, visual thinking, visual inspiration and visual representation
Requisites: None
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Practice studio habits that support a consistent, rigorous, reflective work ethic.
Audience: Undergraduate

2. Practice fundamental skills for self-discovery and exploration in design.
Audience: Undergraduate

3. Investigate current software and techniques for contemporary design.
Audience: Undergraduate

4. Describe the elements that contribute to the visualization of design.
Audience: Undergraduate

5. Apply the elements of art and the principles of design in drawing and digital exercises to express ideas, concepts, and moods.
Audience: Undergraduate

6. Practice a variety of methods to structure, contextualize, and communicate the visual representation of ideas.
Audience: Undergraduate

DS 150 – VISUAL THINKING - PIXELS AND PENCILS
3 credits.

Explores visual media as a means of describing what exists, as a method for generating ideas for what could be, and for professionally communicating a design concept. Use hand drawing techniques and professional design software. Supports the proficiency of technical skills while teaching essential methods for creative practice. Learn to move fluidly across platforms to visually explore possibilities, refine ideas, and professionally communicate design plans.
Requisites: None
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop heightened attention to detail, light and form through observational drawing while developing coordination between hand and eye.
Audience: Undergraduate

2. Use hand drawing and digital tools to visually explore multiple design solutions.
Audience: Undergraduate

3. Create professional visuals to communicate a complex design idea, mood and concept.
Audience: Undergraduate

4. Increase fluency of commonly used design software
Audience: Undergraduate

5. Critically analyze individual work and the work of classmates using appropriate terminology related to the design field.
Audience: Undergraduate

6. Develop studio habits that support a consistent, rigorous, reflective work ethic.
Audience: Undergraduate

DS 151 – CRAFT & CONSTRUCTION FOR GARMENTS
3 credits.

Introduces the principles of sewn construction, fabric cutting/layout, and finishing techniques for creating garment prototypes as they relate to the design process. Develop foundational garment construction skills through a combination of demonstrations, hands-on studio work, and critiques. Emphasis is placed on mastering fundamental sewing techniques, and structural analysis to create well-constructed garments that integrate technical precision.
Requisites: None
Repeatable for Credit: No
Learning Outcomes: 1. Identify and differentiate key fiber properties and fabric structures, analyzing their impact on garment construction and design.
Audience: Undergraduate

2. Operate professional tools and industrial machinery with proficiency, demonstrating industry-standard sewing techniques.
Audience: Undergraduate

3. Construct samples using fundamental sewn construction methods, integrating accuracy and craftsmanship, resulting in a sample book.
Audience: Undergraduate

4. Sew a set of sample garments (shirt, skirt, and shorts) that highlight key sewing techniques, demonstrating proficiency in fundamental construction methods.
Audience: Undergraduate

5. Analyze garment structure and fabrics to determine appropriate construction methods and proper use of seam types, facings, interfacing, appropriate closures, and finishings.
Audience: Undergraduate

DS 152 – FASHION DESIGN I
3 credits.

Introduces core principles of fashion design with a focus on creativity, sustainability, critical thinking, and concept development. Emphasizes silhouette, proportion, scale, and materiality as foundational elements in developing design aesthetics. Includes research and sketching as part of the design process, from initial inspiration to presentation of garment concepts. Explores historical and contemporary fashion to inform original work. Develops skills in trend forecasting, market analysis, and flat sketching.
Requisites: DS 151
Repeatable for Credit: No
Learning Outcomes: 1. Identify fundamental fashion design principles, including silhouette, proportion, scale, and materiality, to establish a strong foundation in design aesthetics.
Audience: Undergraduate

2. Describe and analyze historical and contemporary fashion references to inform their own design development.
Audience: Undergraduate

3. Conduct fashion trend research and market analysis and develop original fashion concepts through this research, experimentation, and iterative design processes.
Audience: Undergraduate

4. Create mood and concept boards to communicate design ideas effectively applying visual storytelling techniques.
Audience: Undergraduate

5. Critique personal work and that of peers using appropriate design vocabulary and constructive feedback.
Audience: Undergraduate

6. Present design concepts in a professional format and communicate design ideas through fashion flat sketches.
Audience: Undergraduate

DS 153 – SEWN CONSTRUCTION I
3 credits.

Introduces the principles of sewn construction and addresses the physical and aesthetic properties of fiber and fabrics in the context of apparel design. The studios address skills necessary to plan and construct basic garments. Lectures, hands-on studios, and critiques explore the fundamentals of apparel structure and emphasize the interrelationship of fabric, design and apparel construction as well as the creative, expressive potential of materials and making.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Differentiate and demonstrate an understanding of key characteristics and interaction of fiber content and fabric structures as applied in apparel construction.
Audience: Undergraduate

2. Demonstrate competence in using professional tools and machinery for garment construction.
Audience: Undergraduate

3. Develop a basic skill set for sewn construction
Audience: Undergraduate

4. Demonstrate the ability to follow, and alter a commercial pattern
Audience: Undergraduate

5. Analyze garment structure and fabrics to determine proper use of interfacings, appropriate closures and edge finishes.
Audience: Undergraduate

6. Apply the principles of construction, fiber content and structure to produce a well-constructed, expressive garment.
Audience: Undergraduate

DS 154 – SEWN CONSTRUCTION II
3 credits.

Emphasizes specialty fabrics, finishes and complex construction such as matching plaids and working with pile fabrics. Introduces pattern manipulation through basic flat patternmaking principles. Design and fabricate an original collection of garments for a target customer and will develop and construct two of the garments.
Requisites: DS 153
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand and develop skill set to apply appropriate construction methods for specialty fabrics.
Audience: Undergraduate

2. Understand advanced construction concepts and experiment with advanced construction techniques.
Audience: Undergraduate

3. Identify and analyze fabric qualities to determine suitability for a specified silhouette, target market, and consumer end-use.
Audience: Undergraduate

4. Recognize and execute principles of flat pattern manipulation to create original designs
Audience: Undergraduate

5. Design a group of garments appropriate for a specific customer and end-use.
Audience: Undergraduate

DS 210 – FASHION ILLUSTRATION
3 credits.

Introduction to visual communication of apparel design concepts using selected media. Focus is on drawing the fashion figure, using special techniques, with emphasis on the relationship of figure, garment, fabric, texture, and pattern.
Requisites: DS 120 and 154
Repeatable for Credit: No
Last Taught: Fall 2025

DS 215 – PATTERNMAKING FOR ACCESSORIES
3 credits.

The principles and theories of flat pattern, drafting and draping methods for 3D accessories are explored. The principles of patternmaking are applied to headwear, handbags and footwear. Complete projects that require designing, patterning and constructing hats, bags and footwear.
Requisites: DS 153
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand and apply draping and flat pattern methods used to develop patterns for a variety of accessories
Audience: Undergraduate

2. Understand and apply shaping devices and how they are used to transform 2-D materials into 3-D forms
Audience: Undergraduate

3. Understand vocabulary specific to headwear, handbags and footwear including terms, categories, styles and parts. Analyze structure and construction methods of existing accessories construction
Audience: Undergraduate

4. Learn skill set needed to apply patternmaking and construction to original design
Audience: Undergraduate

5. Design, test pattern and construct original design
Audience: Undergraduate

DS 220 – DESIGN: FUNDAMENTALS II
3 credits.

Elements and principles of three-dimensional design relevant to design and analysis of the spatial environment.
Requisites: DS 120
Repeatable for Credit: No
Last Taught: Spring 2025

DS 221 – PERSON AND ENVIRONMENT INTERACTIONS
3 credits.

Effects of building and outdoor spaces on people over the life course.
Requisites: None
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

DS 222 – INTERIOR DESIGN I
4 credits.

Understanding and applying the process of solving design problems of interiors. Space planning; selection and use of furnishings and materials; preparation of presentations.
Requisites: DS 220 and declared in Interior Architecture BS
Repeatable for Credit: No
Last Taught: Fall 2025

DS 223 – INTERIOR ARCHITECTURAL DESIGN
3 credits.

Building components, construction, interpretation of working drawing, and the process of project development.
Requisites: DS 222
Repeatable for Credit: No
Last Taught: Fall 2025

DS 224 – INTERIOR MATERIALS AND FINISHES
3 credits.

The materials used in interior environments are immense, diverse and constantly changing. Focus on the composition of materials, their uses, and how they affect human health and well being.
Requisites: Declared in Interior Architecture BS
Repeatable for Credit: No
Last Taught: Fall 2025

DS 225 – APPAREL DESIGN I
3 credits.

Basic principles and elements of design as they apply to apparel. Emphasizing both process and product, students analyze fashion trends and practical problems while developing and executing original designs.
Requisites: DS 210 and 253
Repeatable for Credit: No
Last Taught: Spring 2025

DS/ART 226 – TEXTILE DESIGN: OFF-LOOM CONSTRUCTION
3 credits.

Studio design problems in two and three dimensional off-loom constructions; off-loom weaving, looping, and knotting; historical reference and contemporary application.
Requisites: DS 120 and 153
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2021

DS 227 – TEXTILE DESIGN: PRINTING AND DYEING I
3 credits.

Surface design developed in print and resist techniques using historic and contemporary methods.
Requisites: DS 101
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Be familiar with the history and technique of the following textile processes: indigo dyeing, immersion dyeing with natural dyes, dip dyeing, mechanical resists, block printing, silk-screen printing
Audience: Undergraduate

2. Demonstrate design awareness: motifs, spacing, scale, and colour in relation to assignments
Audience: Undergraduate

3. Discover what possibilities there are for a career in textiles
Audience: Undergraduate

4. See the potential for cloth as a medium for artistic expression and the importance of experimentation in textile media
Audience: Undergraduate

5. Implement basic techniques in dyeing and printing
Audience: Undergraduate

6. Demonstrate an understanding of working through not only technical problems as learned in the execution of assignments, but begin to show an understanding of developing a conceptual idea.
Audience: Undergraduate

7. Display curiosity about unexplored areas in the textile field
Audience: Undergraduate

DS 228 – TEXTILE EMBELLISHMENT I
3 credits.

Historic and contemporary design techniques for embellishing textiles; including embroidery, beadwork and appliqué.
Requisites: None
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Acquire a deepened understanding of the importance of reflection in creative work (learning to pay attention to what you love; what you want to find out; what captures your imagination; and what questions the work suggests).
Audience: Undergraduate

2. Recognize the value of critical thinking and research as it applies to creative work.
Audience: Undergraduate

3. Produce a small collection of embellishment samples showing thoughtful experiential engagement with embroidery, beadwork, and fabric collage.
Audience: Undergraduate

4. Create an original textile work informed by and honoring a textile tradition originating on the African continent.
Audience: Undergraduate

5. Originate one ambitious, thoughtfully considered work informed by your individual, emerging creative practice, and making use of the embellishment techniques introduced in the class.
Audience: Undergraduate

6. Demonstrate public presentation skills appropriate to the discussion of creative research.
Audience: Undergraduate

DS/ART 229 – TEXTILE DESIGN: WEAVING I
3 credits.

The relationship of hand weaving to textural surfaces and sculptural forms are examined through the study of problems including structure, pattern, composition, and additional conceptual technical possibilities. Content is explored in the development of individual direction and in relationship to the discussion of historical and contemporary textiles and other works of art. Pursue an advanced investigation of concept and technique of hand-woven cloth.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate understanding of theories, approaches, concepts, and current and historical textile/weaving practices in projects and presentations.
Audience: Undergraduate

2. Utilize the techniques, skills and modern tools/software necessary to create work in the field.
Audience: Undergraduate

3. Examine articles and conduct and present research to inform personal style and concept goals.
Audience: Undergraduate

4. Synthesize knowledge and use insight and creativity to better understand and improve their own design/art
Audience: Undergraduate

5. Communicate effectively through oral presentations, discussion and critiques.
Audience: Undergraduate

DS/GEN BUS 240 – HUMAN-CENTERED DESIGN AND BUSINESS
2 credits.

Design thinking is an iterative problem-solving process geared toward producing innovative solutions for complex and persistent problems in various fields and organizations. Its process, culture, and value system from both design and business point of views will be covered: Empathetic understanding of the end users, problem definition rooted in systems thinking, ideation with a strong emphasis on creativity, visualization and prototyping, testing rooted in a set of research methods, and finally, the importance of iteration in bringing about innovative solutions. The path from project to market will also be explored, with an understanding of how one might balance desirability, feasibility and viability.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate the ability to understand and gain empathy into human (customer/consumer/user) experience of product, services and systems through systematic inquiries.
Audience: Undergraduate

2. Exhibit the ability to be creative, collaborative, and divergent thinkers who can generate and visually communicate multiple ideas.
Audience: Undergraduate

3. Demonstrate ability to iterate proposed solutions toward innovation.
Audience: Undergraduate

4. Explore questions around cultural and intellectual exchange between business and design such as "What can business learn from design, and vice versa?", or "How might the incorporation of design thinking help human-centered business to grow and flourish?
Audience: Undergraduate

5. Illuminate and expand on existing touch points between design thinking and "business thinking", including, but not limited to, marketing/new product design and development, entrepreneurship and venture creation, operations and new process design
Audience: Undergraduate

DS 241 – VISUAL COMMUNICATION I
3 credits.

Focuses on the basic concepts, methods and materials used for communicating ideas during the design process. Emphasizes creating visually driven experiences, with the goal of providing the tools to integrate traditional manual approaches with up-to-the-minute digital approaches, all within the context of creative design thinking.
Requisites: Declared in Interior Architecture BS
Repeatable for Credit: No
Last Taught: Fall 2025

DS 242 – VISUAL COMMUNICATION II
3 credits.

Advanced topics focusing on the concepts, methods and materials used for communicating ideas during the design process. With an emphasis on creating visually driven experiences, integrates traditional manual approaches with up-to-the-minute digital approaches, all within the context of creative design thinking.
Requisites: DS 241
Repeatable for Credit: No
Last Taught: Spring 2025

DS 251 – TEXTILE SCIENCE
3 credits.

Chemistry and physics of fibers and polymers. Principles of chemical finishes and dyeing. Qualitative fiber analysis. Structure and properties of yarns and fabrics.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

DS 252 – DESIGN LEADERSHIP SYMPOSIUM
1 credit.

Provides detailed examination of design careers in the fields of textiles, fashion, and apparel design as well as interior design, industrial design, and architecture. High level industry experts from leading companies in the design industry participate as guest speakers and panel members.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

DS 253 — PATTERNMAKING FOR FASHION DESIGN I
3 credits.

Introduces flat patternmaking as a fundamental technique in apparel design. Explore foundational concepts and principles through manipulation of pattern blocks and the typology of garment styles and silhouettes to execute original designs. Develop pattern drafts for simple garments by applying fundamental patternmaking techniques (dart manipulation, adding fullness, contouring). Emphasis is placed on understanding garment construction in translating design concepts into accurate pattern drafts.
Requisites: DS 152 or DS 154
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and demonstrate basic knowledge of patternmaking through use of basic tools, appropriate terms and resources.
Audience: Undergraduate

2. Identify and apply fundamental flat patternmaking principles of dart manipulation, adding fullness, and contouring.
Audience: Undergraduate

3. Demonstrate basic principles and techniques of flat patternmaking through the manipulation of basic skirt and bodice garment blocks.
Audience: Undergraduate

4. Communicate pattern modifications and garment designs through accurate technical drawings, appropriate terminology and documentation.
Audience: Undergraduate

5. Translate design sketches into flat pattern drafts that align with garment construction methods.
Audience: Undergraduate

6. Critique one's own work and that of peers using appropriate design vocabulary and constructive feedback.
Audience: Undergraduate

DS/ANTHRO/ART HIST/HISTORY/LAND ARC 264 — DIMENSIONS OF MATERIAL CULTURE
4 credits.

This course introduces students to the interdisciplinary field of material culture studies. It is intended for students interested in any professional endeavor related to material culture, including careers in museums, galleries, historical societies, historic preservation organizations, and academic institutions. During the semester, students have varied opportunities to engage with and contemplate the material world to which people give meaning and which, in turn, influences their lives. Sessions combine in some way the following: presentations from faculty members and professionals who lecture on a phase of material culture related to his/her own scholarship or other professional work; discussion of foundational readings in the field; visits to collections and sites on campus and around Madison; discussion of readings assigned by visiting presenters or the professors; and exams and short papers that engage material culture topics.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

DS 270 — DESIGN AND FASHION EVENT PRACTICUM
2 credits.

Addresses the multi-disciplinary production of a student-centered, student-driven design and fashion event. Topics include, creative direction, strategic marketing, stage and performance, visual communication, event organization, audience engagement and event production. Gain knowledge, skills and hands-on experience implementing a large-scale art event. Emphasizes teamwork and fosters multi-disciplinary appreciation.
Requisites: None
Repeatable for Credit: No
Last Taught: Spring 2020

DS 299 — INDEPENDENT STUDY
1-3 credits.

Directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023

DS 319 — CLOTH TO CLOTHING
3 credits.

Explore specific dye and manipulation techniques that directly relate to integrated textile and garment design. Working with color, composition and fabric movement discuss simple garment shapes and how they can be used in conjunction with expressive textiles.
Requisites: DS 101 and 154
Repeatable for Credit: No
Last Taught: Fall 2025

DS 321 – PROBLEM-DEFINITION: DESIGN PROGRAMMING
3 credits.

Programming is the problem definition phase of design process. An architectural or design program is used to guide the design process and to evaluate design solutions. A variety of design programming approaches, tools, and techniques are presented. Opportunity to develop skills in preparing a design program document that includes multiple user-needs and principles of environment-behavior interaction.
Requisites: DS 221 and sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge about various programming approaches and tradeoffs of selecting a specific approach.
Audience: Undergraduate

2. Illustrate understanding of components within programing documents for designs of different building types.
Audience: Undergraduate

3. Integrate programming tools such as observation, behavior mapping, interviews, and questionnaires in a design program.
Audience: Undergraduate

4. Develop a programming approach and apply it to a project to produce a design program that meets the clients' and users' needs.
Audience: Undergraduate

5. Identify strategies to gather design requirements and integrate them into translatable programing statements.
Audience: Undergraduate

6. Collect, analyze, and organize space requirement information using tools such as adjacency diagrams, criteria matrices, and line-by-line programs.
Audience: Undergraduate

7. Develop analytic and problem-solving skills through use of programming tools and methods.
Audience: Undergraduate

8. Formulate and communicate programmatic requirements to a client and designers.
Audience: Undergraduate

DS 322 – INTERIOR DESIGN II
4 credits.

Design of residential interiors including space planning, lighting design, selections of materials and furniture, professional communication of design solutions. Emphasis on the aesthetic and functional needs of the family and residents with special needs.
Requisites: DS 222
Repeatable for Credit: No
Last Taught: Spring 2025

DS 327 – TEXTILE DESIGN: MANUAL/COMPUTER GENERATED IMAGERY AND PATTERN
3 credits.

Pattern design for textiles, wallpaper and other applications (motif, layout, repeats, colorways, coordinates), using various manual and digital creation methods. Development of imagery, design concepts, collaboration and presentation.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate the use of Photoshop and Illustrator for textile applications
Audience: Both Grad & Undergrad

2. Display proficiency in the use of Pointcarre to develop designs, colourways and repeating patterns
Audience: Both Grad & Undergrad

3. Develop ideas into conceptually solid designs/works
Audience: Both Grad & Undergrad

4. Research important issues surrounding fair trade and artisan production

Audience: Both Grad & Undergrad

5. Explore the history and techniques of the artisans' crafts through research and conversation with the artisans
Audience: Both Grad & Undergrad

6. Operate computers, software programs, scanners and printers
Audience: Both Grad & Undergrad

7. Exhibit the ability to work in a variety of mediums that incorporate digital imaging
Audience: Both Grad & Undergrad

8. Communicate with confidence
Audience: Both Grad & Undergrad

9. Develop an appreciation for a collaborative interdisciplinary environment
Audience: Both Grad & Undergrad

10. Display an advanced level of design awareness: motifs, spacing, scale, and colour in relation to assignments
Audience: Graduate

11. Create innovative applications for co-design
Audience: Graduate

12. Lead critiques and discussions
Audience: Graduate

13. Model a willingness to take on a leadership role in a collaborative interdisciplinary environment
Audience: Graduate

14. Express curiosity about unexplored areas or possibilities within the fields of textile design, fair trade and artisan production
Audience: Graduate

DS 333 – DIGITAL FABRICATION FOR DESIGNERS
3 credits.

Modern tools and techniques including professional design software and digital fabrication equipment are used in combination with traditional model making for tangible prototyping using a variety of media. Leverage digital design software, laser cutting, and 3D printing alongside traditional methods and manual tools to develop design concepts into physical forms.
Requisites: DS 140 or LAND ARC 210
Repeatable for Credit: No
Learning Outcomes: 1. Practice studio habits that support a consistent, rigorous, reflective work ethic.
Audience: Undergraduate

2. Demonstrate proficiency in industry standard software to design original digital files for fabrication.
Audience: Undergraduate

3. Develop practical skills in operating laser cutters and 3D printers, understanding both the technical aspects and material limitations of these tools
Audience: Undergraduate

4. Gain hands-on experience in assembly techniques, using basic hand tools to assemble and complete designs
Audience: Undergraduate

5. Troubleshoot and iterate multiple design solutions, fostering problem-solving and critical thinking abilities essential for successful digital fabrication.
Audience: Undergraduate

6. Explore the integration of digital and physical methods to create functional and aesthetically compelling projects
Audience: Undergraduate

DS 341 – DESIGN THINKING FOR TRANSFORMATION
3 credits.

Learn design thinking techniques to enhance creative analysis and problem solving. Directly apply those techniques to a variety of human centered design challenges. Innovate, prototype, and test designs that address real-word problems with real-world constraints and the limitations of technology. Projects range from ways to improve everyday situations to community issues.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025

DS 353 – PATTERNMAKING FOR FASHION DESIGN II
3 credits.

Expanding upon foundational patternmaking techniques through introduction of complex pattern manipulations, tailored garment construction, zero waste patternmaking, sustainable designs, and multi-piece garment development. Emphasis is placed on precision, fit modifications, structured garment design, and problem-solving in pattern development. Development of skills to create original, industry-standard patterns for diverse silhouettes and styles.
Requisites: DS 253
Repeatable for Credit: No
Learning Outcomes: 1. Apply advanced pattern manipulation techniques, zero-waste, and sustainable design approaches to create innovative, functional, and low-impact garments.
Audience: Undergraduate

2. Analyze and refine fit adjustments for structured and fluid garment styles.
Audience: Undergraduate

3. Develop multi-piece garment patterns, ensuring proper seam alignment and functional design elements.
Audience: Undergraduate

4. Evaluate the impact of fabric properties on advanced pattern designs, making informed material choices.
Audience: Undergraduate

5. Solve construction challenges through strategic pattern adjustments and modifications.
Audience: Undergraduate

6. Produce industry-standard technical documentation for original pattern designs, including spec sheets and pattern notations.
Audience: Undergraduate

DS 355 – HISTORY OF FASHION, 1400-PRESENT
3 credits.

Changing form and meaning of costume in the West from Renaissance to present. Dress considered in relation to social/cultural milieu and as an art form. Includes treatment of the body; ethnic/class variations; couture; "antifashion".
Requisites: Junior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

DS 361 – DESIGN-RELATED INTERNATIONAL EXPERIENCE
1-6 credits.

In-depth study of art/design concepts and/or practice in a specific culture while studying abroad. Looks at cultural issues through a particularized design-related lens.
Requisites: DS 120 or ART 104
Repeatable for Credit: Yes, unlimited number of completions

DS 401 – FIT ACCESSORIES DESIGN
1-6 credits.

Provides equivalency for accessory design courses completed at the Fashion Institute of Technology (FIT) by Textiles Fashion Design majors as part of the FIT visiting student program. This is not a course that can be enrolled in at UW-Madison
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions

DS 402 – FIT ADVERTISING AND MARKETING COMMUNICATIONS
1-6 credits.

Provides equivalency for advertising and marketing communications courses completed at the Fashion Institute of Technology (FIT) by Textiles Fashion Design majors as part of the FIT visiting student program. This is not a course that can be enrolled in at UW-Madison
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions

DS 403 – FIT COMMUNICATION DESIGN FOUNDATION
1-6 credits.

Provides equivalency for communication design foundation courses completed at the Fashion Institute of Technology (FIT) by Textiles Fashion Design majors as part of the FIT visiting student program. This is not a course that can be enrolled in at UW- Madison
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions

DS 404 – FIT FASHION BUSINESS MANAGEMENT
1-6 credits.

Provides equivalency for fashion business management courses completed at the Fashion Institute of Technology (FIT) by Textiles Fashion Design majors as part of the FIT visiting student program. This is not a course that can be enrolled in at UW-Madison
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions

DS 405 – FIT FASHION DESIGN
1-6 credits.

Provides equivalency for fashion design courses completed at the Fashion Institute of Technology (FIT) by Textiles Fashion Design majors as part of the FIT visiting student program. This is not a course that can be enrolled in at UW-Madison
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions

DS 406 – FIT TEXTILE DESIGN AND SCIENCE
1-6 credits.

Provides equivalency for textile design and science courses completed at the Fashion Institute of Technology (FIT) by Textiles Fashion Design majors as part of the FIT visiting student program. This is not a course that can be enrolled in at UW-Madison
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions

DS 407 – FIT RELATED AREA
1-6 credits.

Provides equivalency for related area courses completed at the Fashion Institute of Technology (FIT) by Textiles Fashion Design majors as part of the FIT visiting student program. This is not a course that can be enrolled in at UW-Madison
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions

DS 421 – HISTORY OF ARCHITECTURE AND INTERIORS I: ANTIQUITY THROUGH 18TH CENTURY
3 credits.

Surveys the history of architecture, interiors, furnishings and decorative arts from antiquity to the mid-19th century. Introduction to major design cultures and movements, emphasizing the role of social, economic, political, technological, and aesthetic factors in the shaping design.
Requisites: DS 120 or (ART HIST 201 and 202)
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

DS 422 – HISTORY OF ARCHITECTURE & INTERIORS II: 19TH AND 20TH CENTURIES
3 credits.

Surveys the history of architecture, interiors, furnishings and decorative arts from the mid-19th to the mid-20th century. Introduction to major design cultures and movements, emphasizing the role of social, economic, political, technological, and aesthetic factors in the shaping design.
Requisites: DS 421 or (ART HIST 201 and 202)
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

DS 427 – TEXTILE DESIGN: PRINTING AND DYEING II
3 credits.

Focuses on silkscreen printing. Discharge, burnout, and chemical resist processes, specific to screen printing. Develop conceptual ideas and explore alternative ways of producing images.
Requisites: DS 227 and 327, or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

DS 428 – TEXTILE EMBELLISHMENT II
3 credits.

Opportunity to continue creative research introduced in Textile Embellishment I, with a special emphasis on student driven design. Advance skill and vision using traditional and experimental ways of altering and enriching the surface of pliable materials using techniques such as stitching, embroidery, beading, and fabric collage. Identify and pursue individual conceptual concerns. Readings, formal and informal presentations, group and individual critiques will support the work. Presentation of research will include formal power point talks and physical presentation of the completed textile works.
Requisites: DS 228
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Acquire a deepened understanding of the importance of reflection in creative work (learning to pay attention to what you love; what you want to find out; what captures your imagination; and what questions the work suggests).
Audience: Undergraduate

2. Recognize the value of critical thinking and research as it applies to creative work.
Audience: Undergraduate

3. Create original textile work informed by personal vision, and supported with traditional and applied research.
Audience: Undergraduate

4. Originate ambitious, thoughtfully considered work informed by their individual, emerging creative practice, and making use of the embellishment techniques appropriate to their research.
Audience: Undergraduate

5. Demonstrate public presentation skills appropriate to the discussion of creative research through power point presentations and the opportunity to facilitate discussion.
Audience: Undergraduate

DS 429 – TEXTILE DESIGN: WEAVING II
3 credits.

Analysis of complex or compound hand weave techniques. Individual development of solutions to problems of structural textile design.
Requisites: DS/ART 229
Repeatable for Credit: No
Last Taught: Spring 2025

DS 430 – HISTORY OF TEXTILES
3 credits.

Designs and meanings and interrelationships of textiles in selected cultures and time periods.
Requisites: None
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

DS 451 – COLOR THEORY AND TECHNOLOGY
3 credits.

Specialized topics of current interest.
Requisites: Satisfied Quantitative Reasoning (QR) A requirement or graduate/professional standing
Course Designation: Gen Ed - Quantitative Reasoning Part B
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

DS 453 – DIGITAL PATTERNMAKING I
3 credits.

Explore the digital dimension of patternmaking through industry-standard computer-aided design (CAD) software. Examines the advantages of computer-assisted patternmaking, and considers the potential impact of emerging and future technologies. Emphasis is placed on digitizing patterns, manipulating basic blocks, creating garment models, and developing original garment designs.
Requisites: DS 353
Repeatable for Credit: No
Learning Outcomes: 1. Demonstrate fundamental skills in computer-aided design (CAD) functions using industry standard CAD software systems.
Audience: Undergraduate

2. Describe and compare technologies and processes that complement and enhance computer-aided design.
Audience: Undergraduate

3. Digitize, create, and modify digital pattern pieces using an industry standard CAD system and its various menu functions.
Audience: Undergraduate

4. Create model lists and prepare patterns for plotting and printing.
Audience: Undergraduate

5. Develop a cohesive digital pattern collection of original designs that incorporate principles of sustainable and/or circular design.
Audience: Undergraduate

DS 501 – SPECIAL TOPICS
1-3 credits.

Specialized topics of current interest.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

DS/COMP SCI/I SY E 518 – WEARABLE TECHNOLOGY
3 credits.

Gives students hands-on experience in building wearable computing platforms. Designed for students who have a background in textiles and apparel design, computer science, engineering or media arts. By the completion of the course students will have fundamental knowledge of electronic circuitry, programming, and "maker skills".
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022

DS 519 – COLLECTION DEVELOPMENT
3 credits.

Demonstrate accumulated learning through a semester long project in the development of a collection of marketable artisan works within your own media. Combines classroom-based learning explorations with real world technical and economic considerations to successfully navigate a balance between expansive thinking and application in real world situations.
Requisites: Junior standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

DS 521 – ENVIRONMENTS OF CRISIS & DESIGN
3 credits.

Explores emerging built environments designed to support people undergoing crises such as disasters, conflicts, forced migration. Focuses on psycho-social components to employ human-centered design lens to environments of crisis. Examines theoretical frameworks on stress, trauma-informed practices, supportive environments, and restoration. Investigates physical spaces in crisis environments and their health and wellbeing impacts. Evaluates design, policy interventions from lenses of equity and justice, human rights, and dignity.
Requisites: Junior standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Examine theoretical frameworks in environmental psychology investigating human-environment relations in environments of crisis.
Audience: Both Grad & Undergrad

2. Demonstrate familiarity with the breadth of human experiences in crisis situations focusing on the built environment.
Audience: Both Grad & Undergrad

3. Describe health and well-being impacts of built environments on people undergoing crisis.
Audience: Both Grad & Undergrad

4. Critically evaluate environmental interventions in spaces of crisis to investigate their psycho-social supportiveness.
Audience: Both Grad & Undergrad

5. Apply theoretical frameworks in development of research questions within the context of environments of crisis.
Audience: Graduate

6. Critique existing crisis contexts from a human-centered perspective.
Audience: Graduate

DS 527 – GLOBAL ARTISANS
3 credits.

In the field of design, there has been an increased emphasis on ethical practices in production and consumption. Utilizing "design thinking", become exposed to important issues surrounding small-scale artisan production and develop valuable hands-on skills working with artisan partners through design, quality control, branding and story- telling. Topics may include: fair trade development, product design, cultural implications, as well as pricing, marketing, and sales.
Requisites: Junior standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

DS 528 – EXPERIMENTAL TEXTILE DESIGN
2-3 credits.

Experimental design and decorative principles; elements and techniques for the animation of textile surfaces.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025

DS 529 – BUILDING A SUSTAINABLE CREATIVE PRACTICE
3 credits.

Artists and designers' material choices influence the content, social meaning, and physical structure of their work, as well as leaving an environmental foot print and affecting social exchange. Consideration given to reuse and recycling, and critically engaging ideas of sustainability in art making and design practice with an emphasis on fiber related topics including textile and apparel design, soft sculpture, papermaking and book arts, as well as exhibition, installation, and/or the distribution of finished works.
Requisites: Junior standing
Repeatable for Credit: No
Last Taught: Spring 2025

DS 549 – ENVIRONMENTAL CONTROL SYSTEMS: LIGHTING, ACOUSTICS, AND THERMAL COMFORT IN BUILDINGS
3 credits.

The ways in which we design, construct, and operate has significant impacts on the building occupants and the environment. Architects, designers, and building engineers can work closely together to reduce depletion of critical resources, prevent environmental degradation, and create built environments that are livable, comfortable, safe, and productive. Offers the foundational knowledge on which such practice can be built on. Through a series of lectures, field measurements, and building simulations, understand how lighting, acoustics, and thermal properties behave in buildings and influence the building occupants. The proper application of building design as well as methods for designing and evaluating these features are discussed.
Requisites: Satisfied Quantitative Reasoning (QR) A requirement and declared in Interior Architecture; or graduate/professional standing
Course Designation: Gen Ed - Quantitative Reasoning Part B
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand physics of light, sound, color, and thermal transfer as they pertain to lighting, acoustics, and thermal comfort in buildings.
Audience: Both Grad & Undergrad

2. Understand the earth science that governs solar geometry and the climate as they pertain to lighting and thermal comfort in buildings.
Audience: Both Grad & Undergrad

3. Understand human physiology and psychology related to lighting, acoustics, and thermal comfort in buildings.
Audience: Both Grad & Undergrad

4. Critically evaluate lighting, acoustics, and thermal comfort in both existing and future buildings using various measurement methods and computational models.
Audience: Both Grad & Undergrad

5. Apply concepts of lighting, acoustics, and thermal transfer to design strategies in order to create optimal experiences for building occupants.
Audience: Both Grad & Undergrad

6. Develop a conceptually sophisticated research projects that focuses on building performance evaluation.
Audience: Graduate

7. Learn and lead from class activities, research projects, and self-directed study.
Audience: Graduate

DS 550 – MATERIAL CULTURE OF CHILDHOOD
3 credits.

Explores the histories of Children and Childhood and a set of scholarly methods called Material Culture. How have changing understandings of child development, social and cultural history, and the history of the family shaped and been shaped by children's material worlds? Explores design and material culture topics that illuminate how histories of young children have been understood and treated and considers objects that reflect the experiences of young people, from birth through school age-clothing for babies and children, garments that mark aging and transitions, histories of homes and interior furnishings, toys and play things, objects for learning, and material objects related to caregiving.
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Interpret theoretical and historical texts in Material Culture, applying the concepts to written and oral explanations
Audience: Both Grad & Undergrad

2. Evaluate objects and images as sources of social and cultural information from a material culture perspective
Audience: Both Grad & Undergrad

3. Describe and write about the historical development of the concept of childhood and the influence of material culture on its construction
Audience: Both Grad & Undergrad

4. Explore and test how concepts of childhood are closely connected to ideas about race, gender, class, ethnicity, religion/faith, and socioeconomic class--and all of those distinctions are reflected materially.
Audience: Both Grad & Undergrad

5. Practice conducting object-based research and writing.
Audience: Both Grad & Undergrad

6. Propose and draft a scholarly project focused on the material culture of childhood that aims to make an original contribution to your field.
Audience: Graduate

DS 555 – SUSTAINABLE FASHION PRACTICES - UNRAVELED & REDESIGNED
3 credits.

Explores sustainable fashion design through the lens of circular design principles, ethical production, alternative business models, and material innovation. Emphasizes waste reduction, upcycling, regenerative design, local production networks, and closed-loop fashion systems. Combines theoretical exploration with hands-on projects to analyze the environmental and social impact of the fashion industry, experimental approaches, and creative solutions that align with circular economy frameworks. Encourages critical thinking, material research, and the development of fashion garments with minimal environmental impact.
Requisites: DS 253
Repeatable for Credit: No
Learning Outcomes: 1. Define key concepts of sustainability and circular design in fashion, distinguishing between linear and circular systems.
Audience: Undergraduate

2. Identify and evaluate sustainable materials, ethical production techniques, and low-impact design practices.
Audience: Undergraduate

3. Apply circular design principles to develop innovative fashion products that minimize waste and extend the life cycle of garments.
Audience: Undergraduate

4. Experiment with sustainable construction techniques, including zero-waste patternmaking, upcycling, and modular design, to create responsible fashion prototypes.
Audience: Undergraduate

5. Integrate material research, lifecycle assessment, and circular strategies in the design of a sustainable fashion collection and garment construction.

Audience: Undergraduate

6. Communicate sustainability concepts effectively through visual storytelling, technical documentation, and industry-relevant presentations.

Audience: Undergraduate

DS 561 – TEXTILES: SPECIFICATIONS AND END USE ANALYSIS
3 credits.

Physical textile testings are studied. Emphasis is placed on the evaluation of textiles intended for use as apparel and for interiors. Writing specifications, and minimum performance standards are also discussed.
Requisites: DS 224, 251, or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022

DS 570 – DESIGN AND FASHION EVENT MANAGEMENT
3 credits.

Production of a student-driven, student-centered design and fashion event presents the framework for advanced experience and study. Provides the opportunity to study and to actively engage in high-level interdisciplinary exploration and collaboration. Transferring discipline-specific skills to a new context, learn methods for testing, review, and revision to develop problem-solving skills and communication. Encourages teamwork as well as crossdisciplinary understanding and appreciation.
Requisites: DS 270 or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020

DS/COMP SCI 579 – VIRTUAL REALITY
3 credits.

Introduces students to the field of virtual reality and focuses on creating immersive, interactive virtual experiences. Survey topics include historical perspectives on virtual reality technology, computer graphics and 3D modeling, human perception and psychology, human computer interaction and user interface design. This course is designed for students with backgrounds in Computer Science, Engineering, Art, Architecture and Design. Students will work in interdisciplinary teams on projects, culminating in a final event that will be showcased to the public. While not an official uisite, the class will be technologically motivated; therefore students should be comfortable learning new software. The class will utilize publicly available game design software which provides tools and services for the creation of interactive content. While not necessary, students may find it helpful to have taken classes in programming and computer graphics (such COMP SCI 559: Computer Graphics) or in 3D modeling (such as ART 429: 3D Digital Studio I or DS 242: Visual Communication II).
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025

DS 601 – INTERNSHIP
1-8 credits.

A supervised internship providing hands-on training in a professional experience in design studies related fields.
Requisites: Consent of instructor
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

DS 620 – VISUAL THINKING FOR PROBLEM SOLVING
3 credits.

Visual thinking's theoretical foundations are paired with visual thinking skills, tools, and applications. The format explores the way these can be combined while thinking critically and engaging with problem solving methodologies such as design thinking. Theoretical foundations include the elements and principles of design, the processes of visual narrative, and perceptual theories. Skills and applications include manual sketching, 3D visualization and modeling, data visualization, image manipulation, graphic design, video presentation, multimedia, design for 3D printing and fabrication, diagramming, digital rendering, and graphic design.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand what it means to think and communicate visually.
Audience: Graduate

2. Manipulate visual content created by others, create new visual content related to problem solving, and integrate a wide range of visual thinking tools and processes in order to create a compelling narrative (including data visualization) in the context of solving a design problem.
Audience: Graduate

3. Understand and apply the theoretical foundations of visual communication, such as the elements and principles of design, to engage in effective visual communication and data visualization.
Audience: Graduate

4. Understand the differences between, and similarities among, a wide array of visual thinking tools and methods,
Audience: Graduate

5. Choose and apply visual thinking tools and methods that are useful for different types of problem solving
Audience: Graduate

6. Generate quick hand drawn sketches and diagrams for study and communication.
Audience: Graduate

7. Develop a basic knowledge of how to apply technologies used for visual communication, including industry standard software applications in 2D, 3D, and 4D, along with foundational skills that will support future in-depth study.
Audience: Graduate

8. Generate digital output files that can be used for digital fabrication such as laser cutting, CNC routing, and 3D printing.
Audience: Graduate

DS 622 – INTERIOR DESIGN III
4 credits.

Design of commercial interiors with emphasis on design process, programming, space planning, selection of interior materials, furniture, and lighting. Field trip required.
Requisites: DS 322
Repeatable for Credit: No
Last Taught: Fall 2025

DS 623 – INTERIOR DESIGN IV
4 credits.

Design of commercial interiors with emphasis on acoustics, codes, costs, specifications, details, and visual presentation. Field trip required.
Requisites: DS 622
Repeatable for Credit: No
Last Taught: Spring 2025

DS 624 – INTERIOR ARCHITECTURE PROFESSIONAL PRACTICE
3 credits.

Prepares Interior Architecture majors to launch their careers in design. Become cquainted with aspects of the interior design profession: how an office works, the project delivery process in interior design practice, and post-graduation material preparation.
Requisites: DS 322
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Define contexts for interior design practice such as large or small practices, stand-alone or interior practices included in architectural firms, hybrid practices, and collaborative practices.
Audience: Undergraduate

2. Demonstrate awareness of the impact of a global market for design services on design practices.
Audience: Undergraduate

3. Describe the breadth and depth of interior design's impact and value including sustainability and economic, social, and human-performance responsibility.
Audience: Undergraduate

4. Identify the components of business practice such as business development, brand management, financial management, risk management, client relations, and human resources.
Audience: Undergraduate

5. Give examples of professional organization in the field and legal recognition for the interior design profession.
Audience: Undergraduate

6. Recognize the various types of professional business formations, elements of project management, and instruments of service.
Audience: Undergraduate

7. Understand business practices related to professional ethics and conduct.
Audience: Undergraduate

8. Integrate best practices and design principles in the production of self-marketing materials such as the portfolio and resume.
Audience: Undergraduate

DS 626 – INTERIOR DESIGN V
4 credits.

Provides the opportunity to explore and refine interior design skills while responding to current events and the ever changing world around us. Follow the design process from research, programming, conceptual and schematic design, full design development and presentation. All aspects of designing an interiors project in detail will be addressed, including space planning, interior architectural articulation, furniture selection, finish selection, detailing of custom elements, rendering, website development for client presentation, and more.
Requisites: DS 623
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop studio habits that support a consistent, rigorous, reflective work ethic.
Audience: Undergraduate

2. Critically analyze individual work and the work of classmates using appropriate terminology related to the elements and principles of interior architecture.
Audience: Undergraduate

3. Visualize interior architecture design concepts through the integrated approach of using various pieces of software.
Audience: Undergraduate

4. Explore the role of an interior designer in an ever changing world
Audience: Undergraduate

5. Utilize and build upon all of the fundamental skills learned in the Interior Architecture program
Audience: Undergraduate

6. Advance knowledge of the design process, from research to presentation.
Audience: Undergraduate

7. Create a contemporary client presentation in an era of limited contact.
Audience: Undergraduate

DS/LAND ARC 639 – CULTURE AND BUILT ENVIRONMENT
3 credits.

Explores cultural values embedded in buildings through understanding physical configurations, social organizations, practiced/symbolic/representational aspects of buildings. Covers a wide range of cultures and the built environments they produce including examples from the Americas, the Middle East, as well as those of the many ethnic minorities in the U.S.
Requisites: Junior standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

DS 641 – ADVANCED DESIGN THINKING FOR TRANSFORMATION
3 credits.

An empathetic, human-centered perspective that uses Design Thinking and draws from historical precedence and current research from a variety of fields to help solve complex and persistent problems such as student mental health awareness and lack of clean drinking water. Utilizes advanced design thinking techniques to enhance creative analysis and problem solving to address real-word problems with real-world constraints and the limitations of technology. Projects range from ways to improve everyday situations to community issues.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate the ability to develop and understand empathy through the practice of observation, interviewing skills and other methods.
Audience: Graduate

2. Recognize how knowledge, concepts, and theories outside of the field of design are relevant to informing new approaches to design solutions.
Audience: Graduate

3. Examine a wide range of problems confronting society and identify interdependencies between context practice and methods.
Audience: Graduate

4. Exhibit the ability to be creative, collaborative and divergent thinkers who can generate and visually communicate multiple ideas.
Audience: Graduate

5. Apply the iterative design thinking process to develop innovative solutions for challenging real world problems.
Audience: Graduate

DS 642 – TASTE
3 credits.

Exploration of the idea of taste - both "good" and "bad", in "popular" and "high" culture. Cross-cultural readings from theoretical and historical perspectives, relating to architecture, landscape, public space, art, and clothing.
Requisites: Graduate/professional standing
Repeatable for Credit: No
Last Taught: Fall 2023

DS 650 – COLLABORATIVE DESIGN CAPSTONE
3 credits.

Culminates design education through real-world challenges. Develops critical thinking, creativity, innovation for effective solutions. Emphasizes collaborative teamwork within multidisciplinary groups. Guides portfolio development, underscoring growth and versatility as a designer. Topics include defining problems through research, conceptualizing solutions, designing prototypes and interfaces, conducting user testing, and implementing designs.
Requisites: DS 123, 140, 220, 221, DS/GEN BUS 240, and ART HIST/ANTHRO/DS/HISTORY/LAND ARC 264
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply a deep understanding of design principles, aesthetics, and usability to create visually compelling and functional solutions.
Audience: Undergraduate

2. Synthesize knowledge from various design disciplines to address complex design challenges.
Audience: Undergraduate

3. Define design problems accurately by conducting thorough research, historical analysis, analyzing user needs, and identifying project constraints.
Audience: Undergraduate

4. Collaborate effectively within diverse teams, leveraging each member's strengths to achieve project goals and outcomes.
Audience: Undergraduate

5. Develop and implement project plans, considering scope, timeline, resource allocation, and risk management to deliver projects on schedule.
Audience: Undergraduate

6. Communicate design concepts persuasively through compelling visual presentations, articulate written explanations, and confident verbal discussions.
Audience: Undergraduate

7. Actively seek and incorporate constructive feedback to refine and enhance design iterations, demonstrating a commitment to continuous improvement.
Audience: Undergraduate

8. Deliver polished and professional design pitches and presentations that effectively convey the design process, rationale, and outcomes.
Audience: Undergraduate

DS 679 – RESEARCH METHODS IN DESIGN
3 credits.

Future designers need to have critical research knowledge and skillsets that include mastery of various research methods, related issues, and practical experiences in understanding and interpreting quantitative or qualitative research. Design research allows designers to be involved directly with objects, products, and environments they design through human-centered inquiry. The major concepts addressed include design research and its influence on the practice of design, generating research questions, critical literature review, research evaluation, data management and analysis, and various research strategies, all geared toward application to various design practices.
Requisites: Senior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Appreciate the role of research in design as a tool to involve directly with object, products, and environment that you design
Audience: Both Grad & Undergrad

2. Recognize the value of multiple methods and perspectives in design research
Audience: Both Grad & Undergrad

3. Explore how research can inform design practices in each design stages

Audience: Both Grad & Undergrad

4. Identify relevant sources and professional organizations that can be accessed for information gathering, research, and problem-solving processes
Audience: Both Grad & Undergrad

5. Apply assessment processes to evaluate design outcomes
Audience: Both Grad & Undergrad

6. Effectively present and communicate research to an audience both in written, graphic and oral format
Audience: Both Grad & Undergrad

7. Critically assess the strengths and weaknesses of various research methodologies and techniques
Audience: Graduate

8. Choose and apply specific research methods based on critical assessment of various research methods
Audience: Graduate

9. Develop a conceptually sophisticated research projects that suits their graduate research agenda
Audience: Graduate

10. Demonstrate beginning-level statistical techniques, and critically read studies using such techniques
Audience: Graduate

11. Learn and lead from class activities, research projects, and self-directed study
Audience: Graduate

DS 680 – SENIOR HONORS THESIS
2-4 credits.

Individual study in honors as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2016

DS 690 – SENIOR THESIS
2-4 credits.

Individual study as arranged with a faculty member.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

DS 699 – INDEPENDENT STUDY
1-6 credits.

Directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

DS/ANTHRO/ART HIST/HISTORY/LAND ARC 764 – DIMENSIONS OF MATERIAL CULTURE
4 credits.

This course introduces students to the interdisciplinary field of material culture studies. It is intended for students interested in any professional endeavor related to material culture, including careers in museums, galleries, historical societies, historic preservation organizations, and academic institutions. During the semester, students have varied opportunities to engage with and contemplate the material world to which people give meaning and which, in turn, influences their lives. Sessions combine in some way the following: presentations from faculty members and professionals who lecture on a phase of material culture related to his/her own scholarship or other professional work; discussion of foundational readings in the field; visits to collections and sites on campus and around Madison; discussion of readings assigned by visiting presenters or the professors; and exams and short papers that engage material culture topics.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

DS 920 – SEMINAR IN DESIGN STUDIES
1-3 credits.

A forum to discuss issues in contemporary art and design.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

DS/F&W ECOL/URB R PL 955 – PRACTICAL RESEARCH DESIGN AND METHODS OF EMPIRICAL INQUIRY
3 credits.

Provides a practical introduction to basic concepts of research question formulation, research designs and alternative methods of inquiry, implications for internal validity of the research and generalizability of the findings, operational definitions and measurement validity, reliability, utility and precision.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022

DS 990 – RESEARCH AND THESIS
1-12 credits.

Independent research and writing under the supervision of a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

DS 999 – INDEPENDENT STUDY
1-3 credits.

Directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ECONOMICS (ECON)

ECON 100 – ECONOMIC APPROACH TO CURRENT ISSUES
3-4 credits.

Emphasizes current economic issues and illustrates how the economist's perspective helps understand them. Academic readings and popular books such as Freakonomics will be used to indicate the breadth and scope of questions that can be analyzed from an economic perspective.
Requisites: MATH 96 or placement into MATH 112 or satisfied Quantitative Reasoning (QR) A requirement. Not open to students with credit for ECON 101, 102, or 111
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss key economic concepts and their application to current policy questions.
Audience: Undergraduate

2. Evaluate and critique economic arguments as they apply to current events.
Audience: Undergraduate

ECON 101 – PRINCIPLES OF MICROECONOMICS
4 credits.

Economic problems of individuals, firms and industries with emphasis on value, price, and distribution of income.
Requisites: Satisfied Quantitative Reasoning (QR) A requirement. Not open to students with credit for ECON 111
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain basic economic concepts such as scarcity, opportunity cost, supply and demand, and market failure.
Audience: Undergraduate

2. Recognize how households and firms respond to incentives and make economic decisions.
Audience: Undergraduate

3. Identify and apply mathematical models to answer economic questions.

Audience: Undergraduate

4. Express relationships among economic variables verbally, graphically, and numerically.
Audience: Undergraduate

5. Read current news articles and recognize and critique economic arguments.
Audience: Undergraduate

6. Apply marginal analysis and cost-benefit analysis in a variety of settings.
Audience: Undergraduate

ECON 102 – PRINCIPLES OF MACROECONOMICS
3-4 credits.

Macroeconomic measurement and models of aggregate demand and supply; fiscal and monetary policy for unemployment, inflation, and growth.
Requisites: ECON 101, A A E 101, or 215 prior to Fall 2024. Not open to students with credit for ECON 111
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ECON 109 — STUDY ABROAD IN INTRODUCTORY ECONOMICS
1-4 credits.

Provides an equivalency for introductory level economics courses taken on UW-Madison study abroad programs.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

ECON 111 — PRINCIPLES OF ECONOMICS-ACCELERATED TREATMENT
4 credits.

Integrated treatment of macroeconomics and microeconomics (see ECON 101 and ECON 102). Accelerated approach to economics training, especially for Economics: Math Emphasis majors.
Requisites: MATH 112 or 113 or placement into MATH 221. Not open to students with credit for ECON 101 or 102
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Accelerated Honors (!)
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Explain basic economic concepts such as scarcity, opportunity cost, supply and demand, market failure, and national income accounting relationships.
Audience: Undergraduate

2. Describe U.S. fiscal/monetary institutions and functions.
Audience: Undergraduate

3. Recognize how households and firms respond to incentives and make economic decisions, and apply marginal analysis and cost-benefit analysis in a variety of settings.
Audience: Undergraduate

4. Identify sources of long-run economic growth and short-run economic fluctuations, and evaluate policy tools for addressing both.
Audience: Undergraduate

5. Identify and apply mathematical models to answer microeconomic and macroeconomic questions.
Audience: Undergraduate

6. Interpret economic data, and express relationships among economic variables verbally, graphically, and numerically.
Audience: Undergraduate

7. Read current news articles and recognize and critique economic arguments.
Audience: Undergraduate

ECON 205 — QUANTITATIVE TOOLS FOR ECONOMICS
3-4 credits.

Refine the quantitative skills used in intermediate- and advanced-level economics courses. Apply math skills to the questions, models, and optimization problems that are common in economics. Topics include specific economic applications of algebra, financial mathematics, and calculus.
Requisites: (ECON 101, 102, 111 or concurrent enrollment) and (MATH 211, 217, or 221). Not open to students with credit for MATH 222
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply techniques in algebra and financial mathematics to analyze common economic questions
Audience: Undergraduate

2. Understand select topics from calculus and apply them to standard economic optimization problems
Audience: Undergraduate

ECON 228 — INTERNSHIP ECONOMICS
1 credit.

Internship in economics related field. Students must be declared in the Economics major.
Requisites: Consent of instructor
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, for 2 number of completions
Last Taught: Fall 2025

ECON 299 — DIRECTED STUDY
1-3 credits.

Study of topics at elementary undergraduate level as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2014

ECON/FINANCE 300 – INTRODUCTION TO FINANCE
3 credits.

Concepts and techniques in corporate finance and investments. Topics include the financial environment, securities markets, financial markets, financial statements and analysis, working capital management, capital budgeting, cost of capital, dividend policy, asset valuation, investments, decision-making under uncertainty, mergers, options, and futures.
Requisites: (ECON 101, 111 or A A E 101) and (ACCT I S 100 or 300 or concurrent enrollment) and (GEN BUS 206, 306, ECON 310, MATH 331, STAT/MATH 309, 431, STAT 224, 301, 302, 311, 324, 371 or PSYCH 210 or concur enrollment) or declared undergrad Bus Exchange Program
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply discounted cash flow analysis in various contexts and determine the appropriate discount rate for these calculations.
Audience: Undergraduate

2. Calculate and interpret the effect of leverage on firms' cost of debt, cost of equity, and a company's cost of capital under different assumptions.
Audience: Undergraduate

3. Characterize an efficient market and explain the implications of market efficiency for investors and corporations.
Audience: Undergraduate

4. Characterize different types of securities (including stocks, bonds, and derivatives) and identify the key features of each.
Audience: Undergraduate

5. Compute present and future values under different compounding assumptions.
Audience: Undergraduate

6. Demonstrate a command of the Capital Asset Pricing Model, including its strengths and weaknesses and its use in computing expected returns.
Audience: Undergraduate

7. Demonstrate the power of diversification and the risk-return tradeoff quantitatively.
Audience: Undergraduate

8. Solve capital budgeting problems using appropriate decision rules, taking into account the strengths and weaknesses of the available approaches.
Audience: Undergraduate

ECON 301 – INTERMEDIATE MICROECONOMIC THEORY
4 credits.

Contemporary theory of consumption, production, pricing and resource allocation.
Requisites: (ECON 101, 111, A A E 101, or 215 prior to Fall 2024) and (MATH 213, 217, 221, ECON 205, or MATH 211 prior to Fall 2024). Not open to students with credit for ECON 311.
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. apply economic models to understand household and firm behavior and market outcomes
Audience: Undergraduate

2. specify and adapt microeconomic models to analyze economic environments
Audience: Undergraduate

3. solve economic decision problems using tools of mathematical optimization
Audience: Undergraduate

4. understand the role of these models as the foundation for more advanced analysis
Audience: Undergraduate

ECON 302 — INTERMEDIATE MACROECONOMIC THEORY
4 credits.

Principles and theories of national income determination, analysis of savings, consumption, investment and other aggregates in the national and international economy and relation to employment, inflation and stabilization.
Requisites: (ECON 102 or 111) and (MATH 213, 217, 221, ECON 205, or MATH 211 prior to Fall 2024). Not open to students with credit for ECON 312.
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use disaggregated data to inform the construction of economic models and policy
Audience: Undergraduate

2. Critically evaluate economic models using publicly available data
Audience: Undergraduate

3. Use mathematical methods to capture economic relationships
Audience: Undergraduate

4. Distinguish between short run and long run theories and policy objectives
Audience: Undergraduate

5. Identify how international markets affect the macroeconomy and macroeconomic policy
Audience: Undergraduate

ECON/HIST SCI 305 — DEVELOPMENT OF ECONOMIC THOUGHT
3-4 credits.

Development of economic thought from the middle ages to the present; emphasis on major schools of thought including Classical, Marxian, Neo-Classical, and Keynesian schools.
Requisites: (ECON 101 and 102) or (ECON 102 and A A E 101 or 215 prior to Fall 2024) or ECON 111
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Describe the evolution of the methodology of economics.
Audience: Undergraduate

2. Explain what Adam Smith wrote and what he did not write.
Audience: Undergraduate

3. Discuss the dual role of economics as a social science and as an art (moral philosophy).
Audience: Undergraduate

ECON/A A E/REAL EST/URB R PL 306 — THE REAL ESTATE PROCESS
3 credits.

Introductory overview focused on the key aspects of the real estate process: developing real estate, permitting real estate, buying and selling real estate, understanding the economics of real estate, financing real estate, valuing real estate, leasing real estate, and managing real estate.
Requisites: (ECON 101, 111, A A E 101, or 215 prior to Fall 2024) or declared in undergraduate Business Exchange program
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop a working knowledge of the real estate process, including the roles of the various key real estate professionals and the unique challenges associated with the real estate asset class.
Audience: Undergraduate

2. Explain the characteristics, advantages, and disadvantages of the primary commercial real estate property types.
Audience: Undergraduate

3. Discuss the role of debt and equity in a real estate transaction as well as the fundamental terms, conditions, and requirements of commercial real estate financing.
Audience: Undergraduate

4. Navigate the basic regulatory framework governing the real estate process, including land use planning, zoning and the required project approvals.
Audience: Undergraduate

5. Describe the role of leasing in the commercial real estate transaction, including the critical terms and conditions of commercial leases.
Audience: Undergraduate

ECON 309 — STUDY ABROAD IN INTERMEDIATE ECONOMICS
1-4 credits.

Provides an equivalency for intermediate level economics courses taken on UW-Madison study abroad programs.
Requisites: None
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

ECON 310 – STATISTICS: MEASUREMENT IN ECONOMICS
4 credits.

Introduction to analysis of economic data. The techniques of descriptive statistics and statistical inference (hypothesis testing and estimation) as directed toward application in economic research.
Requisites: (ECON 101, 102, or 111) and (MATH 211, 217, or 221)
Course Designation: Gen Ed - Quantitative Reasoning Part B
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply probability theory to model the likelihood of uncertain events.
Audience: Undergraduate

2. Use software to apply statistical techniques to the analysis of economic data.
Audience: Undergraduate

3. Interpret tables, graphs and statistics used to summarize data.
Audience: Undergraduate

4. Estimate the true value of unknown parameters using point and interval estimators.
Audience: Undergraduate

5. Critically evaluate interpretations of statistical estimates and resulting inferences.
Audience: Undergraduate

6. Test theories by determining an appropriate test statistic, implementing a formal hypothesis test, and interpreting the outcome.
Audience: Undergraduate

ECON 311 – INTERMEDIATE MICROECONOMIC THEORY - ADVANCED TREATMENT
3 credits.

A mathematical approach to the theory of consumption, production, pricing and resource allocation.
Requisites: MATH 222 and (ECON 101 and 102) or ECON 111. Not open to students who have credit for ECON 301
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Accelerated Honors (!)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply economic models to understand household and firm behavior and market outcomes.
Audience: Undergraduate

2. Specify and adapt microeconomic models to analyze economic environments.
Audience: Undergraduate

3. Solve economic decision problems using tools of mathematical optimization.
Audience: Undergraduate

4. Understand the role of these models as the foundation for more advanced analysis.
Audience: Undergraduate

ECON 312 — INTERMEDIATE MACROECONOMIC THEORY - ADVANCED TREATMENT
3 credits.

A mathematical approach to the principles and theories of national income determination, analysis of savings, consumption, investment and other aggregates in the national and international economy and relation to employment, inflation, and stabilization.
Requisites: MATH 222 and (ECON 101 and 102) or ECON 111. Not open to students who have credit for ECON 302
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Accelerated Honors (!)
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Use disaggregated data to inform the construction of economic models and policy.
Audience: Undergraduate

2. Critically evaluate economic models using publicly available data.
Audience: Undergraduate

3. Use mathematical methods to characterize economic relationships.
Audience: Undergraduate

4. Distinguish between short-run and long-run macroeconomic theories and their corresponding policy objectives.
Audience: Undergraduate

5. Use numerical methods to solve and evaluate dynamic macroeconomic models.
Audience: Undergraduate

6. Identify how international trade and capital flows affect the macroeconomy and macroeconomic policy.
Audience: Undergraduate

ECON 315 — DATA VISUALIZATION FOR ECONOMISTS
3-4 credits.

Introduction to the fundamental concepts of economic data visualization and analysis. Develop a toolkit of skills to visualize, interpret, and communicate data. After examining the fundamentals of data visualization, emphasis is on methods using Tableau to design and develop dashboards, graphs, and charts to ease quick and accurate interpretation of economic relationships. Move beyond tabular results to display and demonstrate the findings of economic research.
Requisites: (ECON 101 or 111) and ECON 310
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Visually represent, interpret, and communicate economic data
Audience: Undergraduate

2. Understand data visualization theory
Audience: Undergraduate

3. Incorporate data visualization into economic research
Audience: Undergraduate

4. Present economic research findings clearly and efficiently
Audience: Undergraduate

5. Use Tableau software to interact with economic data
Audience: Undergraduate

ECON/FINANCE 320 – INVESTMENT THEORY
3 credits.

Structure and functioning of securities markets; principles of portfolio construction; models of the tradeoff between risk and expected return.
Requisites: FINANCE/ECON 300, (MATH 213 or 222) and (GEN BUS 307, 317, 656, ACT SCI 654, 655, ECON 400, 410, STAT/MATH 310, STAT 312, or 333 or concurrent enrollment) or declared in undergraduate Business Exchange program
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Solve real-world investment problems
Audience: Undergraduate

2. Formulate the trade-off between risk and return
Audience: Undergraduate

3. Describe the distribution of returns on broad asset classes
Audience: Undergraduate

4. Identify investors' risk preferences
Audience: Undergraduate

5. Use portfolio optimization techniques to develop an asset allocation for an investor
Audience: Undergraduate

6. Examine factor models of returns
Audience: Undergraduate

7. Compare different equilibrium security pricing models
Audience: Undergraduate

8. Debate market efficiency
Audience: Undergraduate

ECON 321 – SPORTS ECONOMICS
3-4 credits.

An examination of the economics behind major professional and intercollegiate sports teams and franchises. Topics covered include the organization of leagues, competitive balance, cooperative and collusive behavior, measurement of productivity, the market for franchises, sale and resale of tickets, and public financing of facilities.
Requisites: ECON 101, 111, A A E 101, or 215 prior to Fall 2024
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the role of monopoly and monopsony power in the labor market for professional athletes, and their relation to strikes and work stoppages.
Audience: Undergraduate

2. Analyze attempts within professional sports leagues to maintain competitive balance, through practices like salary caps, luxury taxes, and draft order.
Audience: Undergraduate

3. Document the financing of sports stadiums via public finance, private finance, or a mixture.
Audience: Undergraduate

4. Contrast the economics of collegiate versus professional sports in the U.S.
Audience: Undergraduate

5. Describe the interplay of industrial organization, public finance, and labor economics as pertains to sports.
Audience: Undergraduate

ECON 325 — ECONOMICS OF RACE IN THE UNITED STATES
3 credits.

Historical and contemporary sources and causes of, and potential policy responses to, racial and ethnic economic inequality in the United States. Topics covered include healthcare, education, labor markets, housing and neighborhoods, wealth, and criminal justice, with a focus on aspects of the economy where there are differences in economic outcomes for racial or racial minority groups. Questions include how these differences can result from disparities in how people, markets, or policies treat or impact different groups using economic theory as a foundation, and how economists have studied and measured these differences. In light of the history and range of economic opportunity and change in some communities, particular attention is given to the African American experience.
Requisites: ECON 101, 111, A A E 101, or 215 prior to Fall 2024
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Summarize the areas of racial economic inequality in the United States
Audience: Undergraduate

2. Articulate how the economic and social history of the United States has affected present day circumstances regarding race and racial economic inequities in the U.S.
Audience: Undergraduate

3. Identify how current policies, social institutions, and cultural assumptions work to maintain inequality.
Audience: Undergraduate

4. Interpret economic models that attempt to explain the existence of inequality.
Audience: Undergraduate

5. Synthesize existing economic research focused on the causes and effects of racial inequality.
Audience: Undergraduate

6. Present the pros and cons of potential policy solutions to racial inequality.
Audience: Undergraduate

7. Demonstrate self-awareness and empathy toward the cultural perspectives and worldviews of others.
Audience: Undergraduate

8. Apply course concepts to their lives outside the classroom by respectfully participating in our multicultural society.
Audience: Undergraduate

ECON 330 — MONEY AND BANKING
4 credits.

Monetary economics; the role of money in the determination of output, prices and interest rates; commercial and central banking, monetary policy, the international monetary system.
Requisites: (ECON 101 and 102) or ECON 111
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the functions and roles of money in the modern macroeconomy.
Audience: Undergraduate

2. Track the development of the Federal Reserve from its creation in the 1910s to its current position as the dominant central bank with control over the world's reserve currency.
Audience: Undergraduate

3. Evaluate the various tools of monetary policy and their impacts on inflation and unemployment in both the short run and long run.
Audience: Undergraduate

4. Describe the role of regulatory agencies in financial markets as they work towards an appropriately capitalized banking system.
Audience: Undergraduate

5. Define basic financial derivatives, leverage, and duration analysis and discuss their role in increasingly complex and interdependent securities markets.
Audience: Undergraduate

ECON 340 – MICROECONOMICS IN POPULAR CULTURE
3 credits.

A critical look at the portrayal of housing, homelessness, globalization, and economic mobility in popular media (primarily films, documentaries, and popular sociological studies), both using the discipline of economic theory and from the perspective of broader economic data.
Requisites: ECON 101, 111, A A E 101, or 215 prior to Fall 2024. Not open to students with credit for ECON 390 topic: Microeconomics in Popular Culture prior to Fall 2024.
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. describe the financial instruments and policies that impact US mortgage markets, with particular emphasis on the causes, consequences, and lessons from the 2008 Financial Crisis
Audience: Undergraduate

2. explain the theory and empirical evidence about the effectiveness of alternative policy approaches toward problems associated with both low-income housing and homelessness
Audience: Undergraduate

3. discuss alternative approaches to understanding variations in economic mobility and opportunity both over time and across regions, with an emphasis on current data, approaches, and policies
Audience: Undergraduate

ECON/A A E/ENVIR ST 343 – ENVIRONMENTAL ECONOMICS
3-4 credits.

Microeconomic principles underlying the use of natural resources such as air, water, forests, fisheries, minerals and energy. These principles are applied in the examination of pollution control, preservation vs. development, deforestation, and other environmental issues.
Requisites: A A E 101 (215 prior to Fall 2024), ECON 101, or 111
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Understand why environmental problems occur in a market-based economy.
Audience: Undergraduate

2. Identify market-based environmental policies to address market failures.
Audience: Undergraduate

3. Explain the social, economic, and/or environmental dimensions of the sustainability challenge(s) of pollution control.
Audience: Undergraduate

4. Apply sustainability principles and/or frameworks to addressing the challenge of optimizing the use of scarce resources over time.
Audience: Undergraduate

ECON 350 – THE CHINESE ECONOMY
3 credits.

The history of China's economic reforms and development, the nature of its growth, and the fundamental institutions that underlie its transformation into an economic powerhouse. China's integration into and impact on the world economy through trade and financial flows. Major challenges modern China faces, such as regional inequalities, environmental concerns, and the prospects for sustainable growth in the future.
Requisites: ECON 101, 111, A A E 101, or 215 prior to Fall 2024
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply economic theories to explain China's record of economic growth
Audience: Undergraduate

2. Critically analyze the strengths and weaknesses of China's policy implementation
Audience: Undergraduate

3. Evaluate academic literature related to China's economic reforms and development
Audience: Undergraduate

ECON 355 – THE ECONOMICS OF GROWING-UP AND GETTING OLD
3-4 credits.

What does economics have to say about how or why people decide to go to school, get married (or divorced), or have children? Use economic models to investigate these "every day occurrences." Start with early childhood and trace out the life cycle from schooling to retirement, concentrating on six stages of life: early childhood; schooling; adolescence; marriage and divorce; fertility; and retirement decisions.
Requisites: ECON 310
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2019
Learning Outcomes: 1. Understand important empirical problems in social science (such as correlation vs causation, endogeneity, omitted variable bias) and tools for overcoming them
Audience: Undergraduate

2. Understand important theoretical models of human behavior (such as game theory, signaling models, hyperbolic discounting) and how to apply them to particular environments
Audience: Undergraduate

3. Understand important models of particular "life cycle" decisions (health, schooling, marrying, divorce, fertility)
Audience: Undergraduate

ECON 370 – ECONOMICS OF POVERTY AND INEQUALITY
3 credits.

Analysis of patterns and causes of poverty and inequality. Topics include theoretical approaches, measurement, historical perspectives and policy responses.
Requisites: (ECON 101, 102, and 310) or (ECON 111 and 310)
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Describe the many ways poverty and inequality are measured.
Audience: Undergraduate

2. Articulate and evaluate various theories for poverty.
Audience: Undergraduate

3. Discuss historic responses to the problem of poverty.
Audience: Undergraduate

4. Identify the numerous ways government policy seeks to alleviate poverty and inequality.
Audience: Undergraduate

5. Critique academic and policy research in the areas of poverty and inequality.
Audience: Undergraduate

ECON/A A E 371 – ENERGY, RESOURCES AND ECONOMICS
3 credits.

Use microeconomic theory to analyze energy markets. Discuss the economics of oil, gas, and electricity and learn about applications to contemporary issues and policy questions.
Requisites: A A E 101 (215 prior to Fall 2024), ECON 101, or 111
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Use economic tools to describe energy demand
Audience: Undergraduate

2. Apply economic models of competition to energy markets
Audience: Undergraduate

3. Analyze how policies to mitigate climate change affect energy markets
Audience: Undergraduate

4. Analyze the causes of and solutions for the sustainability challenge of climate change
Audience: Undergraduate

5. Describe the social, economic, and environmental dimensions of energy policy and identify potential tradeoffs and interrelationships among these dimensions at a level appropriate to the course
Audience: Undergraduate

ECON 390 – CONTEMPORARY ECONOMIC ISSUES
3-4 credits.

Topics vary, including current developments in all fields of economics.
Requisites: ECON 101 or 111
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. apply economic reasoning to contemporary questions and settings
Audience: Undergraduate

ECON 400 — INTRODUCTION TO APPLIED ECONOMETRICS
4 credits.

An introduction to applied econometrics - the statistical methods economists use to evaluate empirical relationships and test economic theory. Emphasis on application of econometrics to real world data using modern statistical software and developing skills needed to understand empirical work in economics.
Requisites: ECON 310, (STAT 240 and 340), STAT 302, 303, 311, 324, STAT/MATH 309, or 431. Not open to students with credit for ECON 410.
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss the properties of an ordinary least squares (OLS) estimator for a linear regression model
Audience: Undergraduate

2. Test theories about the true model using formal hypothesis tests
Audience: Undergraduate

3. State the assumptions underpinning OLS, recognize violations of these assumptions, discuss the consequences of such violations, and - where possible - suggest alternative statistical approaches that are more appropriate given the circumstances
Audience: Undergraduate

4. Evaluate the extent to which econometric methods can be used to determine whether a statistical association represents a causal relationship

Audience: Undergraduate

5. Use statistical software to apply these statistical techniques to analyze the relationship between real-world economic variables
Audience: Undergraduate

6. Read and interpret results from applied economics journal articles that employ these statistical techniques
Audience: Undergraduate

ECON 409 — STUDY ABROAD IN ADVANCED ECONOMICS
1-4 credits.

Provides an equivalency for advanced level economics courses taken on UW-Madison study abroad programs for which there is no exact UW-Madison equivalent. Course must be of equal rigor to those offered on campus. To receive this equivalent, departmental pre-approval is required.
Requisites: None
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

ECON 410 — INTRODUCTORY ECONOMETRICS
4 credits.

Statistical methods used in applied economic research. Topics include: survey methods and data sources; multiple regression and analysis of variance; econometric estimation; forecasting and policy applications.
Requisites: ECON 310 and (MATH 217 or 221). Not open to students with credit for ECON 400
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Derive an ordinary least squares (OLS) estimator for a linear regression model.
Audience: Undergraduate

2. Test theories about the true model using formal hypothesis tests.
Audience: Undergraduate

3. Evaluate the expected value and variance of an estimator.
Audience: Undergraduate

4. Prove that the OLS estimator is unbiased, BLUE, and consistent.
Audience: Undergraduate

5. State the assumptions underpinning OLS, check for violations of these assumptions, determine the consequences of such violations, and – where possible – suggest alternative statistical approaches that are more appropriate given the circumstances.
Audience: Undergraduate

6. Evaluate the extent to which econometric methods can be used to determine whether a statistical association represents a causal relationship.
Audience: Undergraduate

7. Use statistical software to apply all of these statistical techniques to analyze the relationship between real-world economic variables.
Audience: Undergraduate

ECON/REAL EST/URB R PL 420 – URBAN AND REGIONAL ECONOMICS
3 credits.

Focuses on the study of the allocation of scarce resources across space. Uses economic methods to analyze urban real estate. Topics covered include the determinants of real estate values, the location decisions of households and firms, land use, urban growth and agglomeration, real estate pricing, cycles, development, housing market and policies, and sustainable development.
Requisites: (ECON 101 or 111) or declared in undergraduate Business Exchange program
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the economic forces that drive urban growth and regional development.
Audience: Undergraduate

2. Analyze how business and residential location decisions are made and how these decisions impact housing prices, land use, labor market, and many other aspects of cities.
Audience: Undergraduate

3. Apply the spatial equilibrium concepts to urban development and real estate analysis.
Audience: Undergraduate

4. Develop statistical models to assess residential and commercial real estate and perform sensible business and policy analysis.
Audience: Undergraduate

5. Apply the economic decision-making framework to real estate development decisions.
Audience: Undergraduate

6. Demonstrate understanding of cycles, risks and bubbles in residential and commercial real estate markets.
Audience: Undergraduate

7. Evaluate the challenges in economic, social and environmental sustainability in urban development around the world.
Audience: Undergraduate

8. Apply urban and regional economics to real estate business decisions and policy analysis.
Audience: Undergraduate

ECON/A A E 421 – ECONOMIC DECISION ANALYSIS
4 credits.

Managerial oriented, applied presentation of microeconomic theory. Quantitative emphasis with extensive homework use of spreadsheets and written executive summaries of applied economic analyses. Applications on natural resources and agricultural markets.
Requisites: STAT 301, 371, ECON 310, SOC/C&E SOC 360, PSYCH 210, or (GEN BUS 306 and 307)
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Manipulate, organize, and visualize quantitative economic data using computer software.
Audience: Undergraduate

2. Conduct statistical analyses and estimate basic linear regression models of economic data.
Audience: Undergraduate

3. Correctly report and interpret results from statistical analyses in the context of informing economic decisions.
Audience: Undergraduate

4. Set up and solve linear and non-linear programming problems that inform economic decision-making using computer software.
Audience: Undergraduate

5. Integrate uncertainty into the analysis of economic decisions and articulate how uncertainty influences economic behavior.
Audience: Undergraduate

6. Effectively communicate verbally, visually, and in writing the process and results of economic decision analyses.
Audience: Undergraduate

ECON 435 – THE FINANCIAL SYSTEM
3 credits.

Banking, credit markets and financial institutions, monetary and debt management policies; relation of national monetary and credit institutions to the international system.
Requisites: (ECON 301 or ECON 311) and (ECON 302 or ECON 312) and ECON 330
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe key purposes and features of financial markets and institutions.
Audience: Undergraduate

2. Examine and interpret financial and macroeconomic data.
Audience: Undergraduate

3. Interpret the theoretical linkages between the financial sector and the larger macroeconomy
Audience: Undergraduate

ECON 441 – ANALYTICAL PUBLIC FINANCE
3-4 credits.

Analyzes the problems of the public sector in dealing with domestic issues of education, urban areas, welfare, natural resources, and the environment; provides students with opportunity to apply the tools of economic analysis that are pertinent to domestic public sector problems.
Requisites: ECON 301 or 311
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Evaluate the circumstances under which government intervention in the economy is necessary.
Audience: Undergraduate

2. Analyze the various policy approaches the government employs to intervene in the economy.
Audience: Undergraduate

3. Assess the costs, benefits, and unintended consequences of different policy approaches.
Audience: Undergraduate

4. Compare and contrast the primary sources of public revenue and major expenditure programs at the federal, state, and local levels.
Audience: Undergraduate

5. Critically examine policy debates about social insurance, redistributive programs, and taxation using evidence-based reasoning.
Audience: Undergraduate

ECON 442 – MACROECONOMIC POLICY
3-4 credits.

Addresses current issues in modern macroeconomic policymaking. Topics include: fiscal and monetary policy, financial and sovereign debt crisis, and financial regulation.
Requisites: (ECON 301 or 311), (ECON 302 or 312), and ECON 310; or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze the impact of policy and other factors on macroeconomic outcomes.
Audience: Both Grad & Undergrad

2. Apply models to investigate origins of – and solutions to -- current macroeconomic problems.
Audience: Both Grad & Undergrad

3. Evaluate empirical evidence in order to differentiate between competing theories of macroeconomic behavior.
Audience: Graduate

ECON 448 – HUMAN RESOURCES AND ECONOMIC GROWTH
3-4 credits.

Theoretical and empirical analysis of public and private investment in people, emphasizing the contribution to productivity of education, training, health, and mobility.
Requisites: ECON 301 or 311
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Describe models of economic growth.
Audience: Undergraduate

2. Discuss the effects of various policy interventions.
Audience: Undergraduate

3. Apply theoretical frameworks to analyze the performance of countries.
Audience: Undergraduate

4. Explain how economic growth interacts with population, education, health, inequality.
Audience: Undergraduate

5. Present data in a useful way.
Audience: Undergraduate

6. Analyze and evaluate countries' experiences.
Audience: Undergraduate

ECON/ENVIR ST/POLI SCI/URB R PL 449 – GOVERNMENT AND NATURAL RESOURCES
3-4 credits.

Problems of public policy and administration for development and use of natural resources.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

ECON 450 – WAGES AND THE LABOR MARKET
3-4 credits.

Economic and institutional forces which determine labor supply and demand; wage theories, wages in the economy, the labor force, unemployment, wages, labor mobility, functioning of labor markets.
Requisites: ECON 301 or 311
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe and model how workers make labor supply decisions and how firms make labor demand decisions.
Audience: Undergraduate

2. Classify how equilibrium outcomes and policy implications differ by types of labor markets.
Audience: Undergraduate

3. Analyze and critique the presentation of labor-market-related issues in social media, news media, and policy debates.
Audience: Undergraduate

ECON 455 – BEHAVIORAL ECONOMICS
3-4 credits.

Empirical evidence documenting departures in human decision making from rational norms, and alternative theoretical approaches to explaining this behavior grounded based upon psychological enrichments of standard rational actor model. Topics include paradox of choice, loss aversion, time inconsistent preferences, and social preferences.
Requisites: (ECON 301 or 311) and ECON 310; or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe several decision/search heuristics used by economic agents and explain their association with commonly observed cognitive biases
Audience: Both Grad & Undergrad

2. Use economic models to characterize and predict choices made by agents whose preferences diverge from the standard assumptions of rationality.
Audience: Both Grad & Undergrad

3. Apply behavioral economic theories to evaluate real-world decision-making scenarios using case studies and empirical data.
Audience: Both Grad & Undergrad

4. Critically assess the effectiveness of behavioral interventions in influencing decision-making.
Audience: Both Grad & Undergrad

5. Design, describe and/or implement a behavioral intervention aimed at addressing a real-world economic inefficiency, integrating insights from the academic literature.
Audience: Graduate

ECON 458 – INDUSTRIAL STRUCTURE AND COMPETITIVE STRATEGY
3 credits.

Analysis of competition among firms and its effect on industrial structure. Theoretical models and case studies are used. Topics include: entry barriers, price competition dynamics, entry and exit strategies, and competitive tactics such as product differentiation, advertising, and technological change.
Requisites: ECON 301 or 311
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply game theory to formulate and analyze models of imperfectly competitive markets.
Audience: Undergraduate

2. Analyze case studies to determine major factors influencing the intensity of competition in an industry.
Audience: Undergraduate

ECON 460 – ECONOMIC FORECASTING
3-4 credits.

Introduction to econometric time series analysis, forecasting methods, and forecast evaluation. Covers theoretical, methodological, and applied topics, and much of the work will be hands-on data analysis.
Requisites: ECON 400, 410, or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. explain and use linear time-series econometric models
Audience: Both Grad & Undergrad

2. describe and use economic time-series data and data sources
Audience: Both Grad & Undergrad

3. formulate, estimate, and evaluate models for economic forecasting
Audience: Both Grad & Undergrad

4. make point forecasts, interval forecasts and fan charts
Audience: Both Grad & Undergrad

5. select and use conditioning information
Audience: Both Grad & Undergrad

6. use model selection and combination methods
Audience: Both Grad & Undergrad

7. be a "fox" rather than a "hedgehog"
Audience: Both Grad & Undergrad

8. explain, formulate, and use Vector Autoregressive time-series models
Audience: Graduate

9. explain, formulate, and use multivariate time-series forecasting models
Audience: Graduate

ECON 461 – INTERNATIONAL MACROECONOMICS
3-4 credits.

International macroeconomics, focusing on the international exchange of financial instruments - currencies, bonds, equities, derivatives, and more - and how decisions and policies made in one country spill over into other markets.
Requisites: ECON 302 or 312
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe how foreign exchange markets work and use interest and purchasing power parity theories to describe how changes in the economic environment affect exchange rates.
Audience: Undergraduate

2. Connect unbalanced trade in goods to trade in financial assets and understand the link between trade deficits/surpluses and a country's net international investment position.
Audience: Undergraduate

3. Access and analyze data on cross-country asset flows and exchange rates.
Audience: Undergraduate

4. Use economic theory to interpret policies such as the Bretton Woods agreement, the Euro, and Argentina's fixed exchange rate regime.
Audience: Undergraduate

ECON/A A E/INTL BUS 462 – LATIN AMERICAN ECONOMIC DEVELOPMENT
3 credits.

A historico-institutional analysis of development problems in the principal Latin American countries, with attention to differentiation of national growth patterns and alternative development strategies.
Requisites: A A E 101 (215 prior to Fall 2024), ECON 101, or 111
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Demonstrate mastery of the language of international development economics
Audience: Undergraduate

2. Develop proficiency in an array of concepts from primary product exports to conditional cash transfers to migration and remittances to corruption and civil conflict.
Audience: Undergraduate

3. Examine how markets and distinct development strategies and processes provide different opportunities and returns for the rich and the poor, urban and rural, latino and indigenous peoples, large and small countries, and so on.
Audience: Undergraduate

4. Explain the strengths and weaknesses of contending theories of economic development.
Audience: Undergraduate

5. Apply contending theories to markets, state policies, social initiatives, and historical experiences in Latin American countries.
Audience: Undergraduate

ECON 464 – INTERNATIONAL TRADE
3-4 credits.

Contemporary theory of International Trade, focusing on why nations trade and what do they trade, and in what sense international trade is beneficial to trading countries. Current policy issues will be examined to demonstrate the usefulness as well as the limitations of the theory.
Requisites: ECON 301 or 311. Not open to students with credit for ECON 364.
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the reasons of why countries trade
Audience: Undergraduate

2. Apply economic analysis to evaluate effects of opening to trade on welfare of different groups
Audience: Undergraduate

3. Identify effects of tariffs and other trade policy tools on consumer, producers and the government
Audience: Undergraduate

4. Apply economic analysis to evaluate current and proposed international trade agreements
Audience: Undergraduate

ECON 465 – THE AMERICAN ECONOMY TO 1865
3-4 credits.

Survey of the forces underlying American economic development and the distribution of income; rise of regional economies; origins of manufacturing; effects of slavery; influence of government and politics on growth.
Requisites: ECON 101 or 111
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2019
Learning Outcomes: 1. Discuss the application of fundamental concepts of economics to real-world issues facing the pre-Civil-War United States.
Audience: Undergraduate

2. Evaluate quantitative claims with a focus on "orders of magnitude" and other practical skills.
Audience: Undergraduate

3. Apply a diverse set of strategies in quantitative reasoning.
Audience: Undergraduate

4. Use formal models to analyze and interpret significant historical events.
Audience: Undergraduate

ECON/HISTORY 466 – THE AMERICAN ECONOMY SINCE 1865
3-4 credits.

Emergence of the large corporation; growth and instability since the mid-nineteenth century; increasing government participation in the economy; the impact of war, depression, discrimination, and international responsibilities.
Requisites: ECON 101 or 111
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Describe critical economic events in American history.
Audience: Undergraduate

2. Discuss the application of fundamental concepts of economics to real-world issues facing the post-Civil-War United States.
Audience: Undergraduate

3. Identify the determinants and consequences of historical economic events, and use them to critique current economic issues.
Audience: Undergraduate

4. Evaluate quantitative claims with a focus on "orders of magnitude" and other practical skills.
Audience: Undergraduate

ECON 467 – INTERNATIONAL INDUSTRIAL ORGANIZATIONS
3-4 credits.

Focuses on the behavior of international firms and the public policies that affect them. Study theoretical models of strategic competition, evaluate the effects of government policies, review aggregate empirical evidence and learn from case studies.
Requisites: ECON 301 or 311
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2022
Learning Outcomes: 1. Explain and compare models of competition among firms in international environments
Audience: Undergraduate

2. Extrapolate the effects of various government policies on firms, consumers and government finances
Audience: Undergraduate

3. Apply various theoretical frameworks to understand the behavior of specific firms and governments
Audience: Undergraduate

4. Characterize how economists use data and theory to arrive to specific conclusions
Audience: Undergraduate

ECON 468 – INDUSTRIAL ORGANIZATION AND IMPERFECT COMPETITION
3-4 credits.

An overview of the theory of industrial organization, including the study of oligopolistic behavior, monopolistic competition, product differentiation and the dynamic behavior of competitive industries under uncertainty.
Requisites: (ECON 301 or 311) and (MATH 217 or 221)
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe and model how firms acquire and maintain market power.
Audience: Undergraduate

2. Describe and model how firms exercise market power.
Audience: Undergraduate

3. Describe and model the implications of market power for economic efficiency and social welfare.
Audience: Undergraduate

4. Describe and model when and how a government can intervene to improve outcomes.
Audience: Undergraduate

ECON/A A E 473 – ECONOMIC GROWTH AND DEVELOPMENT IN SOUTHEAST ASIA
3 credits.

Evaluates economic development strategies in Southeast Asia and their implications for growth, distribution and environment. Students learn trade and development theory as well as specific knowledge of Southeast Asian economic development.
Requisites: A A E 101 (215 prior to Fall 2024), ECON 101, 111, or graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Demonstrate basic economic and statistical literacy relevant to the study of economic development.
Audience: Both Grad & Undergrad

2. Understand basic models of international trade and economic growth.
Audience: Both Grad & Undergrad

3. Demonstrate a working knowledge of available data on the economies of Southeast Asia.
Audience: Both Grad & Undergrad

4. Identify and analyze problems of economic development in Southeast Asia.
Audience: Undergraduate

5. Identify and analyze problems of economic development in Southeast Asia using formal methods of economic theory and evidence.
Audience: Graduate

ECON/A A E 474 – ECONOMIC PROBLEMS OF DEVELOPING AREAS
3 credits.

Analyzes aggregate growth, income distribution and poverty in lower income economies. Uses microeconomics of imperfect labor, capital and insurance markets to explore why some individuals advance economically as their economies grow and others fall behind. Considers implications of aggregate and micro analysis for national and international economic policy.
Requisites: A A E 101 (215 prior to Fall 2024), ECON 101, or 111
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge of current research in development economics to explain cases and identify areas that policy can influence.
Audience: Undergraduate

2. Calculate basic measures of poverty, inequality and economic development.
Audience: Undergraduate

3. Differentiate empirical methods used to analyze poverty and poverty alleviation.
Audience: Undergraduate

4. Use economic models and empirical methods to evaluate development policy.
Audience: Undergraduate

ECON 475 – ECONOMICS OF GROWTH
3-4 credits.

Theoretical analysis of issues in growth and development. Models will be motivated by country experiences. Topics include: factors affecting saving, investment and cross-country differentials on per capita income; the role of government institutions, market regulation, technology and trade.
Requisites: (ECON 301 or ECON 311), (ECON 302 or ECON 312) and (MATH 217 or 221); or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Summarize the salient stylized facts about growth and development in the post-World War II global economy.
Audience: Both Grad & Undergrad

2. Use econometric methods to identify the proximate and fundamental sources of economic growth and international income differences.
Audience: Both Grad & Undergrad

3. Use established economic models to analyze the major economic and demographic transitions from pre-industrial stagnation to today's modern growth economy.
Audience: Both Grad & Undergrad

4. Apply the principles of endogenous growth theory to identify and analyze the conditions for sustained long-term growth.
Audience: Both Grad & Undergrad

5. Apply the basic principles of dynamic programming to solve versions of the canonical neoclassical growth model and other dynamic macroeconomic models numerically.
Audience: Graduate

ECON/A A E 477 – AGRICULTURAL AND ECONOMIC DEVELOPMENT IN AFRICA
3 credits.

Composition, organization, and techniques of agricultural production; economic change and development of agriculture, economic policies, special problems of developing African agriculture.
Requisites: A A E 101 (215 prior to Fall 2024), ECON 101, 111, or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Explain the economic problems of African nations including economic history, different sectors of the economy, economic development, and economic growth.
Audience: Both Grad & Undergrad

2. Use empirical evidence to evaluate an economic argument, including interpreting and explaining economic data.
Audience: Both Grad & Undergrad

3. Apply the tools of economic analysis (both theoretical and empirical tools) to evaluate specific policy proposals, especially as they relate to contemporary issues in African development.
Audience: Graduate

4. Communicate effectively in written and graphical form about issues in African development.
Audience: Both Grad & Undergrad

5. Explain the social, economic, and/or environmental dimensions of the sustainability challenges of development of African nations.
Audience: Both Grad & Undergrad

6. Analyze the causes of and solutions for the sustainability challenge of generating agricultural and economic development of African countries.
Audience: Both Grad & Undergrad

ECON/FINANCE 503 – MARKETS WITH FRICTIONS
3 credits.

Search theory provides framework for understanding markets and is used to study questions in monetary, public, financial economics. Develop theoretical tools used to introduce frictions in formal models and address the role of frictions in several applied scenarios.
Requisites: (FINANCE 305, 325, 330, and ECON/FINANCE 320), (ECON 301, 302, 311, or 312), or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Examine new issues related to frictional markets by looking at old issues in new ways.
Audience: Both Grad & Undergrad

2. Demonstrate economic reasoning about the economy at a micro and macro level by applying the foundations of mainstream economics.
Audience: Both Grad & Undergrad

3. Explain credit market rationing and its impact on markets for housing, small business loans and other investments.
Audience: Both Grad & Undergrad

4. Articulate the contributing factors of bubbles and crashes in asset prices.
Audience: Both Grad & Undergrad

5. Articulate the role of money and banking in the inter-temporal allocation of resources.
Audience: Both Grad & Undergrad

6. Articulate your perspectives on fundamental questions like: Why we use money? What is a bank? How do organizations (like firms or families) form?

Audience: Both Grad & Undergrad

7. Construct and analyze the three generations of money search models and apply this framework appropriately to real-world economic and financial issues.
Audience: Graduate

ECON 521 – GAME THEORY AND ECONOMIC ANALYSIS
3-4 credits.

The study of multi-agent, interactive decision problems, with emphasis on questions of coordination, cooperation and conflict. Applications include relations between countries, competition between firms, bargaining between unions and firms, and contests between political candidates.
Requisites: (ECON 301 or 311) and MATH 222; or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss the fundamental concepts of game theory and how those concepts apply to real world issues.
Audience: Both Grad & Undergrad

2. Construct and evaluate game theoretic models, including their assumptions and conclusions.
Audience: Both Grad & Undergrad

3. Employ a diverse set of skills and strategies in mathematical reasoning and problem solving.
Audience: Both Grad & Undergrad

4. Use game theoretic techniques to analyze real world situations and policies.
Audience: Both Grad & Undergrad

5. Apply and write about game theory in novel strategic situations.
Audience: Both Grad & Undergrad

6. Read and critique published papers that use game theory.
Audience: Graduate

ECON 522 – LAW AND ECONOMICS
3-4 credits.

Economic analysis of legal rules and institutions with emphases on how different areas of law influence individual incentives. Specific topics include: (1) property, (2) contracts, (3) torts, (4) legal procedure and (5) criminal law.
Requisites: ECON 301 or 311
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain basic features of the Common Law and Civil Law traditions, their origins, their key differences, and some particular legal doctrines.
Audience: Undergraduate

2. Apply basic microeconomic ideas and models to particular legal settings.
Audience: Undergraduate

3. Analyze the effect of a law or aspect of the legal system on behavior, and judge which law will lead to better outcomes in a particular setting.
Audience: Undergraduate

ECON/PHILOS 524 – PHILOSOPHY AND ECONOMICS
3 credits.

Economics examined from the viewpoint of the philosophy of science. Normative and positive aspects of economic theory. Deterministic and statistical explanation. Arrow impossibility theorem. Radical economics.
Requisites: Sophomore standing and 3 credits of PHILOS or ECON
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ECON/A A E 526 – QUANTITATIVE METHODS IN AGRICULTURAL AND APPLIED ECONOMICS
4 credits.

Use of quantitative methods (mathematics, statistics, and optimization) to analyze problems faced by decision makers in natural resources and agriculture. Extensive homework requiring use of quantitative methods via spreadsheet tools to solve problems from an applied decision context.
Requisites: (MATH 211 or 221), ECON 301, and STAT 301, or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Develop an understanding of the use of calibrated economic models to study economic policy and the underlying applied price theory.
Audience: Both Grad & Undergrad

2. Gain expertise in the formulation of numerical economic equilibrium models with application to trade, public finance, climate and energy policy applications.
Audience: Both Grad & Undergrad

3. Describe data sources for sectoral and economy-wide policy applications of calibrated economic equilibrium models.
Audience: Both Grad & Undergrad

4. Use GAMS, Excel and other visualization tools to analyze and interpret large, multi-dimensional datasets and models.
Audience: Both Grad & Undergrad

5. Demonstrate competence in writing about economic issues on the basis of evidence-based analysis of economic policy proposals.
Audience: Both Grad & Undergrad

6. Learn equivalent formulations of partial and general economic equilibrium models in primal, dual and complementarity formats.
Audience: Graduate

ECON/R M I 530 – INSURING LIFE'S RISKS: HEALTH, AGING, AND POLICY
3 credits.

Covers risks related to health and aging, rationales for social insurance programs to protect against these risks, and costs and benefits of these programs. Broad topics include health insurance, disability insurance, and Social Security and pension policy.
Requisites: (ECON 301 or 311) and ECON 310; or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe and interpret models of risk and insurance
Audience: Undergraduate

2. Identify and interpret the basic features (and rationales) of major US social insurance programs related to health and aging
Audience: Undergraduate

3. Apply knowledge from Learning Outcomes 1 and 2 to be able to critique and evaluate the merits of recent research articles
Audience: Undergraduate

ECON/A A E/F&W ECOL 531 – NATURAL RESOURCE ECONOMICS
3 credits.

Economic concepts and tools relating to management and use of natural resources, including pricing principles, cost-benefit analysis, equity, externalities, economic rent, renewable and nonrenewable resources, and resource policy issues.
Requisites: ECON 301 or 311 or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Employ appropriate concepts in order to correctly define the economic benefits accrued from different natural resources.
Audience: Both Grad & Undergrad

2. Apply appropriate methodologies and tools to demonstrate the conditions under which the benefits are likely to be captured or dissipated by real world actors.
Audience: Both Grad & Undergrad

3. Explain the social, economic, and/or environmental dimensions of the sustainability challenges of maintaining healthy supplies of forests, biodiversity, fish and wildlife, and freshwater.
Audience: Both Grad & Undergrad

4. Analyze the causes of and solutions for the sustainability challenges of maintaining healthy supplies of forests, biodiversity, fish and wildlife, and freshwater.
Audience: Both Grad & Undergrad

5. Apply academic principles of natural resource economics to a real-world policy problem.
Audience: Graduate

ECON 535 – EXPERIMENTAL ECONOMICS
3 credits.

An examination of the use of laboratory or field experiments to examine questions of interest to economists. How to design economic experiments and understand their results. Understanding answers to key questions about economic policy, development economics, learning in uncertain situations, behavior in markets, market design, auctions, finance, altruism and selfishness, bargaining, and many other topics, as well as the processes that produced these answers, using principles from statistical models, survey design, game theory, understanding of incentives, and behavioral economics.
Requisites: (ECON 301 or 311) and ECON 310
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe what experimental economics is and is not.
Audience: Undergraduate

2. Discuss the fundamental statistical tools and issues relating to experimental methods in economics.
Audience: Undergraduate

3. Design, carry out, and evaluate the results of basic economic experiments using concepts from survey design, applied statistics, game theory, and behavioral economics.
Audience: Undergraduate

4. Explain important economic models, experiments, games, and experimental results in the development and application of experimental economics.
Audience: Undergraduate

ECON/POP HLTH/PUB AFFR 548 – THE ECONOMICS OF HEALTH CARE
3-4 credits.

Analysis of the health care industry. Markets for hospitals and physicians' care, markets for health manpower, and the role of health insurance.
Requisites: ECON 301, ECON 311, or PUB AFFR 880
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Specify the types of economic decisions health care players make in different markets.
Audience: Both Grad & Undergrad

2. Apply micro economic models and tools to study economic decisions in the healthcare system and understand their implications.
Audience: Both Grad & Undergrad

3. Evaluate empirical evidence from health care literature that involves cost, access, and quality of care considerations for the different health care players.
Audience: Both Grad & Undergrad

4. Describe the basic institutional structure of the US healthcare market and how it compares to markets in other countries.
Audience: Both Grad & Undergrad

5. Identify types of data necessary for testing specific hypotheses involving health care player behavior.
Audience: Graduate

ECON 570 – FUNDAMENTALS OF DATA ANALYTICS FOR ECONOMISTS
3-4 credits.

Introduction to the data that underlies quantitative economic analysis. Learn how to formulate a research question, access economic data sources, conduct preliminary and formal analysis, and report findings in a professional manner.
Requisites: [ECON 310, (STAT 240 and 340), or (STAT 303 and 333)], and (ECON 301 or 311)
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand the economist's research process: formulating a question; preliminary and formal analysis; and communicating results.
Audience: Undergraduate

2. Effectively communicate quantitative economic ideas through figures.
Audience: Undergraduate

3. Access and analyze panel datasets, such as the Panel Study of Income Dynamics, and time series datasets, such as the National Income and Product Accounts.
Audience: Undergraduate

4. Use modern tools to effectively manage data and perform analysis.
Audience: Undergraduate

ECON 580 – HONORS TUTORIAL IN RESEARCH PROJECT DESIGN
3 credits.

Students will be required to criticize research by others, to draft a research proposal and to complete a project that requires original research.
Requisites: (ECON 301 or 311), (ECON 302 or 312), and ECON 410
Course Designation: Gen Ed - Communication Part B
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Accelerated Honors (!)
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Read, understand, and critically evaluate existing research in economics.
Audience: Undergraduate

2. Conduct original research in economics, including developing economic models and analyzing primary data sources.
Audience: Undergraduate

3. Present their original research and defend their methods and conclusions.
Audience: Undergraduate

4. Write a complete and well-structured economics research paper.
Audience: Undergraduate

ECON 581 – HONORS THESIS
3 credits.

Students will work on their honor thesis.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Accelerated Honors (!)
Repeatable for Credit: No
Last Taught: Fall 2025

ECON 621 – MARKETS AND MODELS
3-4 credits.

An investigation into the various ways that markets determine the allocation of scarce resources: via a single market-clearing price, waiting in line or other forms of rationing, search, a centralized matching algorithm, an auction, or a contest. We will examine real-world examples of each type of market, and introduce and solve a formal theoretical model of each to see what insights it leads to.
Requisites: (ECON 301 or 311) and (MATH 217 or 221), or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Explain general principles of why some markets work well (and others do not), and demonstrate why the precise details matter
Audience: Both Grad & Undergrad

2. Discuss details of how particular real-world markets operate
Audience: Both Grad & Undergrad

3. Construct theoretical economic models to match key features of real-world markets, and apply mathematical tools to analyze these models
Audience: Both Grad & Undergrad

4. Understand and explain advanced theoretical results and their proofs; modify and apply these techniques to prove closely-related results
Audience: Graduate

ECON 623 – POPULATION ECONOMICS
3-4 credits.

Examination of economic determinants of population change and demographic behavior including household formation, marriage, child bearing and rearing, mortality (especially infant) and key forms of human capital investments including schooling and migration.
Requisites: (ECON 301 or 311) and ECON 310; or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Critically evaluate research published in economics journals and popular or policy publications.
Audience: Both Grad & Undergrad

2. Develop economic arguments and assess evidence in a clear and effective manner.
Audience: Both Grad & Undergrad

3. Think critically about institutions and behavior, and discuss the underlying mechanisms that influence population outcomes.
Audience: Both Grad & Undergrad

4. Identify evidence that may adjudicate between alternate explanations for phenomena.
Audience: Both Grad & Undergrad

5. Discuss differences in cultures, groups, and societies across time and place, and how this affects population outcomes.
Audience: Both Grad & Undergrad

6. Describe how events and processes in one country can affect those in other countries.
Audience: Both Grad & Undergrad

7. Apply economic theory and data to develop policy proposals.
Audience: Graduate

ECON 661 – ISSUES IN INTERNATIONAL MACROECONOMICS
3-4 credits.

Examines the macroeconomics of open economies (countries that can trade goods and assets with other countries). Takes a systematic approach to building and examining macroeconomic models of the open economy, to try to understand the determination of output and employment, trade balance, capital flows, the foreign currency exchange rate, international prices, and the role of uncertainty and asset choice.
Requisites: (ECON 302 or 312), ECON 310, and (MATH 217 or 221), or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify how international economic models help us to understand real world data such as exchange rates, output in open economies and the trade balance (inquiry and analysis)
Audience: Both Grad & Undergrad

2. Build and apply general equilibrium models of the international economy (critical and creative thinking)
Audience: Both Grad & Undergrad

3. Practice mathematical skills through homework and exams (quantitative literacy)
Audience: Both Grad & Undergrad

4. Examine how macroeconomic institutions vary across countries and how those influence macroeconomic outcomes
Audience: Both Grad & Undergrad

5. Program and numerically solve a dynamic economic model
Audience: Graduate

6. Identify a research topic and develop a detailed paper proposal
Audience: Graduate

ECON 664 – ISSUES IN INTERNATIONAL TRADE
3-4 credits.

Covers advanced topics in international trade and investment, including foreign direct investment, dynamic models of trade, and models of firm-level heterogeneity.
Requisites: ECON 464, 310, and (MATH 217 or 221); or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Understand the motives for multinational production: theories of horizontal, vertical, and export platform foreign direct investment.
Audience: Both Grad & Undergrad

2. Evaluate the potential benefits and costs of hosting a multinational corporation.
Audience: Both Grad & Undergrad

3. Access and analyze data on international trade and production.
Audience: Both Grad & Undergrad

4. Apply boundary-of-the-firm theories to determine what factors influence outsourcing decisions.
Audience: Both Grad & Undergrad

5. Demonstrate an understanding of models of investment under uncertainty
Audience: Graduate

6. Write computer programs to solve multinational decision problems and use the models to analyze the ways that optimal behavior depends on parameter values
Audience: Graduate

ECON 666 – ISSUES IN INTERNATIONAL FINANCE
3-4 credits.

Modern institutions, history, and controversies of international financial relations. Foreign exchange market, the Euro-currency banking system, and central bank intervention in both.
Requisites: (ECON 301 or 311), (ECON 302 or 312), (ECON 310, STAT 302, or 311), and MATH 221; or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2019

ECON/A A E/ENVIR ST/URB R PL 671 – ENERGY ECONOMICS
3 credits.

The method, application, and limitations of traditional economic approaches to the study of energy problems. Topics include microeconomic foundations of energy demand and supply; optimal pricing and allocation of energy resources; energy market structure, conduct, and performance; macro linkages of energy and the economy; and the economics of regulatory and other public policy approaches to the social control of energy.
Requisites: Graduate/professional standing or (senior standing and ECON 101, 111, A A E 101, or 215 prior to Fall 2024)
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020
Learning Outcomes: 1. Understand fundamentals of energy sources and technologies.
Audience: Both Grad & Undergrad

2. Be familiar with microeconomic theory with applications to energy industries and markets.
Audience: Both Grad & Undergrad

3. Build analytical skills in economic analysis and be able to apply the economic thinking to historical and contemporary energy-related issues.
Audience: Graduate

4. Analyze the causes of and solutions for the sustainability challenge of affordable and clean energy.
Audience: Both Grad & Undergrad

5. Apply sustainability principles and/or frameworks to addressing the challenge of affordable and clean energy.
Audience: Both Grad & Undergrad

ECON 681 – SENIOR HONORS THESIS
3 credits.

Faculty guided honors level original research.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ECON 682 – SENIOR HONORS THESIS
3 credits.

Faculty guided honors level original research.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ECON 690 – TOPICS IN ECONOMICS
2-4 credits.

Topics in economic theory and policy.
Requisites: ECON 301 or 311 or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ECON 691 – SENIOR THESIS
1-3 credits.

Faculty guided original research.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

ECON 692 – SENIOR THESIS
1-3 credits.

Faculty guided original research.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ECON 695 – TOPICS IN ECONOMIC DATA ANALYSIS
3-4 credits.

Various advanced topics on the use of data to answer important economic questions.
Requisites: ECON 310, (STAT 240 and 340), or (STAT 303 and 333)
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. interpret, evaluate and critique empirical economic papers
Audience: Undergraduate

2. use specific economic or econometric methodologies to analyze real data
Audience: Undergraduate

ECON 698 – DIRECTED STUDY
1-4 credits.

Study of topics or research at an advanced undergraduate as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2022

ECON 699 – DIRECTED STUDY
1-4 credits.

Study of topics or research at an advanced undergraduate as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ECON 700 – MATHEMATICS FOR ECONOMISTS
3 credits.

Mathematical techniques used in economics analysis at a Master level. Topics include: proof techniques, optimization, introductory topology, functional analysis, linear algebra for microeconomists and differential equations. It is expected that students will have completed three semesters calculus (such as MATH 234) and linear algebra (such as MATH 340).
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ECON 701 – MICROECONOMICS I
3 credits.

First course in a two-semester sequence covering: consumer theory, producer theory, and markets under partial and general equilibrium, and with externalities or market power. The sequence will include an introduction to decision theory and game theory, and applications to auction theory and partially informed trade. It is expected that students will have completed three semesters calculus (such as MATH 234) and linear algebra (such as MATH 340).
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ECON 702 – MACROECONOMICS I
3 credits.

A mathematical approach to the study of aggregate output determination, including analysis of consumption, labor markets, economic growth, and business cycles. Analysis of fiscal and monetary policies and their interactions. It is expected that students will have completed three semesters calculus (such as MATH 234) and linear algebra (such as MATH 340).
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ECON 703 – MATHEMATICAL ECONOMICS I
3-4 credits.

A survey of mathematical techniques used in economic analysis. Linear algebra and optimization techniques are emphasized.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ECON 704 – ECONOMETRICS I
3 credits.

Econometric methods, theory, and applications. Matrix algebra will be used. Topics include linear regression, least-squares estimation, inference, and hypothesis testing. Primarily for Master's level students. It is expected that students will have completed three semesters calculus (such as MATH 234) and linear algebra (such as MATH 340).
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ECON 705 – ECONOMETRICS II
3 credits.

Econometric methods, theory, and applications. Topics include instrumental variables, GMM, panel data, limited dependent variables, time series, and vector autoregressions.
Requisites: ECON 704
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ECON 706 – ECONOMETRICS III
3 credits.

Focus on using econometric methods to address empirical questions, conduct empirical research, and write empirical papers in economics.
Requisites: ECON 705
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ECON 707 – CAUSAL ESTIMATION IN ECONOMICS
3 credits.

Most empirical work in economics focuses on estimation of causal effects, including causal effects of an economic policy, a program, or a person's decision. Discussion of the basic causality issue and contemporary methods in econometrics for identifying and estimating causal effects.
Requisites: ECON 704
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Explain the concept of causality
Audience: Graduate

2. Identify and evaluate empirical methods used in papers in microeconomics that estimate causal effects
Audience: Graduate

3. Evaluate and critique empirical papers estimating causal effects - understand the crucial assumptions behind the results, and judge the consequences of these assumptions on the estimates
Audience: Graduate

ECON 708 – MICROECONOMICS II
3 credits.

Second course in a two-semester sequence covering: consumer theory, producer theory, and markets under partial and general equilibrium, and with externalities or market power. The sequence will include an introduction to decision theory and game theory, and applications to auction theory and partially informed trade.
Requisites: ECON 701
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ECON 709 – ECONOMIC STATISTICS AND ECONOMETRICS I
3-4 credits.

Probability distributions, statistical inference; multiple linear regression; introduction to econometric methods. It is expected that students will have completed three semesters calculus (such as MATH 234) and linear algebra (such as MATH 340).
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ECON 710 – ECONOMIC STATISTICS AND ECONOMETRICS II
3-4 credits.

Extensions of the linear regression model; introduction to multiple equation models.
Requisites: ECON 709
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ECON 711 – ECONOMIC THEORY-MICROECONOMICS SEQUENCE
3 credits.

First course in a two-semester sequence: theories of firms, consumers, and markets; or partial and general equilibria in market and centralized economies; topics in welfare economics. It is expected that students will have completed three semesters calculus (such as MATH 234) and linear algebra (such as MATH 340).
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ECON 712 – ECONOMIC THEORY-MACROECONOMICS SEQUENCE
3 credits.

First course in a two semester sequence: commodity, money and labor markets, their components and general equilibrium; intertemporal optimization and growth theory. It is expected that students will have completed three semesters calculus (such as MATH 234) and linear algebra (such as MATH 340).
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ECON 713 – ECONOMIC THEORY: MICROECONOMICS SEQUENCE
3 credits.

Second course in a two-semester sequence: the theory of market, their efficiency properties, externalities, and the role of prices, and an introduction to the economics of information, including moral hazard and adverse selection.
Requisites: ECON 711
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ECON 714 – ECONOMIC THEORY; MACROECONOMICS SEQUENCE
3 credits.

Second course in a two-semester sequence. Topics include: asset pricing; fiscal and monetary policy; mechanism design, estimation and calibration of business cycle models.
Requisites: ECON 712
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ECON 715 – ECONOMETRIC METHODS
3 credits.

Nonlinear econometric theory.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ECON 716 – ECONOMETRIC METHODS
3 credits.

Advanced econometric theory.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ECON 717 – APPLIED ECONOMETRICS
3 credits.

Applied cross section and panel methods.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ECON 718 – TOPICS IN APPLIED ECONOMETRICS
3 credits.

Applied time series methods.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2019

ECON 721 – FINANCIAL MICROECONOMICS
3 credits.

The contemporary theory of financial markets, portfolio choice, and asset pricing.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Formulate the classic consumption-based framework and financial equilibrium
Audience: Graduate

2. Derive the predictions for portfolio choice, asset pricing, and social efficiency
Audience: Graduate

3. Recover Fisher prices for YTM of treasury bonds and use these prices to valuate fixed income assets (bonds, mortgages)
Audience: Graduate

4. Recover Stochastic Discount Factor (SDF) from option prices and valuate risky assets (stocks, options)
Audience: Graduate

5. Understand the implication of SDF for a risk premium
Audience: Graduate

6. Model financial markets with default and collateral and systemic risk
Audience: Graduate

7. Model thin markets with institutional investors and insider's trading
Audience: Graduate

ECON 724 – FINANCIAL ECONOMETRICS
3 credits.

Introduction to econometric analysis of financial time series. Covers linear econometric time series models, multivariate time series, volatility estimation, and estimating and testing financial econometric models.
Requisites: ECON 704
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate an understanding of the major theories of financial pricing
Audience: Graduate

2. Use the theory of efficient markets to understand asset pricing
Audience: Graduate

3. Use linear time-series econometric models for financial forecasting
Audience: Graduate

4. Use volatility models to identify financial uncertainty
Audience: Graduate

5. Formulate and estimate asset pricing models
Audience: Graduate

6. Work with real financial data sets
Audience: Graduate

7. Build models for portfolio optimization
Audience: Graduate

ECON 725 – MACHINE LEARNING FOR ECONOMISTS
3 credits.

Introduction to the use of Machine Learning (ML) in economic analysis. Covers basic techniques of ML, much attention will be devoted to evaluating the use of these tools in economics. Learn how economists are integrating the tools of ML with econometric techniques in current empirical research. Gain hands on experience in using these techniques to answer traditional questions of interest to economists. Topics include (i) an in-depth discussion of the differences and similarities in goals, empirical settings and tools between ML and econometrics, (ii) supervised learning methods for regression and classification, unsupervised learning methods, large data analysis and data mining, (iii) recent methods at the intersection of ML and econometrics, designed for causal inference, optimal policy estimation, estimation of counterfactual effects. The methods are taught with an emphasis on practical application.
Requisites: Declared in an Economics graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Summarize the basic concepts of machine learning from an economist's perspective, and how these tools complement the econometrics toolkit
Audience: Graduate

2. Classify differences and similarities between econometrics and machine learning
Audience: Graduate

3. Implement new methods at the intersection of machine learning and econometrics that can be used to answer economic questions
Audience: Graduate

4. Apply machine learning to datasets in economics
Audience: Graduate

5. Develop and enhance analytic skills
Audience: Graduate

6. Write functional code in R
Audience: Graduate

ECON 726 – APPLICATIONS OF MACHINE LEARNING IN ECONOMICS
3 credits.

Techniques of Machine Learning (ML) and the use of these tools in economics. Exploration of how economists are integrating ML tools with econometric techniques in current empirical research. Hands on experience in using these techniques to answer traditional questions of interest to economists. Topics include (i) an in-depth discussion of the differences and similarities in goals, empirical settings and tools between ML and econometrics, (ii) supervised learning methods for regression and classification, unsupervised learning methods, large data analysis and data mining, (iii) recent methods at the intersection of ML and econometrics, designed for causal inference, optimal policy estimation, estimation of counterfactual effects. The methods are taught with an emphasis on practical application.
Requisites: ECON 725
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Summarize the basic concepts of machine learning from an economist's perspective, and how these tools complement the econometrics toolkit
Audience: Graduate

2. Apply machine learning methods to real economic data
Audience: Graduate

3. Evaluate the advantages and disadvantages of alternative machine learning algorithms in economic applications
Audience: Graduate

ECON 730 – INTERNATIONAL FINANCIAL ECONOMICS
3 credits.

Examines the economics of international financial markets, and how international considerations affect financial economic models. It provides an introduction to foreign exchange markets and risk; it investigates international parity conditions and foreign exchange rate determination; it studies international capital markets; it looks at the basics of international corporate finance; and, it discusses foreign currency derivatives.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify how international financial models help us to understand real world data such as exchange rates, interest rates, forward rates, and other international financial variables
Audience: Graduate

2. Build and apply general equilibrium models of risk and return in the global economy
Audience: Graduate

3. Practice mathematical skills through homework and exams
Audience: Graduate

4. Examine how financial institutions vary across countries and how those influence outcomes such as systemic risk to the financial system
Audience: Graduate

ECON/PUB AFFR/URB R PL 734 – REGIONAL ECONOMIC PROBLEM ANALYSIS
3 credits.

Examination of major theories of regional economic development, with special emphasis upon the evolution and amelioration of regional economic problems. Selected techniques of regional analysis, including economic base multipliers, input/output models, and shift-share analysis are used in the context of setting regional development goals.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Explain regional economic theory, empirical justification/application, and relevant impacts of planning in the context of addressing local economic, social, and environmental problems.
Audience: Graduate

2. Understand the theoretical basis of regional science.
Audience: Graduate

3. Describe and apply basic empirical tools.
Audience: Graduate

4. Explain relevant consequences of regional policies that target economic, social, and environmental change.
Audience: Graduate

ECON 735 – MONETARY AND FINANCIAL THEORY
3 credits.

Advanced appraisal of theory and institutions of the financial system, monetary theory, the credit system and financial intermediaries.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ECON 736 – MACROECONOMIC POLICY
3 credits.

Theoretical, empirical, and institutional aspects of the use of monetary, fiscal, and income policies to affect inflation, unemployment, and other policy goals.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ECON 741 – THEORY OF PUBLIC FINANCE AND FISCAL POLICY
3 credits.

Theoretical development of the functions of government in a mixed economy; welfare criteria for efficient government expenditures and taxation; nature of public goods and of redistribution activities of governments. Program budgeting and theoretical issues in cost-benefit analysis.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ECON 742 – THEORY OF PUBLIC FINANCE AND FISCAL POLICY
3 credits.

Incidence of tax burdens and expenditure benefits on relative incomes; effect of taxation on microeconomic decisions relating to work effort, investment, and consumption; analysis of the stabilization, growth, and debt management policies in the context of the economy as a whole; problems in international taxation.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ECON/A A E 747 – FRONTIERS IN AGRICULTURAL ECONOMICS 2
3 credits.

Organization, design, and performance of food and agricultural markets. Industrial organization; firm boundaries, contracting, and collective action; spatial, temporal, and quality dimensions of market design.
Requisites: ECON 709 and 711
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Describe the general state and history of the American agricultural sector, agricultural policy, and the major subfields of agricultural economics.
Audience: Graduate

2. Apply and extend economic models in agricultural contexts to evaluate or predict economic behavior or outcomes.
Audience: Graduate

3. Conduct and interpret econometric analyses motivated by economic theory.
Audience: Graduate

4. Synthesize and summarize research in the field of agricultural economics through clear writing.
Audience: Graduate

5. Generate interesting and relevant research questions informed by the economic literature.
Audience: Graduate

ECON 750 – LABOR ECONOMICS
3 credits.

Theoretical and empirical analysis of labor markets, labor mobility, the determination of earnings and employment, and labor supply of the household unit; emphasizes recent research on current issues in public policy.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ECON 751 – SURVEY OF INSTITUTIONAL ASPECTS OF LABOR ECONOMICS
3 credits.

Taught on a modular basis: Labor Theories and Labor History; Union Political Activities; Collective Bargaining and Public Policy. For use in analysis of problems in areas of labor markets, wages and human resources.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ECON 761 – INDUSTRIAL ORGANIZATION THEORY
3 credits.

A review of theories of the firm, oligopoly, and imperfect competition. Includes applications of economic theory and game theory to agency theory, product diversity, technological change, and strategic behavior by firms--among other problems.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ECON 762 – EMPIRICAL ANALYSIS OF INDUSTRIAL ORGANIZATION AND PUBLIC POLICY
3 credits.

A study of measurement in industrial organization and a survey of empirical tests of hypotheses in the field. The theory and practice of antitrust is also covered. Each student will produce an original piece of research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ECON 770 – DATA ANALYTICS FOR ECONOMISTS
3 credits.

Use core economic datasets such as the Panel Study on Income Dynamics, Consumer Expenditure Survey, National Income and Product Accounts, and the American Community Survey for quantitative economic research. Learn to clean and manipulate data to create datasets usable for economic research and to implement theory-based and atheoretic econometric models.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Be familiar with core data sets often used in microeconomics, macroeconomics, industrial organization, and finance
Audience: Graduate

2. Assemble manipulate economic data into datasets that can be used to conduct economic research
Audience: Graduate

3. Recognize the organization of economic data into cross-section, panel, and time series datasets
Audience: Graduate

4. Use python and pandas to efficiently manipulate and analyze economic data
Audience: Graduate

5. Identify the strengths and weaknesses of theory-based and atheoretic econometric models
Audience: Graduate

ECON 771 – ADVANCES IN ARTIFICIAL INTELLIGENCE FOR ECONOMISTS
3 credits.

Introduction to the basic concepts of artificial intelligence and its use in economics. Covers general principles and specific economic applications. Discusses implementing these approaches using economic data.
Requisites: ECON 725
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Explain basic Artificial Intelligence methods and how they are commonly applied to economic data
Audience: Graduate

2. Classify differences and similarities between econometrics and AI methods
Audience: Graduate

3. Evaluate advantages and disadvantages of different econometrics and AI methods
Audience: Graduate

4. Apply AI tools and methods to economic data
Audience: Graduate

ECON/GEN BUS/STAT 775 – BAYESIAN STATISTICS
3 credits.

Introduces the theory, methods, and computational procedures needed to perform advanced Bayesian data analyses. Predictive and decision-theoretic motivations including subjective probability, risk, admissibility, and exchangeability; highlights key components of Bayesian analysis (i.e., prior, likelihood, posterior, and predictive distributions) within standard parametric models and advanced hierarchical and multilevel models; demonstrates the iterative process of model specification, implementation, criticism, and revision with applied case studies; implements computational techniques (e.g., Markov chain Monte Carlo, variational inference) in modern probabilistic programming languages.
Requisites: STAT 609, 610, 611, STAT/MATH 709, ECON 709, POLI SCI 818, or COMP SCI/E C E 761
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Justify the use of probability for coherent uncertainty quantification
Audience: Graduate

2. Explain how Bayesian updating occurs in conjugate models and hierarchical models
Audience: Graduate

3. Compare and contrast the conceptual and practical benefits and challenges of different posterior approximation strategies like MCMC and variational inference
Audience: Graduate

4. Implement posterior approximation algorithms in modern statistical and probabilistic programming languages such as R or Stan
Audience: Graduate

5. Specify, fit, criticize, and revise Bayesian models in practice
Audience: Graduate

ECON 805 – ADVANCED MICROECONOMIC THEORY I
3 credits.

Economic behavior under uncertainty; measure of risk, information structure, stock market and asset pricing, insurance theory, asymmetric information and incentive mechanisms.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ECON 806 – ADVANCED MICROECONOMIC THEORY II
3 credits.

General equilibrium analysis existence and computation of fixed points and competitive equilibrium, regular economics, core, non-competitive approach to perfect competition and monopolistic competition.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019

ECON 809 – TOPICS IN MICROECONOMIC THEORY
1-3 credits.

Topics in microeconomic theory.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ECON 810 – ADVANCED MACROECONOMIC THEORY
3 credits.

Topics in macroeconomic research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ECON/URB R PL 845 – ADVANCED TOPICS IN PUBLIC FINANCE
1-4 credits.

Advanced public finance problems and literature, research; subject changes each semester; may be repeated. Modules.
Requisites: ECON 713 and 714
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2020

ECON/POP HLTH 848 – HEALTH ECONOMICS
1-3 credits.

Health economics issues including demand, supply and pricing, market structure, medical malpractice, technological change, value of life, role of insurance, and other aspects of uncertainty.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Describe the breadth of themes in health economics, organized under three main topic areas (the production of health; the value of health and health care; and the use of evidence to make decisions in health and healthcare contexts), and to develop appropriate analytical and methodological skills
Audience: Graduate

2. Enhance analytical and writing skills by producing several short papers
Audience: Graduate

3. Enhance scholarly oral presentation skills
Audience: Graduate

ECON 871 – ADVANCED INTERNATIONAL ECONOMICS
3 credits.

General equilibrium algebraic and geometric modeling of open economies with balanced trade, and the welfare economics of international exchange and barriers thereto.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ECON 872 – ADVANCED INTERNATIONAL ECONOMICS
3 credits.

Algebraic and geometric modeling of open macroeconomics with unbalanced trade and payments, focussing analytically on the foreign exchange market and the determinants of the exchange rate.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ECON 880 – TOPICS IN COMPUTATIONAL ECONOMICS
3 credits.

Covers techniques to compute and estimate structural models. Transition from formal Econometrics, Macroeconomics and Theory training to applications.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply numerical methods to solve dynamic programming problems (including parallel computing)
Audience: Graduate

2. Solve and simulate dynamic equilibrium models with heterogenous agents to understand such issues as wealth inequality and the the firm size distribution
Audience: Graduate

3. Use simulated method of moments to calibrate dynamic models with heterogeneous agents
Audience: Graduate

4. Solve and estimate static and dynamic discrete choice models to understand such issues as demand for differentiated products, residential sorting, investment decisions
Audience: Graduate

5. Solve dynamic Markov games with strategic interactions to understand such issues as strategic investments and the evolution of the firm size distribution
Audience: Graduate

ECON 899 – RECENT ADVANCES IN ECONOMICS
1-3 credits.

Selections from all fields of economic research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ECON 901 – WORKSHOP IN MATHEMATICAL ECONOMIC THEORY
1-7 credits.

First in a two seminar sequence on critical discussion of topics in the field of economic theory.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ECON 902 – WORKSHOP IN ECONOMIC THEORY
1-7 credits.

Critical discussion of topics in the field of economic theory.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ECON 903 – WORKSHOP ON INDUSTRIAL ORGANIZATION
1-7 credits.

Current research on the operation of markets in which individuals and firms act with imperfect information, are limited in their responses, may purchase heterogeneous commodities or factor services, and are concerned with conflicting goals.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ECON 904 – WORKSHOP ON INDUSTRIAL ORGANIZATION
1-7 credits.

Second in a two seminar sequence on current research on the operation of markets in which individuals and firms act with imperfect information, are limited in their responses, may purchase heterogeneous commodities or factor services, and are concerned with conflicting goals.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ECON 913 – WORKSHOP IN ECONOMETRICS
1-7 credits.

Current research in econometric model building, estimation and inference in econometrics
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ECON 914 – WORKSHOP IN ECONOMETRICS
1-7 credits.

Second in a two seminar sequence on current research in econometric model building, estimation and inference in econometrics.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ECON/ANTHRO/C&E SOC/SOC 925 – SEMINAR: SOCIO-ECONOMIC CHANGE IN UNDERDEVELOPED AREAS
2-3 credits.

Social and economic factors relating to stability, growth, and change in the non-Western areas of the contemporary world.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ECON 955 – WORKSHOP IN LABOR ECONOMICS
1-7 credits.

Analysis of current research in wage determination and the functioning of labor markets.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ECON 956 – WORKSHOP IN LABOR ECONOMICS
1-7 credits.

Second in a two seminar sequence on the analysis of current research in wage determination and the functioning of labor markets.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ECON 965 – WORKSHOP ON QUANTITATIVE MACRO-ECONOMIC ANALYSIS
1-7 credits.

Current research on macroeconomic models, monetary theory and policy, the theory of portfolio selection, and the allocative and distributive performance of capital markets.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ECON 966 – WORKSHOP ON QUANTITATIVE MACRO-ECONOMIC ANALYSIS
1-7 credits.

Second in a two seminar sequence on current research on macroeconomic models, monetary theory and policy, the theory of portfolio selection, and the allocative and distributive performance of capital markets.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ECON 968 – WORKSHOP ON PUBLIC ECONOMICS
1-7 credits.

Individual research and group discussion of public expenditure programs with attention to investment in human capital, education, training, health information, and welfare programs. Reports on research in progress by students, staff, visiting scholars.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ECON 969 – WORKSHOP ON PUBLIC ECONOMICS
1-7 credits.

Second in a two seminar sequence on individual research and group discussion of public expenditure programs with attention to investment in human capital, education, training, health information, and welfare programs. Reports on research in progress by students, staff, visiting scholars.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ECON 977 – WORKSHOP IN INTERNATIONAL ECONOMICS
1-7 credits.

Current research in international trade; a wide range of topics in theory, quantitative analysis, statistics, and policy. For graduate students in their second or later years when working on theses.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ECON 978 – WORKSHOP IN INTERNATIONAL ECONOMICS
1-7 credits.

Second in a two seminar sequence on the current research in international trade; a wide range of topics in theory, quantitative analysis, statistics, and policy. For graduate students in their second or later years when working on theses.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ECON/AFRICAN/ANTHRO/GEOG/HISTORY/POLI SCI 983 – INTERDEPARTMENTAL SEMINAR IN AFRICAN STUDIES TOPICS
3 credits.

Interdisciplinary inquiry in African societies and cultures.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Develop in-depth knowledge in a sub-field of specialization within African studies
Audience: Graduate

2. Acquire and demonstrate understanding of major theories, approaches, concepts, currently informing African studies
Audience: Graduate

3. Understand your process of learning and possess the capacity to intentionally seek, evaluate, and learn from information, and to recognize and reduce bias in thinking.
Audience: Graduate

4. Gain firm knowledge of existing research in African studies
Audience: Graduate

5. Develop and improve speaking, readings, listening, and writing skills
Audience: Graduate

6. Write and speak across disciplinary boundaries
Audience: Graduate

7. Analyze texts from various theoretical and critical perspectives
Audience: Graduate

ECON 990 – THESIS
2-9 credits.

Independent research and writing for graduate students under the supervision of a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ECON 999 – INDEPENDENT WORK
2-9 credits.

Directed study projects for graduate students as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

EDUCATIONAL LEADERSHIP AND POLICY ANALYSIS (ELPA)

ELPA/LEGAL ST 442 – CIVIL RIGHTS LAWS, THE COURTS, AND PUBLIC EDUCATION
3 credits.

Examines several legal issues confronting students and educators within the U.S. education system with a particular focus on race discrimination. Examines how civil rights laws and constitutional provisions can help create more equitable schooling experiences for students and educators from historically marginalized populations. Identifies pragmatic approaches to the law, and explores issues of the democratic underpinnings of education.
Requisites: Junior standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Analyze the U.S. constitutional provisions and civil rights laws in the U.S. that impact U.S. public education, demonstrating an awareness of history's impact on the past and present.
Audience: Both Grad & Undergrad

2. Describe various legal documents related to education, recognizing how assumptions about minoritized populations may play out in school policy.
Audience: Both Grad & Undergrad

3. Explain and engage in discussions about racial injustice through the discussion of case law, demonstrating a consciousness or awareness of how the issue impacts themselves and others in a public school setting.
Audience: Both Grad & Undergrad

4. Identify ways to become more effective participants in a multiracial society through the examination of current issues and social movements rooted in education law and policy.
Audience: Both Grad & Undergrad

5. Examine issues in civil rights law in education using peer-reviewed research
Audience: Graduate

ELPA 502 – WORKSHOP IN EDUCATIONAL LEADERSHIP AND POLICY ANALYSIS
1-3 credits.

Practical problems derived from student interests and needs.
Requisites: Junior standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ELPA/ED POL/LEGAL ST 542 – LAW AND PUBLIC EDUCATION
3 credits.

Examines the legal issues related to the policy decisions and delivery of public education (elementary and secondary) in the United States. Learn how law impacts both curriculum development and curricular delivery, explore current legal controversies, constitutional issues, and learn about legal reasoning and analysis. Examines how both legislation and litigation affects public education. Particular attention is paid to law as public policy and the analysis of the same.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify various analytic frameworks that guide legal analysis.
Audience: Both Grad & Undergrad

2. Analyze the use of principles and/or frameworks to a situation or issue.
Audience: Both Grad & Undergrad

3. Understand the role of analytic frameworks in the development and implementation of law and policy.
Audience: Both Grad & Undergrad

4. Describe the many legal issues inherent in daily school practice.
Audience: Undergraduate

5. Discuss various legal principles.
Audience: Undergraduate

6. Examine the sources of law and the various interests that the law seeks to balance.
Audience: Undergraduate

7. Recognize and identify independently the many legal issues inherent in daily school practice.
Audience: Graduate

8. Explore and apply various legal practices and their application.
Audience: Graduate

9. Examine the sources of law and the various interests that the law seeks to balance, provide varying arguments in written form.
Audience: Graduate

10. Find and understand primary sources of legal authority (e.g. actual cases, statutes, and administrative rules).
Audience: Graduate

ELPA 600 – COOPERATIVE PROGRAM OFF-CAMPUS TERM
0 credits.

For participants in M.S. cooperative program to maintain UW-Madison status during terms when taking courses from partner institution.
Requisites: Declared in Educational Leadership and Policy Analysis: Cooperative Program with UW Whitewater MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ELPA 640 – LEGAL RIGHTS AND RESPONSIBILITIES FOR TEACHERS
1-3 credits.

Examines the legal issues confronting the classroom teacher on a daily basis. An emphasis will be placed on understanding legal analysis in order to empower teachers to better balance the multiple interests confronting them. Also, understanding of how law can further the development of a democratic classroom. Specific topics to be examined include: curricular control, teachers' academic freedom, religion in the curriculum, equity in programming, special education, student records, student discipline, teacher contracts, teacher discipline, and negligence.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Examine the legal issues confronting an educational professional on a daily basis
Audience: Graduate

2. Learn how the law impacts both curriculum development and curricular delivery
Audience: Graduate

3. Understand legal analysis in order to empower educators to better balance the multiple interests confronting them
Audience: Graduate

4. Understand how the law can further the development of a democratic classroom
Audience: Graduate

ELPA 662 – EXPEDITIONS IN EVIDENCE-BASED TEACHING AND LEARNING
2 credits.

Use experiential learning to explore evidence-based and inclusive teaching approaches within different higher education learning contexts.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explore and engage with educational practices and learning environments that are aligned with principles of inclusive and evidence-based teaching and learning.
Audience: Graduate

2. Consider how teaching approaches may be applied across different learning contexts at the college level
Audience: Graduate

3. Observe and critically reflect on teaching practices and outcomes for higher education learners.
Audience: Graduate

4. Describe effective models for developing inclusive learning communities and engaging diverse groups of learners.
Audience: Graduate

5. Begin to identify how to integrate evidence-based teaching approaches with your own disciplinary content knowledge to create inclusive learning experiences.
Audience: Graduate

ELPA 663 – CAPSTONE SEMINAR IN TEACHING AND LEARNING
1 credit.

Synthesize experiences in teaching, mentoring, and educational development into materials for use in next career stage(s) as future faculty.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Articulate your philosophy as an educator, drawing upon evidence-based and inclusive pedagogies relevant to higher education learning environments.
Audience: Graduate

2. Design portfolio materials that integrate your experiences with teaching, mentoring, and educational development, and that align with your career(s) of interest.
Audience: Graduate

3. Develop professional goals that include a continuing practice of reflective growth as an educator.
Audience: Graduate

ELPA 700 – FIELD EXPERIENCE IN EDUCATIONAL LEADERSHIP
3 credits.

Supervised field experience: elementary, secondary, vocational, technical, higher, and/or special education at local, state, or national level.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ELPA 701 – INTRODUCTION TO HIGHER AND POST-SECONDARY EDUCATION
3 credits.

Examines the history and philosophy of higher and postsecondary education; the major participants; curriculum; governance and leadership; relations with state and federal government; and current issues.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ELPA 703 – EVALUATING AND SUPPORTING QUALITY CLASSROOM TEACHING
3 credits.

Evaluate teaching practices and recognize and support quality classroom teaching in K-12 settings. Application of established evaluation frameworks to video cases of classroom practice.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

ELPA 710 – INTRODUCTION TO INTERCOLLEGIATE ATHLETICS ADMINISTRATION
3 credits.

Examine the administration of intercollegiate athletics in higher education institutions with particular emphasis on providing practical and theoretical approaches.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ELPA 715 – GOVERNANCE AND ADMINISTRATION OF COLLEGES AND UNIVERSITIES
3 credits.

Functions, organization, and administrative practices of colleges and universities; role of governing boards, administrators, faculty members, and students in policy making.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ELPA/COUN PSY/CURRIC/ED POL/ED PSYCH/RP & SE 719 – INTRODUCTION TO QUALITATIVE RESEARCH
3 credits.

Provides an overview of qualitative inquiry, examining assumptions, standards, and methods for generating and communicating interpretations. Methodological and theoretical works illustrate case study, ethnography, narrative, and action research. Does not include a field method component.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ELPA 725 – RESEARCH METHODS AND PROCEDURES IN EDUCATIONAL ADMINISTRATION
3 credits.

Role of theory and hypothesis testing in research. Introduction to research problems, questions, hypotheses, variables, constructs, definitions, measurement, research and experimental designs, sampling, descriptive statistics, proposal writing, types of research and statistical computing. Critical analysis of published research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ELPA 726 – DATA-DRIVEN LEADERSHIP FOR EDUCATIONAL EQUITY AND SYSTEMIC SCHOOL IMPROVEMENT
3 credits.

Engages educational leaders in data-driven decision-making from a system-wide perspective, and developing basic data analysis skills.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2017
Learning Outcomes: 1. Evaluate existing improvement processes, use research and data to develop an improvement process, and develop an implementation plan to support the improvement process.
Audience: Graduate

2. Evaluate ethical dimensions of issues, analyze decisions in terms of established ethical frameworks, and develop a communication plan to advocate for ethical decisions.
Audience: Graduate

3. Interpret data from formative and summative assessments for use in educational planning and engage faculty in gathering, synthesizing, and using data to evaluate the quality, coordination, and coherence of the school's curriculum, instruction, and assessment practices.
Audience: Graduate

4. Master principles of systems management and continuous improvement.
Audience: Graduate

ELPA 735 – LEADERSHIP FOR EQUITY AND DIVERSITY
3 credits.

Coordinating and effective utilization of school-based special services in the context of student diversity with attention to values, theory, and research underlying curriculum, instruction and policy, in terms of social class, gender, sexual orientation, disability, and race.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

ELPA 736 – ADMINISTRATION OF STUDENT SERVICES IN HIGHER EDUCATION
3 credits.

Organization and administration of student services in higher education including philosophy, current issues, student development, program planning, financial aid, auxiliary services, housing, counseling, advising, social and health services, student organizations, legal aspects, and special populations.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ELPA 750 – COACHING ATHLETICS 1: EVERYDAY PRACTICES OF TOP LEADERS
3 credits.

Employs an everyday practices conceptual framework. Core tenets: brokering, embedding, experimenting, targeting high doses, zeal. Examines complexities of coaching practice, including individual, organizational, and contextual variables. Draws from research on leadership. Uses research-driven framework to analyze coaching practice across five domains. Highlights processes that guide successful coaches at multiple levels. Encourages reflection upon coaching aspirations and trajectories.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Deepen understandings of the multi-dimensional complexities of coaching practice.
Audience: Graduate

2. Understand how diverse settings and conditions shape coaching practice.
Audience: Graduate

3. Identify effective coaching and leadership strategies.
Audience: Graduate

4. Articulate processes and outcomes that underlie successful systems of coaching.
Audience: Graduate

5. Identify models and practices of coaching that fit with our personal characteristics and situations.
Audience: Graduate

6. Discern how coaching fits into our aspired futures as athletes, teachers, leaders, parents, and/or community members.
Audience: Graduate

ELPA 751 – LEADERSHIP AND JUSTICE IN SPORTS
3 credits.

Examines the broad landscape of athletics, focusing on matters of human, social, economic, and cultural capital. Draws from prominent books, articles, documentaries, and other sources to develop expanded perspectives and nuanced understandings of leadership and social justice in sports. Specific learning foci include the social, cultural, and historical roles of sports and the traditional and emerging roles of athletes and coaches. Particular attention paid to matters of race, poverty, activism, youth sports, college sports reform, and the leadership that unfolds in these settings.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Cultivate critical reflection on the systems and structures that underlie athletics in the US.
Audience: Graduate

2. Deepen historical understandings of the multi-level ways that justice has been contested in and through sports.
Audience: Graduate

3. Identify key practices and conditions that cultivate life opportunities in and through sports.
Audience: Graduate

4. Articulate processes and models that promote justice in and through sports.
Audience: Graduate

5. Promote justice-centered leadership roles and possibilities in sports.
Audience: Graduate

6. Build capacity for positively transforming lives, organizations, communities, and perspectives in sports and beyond.
Audience: Graduate

ELPA 752 – COACH AS TEACHER: MASTERING INSTRUCTIONAL PRACTICE ON AND OFF THE FIELD
3 credits.

Provides opportunities to learn about the theory and practice of instruction in athletics settings. Identifies the hallmarks of excellent teaching and learning. Synthesizes the characteristics and practices of teachers who achieve mastery. Considers how particular contexts (e.g., sport, developmental stage, physical environment) shape teaching and learning. Explores team curriculum. Examines methods of leading and evaluating teaching and learning in sport. Also addresses: practice planning, skills-teaching, feedback, technology, learning targets, on-field instruction, and film room instruction.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Understand ecological development theories and their applicability to sports
Audience: Graduate

2. Understand how race, class, gender, age and other variables relate to teaching and learning in sports
Audience: Graduate

3. Identify and describe the hallmarks of excellent teaching and learning in a sport setting
Audience: Graduate

4. Assemble a “tool kit” of effective sport and developmentally appropriate teaching strategies
Audience: Graduate

5. Develop instructional leadership plans for sport settings
Audience: Graduate

6. Synthesize and apply research-supported evaluation practices
Audience: Graduate

7. Deepen understandings of how coaches can cultivate learning cultures
Audience: Graduate

ELPA 753 – PSYCHOLOGY AND COACHING IN SPORTS
3 credits.

Examines key principles of psychology relating to athletics. Addresses psychological aspects of leading. Examines research on psychology in competition. Considers how attention to psychology improves processes and outcomes. Supports coaches' and leaders' holistic development.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the basic aspects of sport psychology and its place in both the broader field of psychology and in the field of coaching.
Audience: Graduate

2. Identify and critique several psychological constructs that are often addressed in sport settings.
Audience: Graduate

3. Describe the interrelation of psychological constructs in coaching.
Audience: Graduate

4. Evaluate psychological constructs across diverse sports settings, including differences in developmental stages, sports, race, gender, culture, and geography.
Audience: Graduate

5. Synthesize best practices relating to their own area of coaching interest.
Audience: Graduate

6. Develop key strategies to be utilized in their own coaching settings, including identifying team members' signs of risk, how to best coordinate with key collaborators, how to manage one's own stress, etc.
Audience: Graduate

ELPA 754 – RUNNING A CHAMPIONSHIP SYSTEM: THE BADGER SPORTS LEADERSHIP ROAD COURSE
3 credits.

Examines core components of championships sports programs. Uses case study design to examine how leadership unfolds across multiple levels within one setting. Draws from distributed leadership analytic framework. Considers how matters such as talent, culture, commitment, leadership, intelligence, organization, resilience, teamwork, integrity, health, resources, and opportunities intersect in a successful system.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 2 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Build capacity for identifying, describing, and applying key tenets of the distributed leadership perspective to a sports program
Audience: Graduate

2. Build capacity for employing case study methodology toward team/organizational improvement
Audience: Graduate

3. Deepen understandings of how multiple components of a sports program interact contributing to competitive success
Audience: Graduate

4. Identify and articulate promising coaching and leadership practices within a larger school, university, and/or professional team organization.
Audience: Graduate

ELPA 755 – COACHING ATHLETICS 2: A BELL COW WAY
3 credits.

Provides opportunities to learn from specific models of coaching practice. Utilizes Bell Cow method. Articulates processes underlying successful coaching systems. Attends to personal characteristics and unique settings of coaching. Draws from leadership theory.
Requisites: ELPA 750
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Deepen understandings of the multi-dimensional complexities of coaching practice.
Audience: Graduate

2. Understand how diverse settings and conditions shape coaching practice.
Audience: Graduate

3. Identify effective coaching and leadership strategies.
Audience: Graduate

4. Articulate processes and outcomes that underlie successful systems of coaching.
Audience: Graduate

5. Identify models and practices of coaching that fit with our personal characteristics and situations.
Audience: Graduate

6. Discern how coaching fits into our aspired futures as athletes, teachers, leaders, parents, and/or community members.
Audience: Graduate

ELPA/ED POL/PUB AFFR 765 – ISSUES IN EDUCATIONAL POLICY ANALYSIS
3 credits.

Theory, research, and practical experience in educational policy analysis, including the social construction of policy problems in education; the design, implementation, and evaluation of policy responses; and the practical and ethical dilemmas of the policy analyst.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

ELPA/INTER-HE 770 – COMMUNITY, OPPORTUNITY, AND JUSTICE
3 credits.

Critical examination of school-community engagement and collaboration. Examines theory and practice of mutually beneficial collaboration in diverse education settings, including leadership issues in collaborative settings, and facilitators and inhibitors to effective collaboration.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

ELPA 777 – HIGHER AND POST-SECONDARY EDUCATION CAPSTONE SEMINAR
3 credits.

Provides an opportunity to use concepts and theories learned in previous coursework to analyze professional issues facing higher education administrators. Assists with career transitions and provides a culminating experience for the master's program.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ELPA/ED PSYCH 780 – TEACHER LEADERSHIP AND LEARNING COMMUNITIES
3-4 credits.

Focuses on knowledge and skills teachers need to be leaders in their schools in facilitating the development of strong learning communities that include students, teachers, families, administrators, and other educators. Understand key concepts, theories, and models used in building and sustaining effective learning communities; develop skills in creating practices that contribute to effective teacher leadership; and identify and strengthen skills needed to lead schools to build learning communities that promote student learning.
Requisites: Declared in Educational Psychology: Professional Educator (MSPE)
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2020

ELPA/COUN PSY/CURRIC/ED POL/ED PSYCH/RP & SE 788 – QUALITATIVE RESEARCH METHODS IN EDUCATION: FIELD METHODS I
3 credits.

Introductory field methods experience in qualitative research. Learn to define good research questions, determine which methods of data collection and analysis are useful for addressing those questions, engage in these methods, reflect on their utility in education research.
Requisites: ED PSYCH/COUN PSY/CURRIC/ED POL/ELPA/RP & SE 719
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ELPA/COUN PSY/CURRIC/ED POL/ED PSYCH/RP & SE 789 – QUALITATIVE RESEARCH METHODS IN EDUCATION: FIELD METHODS II
3 credits.

Focus on data analysis and translation of finds and implications. Gain theoretical and practical knowledge and skills regarding coding and analysis techniques, use of qualitative analytic tools, strategies for sharing findings with audiences beyond research team.
Requisites: ED PSYCH/COUN PSY/CURRIC/ED POL/ELPA/RP & SE 788
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ELPA 810 – DOCTORAL INQUIRY IN EDUCATIONAL LEADERSHIP AND POLICY ANALYSIS
3 credits.

Introduction to inquiry in the field of educational leadership and policy analysis for first semester doctoral students. Provides an introduction to research through engagement with ideas, including identifying and crystallizing meaningful problems, fundamentals of research design, and key challenges in conducting disciplined inquiry.
Requisites: Declared in Educational Leadership and Policy Analysis PHD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ELPA 812 – LITERATURE REVIEW IN EDUCATIONAL LEADERSHIP AND POLICY ANALYSIS
3 credits.

Develop, organize, and write a comprehensive literature review focused on a specific research area of individual interest. Learn strategies for effectively researching, synthesizing, and critically evaluating existing scholarship to build a strong foundation for research projects.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Use appropriate techniques for identifying, organizing, and synthesizing relevant literature.
Audience: Graduate

2. Explore how power and privilege shape educational research and knowledge dissemination.
Audience: Graduate

3. Identify useful technological and software tools that support research and writing.
Audience: Graduate

4. Complete an annotated bibliography.
Audience: Graduate

5. Learn valuable peer review techniques.
Audience: Graduate

6. Produce a draft document that serves as a foundation for the Preliminary Exam.
Audience: Graduate

ELPA/ED PSYCH 822 – INTRODUCTION TO QUANTITATIVE INQUIRY IN EDUCATION
3 credits.

Utilize the concepts and methods of quantitative social science research to conduct research on education issues. Topics include hypothesis testing, statistical inference, point estimates, graphic and numerical data displays, correlation and regression.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ELPA 823 – DATA MANAGEMENT FOR EDUCATION POLICY ANALYSIS
3 credits.

Focuses on the knowledge and skills required to support rigorous quantitative inquiry. Acquire and import data; combine (merge/append) multiple data sets; organize directories and files for optimal workflow; clean data; document data manipulations for reproducibility and transparency; write code to facilitate collaboration; and summarize data in visual (graph, chart, map) and tabular forms.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Import, merge, and append multiple data sources
Audience: Graduate

2. Structure directories and files to support collaborative inquiry
Audience: Graduate

3. Organize a dataset through the systematic assignment of variable names, variable labels, and value labels
Audience: Graduate

4. Generate and manipulate string and numeric data
Audience: Graduate

5. Clean and troubleshoot data, including the imputation of missing values

Audience: Graduate

6. Collapse and reshape your dataset
Audience: Graduate

7. Generate summary statistics, in tabular and graphic form
Audience: Graduate

8. Use coding strategies, such as loops, logical expressions, locals, and macros, to program efficiently
Audience: Graduate

9. Document data preparation and structure
Audience: Graduate

10. Acquire publicly available data from multiple formats
Audience: Graduate

ELPA 824 – FIELD RESEARCH DESIGNS & METHODOLOGIES IN EDUCATIONAL ADMINISTRATN
3 credits.

Focuses on research design, the major qualitative methods and techniques used in field research, data analysis, communicating field research, ethical challenges, and trustworthiness in conducting qualitative research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ELPA 825 – ADVANCED RESEARCH METHODS IN EDUCATIONAL ADMINISTRATION
3 credits.

Research designs for problems in educational administration including role of theory and hypothesis testing; variable definition and measurement; correlational, survey, experimental and non-experimental, factorial and single-subject designs.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ELPA/ED PSYCH 827 – SURVEYS AND OTHER QUANTITATIVE DATA COLLECTION STRATEGIES
3 credits.

Methods and concepts of survey research methods as they are commonly used in education research. Strategies include surveys (phone, mail, electronic, in person), logs/diaries, and experience sampling instruments. Emphasis is given to self-administered surveys, including periodic surveys, since these strategies are the most common in education research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

ELPA 831 – FINANCING POSTSECONDARY EDUCATION
3 credits.

Contemporary bases for collecting and distributing funds for postsecondary education provided by two-year institutions, colleges and universities; problems and issues in financing postsecondary institutions; economic aspects of expenditures for postsecondary education.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ELPA 832 – RESOURCE ALLOCATION FOR EQUITY AND SOCIAL JUSTICE
3 credits.

School finance and resource allocation for educational leaders, with an emphasis on educational adequacy, equity and efficiency. Includes an emphasis on the strategic deployment of human and material resources to address inequality and promote educational opportunity.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

ELPA/RP & SE 835 – LEADERSHIP FOR INCLUSIVE SCHOOLING
3 credits.

Examines historical and organizational context of special education administration at the federal, state and local levels. Includes policy implementation, constituency management, coordination, communication, and current issues.
Requisites: ELPA 735
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ELPA 840 – PUBLIC SCHOOL LAW
3 credits.

Legal aspects of public K-12 education. Legal structure; employee rights; employee discipline; curriculum; students' rights; student discipline, special education; torts; contracts, religion. Impact of federal and state constitutions, statutes, and court decisions on education.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ELPA 841 – LEGAL ASPECTS OF HIGHER EDUCATION
3 credits.

Legal structure of higher education, including historical evolution as well as current legal problems. Attempts to assess the impact of legal decisions, statutes, and regulations upon higher education and to discuss the implications of the interaction of the legal system and university governance for the practicing administrator.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

ELPA/ED POL/ED PSYCH/RP & SE 842 – LEGAL FOUNDATIONS OF SPECIAL EDUCATION AND PUPIL SERVICES
3 credits.

Legal requirements and issues relative to special education and pupil services programs; special education, juvenile justice, programs for English language learners, programs for children who are homeless; examination of applicable federal and state statutes and case law.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Describe various legal issues and identify those issues inherent in the delivery of pupil services.
Audience: Graduate

2. Explain the foundation created by federal disability law (Section 504, ADA, IDEA).
Audience: Graduate

3. Describe the relationship between state and federal law in the delivery of special education.
Audience: Graduate

4. Apply legal principles to a set of facts.
Audience: Graduate

5. Explain the relationship between statutory and regulatory requirements and practice.
Audience: Graduate

6. Identify various analytic frameworks that guide legal analysis.
Audience: Graduate

7. Apply principles and/or frameworks to a situation or issue.
Audience: Graduate

8. Analyze existing policies and practice from a legal perspective.
Audience: Graduate

9. Explain the dynamic nature of this branch of school law and will identify tools and resources available to help them remain current.
Audience: Graduate

ELPA 844 – TECHNOLOGY AND SCHOOL LEADERSHIP
3 credits.

Investigates how school leaders develop and use technological tools and systems to improve student learning and effect change in schools.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

ELPA 845 – SCHOOL-LEVEL LEADERSHIP
3 credits.

Dimensions of school-level leadership includes a focus on dimensions of the principal's leadership role, leadership tasks needed to advance equity and excellence in student learning, and distributed leadership.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ELPA 846 – THE SCHOOL SUPERINTENDENCY
3 credits.

Investigation of leadership and political theories, professional competencies, and the personal commitment involved in the role of the school superintendent. Covers the evolution of theoretical and practical perspectives of the school superintendence, including internship experiences.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023

ELPA 847 – INSTRUCTIONAL LEADERSHIP AND TEACHER CAPACITY
3 credits.

Learn to create and sustain successful teaching and learning environments. Designed to provide teachers, learning specialists, principals, and other administrators with the foundations of research, theory, and best practices of instructional leadership to enhance teachers' capacity for equity and excellence in student learning.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

ELPA 856 – MOBILITY AND INCLUSION IN GLOBAL HIGHER EDUCATION
3 credits.

Connects the discussion on diversity, equity, and inclusion (DEI) with student mobility in the context of internationalization of higher education. Delve into inquiries on why and how promoting mobility in international education and advancing DEI in higher education can benefit and enhance each other. Primarily serves as a venue to develop knowledge, expertise, and research skills in developing and implementing policies, programs, and strategies aiming at promoting international mobility in higher education through the lens of social justice. Strives for diversity, equity, and inclusion in the context of internationalization of higher education.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop awareness of positionality, bias, and privileges and how they may affect international student mobility, experience, and educational outcomes.
Audience: Graduate

2. Describe issues, trends, and challenges concerning diversity, equity, and inclusion in international higher education.
Audience: Graduate

3. Identify and analyze issues and challenges pertaining to international higher education through the lens of equity and inclusion.
Audience: Graduate

4. Outline the current trends and focuses surrounding research on mobility and inclusion in international higher education.
Audience: Graduate

5. Design inclusive, equity-driven, asset-based international education programming or research projects.
Audience: Graduate

6. Develop competence of self-reflection, self-assessment, and self-care.

Audience: Graduate

ELPA 860 – ORGANIZATIONAL THEORY AND BEHAVIOR IN EDUCATION
3 credits.

Theoretical constructs and empirical research relating to administering organizations in education. Emphasis on administrative behavior with special attention to planning and organizational improvement.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ELPA 863 – RACE, CLASS AND EDUCATIONAL INEQUALITY
3 credits.

Critically examines race and class inequality in education, including the importance of race and class at multiple levels of analysis, including the classroom and school, as well as the family, neighborhood, and community.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ELPA 870 – THE POLITICS OF EDUCATION
3 credits.

Policy development in education as a political process; community power, state and national politics in educational decision making; role of leadership and pressure groups, particularly the educational lobbies, in the shaping of educational policy at local, state, and national levels.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ELPA 875 – THEORY AND PRACTICE OF EDUCATIONAL PLANNING
3 credits.

Theory, research and practice in advanced program planning and evaluation involving elementary, secondary and higher and post-secondary education.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ELPA 878 – THE AMERICAN COMMUNITY COLLEGE
3 credits.

Addresses policies, trends, and debates in the evolution of the American community college from the beginning of the 20th century to the present, as well as current research on the community college and the diverse body of students it serves. Topics include, but are not limited to, governance and administration, faculty and advising, credential completion and transfer, enrollment patterns, developmental education, complexities surrounding students' goals and aspirations, and the cooling-out versus warming-up effect of the community college. Through class discussions and the culminating course project (research study or policy proposal), course participants will engage in a critical, scholarly examination of the American community college, considering its strengths and weaknesses, as well as opportunities and challenges within the broader context of education.
Requisites: Graduate Students Only
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand the history of community colleges and their missions, policies, and programs
Audience: Graduate

2. Develop a strong knowledge base of a broad range of contemporary topics and pressing questions concerning the community college and its students
Audience: Graduate

3. Identify and elaborate on policies, trends, and issues that influence current community college education and discuss their impact on future policies and practices
Audience: Graduate

4. Enhance expertise in one or two current research/policy topics on the community college
Audience: Graduate

5. Cultivate the capacity to critically evaluate existing empirical evidence and to plan and conduct original research or develop a policy proposal grounded within sound evidence
Audience: Graduate

ELPA 880 – ACADEMIC PROGRAMS IN COLLEGES AND UNIVERSITIES
3 credits.

Explores higher education curriculum including academic program philosophy and design, planning and development, program innovations, liberal education, academic majors, graduate and professional education, program review and evaluation.
Requisites: ELPA 715
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022

ELPA 881 – IDEAS OF THE UNIVERSITY: IMAGES OF HIGHER LEARNING FOR THE 21ST CENTURY
3 credits.

Explores alternative images and models to guide universities in the twenty-first century by engaging a diverse range of voices representing multiple stakeholders.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

ELPA 882 – MINORITY-SERVING INSTITUTIONS OF HIGHER EDUCATION
3 credits.

Examines the origins, contemporary landscape, structures, and stakeholders of minority-serving institutions (MSIs) -- historically black colleges and universities (HBCUs), Hispanic-serving institutions (HSIs), and tribal colleges and universities (TCUs) -- including related challenges and opportunities for research and practice.
Requisites: ELPA 701
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ELPA 883 – PERSPECTIVES ON COLLEGE STUDENT IDENTITY AND DEVELOPMENT
3 credits.

An introduction to identity and college student development theory that can either be applied to higher education administration practice or to research in higher education.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ELPA 885 – LEADERSHIP FOR STUDY ABROAD PROGRAMS AND INTERNATIONAL STUDENT SERVICES
3 credits.

A comprehensive understanding of leadership and administration of higher education study abroad programs and international student services. Delving into the latest discussion and debates on this subject from both researchers' and practitioners' points of view, serves as a venue to develop knowledge and expertise in developing and implementing policies, programs, and strategies for optimizing leadership for study abroad programs, international student services, and international enrollment management.
Requisites: Declared in Educational Leadership and Policy Analysis: Global Higher Education MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Outline current trends, issues, and research surrounding education abroad programs and international student services

Audience: Graduate

2. Understand various aspects for developing, managing, and evaluating study abroad programs
Audience: Graduate

3. Identify and analyze issues and challenges pertaining to a higher education institution’s engagement with its international student population and international recruitment
Audience: Graduate

4. Design proposals aiming to solve a practical issue in education abroad programs, international student services, and international enrollment management
Audience: Graduate

5. Engage with faculty development, curriculum design, and classroom teaching in a diverse, global context for advancing the missions of study abroad programs and international student services
Audience: Graduate

ELPA 886 – INTERNATIONALIZATION OF HIGHER EDUCATION
3 credits.

Close look at issues, trends, and challenges concerning internationalization in higher education in both the U.S. and foreign countries. Focus includes internationalizing teaching and learning, international partnerships and collaborations, international student recruitment and advising, study abroad etc.
Requisites: Declared in Educational Leadership and Policy Analysis: Global Higher Education MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

ELPA 887 – DIVERSITY AND INEQUALITY IN HIGHER EDUCATION
3 credits.

Survey of equity issues related to higher education access, admissions, transitions, persistence, and success. Focuses on the role of inequities across categories such as race, class, sex, gender, sexual orientation, language, nationality, or religion in higher education alongside considerations as to how researchers and practitioners can better communicate with one another about diversity issues.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ELPA 888 – ASSESSMENT IN HIGHER EDUCATION
3 credits.

An overview of the key concepts, tools, and practices of assessment in academic and student services settings. A theoretical and practical basis for choosing, designing and using assessment and evaluation tools will also be provided.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ELPA 890 – APPLIED RESEARCH IN EDUCATIONAL ADMINISTRATION
3 credits.

Supervised research on topics in the administration of elementary and secondary education.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ELPA 900 – INTERNSHIP IN EDUCATIONAL ADMINISTRATION
1-3 credits.

Internship completed in a school setting. Provides the opportunity to practice the application of knowledge gained in the academic program, examine administrative practice, and use reflection to improve practice.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Engage in opportunities wherein aspiring building leaders see the work of the school and its staff through the primary lens of social justice and equity.
Audience: Graduate

2. Analyze and reflect on the direct application in practice of the principles of social justice gained through the course work in the Master's Degree in Social Justice Leadership Program.
Audience: Graduate

3. Complete the requirements of the Internship and field experiences in order to gain experience and understanding of the school principal.
Audience: Graduate

4. Understand and begin to develop fundamental leadership skills as a future school leader.
Audience: Graduate

5. Share and discuss experiences as both an observer and practitioner of equity-based leadership.
Audience: Graduate

6. Complete the activities, summaries, and reflections in the Field Experience Journal.
Audience: Graduate

ELPA 910 – SEMINAR IN EDUCATIONAL LAW
3 credits.

Interpretation and critique of legal authority impacting education. Topics may include education and religion, students' rights, teachers' rights, and federal involvement in education.
Requisites: ELPA 840 or 841
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

ELPA 911 – AUTHENTIC PEDAGOGY AND ACHIEVEMENT
3 credits.

Concentrates on a specific formulation of authentic intellectual work that has a compelling research base. Critical analysis of some of the roots of authentic pedagogy, its research base, its connections to other formulations (critical pedagogy, culturally relevant pedagogy), as well as theoretical perspectives and empirical studies on pedagogy's role in the reproduction of inequality and its possibilities for social justice. Read seminal works on pedagogy and assessment, in the sociology of education, and in critical/post-structural theory applied to teaching, and relate them to both current assessment practices/policies and education leadership.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2023
Learning Outcomes: 1. Identify and apply knowledge, understanding and skills of instructional leadership to enhance teachers' capacity in K-12 schools for equity and excellence in student learning.
Audience: Graduate

2. Demonstrate doctoral-level inquiry skills related to the theoretical and empirical literature on pedagogy and equitable student achievement.
Audience: Graduate

3. Analyze seminal works on pedagogy and assessment, the sociology of education, and critical/post-structural theory applied to teaching, and communicate in written and oral work how their analysis applies to both current assessment practices/policies and education leadership.
Audience: Graduate

ELPA 940 – SPECIAL TOPICS SEMINAR IN EDUCATIONAL LEADERSHIP
1-3 credits.

Research on and/or discussion of selected topics in educational leadership and policy analysis.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ELPA 960 – SEMINAR IN EDUCATIONAL FINANCE
3 credits.

Problems of financing education; school financial management; and related research.
Requisites: ELPA 832
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ELPA 961 – CRITICAL ISSUES IN EDUCATIONAL POLICY
3 credits.

Orients contemporary policy issues in education by connecting education policy to rigorous research evidence, using a theoretically motivated and disciplinary-based approach to understand educational policies, processes, and outcomes. Considers current efforts to "translate" key research findings to practitioners, policymakers, and laypersons in schools and communities, where the results can help improve educational practice and results. Discusses how research evidence from a range of disciplines - including psychology, sociology, social work, and economics - has been, is being, and could be applied to educational practice and education policy.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and summarize how American education policy has (or has not) evolved over the past 50 years.
Audience: Graduate

2. Demonstrate knowledge about the significance (or lack thereof) of research evidence in developing American education policy practice by writing a paper summarizing current evidence on a policy or practice and how that evidence has or has not inspired practical changes in the schools.
Audience: Graduate

3. Demonstrate knowledge, through class participation and preparation of a final paper, of how rigorous research evidence can inform policy and practice.
Audience: Graduate

4. Articulate, through class participation and preparation of a final paper, how research evidence can be effectively "translated" to impact policy and practice.
Audience: Graduate

ELPA 990 – RESEARCH OR THESIS
1-12 credits.

Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ELPA 999 – INDEPENDENT READING
1-3 credits.

Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

EDUCATIONAL POLICY STUDIES (ED POL)

ED POL/HISTORY 107 — THE HISTORY OF THE UNIVERSITY IN THE WEST
3 credits.

Traces the development of higher education and, specifically, the institution known as the "university," in the United States and Europe since the Middle Ages. Concentrates on the intellectual, political, and social history of higher education, focusing particularly on the history of the "university" as an IDEA, an INSTITUTION, and as a community of PEOPLE, including students and faculty.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate your knowledge and explain—in essays, exams, and online and face-to-face discussions—the significance of key actors, events, themes, and ideas relating to the history of American education.
Audience: Undergraduate

2. Interpret and contextualize a range of primary historical sources.
Audience: Undergraduate

3. Identify and evaluate historical arguments in secondary scholarly works.
Audience: Undergraduate

4. Develop and support your own historical interpretations based on primary and secondary sources.
Audience: Undergraduate

5. Engage in open and respectful dialogue while reflecting upon and acknowledging your own biases.
Audience: Undergraduate

6. Connect your academic work to contemporary public debates, to consider diverse perspectives, and to develop, revise, and support your own ideas about the world.
Audience: Undergraduate

ED POL 112 — GLOBAL EDUCATION THROUGH FILM
3 credits.

Introduces global educational issues, policies, and practices through films. Considers education in context, thinking critically about the role of education in the world. Compares across issues, places, policies, and practices. Examines the diversity of global educational spaces and practices, both in and out the classroom, and the purposes of education in society, including how political socialization, economic development, social mobility, and social solidarity are often in conflict.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the diversity of education and educational practices, in and beyond formal classroom spaces, and in different parts of the world.
Audience: Undergraduate

2. Demonstrate an understanding of education as it shapes and is shaped by social, cultural, and historical contexts and relationships (indigeneity, community, race, gender, religion, geography, poverty, class, etc.).
Audience: Undergraduate

3. Compare their own educational experiences and aspirations to educational processes and practices in other spaces, places, and times.
Audience: Undergraduate

4. Employ various approaches to interpreting film.
Audience: Undergraduate

5. Demonstrate an appreciation of the complexities of the interpretative process within historical and cultural contexts.
Audience: Undergraduate

6. Apply critical approaches to the works and alternative ways of considering them.
Audience: Undergraduate

ED POL 123 – EDUCATION, TECHNOLOGY, AND SOCIETY: AI, BIG DATA, AND THE DIGITAL DIVIDE
3 credits.

Introduction to the relationship between education, technology, and society. Consider issues related to educational technology and society in both domestic and global contexts. Critically examine how different types of educational technology interact with a variety of sociopolitical factors viewed through various stakeholder perspectives.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the historical development of modern technology use in K12 and higher education
Audience: Undergraduate

2. Explain how core technologies have shaped K12 and higher educational systems
Audience: Undergraduate

3. Debate the role of specific types of technologies in the context of higher education and/or K12 education
Audience: Undergraduate

4. Analyze sociopolitical forces that govern adoption and use of emerging trends in educational technology
Audience: Undergraduate

5. Propose solutions for sociopolitical issues that arise from the use of educational technology in K12 and higher education
Audience: Undergraduate

ED POL 134 – MEDIA LITERACY AND MISINFORMATION IN EDUCATION
3 credits.

Examines claims in education stories, the various forms of bias that surround them, and how our changing media landscape impacts what stories are told, who tells them and how they impact education policy and practice.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Compare the concepts of individual, structural, and institutional bias and how these biases shape and have shaped stories in media and scholarship on the topic of education
Audience: Undergraduate

2. Analyze texts related to education for message, audience, and intention

Audience: Undergraduate

3. Compare how data and truth are presented in education stories and how information about education is deployed in media
Audience: Undergraduate

4. Relate digital citizenship and information literacy to the practice of democracy as it pertains to education
Audience: Undergraduate

5. Demonstrate improved summarizing, synthesizing, and analytical skills in academic speaking and writing across a range of writing genres
Audience: Undergraduate

ED POL 140 – INTRODUCTION TO EDUCATION
3 credits.

An introduction to fundamental educational questions, concepts, perspectives and ideas, designed to enable thoughtful examination and assessment of proposed and existing educational policies and practices.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify various perspectives on the purposes of education
Audience: Undergraduate

2. Describe how communities over time and around the world understand education
Audience: Undergraduate

3. Analyze the impact of poverty, race, gender, and socio-economic status on children globally
Audience: Undergraduate

4. Explicate the relationship between schooling and other life outcomes.
Audience: Undergraduate

ED POL/HISTORY 143 – HISTORY OF RACE AND INEQUALITY IN URBAN AMERICA
3 credits.

Examine the historical relationships between metropolitan change, economic transformation, and the construction of race and how those processes have shaped mass incarceration, educational, housing, and income inequality, and the experiences of racial/ethnic minorities who have been marginalized or discriminated against. Key questions include: What is the historical nature of inequality and opportunity in metropolitan America? What policies and ideas have historically promoted inequality, and how have those policies and ideas shifted over time? How have marginalized people responded to inequality, and what impacts have various modes of resistance had? Lastly, what is "race," how has its meaning changed over time, and how has it historically shaped inequality and opportunity?
Requisites: None
Course Designation: Gen Ed - Communication Part B
Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate their awareness of History's Impact on the Present
Audience: Undergraduate

2. Recognize and Question Assumptions
Audience: Undergraduate

3. Demonstrate their consciousness of Self and Others
Audience: Undergraduate

4. Demonstrate their capacity for Effective Participation in a Multicultural Society
Audience: Undergraduate

5. Identify and discuss the significance of key actors, events, themes, and ideas relating to the history of race and inequality in the metropolitan United States
Audience: Undergraduate

6. Identify and evaluate historical arguments in secondary scholarly works
Audience: Undergraduate

7. Interpret, analyze, and contextualize primary historical sources
Audience: Undergraduate

8. Use library resources in order to locate relevant primary and secondary source materials
Audience: Undergraduate

9. Synthesize information from primary and secondary sources in order to develop and support their own evidence-based historical interpretations
Audience: Undergraduate

ED POL 145 – INTRODUCTION TO EDUCATION POLICY
3 credits.

Introduction to K-12 education policy, policy processes, and school governance in the United States. Examines the multiple and sometimes conflicting goals that animate education debates; the discourses and representations of schools, students, and education policies that shape policy and politics; research on education and education policy; and the various lenses and conceptual tools that can help us understand education policy. Includes original policy texts, empirical and conceptual research, current events, and film. Considers how key themes may be useful (or not) for thinking about early childhood education, higher education, and K-12 education in historical and contemporary, US and and global, contexts.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Critically analyze the multiple purposes, complex governance and politics, contested discourses, and major problems and policies in education.
Audience: Undergraduate

2. Demonstrate familiarity with and ability to discern between competing perspectives on education policy.
Audience: Undergraduate

3. Apply concepts and knowledge from the course to analyzing new policies, reform proposals, and current events
Audience: Undergraduate

4. Utilize the skills developed in this class, combined with values and experiences, to develop and defend policy positions.
Audience: Undergraduate

ED POL 147 – ETHICS AND EDUCATION
3 credits.

Examines a variety of ethical questions in education, including: What justifies educating people, in the first place? What does equity in education require? Who has the proper authority to make decisions about education? Introduces analytic tools that educational ethicists use to investigate foundational and applied questions. Understand and evaluate major views on a range of such foundational and applied issues in educational ethics.
Requisites: None
Course Designation: Gen Ed - Communication Part B
Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Define the ethical and political context of formal and/or informal education in the US and/or in a global context—that is, how considerations of ethics and justice bear on educational policy and practice
Audience: Undergraduate

2. Relate educational justice to broader conceptions and theories of social justice, both in the liberal tradition and its critics, and to issues of contemporary controversy in educational theory and practice
Audience: Undergraduate

3. Describe how various kinds of educational inequalities are unjust and why
Audience: Undergraduate

4. Formulate and communicate research-based arguments on topics in ethics and education.
Audience: Undergraduate

5. Use library resources in order to locate relevant academic source materials.
Audience: Undergraduate

6. Synthesize and articulate ethical questions in education, and improve written and oral communication of such questions to public audiences
Audience: Undergraduate

ED POL 150 – EDUCATION AND PUBLIC POLICY
1-3 credits.

Examines a variety of topics related to educational policies, practices, and issues in social, cultural, historical, and political economic contexts in the U.S. and around the world.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Define the social, cultural, and/or historical context surrounding formal and/or informal education in the US and/or in a global context.
Audience: Undergraduate

2. Relate educational policy in a national and/or global context.
Audience: Undergraduate

3. Examine the causes and consequences of educational inequality related to race, class, gender, and/or other dimensions.
Audience: Undergraduate

ED POL/GEN&WS 160 – GENDER, SEXUALITY, AND EDUCATION POLICY
3 credits.

Explores how gender, sexuality, and gender identity are conceptualized, practiced, protected, and policed in K-12 schools and in out-of-school contexts in the United States and globally. Examines how gender, sexuality, and gender identity intersect with race, class, language, nationality, and religion to shape the experiences of school-age children and youth.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain how gender, sexuality, and gender identity, as separate and intersected identities, have become situated as normal, natural, and static concepts, and the role that schooling plays in those processes
Audience: Undergraduate

2. Identify and summarize how students are racialized and gendered within educational settings and by educational policies and practices, and how class, religion, language, national status, and other factors intersect with gender, sexuality, and gender identity to shape different educational outcomes and experiences for students
Audience: Undergraduate

3. Analyze the effects of an intersectional approach to understanding gender, sexuality, and gender identity within students' educational experiences, in the US and globally
Audience: Undergraduate

ED POL 180 – EDUCATION AND WHITE SUPREMACY
3 credits.

Provides an overview of the construction of racialized identity in the US and around the world. Examines the relationship between race, ethnicity, and white supremacy as social constructions and connects this to historical and current models of schooling. Explores the concept of settler colonialism and introduces its history in the US and in Wisconsin. Fosters understanding of white supremacy and of formal schooling as national systems that often work to reinforce one another, and of alternative approaches to schooling and society that can foster equity and justice.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Become familiar with the histories and current lives of people who are considered racial, ethnic, religious, linguistic, geographic, cultural, etc. minorities; and in so doing, demonstrate self-awareness and empathy towards the cultural perspectives and experiences of minoritized people.
Audience: Undergraduate

2. Understand the historical underpinnings of white supremacy, colonialism, and racism, and how these concepts shape past and present racialized knowledge claims and cultural assumptions, and shape present-day schooling in the U.S. and around the world.
Audience: Undergraduate

3. Interrogate the question of how to respond effectively to dismantling white supremacy, particularly in schools.
Audience: Undergraduate

ED POL 197 – LISTENING TO THE LAND
3 credits.

What if our best teacher is all around us, even under our feet? For Indigenous peoples, whose worldviews, languages, and lifeways emerge from, and sustain, reciprocal relations to place, land is always teaching. Reflect on "land as first teacher" by considering Indigenous approaches to learning, Indigenous languages in relation to land, and the current environmental health of land. Seeks to live the principles of Indigenous learning through Indigenous foodways and experiential, place-based learning activities. Together, develop a personal relationship to Teejop (Four Lakes, or the Madison region), and explore generational responsibilities to Teejop. What does the land teach? And how do people learn to listen?
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Create relationships with each other, instructors, and the land
Audience: Undergraduate

2. Understand how indigenous peoples value knowledge and how you, as a student, can ask for and seek knowledge
Audience: Undergraduate

3. Begin your own personal relationship - mentally, emotionally, physically, spiritually – with Teejop, and to see (and feel) the importance of this place beyond the classrooms and buildings
Audience: Undergraduate

4. Critically analyze settler colonialism in higher education, including the cultural norms that it promulgates
Audience: Undergraduate

5. Demonstrate an understanding of the history, culture, and perspectives of Native American Nations in the Upper Midwest in relation to place and education; and the particular historical and present-day impacts of settler colonialism on US-tribal relations and the racialization of indigenous people
Audience: Undergraduate

6. Research, analyze, discuss, reflect, and present on the history and use of a particular plant or animal. In doing so, demonstrate self-awareness and empathy towards human and non-human people
Audience: Undergraduate

7. Reflect on and synthesize hands on learning activities and share with others
Audience: Undergraduate

8. Explain the social, economic, and/or environmental dimensions of the sustainability challenges of settler colonialism
Audience: Undergraduate

9. Explain the social, economic, and environmental dimensions of the sustainability challenges of settler colonialism and its undermining of tribal communities' sovereignty
Audience: Undergraduate

10. Use sustainability principles for developing personal goals and professional values.

ED POL 200 – RACE, ETHNICITY, AND INEQUALITY IN AMERICAN EDUCATION
3 credits.

Explores the complex relationships among race, ethnicity and inequality in U.S. public education through theoretical, historical, social, and cultural frameworks and perspectives. Specifically, examine how schools serve are sites where racial/ethnic inequality is produced, reproduced, and resisted through institutional structures and the "everyday" practices of teachers, students, parents, and community members. Examine how race and ethnicity intersect with other identities (e.g. gender, social class, sexual orientation, etc.). It is centrally focused on K-12 education and working in multicultural contexts.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate an understanding of the relationship between race, ethnicity, and inequality in U.S. public education
Audience: Undergraduate

2. Critically analyze and contextualize U.S. public educational policies through theoretical, historical, social, and cultural frameworks and perspectives
Audience: Undergraduate

3. Analyze education policies using diverse perspectives related to race, ethnicity, gender, social class, and/or other social differences
Audience: Undergraduate

ED POL 202 – CAREERS IN EDUCATION
3 credits.

Explores the meaning, value, and potential of an education/social sciences major for a variety of education-related careers in the contemporary workplace. Includes a review of theories of the relationships among education, work, skills and society, analyses of contextual forces shaping education and the labor market (the Covid-19 pandemic, inequality and racism, and climate change), individual and collaborative assignments focused on developing key competencies (e.g., oral and written communication, critical thinking), and hands-on activities to provide practical tools for succeeding in college and the 21st century workplace (e.g., writing a cover letter, conducting literature reviews).
Requisites: Satisfied Communications A requirement
Course Designation: Gen Ed - Communication Part B
Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand basic concepts of career development theory and apply them to your own academic and career goals;
Audience: Undergraduate

2. Understand, evaluate, and communicate social science concepts about the nature of work in contemporary society, with respect to the role of educational credentials, skills and salient contextual forces; and,
Audience: Undergraduate

3. Synthesize information about three key contextual forces impacting society;
Audience: Undergraduate

4. Learn about the specific jobs and occupations that are available for someone with an education and/or social sciences degree;
Audience: Undergraduate

5. Investigate and learn about a specific "career community" or occupational sector, an organization within that sector, and what it would take to be competitive for a job in that organization;
Audience: Undergraduate

6. Develop and communicate a compelling personal career narrative about the student's path through an undergraduate education and beyond, with respect to a specific target career community
Audience: Undergraduate

7. Understand key steps in the job-search process, and begin establishing a professional online presence and professional contacts.
Audience: Undergraduate

8. Develop and sharpen oral and written communication skills via presentations, discussion (in-person and online), and report and paper writing.
Audience: Undergraduate

9. Develop and sharpen skills in conducting technical academic research and writing that includes collecting and summarizing information, preparing outlines, and writing and revising manuscripts.
Audience: Undergraduate

ED POL 203 – INTERNSHIP IN EDUCATION, ARTS, OR HEALTH
1-3 credits.

Provides the opportunity to reflect and critically analyze workplace experience in the field of education, arts, and/or health and enhance career opportunities through the exposure to the nexus of career development theory and practice.
Requisites: None
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: Yes, for 3 number of completions
Last Taught: Summer 2025
Learning Outcomes: 1. Improve skills relevant to exploring, preparing for, and experiencing opportunities in the fields of education, art, or health including develop resume, conduct an informational interview, communicate unique skills and qualities to an employer.
Audience: Undergraduate

2. Learn about and reflect on workplace expectations, norms, and skills
Audience: Undergraduate

3. Understand the work and future progression of a particular career pathway
Audience: Undergraduate

4. Through facilitated reflection, develop a career action plan to apply what is learned in the internship to future career goals
Audience: Undergraduate

ED POL 205 – LANGUAGE AND SOCIAL INEQUALITY
3 credits.

Examine cultural and language politics, policies, and practices in education. Read in the fields of anthropology, sociolinguistics, and language policy to consider how language policies, politics, and practices either reinforce or reduce educational and social inequality.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Consider how language policies, practices, and pedagogies contribute to or interrupt inequality in their own lives, on campus, and in local communities.
Audience: Undergraduate

2. Analyze how linguistic inequality is often reinforced but can be addressed more equitably through education.
Audience: Undergraduate

3. Compare language policies and their impact on equity efforts across a range of locations.
Audience: Undergraduate

4. Learn about key concepts in the study of language, culture, and social inequality.
Audience: Undergraduate

5. Analyze how language constructs inequalities in texts, media and everyday interactions.
Audience: Undergraduate

6. Develop academic speaking and writing skills
Audience: Undergraduate

ED POL 209 – INTRODUCTION TO QUANTITATIVE METHODS IN EDUCATION POLICY
3 credits.

Introduction to how quantitative inference is used in education policy. Focuses on the use of quantitative reasoning as a tool to analyze and interpret data. Activities support understanding the basics of generating and interpreting data in both visual and numerical form. Includes a practical component that provides opportunities to practice interpreting and writing about data.
Requisites: Satisfied Quantitative Reasoning (QR) A requirement
Course Designation: Gen Ed - Quantitative Reasoning Part B
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply quantitative reasoning to educational topics
Audience: Undergraduate

2. Explain how inferences are made using quantitative data in educational contexts
Audience: Undergraduate

3. Interpret data in popular press and research articles
Audience: Undergraduate

4. Produce and interpret education policy questions using data
Audience: Undergraduate

ED POL 210 – YOUTH, EDUCATION, AND SOCIETY
3 credits.

Explores the study of youth through theoretical, historical, social, and cultural perspectives with a focus on Minoritized Youth; interrogates the concept of "youth" as a socially constructed category; examines how "youth" have been positioned within educational, political, economic, and social contexts; analyzes how youth's racialized experiences intersect with other social identities: social class, gender, and sexuality. Themes explored: conceptions of youth as a social category, education and schooling, race, gender, sexuality, politics and activism, community-based learning, criminal justice, media, and popular culture. Uses historical and contemporary "texts" and current events to study the lived experiences of young people within diverse racial, cultural, gendered, sexualized and classed contexts. Reflect on own experiences as "youth," their relationship to education and other social institutions, and how it informs understanding of society, educational theory and practice.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify how the category of “youth” is conceptualized over space and time
Audience: Undergraduate

2. Analyze issues, ideas and concepts central to understanding the social and political factors that shape youth’s experience and educational outcomes in the US – and how these experiences vary across race, ethnicity, class, gender, sexuality and context.
Audience: Undergraduate

3. Apply critical thinking skills to myriad significant racial and socio-cultural issues in and around educational communities for youth of color in marginalized contexts
Audience: Undergraduate

4. Deconstruct the framing of youth within education, research, media, and popular discourses
Audience: Undergraduate

5. Contextualize personal beliefs and understanding of social forces (i.e. race, class, gender, sexuality, power, etc.) and how these beliefs shape their own social identities
Audience: Undergraduate

6. Develop an awareness of the worldviews of others and the varied realities of youths’ educational and social experiences
Audience: Undergraduate

7. Engage in/and think critically about political and social events that impact the lives of young people as it relates to the current moment (social movements, youth uprisings, campus conflict/climate, etc.)
Audience: Undergraduate

ED POL 212 – EDUCATION FOR SOCIAL JUSTICE
3 credits.

Learn theories and practices of educating for social justice, a pedagogical-political approach based on participatory methodologies that is committed to positive social change. Discuss popular education, peace and human rights education, critical pedagogy, and related approaches. Engage in theoretical debates, focusing on the ideas of transformative educators such as Paulo Freire and bell hooks, and learn about radical educator collectives and transformative education efforts in districts, schools, classrooms, community associations, and NGOs from around the world.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define and consider social justice fully
Audience: Undergraduate

2. Explore politically engaged education efforts
Audience: Undergraduate

3. Examine contemporary theories that orient praxis in popular education, social justice education, and participatory action research
Audience: Undergraduate

4. Make links between theory and practice, including through reflection on their own experiences
Audience: Undergraduate

5. Improve critical reading, research, oral presentation, and academic literacy skills
Audience: Undergraduate

ED POL 215 – DISABILITY AND EDUCATION POLICY
3 credits.

Examines how policies shape the educational experiences of students with disabilities in education and the broader educational landscape.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Describe how constructions of dis/ability inform the content and enactment of education policy
Audience: Undergraduate

2. Identify the sociopolitical forces and actors grounding present iterations of disability-focused education policy
Audience: Undergraduate

3. Explain how education policies intersect to shape the schooling experiences of students with disabilities
Audience: Undergraduate

ED POL/INTL ST 220 – HUMAN RIGHTS AND EDUCATION
3 credits.

Explores questions related to human rights and education, from the individual to the global level; from the abstract to the practical: What does it mean to be human? How do we learn to be human? What rights mark a human being? Do all human have rights? If they have a right to education, do they have a right to a particular kind of education? Can one global education and human rights model best meet the needs of our incredibly diverse global population? Can the global human rights framework improve current educational, national, social, and economic inequities? How so? How does education as a human right relate to human rights education? and who should decide the answers to these questions, and how? Investigates the tensions and boundaries of the human rights framework to reduce social inequality through methodological inquires in educational case studies, including: educational inequality; victims of the war on drugs; working children's rights; and climate change.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop awareness of the diversity of historical, political-economic, social and cultural meanings of 'human,' including the ethical imperatives and the exclusionary practices underlying them.
Audience: Undergraduate

2. Be familiar with global Human Rights frameworks and institutions, and develop a critical appreciation of their potential as well as limitations in particular sociocultural contexts.
Audience: Undergraduate

3. Develop a critical understanding of educational experiences in terms of Human Rights.
Audience: Undergraduate

4. Read and produce academic texts; more specifically: summaries, personal narratives, expository texts, and persuasive papers.
Audience: Undergraduate

ED POL 222 – INDIGENOUS EDUCATION POLICY AND PRACTICE
3 credits.

Examines concepts of sovereignty and educational policy formation for First Nations Peoples in the U.S. and key educational policies, practices, and contexts that have shaped American Indian education. Explores the 11 federally recognized tribes of Wisconsin, their sovereignty, and educational issues facing them and other tribal nations. Examines Wisconsin's Act 31, the contexts leading up to its creation, and its implementation. Considers the educational policy implications of state curriculum policy and common instructional materials for First Nations Peoples, land-grant universities, and broader society.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Describe Wisconsin's educational policy, "Act 31," as codified in statute and rule, and its creation and enactment in K-12 schools.
Audience: Undergraduate

2. Analyze complex historical, legal, and policy issues pertaining to the formation of educational policy for First Nations Peoples in the U.S, including the roles that treaties play in the formation of educational policy.
Audience: Undergraduate

3. Describe the history of Wisconsin state interference with the exercise of usufructuary rights and the Ojibwe Peoples' efforts to have them restored.

Audience: Undergraduate

4. Examine the role that curriculum policy has played in shaping public understanding of Native Peoples and contemporary issues.
Audience: Undergraduate

5. Describe how stereotypes create educational inequalities in K-12 and higher education settings and their implications for First Nations Peoples and broader society.
Audience: Undergraduate

6. Evaluate instructional materials regarding Native Peoples in K-12 settings, both historical and current.
Audience: Undergraduate

ED POL 237 – WEALTH, POVERTY AND INEQUALITY: TRANSNATIONAL PERSPECTIVES ON POLICY AND PRACTICE IN EDUCATION
3 credits.

Examines poverty, inequality, and education from a theoretical, historical, and practical perspective through an introduction to historical and contemporary debates on wealth, poverty, and inequality. Interrogates these debates in relation to policies, practice, and institutions of education.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ED POL 240 – COMPARATIVE EDUCATION
3 credits.

Examines the socio-cultural, political and economic forces that shape education around the world, including in the U.S. Explores a series of essential questions about the means and ends of education, including: the purposes of schooling in different locations; the role of schooling in producing inequality or supporting social change, particularly in relation to class, race, gender, migration, language, and abilities; global educational reform; global educational assessments; curriculum and pedagogy; and teacher education.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the various norms, perspectives, traditions, structures, and purposes of education around the world.
Audience: Undergraduate

2. Examine the impact of socio-economic status, race, gender, migration status, language, and ability on students in various regions of the world
Audience: Undergraduate

3. Evaluate global educational reforms
Audience: Undergraduate

4. Analyze a variety of arguments and policies to improve educational quality and access
Audience: Undergraduate

ED POL 245 – EDUCATION IN EAST ASIA
3 credits.

An overview and discussion on the values, histories, systems, policies, problems, and reforms of education in East Asian societies. Examines extended issues in comparative education, including education and its relation to economic development, social inequality and stratification, gender and family, ethnicity and migration, identity formation, and student movements.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge of the history of education and current education systems in East Asian societies.
Audience: Undergraduate

2. Define and compare the social, cultural, and historical context surrounding formal and informal education in East Asian societies.
Audience: Undergraduate

3. Critically examine the causes and consequences of educational inequality and stratification related to race, class, gender, and other dimensions in East Asian societies.
Audience: Undergraduate

4. Relate education systems, policies, problems, and reforms in East Asian societies in a national and global context.
Audience: Undergraduate

5. Develop skills in critical reading, the use of appropriate style and disciplinary convention and the productive use of core library resources.
Audience: Undergraduate

ED POL/CURRIC/LEGAL ST 250 – INCARCERATION AND EDUCATION
3 credits.

Investigates how the systems of incarceration and education operate alongside, within, around and through one another. Provides a historical examination of how education and incarceration have interacted. Examines how prisons operate as 'teaching institutions,' what it teaches all of us impacted by it, and what interventions have been designed to facilitate particular kinds of learning. Presents firsthand accounts of those who work and live in the carceral system currently.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze the relationship between schooling and incarceration including issues related to discipline, gender, and disability
Audience: Undergraduate

2. Articulate and evaluate your understanding of experiences of incarceration including the sources, assumptions, and implications behind your understanding
Audience: Undergraduate

3. Synthesize the lived experiences of diverse individuals impacted by incarceration to understand the range of forms learning takes place inside carceral facilities;
Audience: Undergraduate

4. Evaluate different policies and practices that operate at the intersections of education and incarceration.
Audience: Undergraduate

ED POL 260 – INTRODUCTION TO INTERNATIONAL EDUCATION DEVELOPMENT
3 credits.

Examines theories, institutions, and issues in international educational development.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain the economic, social, cultural, and political dimensions of educational development.
Audience: Undergraduate

2. Critically compare and contrast theoretical approaches that have shaped international educational development.
Audience: Undergraduate

3. Describe current issues in international educational development
Audience: Undergraduate

4. Identify and compare the assumptions, benefits, and limitations of different educational policy and planning approaches.
Audience: Undergraduate

5. Discuss and critique prevailing assumptions about education and development.
Audience: Undergraduate

6. Demonstrate critical thinking skills as well as academic speaking and writing skills.
Audience: Undergraduate

ED POL 274 – EDUCATION STUDIES--STUDY ABROAD/GLOBAL EDUCATION
1-3 credits.

Topics vary reflecting the specializations, expertise, and curricula of study-abroad programs.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Gain a deeper knowledge and understanding of other cultures and their environments.
Audience: Undergraduate

2. Develop greater cultural self-awareness and intercultural competence.
Audience: Undergraduate

3. Develop different economic, political, social, and educational perspectives on global issues.
Audience: Undergraduate

4. Increase their capacity to analyze issues with appreciation for disparate viewpoints
Audience: Undergraduate

5. Develop career readiness and gain leadership skills that are relevant for a global world.
Audience: Undergraduate

6. Communicate appropriately and effectively with diverse individuals and groups.
Audience: Undergraduate

7. Examine their own actions in terms of personal responsibility and ethical, social and environmental consequences.
Audience: Undergraduate

8. Develop a better understanding of the diversity of the host society and better understand the diversity in their own society.
Audience: Undergraduate

ED POL 300 – SCHOOL AND SOCIETY
3 credits.

Focuses on the interplay between schools and society by examining societal and cultural influences on school processes, policies, practices, and pedagogy; or, how society shapes schooling, and conversely, the ways in which schools assist in shaping society. Reflect on the purposes of schools and how these purposes have shifted over time. Examines how assumptions regarding the purposes of schooling interact with debates over how we teach, what we teach, and how we evaluate schools, teachers, and students. Identify the foundations of education in the United States and critically examine the ways in which educational practices and policies impact the lives of students.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate an understanding of the social, cultural, and/or historical contexts of education policy.
Audience: Undergraduate

2. Analyze education policy from multiple theoretical perspectives (e.g., historical, ethical/philosophical, economic/political, etc.).
Audience: Undergraduate

3. Demonstrate analysis on education policy issues from diverse perspectives related to race, class, and/or gender, and other forms of social difference.
Audience: Undergraduate

4. Recognize and apply principles of socially responsible and ethical research.
Audience: Undergraduate

ED POL 305 – DEMOCRACY AND EDUCATION
3 credits.

Explores both the form(s) of education in democracies and the controversies that shape education in the contemporary U.S. context. Examines the history of elements of mass schooling in the U.S., analyzes the competing values at play in contemporary issues, and explores some of the human stories behind some of the most enduring problems in U.S. education. Discusses the necessity of education for democratic life, the challenges inherent in mass schooling in the U.S., and the varying positions that animate contemporary educational debates. Evaluates a variety of educational issues on the basis of democratic criteria such as equality, liberty, and justice.
Requisites: None
Course Designation: Gen Ed - Communication Part B
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the unique relationship between democratic government and education
Audience: Undergraduate

2. Describe the values and perspectives inherent in opposing positions in controversies about education in America
Audience: Undergraduate

3. Utilize evidence to evaluate opposing positions using common democratic values as criteria
Audience: Undergraduate

4. Synthesize and articulate personal views, and improve written and oral communication of such views to public audiences
Audience: Undergraduate

ED POL 308 – INTRODUCTION TO QUALITATIVE RESEARCH METHODS IN EDUCATION
3 credits.

Examines qualitative research methods for educational research - specifically, the role of theory, how to develop a research question, how to design a study, interviewing, conducting observations, doing initial data analysis, and presenting an original qualitative research project. Complete a series of "stepping stone" assignments (practica) and peer feedback activities designed to scaffold the research experience in an organized, supportive, informed, and meaningful way.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand how ontology and epistemology shape research design and methods
Audience: Undergraduate

2. Develop research questions appropriate to qualitative research
Audience: Undergraduate

3. Develop a conceptual framework
Audience: Undergraduate

4. Design and initiate a qualitative research project
Audience: Undergraduate

5. Practice research, including observations and interviews
Audience: Undergraduate

6. Give informed feedback on qualitative research projects
Audience: Undergraduate

7. Analyze qualitative data
Audience: Undergraduate

8. Exercise their academic skills in oral presentations and writing
Audience: Undergraduate

ED POL 309 – APPLIED QUANTITATIVE EDUCATION RESEARCH
3 credits.

Introduces how quantitative research methods are applied in empirical education research. Focused on data exploration, manipulation, visualization, and simple analyses with secondary datasets and R or other programming language.
Requisites: ED POL 209
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply basic quantitative research methods to education research
Audience: Undergraduate

2. Employ statistical software to import, manage, transform, visualize and analyze education data and research.
Audience: Undergraduate

3. Develop skills necessary to interpret secondary datasets in education research using appropriate quantitative methods.
Audience: Undergraduate

ED POL/CHICLA 310 – LATINE STUDENTS IN THE U.S. HIGHER EDUCATION SYSTEM
3 credits.

Develop a deeper understanding of U.S. higher education by examining connections between historical and present-day circumstances for a group of students often called the key to the sector's future. Latine students are the fastest growing population in postsecondary education today. Why did this growth happen? How has it impacted colleges and universities? How are Latine college students dealing with varying levels of institutional support? And what strengths do they bring to their education and future careers? By studying research from sociologists, historians, and education scholars, develop informed critiques of higher education and reimagine a better system for all.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Identify the major players in the U.S. higher education system, along with their relationships to one another.
Audience: Undergraduate

2. Summarize the development of this system - especially its early treatment of People of Color - and identify the historical roots of modern educational trends.
Audience: Undergraduate

3. Describe the strengths Latine students bring to their own educational trajectories and list their contributions to American colleges and universities.
Audience: Undergraduate

4. Apply social science theories and methods to understanding inequality in college enrollment, experiences, and outcomes for underrepresented minority students, especially Latines.
Audience: Undergraduate

5. Evaluate new ideas for improving the productivity, diversity, stability, and/or innovativeness of the higher education system.
Audience: Undergraduate

6. Assess and synthesize existing education research to formulate new arguments about the U.S. higher education system.
Audience: Undergraduate

7. Participate in informed and respectful conversations about higher education with a variety of people - taking into consideration the cultural perspectives and worldview of others.
Audience: Undergraduate

ED POL 320 – CLIMATE CHANGE, SUSTAINABILITY, AND EDUCATION
3 credits.

Provides an overview of diverse theories and models of human-earth relations, and the causes and consequences of climate and environmental crisis. Centering a global ecological justice lens, develops a critical approach to examining how different people around the world learn about and experience the climate crisis. Provides a range of tools to use in responding to the climate crisis, including learning about and engaging with Teejop and Traditional Ecological Knowledge frameworks, exploring how increased diversity can sustain human survival, and examining the concept of sustainability.
Requisites: Sophomore standing
Course Designation: Breadth - Either Social Science or Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop an understanding of various conceptualizations of human-earth relations, and the consequences of these understandings on human actions and educational responses
Audience: Undergraduate

2. Utilize existing scientific evidence to recognize the shape and scope of anthropogenic climate change and its extensive impacts on human and planetary health.
Audience: Undergraduate

3. Examine educational and knowledge-generation approaches that appear to hold promise for a more sustaining global future.
Audience: Undergraduate

4. Explain the social, economic, and/or environmental dimensions of the sustainability challenges of addressing climate change and justice through education.
Audience: Undergraduate

5. Apply sustainability principles and/or frameworks to addressing the challenges of educating for sustainable development.
Audience: Undergraduate

6. Describe the social, economic, and environmental dimensions of climate change and environmental justice and identify potential trade-offs and interrelationships among these dimensions at a level appropriate to the course.
Audience: Undergraduate

ED POL/INTL ST 335 – GLOBALIZATION AND EDUCATION
3 credits.

Discuss the ways education is inextricably linked to global political, economic, and social contexts. Reflect on both scholarly research and popular conceptions of market, society and schools in different geographic and cultural contexts. Approach globalization from a context-sensitive, place-based approach, rather than abstract, predictive method through interdisciplinary analysis. Explore the concept of globalization across disciplinary frameworks including anthropology, geography, and history. Provides critical analysis to understand the challenges facing education in a globalization era, to build stronger commitment to helping address those challenges, and a set of skills for researching and writing about them. Examine the following "problem-spaces": globalization and migration; globalization and race; global testing and assessment; marketization of education; global city development and higher education; youth culture and globalization.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. demonstrate an understanding of the social, cultural, and/or historical contexts of education policy
Audience: Undergraduate

2. examine education policy from multiple theoretical perspectives (e.g., historical, ethical/philosophical, economic/political, etc.)
Audience: Undergraduate

3. analyze education policy issues from diverse perspectives related to race, class, and/or gender, and other forms of social difference
Audience: Undergraduate

4. Recognize and apply principles of socially responsible and ethical research
Audience: Undergraduate

ED POL/CHICLA/LACIS 342 – EDUCATION ACROSS THE AMERICAS: EMPIRE, CAPITALISM, AND RESISTANCE
3 credits.

Examines educational inequality across the Americas through the lens of imperialism, different forms of colonialism, and capitalism. By exploring the logics and actions of different education stakeholders, critically examine how educational policy across the hemisphere has a shared history of oppression and contestation.
Requisites: Sophomore standing
Course Designation: Gen Ed - Communication Part B
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Draw from different sources to evaluate the transnational contexts of education policy and pose relevant questions about hemispheric educational issues
Audience: Undergraduate

2. Use clear understandings of terms such as imperialism, colonialism, capitalism, racism, and transnationalism to explain unequal educational processes
Audience: Undergraduate

3. Formulate and communicate research-based arguments on topics in education policy using academic literature, including primary and secondary sources
Audience: Undergraduate

4. Produce expository and argumentative texts and draw from this work to produce a podcast
Audience: Undergraduate

ED POL 345 – ECONOMICS OF EDUCATION
3 credits.

Engages with contemporary issues in the economics of education across the K-12 and postsecondary policy arenas in the US and beyond. With foundations in human capital and the education production function, covers a wide variety of topics, including teacher labor markets and teacher quality, school choice, K-12 and higher education finance, and the individual and collective returns to education. Discuss, present, and critique education policy issues through the lens of economics and apply course content to current issues in education policy, including creation and dissemination of recommendations for education policy and practice.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Demonstrate a strong degree of economic literacy and articulate economic perspectives
Audience: Undergraduate

2. Discuss the production, costs, and financing of K-12 and higher education systems
Audience: Undergraduate

3. Describe economic aspects of teachers, teacher quality, and teacher labor markets;
Audience: Undergraduate

4. Differentiate broad K-12 and higher education markets, choices, and incentives through an economic lens
Audience: Undergraduate

5. Review, synthesize, and critique economic literature on a variety of education policy issues
Audience: Undergraduate

6. Practice critical reading, logical thinking, and use of evidence within the economics discipline
Audience: Undergraduate

7. Demonstrate skilled written and verbal communication on multiple points of view across topics
Audience: Undergraduate

8. Generate and communicate recommendations for policy and practice by synthesizing theory and contexts
Audience: Undergraduate

ED POL 350 – TOPICS IN EDUCATION STUDIES
3 credits.

Examines contemporary topics and debates in education studies; develops research, analytical, and other skills to work in education careers.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Formulate research-based arguments on topics in education using academic literature, including both primary and secondary sources
Audience: Undergraduate

2. Demonstrate an understanding of the social, cultural, and historical contexts of education policy and practice
Audience: Undergraduate

3. Examine education policy from multiple theoretical perspectives
Audience: Undergraduate

4. Examine different historical and social-science methods to answer major questions in education research, both contemporary and enduring
Audience: Undergraduate

5. Analyze education policy issues from diverse perspectives related to race, class, and gender, and other forms of social difference
Audience: Undergraduate

ED POL 355 – THE POLITICS OF EDUCATION INJUSTICE IN THE US
3 credits.

Public education in the United States is an inherently political site that offers an important institution to understand politics, power, and injustice broadly. Explore these themes from multiple angles: (a) the layered histories of injustice at the intersection of race, class, gender, and more in historical and present cases; (b) the power of ideas in shaping policy possibilities; (c) shifting levels of governance and questions of injustice; and (c) perspectives of key actors, interests, and stakeholders. Consider the politics of education in relation to broader social, spatial, historical, and political economic contexts. Develop critical analytic and conceptual tools to deeply understand and analyze how power and politics are impacting contemporary educational policy events. By drawing from grassroots and subjugated perspectives, cultivate a policy imagination towards more just educational possibilities, and explore the necessary policy infrastructure and movements to sustain them.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain the historical development of the U.S. public education system in relationship to injustice at the intersection of race, class, gender, and other axes of inequality
Audience: Undergraduate

2. Critically analyze contemporary educational policy and politics through a justice lens based on foundational knowledge of the history of public education and theories of power and politics
Audience: Undergraduate

3. Evaluate how power and authority is distributed across various political institutions responsible for education policy decision-making, and how various actors work to create change in ways that expand and contract justice
Audience: Undergraduate

4. Develop analytic tools to identify how power and politics are impacting contemporary educational policy events that reflect critical engagement with the worldviews and experiences of others
Audience: Undergraduate

5. Reflect on personal experiences (as situated in broader contexts) and question knowledge claims related to injustice at the intersection of race, class, gender, and other axes of inequality
Audience: Undergraduate

6. Cultivate critical reasoning capacity to apply course concepts related to power, politics, and injustice to their lives outside the classroom and mobilize this capacity to respectfully participate in a multicultural society
Audience: Undergraduate

ED POL 399 – INDEPENDENT READING
1-3 credits.

Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ED POL/HISTORY 412 – HISTORY OF AMERICAN EDUCATION
3 credits.

Examines the history of education in America from the colonization of North America to the present to consider education in its broadest sense - as a process of individual development and cultural transmission. Explores such topics as the rise of common schools in the urban North; the education of Native Americans, immigrants, slaves, and free blacks; the evolution of teacher training (primarily for women); various philosophies of "progressive" school reform; the politics of desegregation, bilingual education, and special education; the articulation between high school and college work; and the evolving federal role in American education.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. demonstrate their knowledge and explain the significance of key actors, events, themes, and ideas relating to the history of American education
Audience: Both Grad & Undergrad

2. interpret and contextualize primary historical sources
Audience: Both Grad & Undergrad

3. identify and evaluate historical arguments in secondary scholarly works
Audience: Both Grad & Undergrad

4. locate, synthesize, and evaluate information from primary and/or secondary sources in order to develop and support their own evidence-based historical interpretations
Audience: Undergraduate

5. locate, synthesize, and evaluate relevant primary historical sources in order to construct evidence-based historical interpretations.
Audience: Graduate

ED POL 423 – EDUCATION FOR GLOBAL CHANGE
3 credits.

How do people conceptualize and utilize education to (attempt to) create individual, familial, community, institutional, national, and global change? Push collective understanding about the diverse ways that people have conceptualized change, its goals, and the mechanisms through which to produce change around the world. Explore a diverse range of educational approaches (including formal, informal, non-formal, and "traditional" educational models) to transforming the world. Draw on a range of disciplinary and sectoral approaches, including education, public health, and public policy; and a broad range of change models, including individual and peer behavior change, social marketing, social movements, chaos theory, and liberation theory.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Examine the diverse ways that people have conceptualized change and the educational mechanisms that drive it across disciplines, research methodologies, and epistemologies.
Audience: Undergraduate

2. Analyze how theories of change conceptualize human growth and development, national and international development, and global sustainability; and integrate new information about international development, education, and their own positionality into their existing frame of knowledge.
Audience: Both Grad & Undergrad

3. Describe and analyze how different theories of change could be applied to key international development problems that require global educational solutions (e.g., HIV/AIDS and climate change); produce a final project that proposes a new international development education project to at least one group of stakeholders in international development arenas.
Audience: Both Grad & Undergrad

4. Determine for themselves what theories of change most appeal to them and why; recognize the voice, resource, and power dynamics in each change approach; and decide how they might move their understanding of a theory of change into practicable action, in part through reflection on their sources, and in part through reflection on their own positionality.
Audience: Both Grad & Undergrad

5. Synthesize and analyze information arising from multiple disciplinary, methodological, and epistemological literatures on theories of change, and situate international development education within these traditions.
Audience: Graduate

6. Explain the social, economic, and/or environmental dimensions of the sustainability challenges of international development paradigms, and the sustainability challenges posed by current international development efforts.
Audience: Both Grad & Undergrad

7. Analyze the causes of and solutions for the sustainability challenges of international development and international education.
Audience: Both Grad & Undergrad

8. Describe the social, economic, political, and environmental dimensions of international development education efforts and identify potential trade-offs and interrelationships among these dimensions at a level appropriate to the course.

ED POL 435 – EDUCATION IN EMERGENCIES
3 credits.

The United Nations High Commissioner for Refugees (UNHCR) estimates that more than 82.4 million individuals have been forcibly displaced from their homes. More than a third of them are refugees, and more than 13 million are under the age of 18. In contrast to the portrayals of children wandering among the iconic UNHCR white tents in refugee camps, new images of refugee boys and girls attending public schools raise questions about the role of humanitarianism and education across the world. What are the causes of forced migration? Who counts as a refugee today? What do camp refugees and urban refugees have in common? How do we guarantee access to school for these populations? What would a high-quality curriculum look like for these students?
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and interrupt assumptions (including stereotypes and prejudices) about migrants, particularly refugees.
Audience: Both Grad & Undergrad

2. Critically examine the links between the modern state, borders, security, and forced migration.
Audience: Undergraduate

3. Differentiate the foundations and evolution of the field of education in emergencies in relation to refugee issues and adopt a critical stance on refugee education.
Audience: Both Grad & Undergrad

4. Analyze how educators in formal and nonformal settings can offer rich learning experiences to children and youth with refugee status.
Audience: Undergraduate

5. Exercise your academic skills in oral presentations and writing.
Audience: Undergraduate

6. Develop the conceptual tools to trace and follow conversations about the modern state, borders, security, and forced migration.
Audience: Graduate

7. Critically assess academic literature in the fields of refugee studies and education in emergencies.
Audience: Graduate

8. Draw from key concepts to analyze how educators in formal and nonformal settings shape the learning experiences of children and youth with refugee status.
Audience: Graduate

9. Write an argument-driven paper and exercise your academic skills in oral presentations.
Audience: Graduate

ED POL 450 – RETHINKING "AFTER-SCHOOL" EDUCATION
3 credits.

Provides an opportunity to engage with and discuss historical, ideological, and contemporary issues within community-based after school programs at large and within the Madison context. Examine the social and political context of after school programs to better understand the ways in which they have the potential to meet important needs.
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate an understanding of the history of and the political and social influences on afterschool programs
Audience: Undergraduate

2. Identify types of community-based after school programs and key issues within them
Audience: Undergraduate

3. Identify the roles, challenges, and experiences of leaders, afterschool educators, youth workers, and diverse youth participants in community-based afterschool programs
Audience: Undergraduate

4. Analyze how afterschool programs relate to broader social forces and education discourses
Audience: Undergraduate

ED POL 460 – IMMIGRATION, EDUCATION, AND EQUITY
3 credits.

Examines policy issues surrounding the education of children from immigrant families in K-16 educational settings in the U.S. Explores the economic, social, political, and ideological contexts of immigration and education, as well as school factors and home-school relations through readings, discussions, and assignments. Considers the impact of various policy and pedagogical approaches. Course readings draw from relevant literature in educational anthropology, sociology of education, educational policy, sociolinguistics, and language pedagogy.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze the economic, political, and social contexts of immigration in the US.
Audience: Undergraduate

2. Describe the scope, breadth and diversity of immigrant flows to the US and how they have changed over time in relation to immigration policy.
Audience: Undergraduate

3. Examine questions about educational quality and access, language and culture, immigration, educational policy, community and family engagement, and other topics pertinent to the education of immigrants in the US.
Audience: Undergraduate

4. Analyze the critical academic, linguistic, and social supports schools must provide to immigrant students, including an assets-based approach.
Audience: Undergraduate

ED POL/HISTORY 478 – COMPARATIVE HISTORY OF CHILDHOOD AND ADOLESCENCE
3 credits.

Examines the growth of modern childhood and adolescent sub-cultures, class differences, literary and pictorial representations, legal and demographic developments, and the growth of educational theories and institutions.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021
Learning Outcomes: 1. Demonstrate their knowledge and explain the significance of key actors, events, themes, and ideas related to the history of childhood and adolescence
Audience: Both Grad & Undergrad

2. Interpret and contextualize primary historical sources
Audience: Both Grad & Undergrad

3. Identify and evaluate information from primary and/or secondary sources in order to develop and locate, synthesize, and evaluate information from primary and/or secondary sources in order to develop and support their own evidence-based historical interpretations
Audience: Undergraduate

4. Locate, synthesize, and evaluate primary historical sources in order to construct evidence-based historical interpretations
Audience: Graduate

ED POL 500 – TOPICS ON SOCIAL ISSUES AND EDUCATION
3 credits.

Explore contemporary social issues or problems and their significance for educational purposes and practices. Designed for various special topics on social issues and education.
Requisites: Junior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify contemporary social issues or problems and their significance for educational purposes and practices.
Audience: Both Grad & Undergrad

2. Critically analyze educational policies and social issues using various qualitative theories and methodologies.
Audience: Graduate

3. Demonstrate knowledge and reflective responses about specific social issues or problems discussed in the course.
Audience: Both Grad & Undergrad

ED POL 505 – ISSUES IN URBAN EDUCATION IN THE U.S.
3 credits.

Explore urban education in the United States and its relationship to broader political, social, and economic contexts; focuses on contemporary urban educational issues and students' experiences in school and community settings, the experiences of students and families of color and the relationship between race, class, gender, and inequality in urban education.
Requisites: Junior standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Articulate the relationship between urban education and broader political, social, and economic contexts
Audience: Both Grad & Undergrad

2. Critically analyze the role that urban educational policy, school structures, and school actors play in causing, ameliorating, or exacerbating educational inequities that impact the lives and learning of students and families of color and students and families living in poverty
Audience: Both Grad & Undergrad

3. Critically analyze the role that out-of-school factors (e.g. home, community, and broader economic and political contexts and conditions) play in causing, ameliorating, or exacerbating educational inequities
Audience: Both Grad & Undergrad

4. Read and evaluate scholarly research on urban education and connect it to community-based learning experiences
Audience: Both Grad & Undergrad

5. Critically reflect on their educational experiences in relation to the course themes
Audience: Both Grad & Undergrad

6. Effectively communicate what they learned about urban educational issues both orally and in writing, to both academic and non-academic audiences
Audience: Both Grad & Undergrad

7. Develop their research and communication skills via a final research paper and class presentation
Audience: Graduate

ED POL 510 – URBAN SCHOOL POLICY
3 credits.

Examines the following questions focusing on: goals and values for urban schools, framings of "the problem" of K-12 urban schooling in the United States, evidence of the complexities and research evidence on contemporary policies for improving urban schools, and theories of urban school politics, policy, and equity-oriented school reform. Focuses on system-level educational problems, politics, and policies.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Develop knowledge about how urban school problems are framed, a variety of prominent policies aimed at improving urban schools, and explanations for the difficulty of changing urban school districts
Audience: Undergraduate

2. Critically reflect on contemporary and enduring debates about urban school problems, policies, and the politics of school system change.
Audience: Undergraduate

3. Apply concepts and lessons from the course to analyze new issues and pressing concerns related to urban school policy.
Audience: Undergraduate

ED POL/CURRIC/HISTORY/JEWISH 515 – HOLOCAUST: HISTORY, MEMORY AND EDUCATION
3 credits.

Explores the ways in which Holocaust history, memory and education are mutually entangled, politically charged and morally complex. Using primarily American sites of memory, critically analyze a variety of representations of the Shoah--in literature, films, memoirs, monuments, museums and classrooms.
Requisites: Junior standing
Course Designation: Gen Ed - Communication Part B
Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022
Learning Outcomes: 1. Examine and question cultural assumptions and knowledge claims about race, ethnicity, and religion
Audience: Both Grad & Undergrad

2. Improve written and oral communication skills by engaging in critical conversations, making presentations, practicing group projects and writing papers
Audience: Both Grad & Undergrad

3. Demonstrate self-awareness and empathy to other worldviews and cultural differences and apply course concepts outside of the classroom by engaging in respectful conversations about race, ethnicity, and religion in our multi-cultural society
Audience: Both Grad & Undergrad

4. Construct and develop a meaningful project around a topic that interests you
Audience: Both Grad & Undergrad

5. Articulate answers to and pose complex questions regarding ethical issues, connecting historical events to present circumstances regarding racial inequalities
Audience: Undergraduate

6. Develop your academic writing by thinking carefully through your ideas and editing your work and your peers'
Audience: Undergraduate

7. Pose and answer complex historical and ethical questions regarding the Holocaust, genocide, their representations and political uses, connecting historical events to present circumstances regarding racial inequalities
Audience: Graduate

8. Develop interpersonal academic skills by editing peers' work
Audience: Graduate

ED POL/CURRIC/RELIG ST 516 – RELIGION AND PUBLIC EDUCATION
3 credits.

Examines theories and practices related to the role of religion in public schooling and its accompanying tensions: political and philosophical, practical and personal.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021

ED POL 518 – INTRODUCTION TO DEBATES IN HIGHER EDUCATION POLICY
3 credits.

Critical examination of debates in contemporary higher education policy. Explores the sociocultural tensions among key policy goals such as quality, equity, and efficiency, and the results (including unintended consequences) of those tensions. Examines the theory and research brought to bear on policy debates, and how they are used-or not used-to shape policy agendas.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Critically reflect about an array of higher education policies
Audience: Both Grad & Undergrad

2. Communicate effectively about perspective and viewpoints on higher education policy issues with others
Audience: Both Grad & Undergrad

3. Analyze higher education policies and convey ideas clearly in writing
Audience: Both Grad & Undergrad

4. Utilize various research theory and methodologies to concisely articulate and analyze debates about higher education
Audience: Graduate

ED POL 525 – IS COLLEGE POSSIBLE? COLLEGE ACCESS AND ADMISSIONS IN THE US
3 credits.

Survey of the college access landscape in the US with particular attention to historical and contemporary social, economic, and political contexts from the individual to federal level. Specifically focus on students' transitions from K12 to higher education, including policy aspects of college-going affecting college preparation, search, application, choice, and enrollment. Review, discuss, and apply evidence-based perspectives on related issues, including affordability and postsecondary sectors, with an emphasis on interventions seeking to reduce social and economic inequality in access to college.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Describe the economic, political, and social contexts surrounding access to higher education in the US
Audience: Both Grad & Undergrad

2. Summarize different pathways and pitfalls to equitable access with particular attention to differences across individual (student, family) and systems (community/institutional/government) contexts
Audience: Both Grad & Undergrad

3. Critique and synthesize evidence examining various strategies and interventions to increase access
Audience: Both Grad & Undergrad

4. Apply multi-disciplinary perspectives to novel issues in college access and generate policy solutions
Audience: Both Grad & Undergrad

5. Communicate evidence-based recommendations to diverse stakeholders using various methods
Audience: Both Grad & Undergrad

6. Formulate novel research questions on contemporary college access issues drawing from prior work
Audience: Graduate

7. Conduct high-quality empirical research on college access leveraging disciplinary norms and methods
Audience: Graduate

ED POL/PHILOS 540 – EGALITARIANISM AND EDUCATIONAL JUSTICE
3 credits.

Examines significant disagreements about educational justice-about the very concept of educational justice; about the most plausible substantive account of educational justice and the way that an ideal of equality bears on it; and about what kinds of policies the most plausible account of educational justice would require in circumstances like our own. Introduces tools that contemporary moral and political philosophers use to investigate those questions. Understand and evaluate efforts to resolve those questions.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the structure of, and the differences among, major accounts of educational justice that have been defended in the literature on the philosophy of education
Audience: Both Grad & Undergrad

2. Examine the educational policies that different accounts of educational justice would favor, and evaluate existing educational policies by the standards of different accounts of educational justice
Audience: Both Grad & Undergrad

3. Construct and evaluate complex normative—moral and political—arguments about the concept of educational justice, the most plausible account of educational justice, and the practical implications of accounts of educational justice
Audience: Both Grad & Undergrad

4. Construct and defend novel versions, objections, and assessments of egalitarian theories of educational justice for educational policy and practice by conducting original philosophical research.
Audience: Graduate

ED POL/ELPA/LEGAL ST 542 – LAW AND PUBLIC EDUCATION
3 credits.

Examines the legal issues related to the policy decisions and delivery of public education (elementary and secondary) in the United States. Learn how law impacts both curriculum development and curricular delivery, explore current legal controversies, constitutional issues, and learn about legal reasoning and analysis. Examines how both legislation and litigation affects public education. Particular attention is paid to law as public policy and the analysis of the same.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify various analytic frameworks that guide legal analysis.
Audience: Both Grad & Undergrad

2. Analyze the use of principles and/or frameworks to a situation or issue.
Audience: Both Grad & Undergrad

3. Understand the role of analytic frameworks in the development and implementation of law and policy.
Audience: Both Grad & Undergrad

4. Describe the many legal issues inherent in daily school practice.
Audience: Undergraduate

5. Discuss various legal principles.
Audience: Undergraduate

6. Examine the sources of law and the various interests that the law seeks to balance.
Audience: Undergraduate

7. Recognize and identify independently the many legal issues inherent in daily school practice.
Audience: Graduate

8. Explore and apply various legal practices and their application.
Audience: Graduate

9. Examine the sources of law and the various interests that the law seeks to balance, provide varying arguments in written form.
Audience: Graduate

10. Find and understand primary sources of legal authority (e.g. actual cases, statutes, and administrative rules).
Audience: Graduate

ED POL/PHILOS 545 – PHILOSOPHICAL CONCEPTIONS OF TEACHING AND LEARNING
3 credits.

Examination and analysis of conceptions of teaching and learning in classical philosophical works and in contemporary literature in the philosophy of education.
Requisites: Junior standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

ED POL/PHILOS 550 – PHILOSOPHY OF MORAL EDUCATION
3 credits.

Critical examination of classical and contemporary conceptions of moral education.
Requisites: Junior standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ED POL/GEN&WS 560 – GENDER AND EDUCATION
3 credits.

Examines the relationship between gender and education and explores notions of gender as socially constructed categories and identities. Identify the ways schools (re)produce and mediate gender identities and explore the experiences of students. Draws on critical and feminist perspectives to analyze the ways gender intersects with understandings of identity performance and expression such as masculinity and femininity, as well as at the intersection of race, ethnicity, class, and sexuality in schooling processes.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand the role schools and education play in enhancing or reproducing gender inequality
Audience: Both Grad & Undergrad

2. Explain theories on the social construction of gender and sexuality
Audience: Both Grad & Undergrad

3. Describe and reflect on the history of the gender equity movement in education
Audience: Both Grad & Undergrad

4. Read, discuss, and write about research on students with diverse gender and sexual identities
Audience: Both Grad & Undergrad

5. Develop analytical skills necessary to think about intersectional identities how they are tied to students' experiences in education
Audience: Both Grad & Undergrad

6. Explain and analyze pedagogical approaches and school policies' effects on learners of diverse gender and sexual identities
Audience: Both Grad & Undergrad

7. Analyze the role that educational research, policies and practices play in causing, ameliorating, or exacerbating gender inequities
Audience: Both Grad & Undergrad

8. Build the skills necessary to apply these concepts and approaches to our own final research project on a gender related topic
Audience: Both Grad & Undergrad

9. Read and evaluate scholarly research in the fields of education, sociology, feminist studies, anthropology, etc
Audience: Graduate

ED POL/AFROAMER 567 – HISTORY OF AFRICAN AMERICAN EDUCATION
3 credits.

An examination of the social, economic, political, and cultural issues influencing the education of Black Americans from the early nineteenth century to the 1960s.
Requisites: Junior standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

ED POL/ANTHRO 570 – ANTHROPOLOGY AND EDUCATION
3 credits.

An exploration of the foundational concepts and methods of educational anthropology. Examines anthropological inquiry on educational research with particular reference to cultural perspectives on education and educational systems, learning as cultural transmission, and application of anthropological knowledge to curriculum.
Requisites: Junior standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate an understanding of the social, cultural, and/or historical contexts of education policy.
Audience: Both Grad & Undergrad

2. Analyze education policy issues from diverse perspectives related to race, class, and/or gender, and other forms of social difference.
Audience: Both Grad & Undergrad

3. Write clearly and compellingly for diverse audiences about complex topics in educational policy.
Audience: Both Grad & Undergrad

4. Utilize social and cultural research theories and methodologies to articulate perspectives and viewpoints
Audience: Graduate

ED POL 575 – EDUCATION POLICY AND PRACTICE
3 credits.

Examines teachers' and administrators' practice through research on teachers and teaching as an occupation, the everyday realities of classrooms, and a variety of frameworks for understanding the relationship between policy and educators' daily work. Considers teachers and administrators as implementers of local, state, and federal policies, while simultaneously designing and creating policies and practices themselves.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop knowledge about research and theory on teaching as an occupation, teachers' work, and policy implementation or policy appropriation.
Audience: Both Grad & Undergrad

2. Critically reflect on the relationship between policy and practice.
Audience: Both Grad & Undergrad

3. Apply concepts and lessons from the course to analyze "real world" examples of teaching (or administrative) practice and explain how policy is or is not practiced in schools.
Audience: Both Grad & Undergrad

4. Concisely articulate research-based evidence and reflections about education policy and practices
Audience: Graduate

ED POL 580 – PARTICIPATORY AND COMMUNITY-BASED RESEARCH AND EVALUATION
3 credits.

Teaches the goals, purposes and methods associated with community-engaged, participatory research and evaluation, including the following: 1) the political and philosophical underpinnings of the approach, and specifically of participatory action research (PAR); 2) qualitative research methods; 3) examples of community-engaged, participatory studies.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the specific tenets of community-engaged, participatory research and evaluation
Audience: Both Grad & Undergrad

2. Demonstrate an understanding of qualitative social science theories, epistemologies, and methodologies related to education research
Audience: Both Grad & Undergrad

3. Collect and analyze data
Audience: Both Grad & Undergrad

4. Demonstrate professional standards for conducting scholarship ethically and responsibly
Audience: Both Grad & Undergrad

5. Design a participatory, community-engaged study
Audience: Graduate

ED POL 585 – FAMILY AND COMMUNITY ENGAGEMENT IN EDUCATION
3 credits.

Examines how and why different families and communities engage in education, with an emphasis on issues of power and equity. Focuses on social science approaches to understanding family and community engagement in K-12 schooling in the U.S. Opportunity to explore historical and philosophical approaches, and family and community engagement in international, higher education, and other contexts.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Analyze range of perspectives on family and community engagement in education
Audience: Both Grad & Undergrad

2. Explain how family and community engagement are shaped by historical, social, cultural, and political contexts
Audience: Both Grad & Undergrad

3. Connect course content to personal experiences and apply a growing understanding of family and community engagement to one's past, current, and future roles as an education stakeholder
Audience: Both Grad & Undergrad

4. Improve critical reading, research, writing, oral presentation, and other academic literacy skills
Audience: Both Grad & Undergrad

5. Utilize theoretical and methodological approaches to studying family and community engagement in education
Audience: Graduate

ED POL 595 – LANGUAGE POLITICS AND EDUCATION
3 credits.

Overview of language politics, policies, and practices in global perspective; draws on the work of anthropologists, sociolinguists, and language policy scholars to examine how language choices in and regarding schooling interact with ethnic and linguistic diversity. Consider the following questions: How and under what conditions do language policies, practices, and pedagogies redress or exacerbate inequalities? How people at the local level, including educators, negotiate language and literacy policies and politics. Uses a global lens to expand local understandings and practices.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Compare language policies and their impact on equity efforts across a range of locations
Audience: Both Grad & Undergrad

2. Identify key concepts in the study of language.
Audience: Both Grad & Undergrad

3. Compare a range of approaches to studying language and education.
Audience: Both Grad & Undergrad

4. Critically analyze how language functions to construct inequalities in texts, media and everyday interactions.
Audience: Both Grad & Undergrad

5. Develop critical media literacy skills by connecting contemporary events with theories and debates we discuss in class.
Audience: Both Grad & Undergrad

6. Develop academic speaking and writing skills.
Audience: Both Grad & Undergrad

7. Critically reflect on language politics in own field of study and research interests
Audience: Graduate

ED POL 600 – PROBLEMS IN EDUCATIONAL POLICY
3 credits.

Examines various debates in the field of education policy specific to special topic identified by instructor/faculty. Policy area and faculty vary each semester.
Requisites: Junior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025
Learning Outcomes: 1. Demonstrate an understanding of diverse historical and qualitative social-science theories, epistemologies, and methodologies related to education research and evaluation.
Audience: Both Grad & Undergrad

2. Develop a researchable question and design an historical or qualitative social-science research or evaluation project on some aspect of education policy, past or present.
Audience: Undergraduate

3. Develop a researchable question and design an historical or qualitative social-science research or evaluation project on some aspect of education policy, past or present -- design research or evaluation specific to area of studies.
Audience: Graduate

4. Gain experience conducting a field-based and/or archival research project and presenting their research or evaluation in a thesis.
Audience: Both Grad & Undergrad

5. Write clearly and compellingly for diverse audiences about complex topics in educational history and policy.
Audience: Both Grad & Undergrad

6. Understand professional standards for conducting scholarship ethically and responsibly.
Audience: Both Grad & Undergrad

ED POL 601 – RESEARCH AND EVALUATION FOR EQUITY
3 credits.

How can research and evaluation serve as mechanisms for advancing equity and justice? Interdisciplinary approach to foundational understanding of educational research and program evaluation. Explores common types of program evaluation and examine how equity-oriented frameworks can inform research and evaluation projects. Considers how politics shape who evaluates, for what reasons, and with what consequences. Engage in systematic inquiry using evaluation research methods, including data collection, analysis, and interpretation.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate an understanding of diverse historical and qualitative social-science theories, epistemologies, and methodologies related to education research and evaluation
Audience: Graduate

2. Develop an understanding of the role of power and inequity in shaping project, program, and policy intended and unintended consequences
Audience: Graduate

3. Develop a researchable question and design an evaluation project
Audience: Both Grad & Undergrad

4. Develop skills of collecting and analyzing data for an evaluation project
Audience: Both Grad & Undergrad

5. Develop skills of writing clearly and compellingly for diverse audiences about complex topics in educational history and policy
Audience: Both Grad & Undergrad

6. Follow professional standards for conducting scholarship ethically and responsibly in pursuit of equity
Audience: Both Grad & Undergrad

7. Consider the issues of equity, diversity, and inclusion in educational policies and practices
Audience: Both Grad & Undergrad

ED POL 602 – STATISTICS FOR RESEARCH AND EVALUATION
3 credits.

An introduction to statistical analysis for research and evaluation. Draw on current events and policy debates when possible. Describe data and distributions; internal/external validity; sampling, inference, and evaluation designs (RCT, regression, DiD). Expect to use real data and computer software to complete assignments.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Describe data and distributions
Audience: Graduate

2. Identify relationships between variables
Audience: Graduate

3. Explain the relationship between internal and external validity
Audience: Graduate

4. Demonstrate knowledge of inferential statistics through a final exam
Audience: Graduate

5. Use computer software to analyze data
Audience: Graduate

ED POL 603 – RESEARCH AND EVALUATION DESIGN AND METHODS
3 credits.

Examines applied research and evaluation design. Explains the basic components of the research process: conceptualization and measurement, sample selection, and techniques for data generation. Explores and practices research techniques, including survey, focus groups, interviews, etc. Entails a developmental sequence of assignments culminating in a research proposal.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Become familiar with the concepts, language, methods, and applications of research and evaluation
Audience: Graduate

2. Formulate clear research questions
Audience: Graduate

3. Identify an appropriate research design to answer research questions and contribute to generalizable knowledge
Audience: Graduate

4. Assess the strengths and weaknesses of the research design in any given study
Audience: Graduate

5. Learn and practice a range of research techniques
Audience: Graduate

6. Incorporate anti-oppression practice into research studies
Audience: Graduate

7. Write a detailed, feasible, and rigorous research proposal
Audience: Graduate

ED POL 605 – USING SECONDARY DATA: APPLIED QUANTITATIVE ANALYSIS
3 credits.

Introduce methods for managing secondary data or data not collected for specific research purposes and analyzing it to address educational policies. Focus on quantitative techniques. Use secondary data and statistical software to complete assignments
Requisites: ED POL 209 or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze existing data to answer research questions about educational policy.
Audience: Both Grad & Undergrad

2. Explain data management and variable creation for quantitative research in educational policy.
Audience: Both Grad & Undergrad

3. Identify and employ methods for secondary analysis through a final project on the topic of educational policy.
Audience: Both Grad & Undergrad

4. Use computer software to analyze educational data.
Audience: Both Grad & Undergrad

5. Critically evaluate the strengths and limitations of quantitative research methods and findings in educational research.
Audience: Graduate

ED POL 606 – RESEARCH AND EVALUATION PLANNING AND MANAGEMENT
3 credits.

Focuses on the role of research and evaluation in program development. Design, plan, and manage research and program evaluations. Includes discussion and debate regarding a series of case studies. Asks how, and under what conditions, research and evaluation contribute to equity goals.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Demonstrate an understanding of diverse historical and qualitative social-science theories, epistemologies, and methodologies related to education research and evaluation.
Audience: Graduate

2. Define different evaluation paradigms, purposes, designs, and stakeholders
Audience: Graduate

3. Develop basic skills of evaluation work, such as aligning aims and methods, writing research questions and hypotheses, and identifying data measures
Audience: Graduate

4. Develop skills to plan and manage an evaluation project
Audience: Graduate

5. Understand professional standards for conducting research and evaluation ethically and responsibly
Audience: Graduate

ED POL/HISTORY 612 – HISTORY OF STUDENT ACTIVISM FROM THE POPULAR FRONT TO BLACK LIVES MATTER
3 credits.

Explore the history of student activism in the United States, with an emphasis on the experiences racial/ethnic minority youths who have been marginalized or discriminated against. What motivated students to become politically active, and what forms did their activism take? How did student activism vary across time and space and from one group of activists to another? Why did some students become activists while others did not? What role did education and educational institutions play in their activism? What impact have student activists had, and what do their histories reveal about the capacity and mechanisms for achieving racial equity in particular and for affecting social, political, and economic change more broadly?
Requisites: Junior standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop an awareness of History's Impact on the Present
Audience: Both Grad & Undergrad

2. Develop an ability to Recognize and Question Assumptions
Audience: Both Grad & Undergrad

3. Develop consciousness of Self and Other
Audience: Both Grad & Undergrad

4. Develop capacity for Effective Participation in a Multicultural Society
Audience: Both Grad & Undergrad

5. Identify and discuss the significance of key actors, events, themes, and historiographical debates relating to the history of student activism in the modern United States
Audience: Both Grad & Undergrad

6. Identify and evaluate historical arguments in secondary scholarly works
Audience: Both Grad & Undergrad

7. Interpret and contextualize primary historical sources
Audience: Both Grad & Undergrad

8. Synthesize information from primary and secondary sources in order to develop and support their own evidence-based historical interpretations.
Audience: Both Grad & Undergrad

9. Synthesize information from secondary sources in order to develop and support evidence-based historical interpretations and historiographical analyses.
Audience: Graduate

ED POL 618 – ADVANCED QUALITATIVE RESEARCH METHODS IN EDUCATION
3 credits.

Advanced qualitative methods for educational research taught through an apprenticeship in the research process, from developing the idea and questions to collecting and analyzing data to disseminating results. Presents specialized qualitative approaches.
Requisites: ED POL 308
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Review the fundamentals of the social science research process in educational policy.
Audience: Undergraduate

2. Apply a range of research tools and methods relevant to social science research in educational policy.
Audience: Undergraduate

3. Discuss ethical dilemmas in human subjects research in educational policy.
Audience: Undergraduate

4. Develop research questions appropriate to qualitative research in educational policy.
Audience: Undergraduate

5. Collect, manage, and analyze educational research data.
Audience: Undergraduate

6. Present educational research findings to a broad audience.
Audience: Undergraduate

7. Reflect on the research process in educational policy.
Audience: Undergraduate

8. Learn about different types of graduate programs and careers involving educational research skills.
Audience: Undergraduate

ED POL/HISTORY 622 – HISTORY OF RADICAL AND EXPERIMENTAL EDUCATION IN THE US AND UK
3 credits.

Examines the comparative history of radical and experimental education in the United States and United Kingdom since 1800. It focuses on the social, cultural, and intellectual history of diverse educational experiments, including experiments related to socialism, abolitionism, anarchism, and religious fundamentalism.
Requisites: Junior standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2020
Learning Outcomes: 1. Demonstrate understanding of the course content: both the broad themes and specific cases we'll study in the history of radical and experimental education in the US and UK.
Audience: Both Grad & Undergrad

2. Demonstrate the ability to think historically: to determine historical significance; to evaluate evidence; to identify continuity and change; to assess cause and consequence; to demonstrate understanding of contextualization and periodization; to take historical perspectives; and to critically assess the moral dimensions of history.
Audience: Both Grad & Undergrad

3. Identify, analyze, and critique historical arguments (as presented by our authors and classmates).
Audience: Both Grad & Undergrad

4. Develop original historical arguments using primary and secondary sources (in class discussion and in our informal and formal writing assignments).
Audience: Graduate

5. Communicate historical knowledge, interpretations, and arguments clearly in writing, discussion, and oral presentations.
Audience: Both Grad & Undergrad

ED POL 640 – SOCIAL AND CULTURAL APPROACHES TO EDUCATION POLICY FOR SECONDARY EDUCATORS
3 credits.

Introduces the social, political and cultural influences surrounding educational policies and practices and the role of teachers in education policymaking. Focuses on the purpose(s) of schooling, considering questions such as: What should the purpose of schooling be? How do our assumptions regarding the purpose(s) of schooling shape our understandings of education policies and practices? Considers educational inequalities and contemporary education policies.
Requisites: Declared in Curriculum and Instruction MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Demonstrate an understanding of the social, cultural, and/or historical contexts of education policy
Audience: Graduate

2. Analyze education policy issues from diverse perspectives related to race, class, and/or gender, and other forms of social difference
Audience: Graduate

3. Write clearly and compellingly for diverse audiences about complex topics in educational policy
Audience: Graduate

ED POL/SOC 648 – SOCIOLOGY OF EDUCATION
3 credits.

Utilizes a sociological lens to examine American schools and schooling, with a particular focus on social inequality in the U.S. and how class, race, and gender intersect in the experiences of students. Examine how schools and schooling relate to broader social structures, institutions, and practices with a focus on inequality in public education.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Articulate the relationship between education and social inequality in the U.S. along various dimensions
Audience: Both Grad & Undergrad

2. Apply critical thinking skills to your understanding of educational institutions and individual educational experiences
Audience: Both Grad & Undergrad

3. Effectively communicate what you learned about the sociology of education both orally and in writing
Audience: Both Grad & Undergrad

4. Read and evaluate sociological research on education and schooling
Audience: Undergraduate

5. Read and evaluate sociological research on education and schooling and relate to own methodological and theoretical backgrounds
Audience: Graduate

ED POL/HISTORY 665 – HISTORY OF THE FEDERAL ROLE IN AMERICAN EDUCATION
3 credits.

Examines the history of federal aid to education from 1776 to the present, with heavy emphasis on the post-World War II period. Explores the federal role in public education in the Early Republic and during Reconstruction; Traces the evolution of federal policies concerning racial desegregation, compensatory education for low-income students, bilingual education, and special education for the disabled. Critically reflect on the tradition of "local control," policy implementation and evaluation, accountability, block grants, interest groups and lobbies; nationally standardized testing, and the different goals assigned to public schooling in the United States (e.g., social integration/inclusion, individual academic achievement, etc.).
Requisites: Junior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2018
Learning Outcomes: 1. Demonstrate an understanding of diverse historical and qualitative social-science theories, epistemologies, and methodologies related to education research.
Audience: Both Grad & Undergrad

2. Develop a researchable question and design an historical or qualitative social-science research project on some aspect of education policy, past or present.
Audience: Both Grad & Undergrad

3. Gain experience conducting a field-based and/or archival research project and presenting their research in a thesis.
Audience: Both Grad & Undergrad

4. Write clearly and compellingly for diverse audiences about complex topics in educational history and policy.
Audience: Both Grad & Undergrad

5. Understand professional standards for conducting scholarship ethically and responsibly.
Audience: Undergraduate

6. Understand professional standards for conducting scholarship ethically and responsibly and conducting historical research related to their specific research inquiry and project.
Audience: Graduate

ED POL 675 – INTRODUCTION TO COMPARATIVE AND INTERNATIONAL EDUCATION
3 credits.

Introduction to the origins and development of the field of comparative and international education (CIE) and to explore how scholars engage some of the theoretical, ideological, methodological, and topical debates that characterize research in the field of CIE policy.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Critically compare and contrast theoretical approaches that have shaped the field of comparative international education.
Audience: Both Grad & Undergrad

2. Identify and compare the assumptions, benefits, and limitations of different educational policy and planning approaches on comparative international education.
Audience: Both Grad & Undergrad

3. Utilize concepts and lessons from the course to analyze new issues and pressing concerns related to comparative international education
Audience: Both Grad & Undergrad

4. Apply various research methods to analyze data and research related to the comparative international education
Audience: Graduate

ED POL 680 – EDUCATIONAL POLICY STUDIES HONORS CAPSTONE
3 credits.

Develop a capstone project reflecting expertise in existing research on an issue or question of interest. Engage in interdisciplinary conversations, consider pressing issues in education, explore potential professional and academic trajectories, and prepare for future careers and graduate education. Requires declaration in Educational Policy Studies BS Honors in the Major.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Synthesize previous course work and themes through discussion of pressing issues in education.
Audience: Undergraduate

2. Explore fellow honors students epistemologically, methodologically, and topically diverse research interests.
Audience: Undergraduate

3. Develop, through a series of scaffolded assignments, a rigorously researched capstone project such as literature review paper or policy brief that reviews relevant research.
Audience: Undergraduate

4. Write a personal statement describing your learning and future directions in education.
Audience: Undergraduate

ED POL 688 – INTRODUCTION TO SURVEY METHODS FOR EDUCATION RESEARCH
3 credits.

Introduction to conceptual and practical tools for planning, designing, and conducting survey research on education-related issues. Provides an overview of principles in survey methods and relevant issues, including data collection modes, sampling methods, questionnaires and measurement design, possible sources of bias and errors, non-response, and other extended topics. Provides a substantial experience with practical research skills.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Demonstrate knowledge of basic concepts, principles, tools, and common challenges in survey methods in education research
Audience: Both Grad & Undergrad

2. Critically examine the causes and sources of biases in survey methods and demonstrate knowledge in approaches to address these biases
Audience: Both Grad & Undergrad

3. Apply principles in sampling to draw and document a survey sample
Audience: Both Grad & Undergrad

4. Apply principles of question design in developing survey questions and instruments
Audience: Both Grad & Undergrad

5. Critically evaluate survey design, instruments, and research based on survey data
Audience: Graduate

6. Develop a professionally written proposal for an education research project with a survey component
Audience: Graduate

ED POL 699 – INDEPENDENT READING
1-3 credits.

Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ED POL 701 – INTRODUCTION TO EDUCATIONAL POLICY STUDIES
3 credits.

An introduction to diverse scholarly perspectives in educational policy studies.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply resources and strategies for enhancing your life and well-being as a doctoral student
Audience: Graduate

2. Meet faculty and fellow students in the department and learn about their epistemologically, methodologically, and topically diverse research
Audience: Graduate

3. Learn, through a series of scaffolded assignments, to write a robust literature review
Audience: Graduate

ED POL/AFROAMER/HISTORY 712 – EDUCATION AND THE CIVIL RIGHTS MOVEMENT
3 credits.

Explores the historical relationship between education and the African American freedom struggle from the early twentieth century to the present. Topics include school segregation, desegregation, and resegregation; high school and college student activism; Black Power; civil rights protest strategies and tactics, and the role of the federal government.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ED POL/HISTORY 713 – HISTORY OF HIGHER EDUCATION IN EUROPE AND AMERICA
3 credits.

Development of colleges, universities, and higher learning in Europe and America.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2019
Learning Outcomes: 1. Demonstrate an understanding of diverse historical theories, epistemologies, and methodologies related to education research
Audience: Graduate

2. Develop a researchable question and design an historical research project on some aspect of education policy, past or present
Audience: Graduate

3. Gain experience conducting an archival research project and presenting their research in a thesis
Audience: Graduate

4. Write clearly and compellingly for diverse audiences about complex topics in educational history
Audience: Graduate

5. Apply professional standards for conducting scholarship ethically and responsibly
Audience: Graduate

ED POL/COUN PSY/CURRIC/ED PSYCH/ELPA/RP & SE 719 – INTRODUCTION TO QUALITATIVE RESEARCH
3 credits.

Provides an overview of qualitative inquiry, examining assumptions, standards, and methods for generating and communicating interpretations. Methodological and theoretical works illustrate case study, ethnography, narrative, and action research. Does not include a field method component.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ED POL 743 – COST-EFFECTIVENESS & BENEFIT-COST ANALYSIS IN EDUCATION
3 credits.

Introduction and application of methods of economic evaluation in education focusing on the use of cost, cost-effectiveness, and benefit-cost analyses. Topics include collecting inputs; pricing; estimating costs; adjusting for inflation, amortization, and units; sensitivity analyses; measuring effectiveness; quantifying benefits; computing rates of return; and communicating results. Lecture and project based with focus on real-world application, data collection, replication, and peer review.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop and articulate a clear understanding of economic evaluations in education
Audience: Graduate

2. Discuss and write about concepts in economic evaluation
Audience: Graduate

3. Assess empirical work for strengths and weaknesses of rigor of evidence
Audience: Graduate

4. Distinguish cost analyses, cost-feasibility studies, benefit-cost analyses, and cost-effectiveness studies
Audience: Graduate

5. Articulate the strengths and weaknesses of each approach, including what settings facilitate which type
Audience: Graduate

6. Design and peer-review research employing economic evaluation in education
Audience: Graduate

7. Conduct research proposal applying methods covered in class to contribute to the field
Audience: Graduate

ED POL 745 – POLITICAL ECONOMY AND EDUCATION
3 credits.

Seeks to provide an introduction to political economy in the field of education from a theoretical, historical, and comparative perspective.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Identify political and economic influences on education policy.
Audience: Graduate

2. Compare and contrast various theories of political economy.
Audience: Graduate

3. Understand education as a site of struggle among different groups and ideologies in society.
Audience: Graduate

4. Examine theories and practices of neoliberalism and related concepts (e.g., late liberalism, racial capitalism).
Audience: Graduate

5. Explore linkages among shifting political and economic trends and educational agendas
Audience: Graduate

6. Determine how neoliberalism (and attendant theories) influence educational policies and practices, including through the interrelated processes of globalization, privatization, marketization, and corporatization.
Audience: Graduate

7. Critically assess claims and arguments about what kind of educational reforms are needed and their potential implications
Audience: Graduate

8. Describe intersectional (e.g., gendered, raced, classed) dimensions of labor, globalization, capital, and education
Audience: Graduate

9. Critically reflect on assumptions about education and the possibilities of social and educational change
Audience: Graduate

ED POL/C&E SOC/SOC 755 – METHODS OF QUALITATIVE RESEARCH
3 credits.

Introduces qualitative, or ethnographic, research methods, emphasizing those suitable for educational and other organizational settings. Considers strengths and limitations of qualitative approaches in relation to varied research problems. Explores methodological procedures from entry into the field through writing.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ED POL 760 – CRITICAL DEVELOPMENT STUDIES AND EDUCATION
3 credits.

Presents a comprehensive and critical understanding of the international educational development (IED) arena; the paradigms and theories that shape the field; the relationships among major actors and institutions; and themes and issues that have arisen in international educational development over the past decades.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Examine various theories about the relationship between economic, social and political development education
Audience: Graduate

2. Consider how different disciplines have shaped the field of comparative and international education (CIE) over time
Audience: Graduate

3. Discuss the relationships among major actors and institutions in the field of comparative and international education (CIE)
Audience: Graduate

4. Write a publishable academic book review
Audience: Graduate

5. Write an argument-driven academic literature review to inform their own research project
Audience: Graduate

ED POL 761 – MIGRATION AND EDUCATION
3 credits.

Addresses political economic issues related to migration and education. Drawing on the anthropology of globalization and sociology of immigration, the course reviews major theories of immigrant incorporation and exclusion processes, examines case studies of im/migrants, refugees, and displaced persons and their adaptation processes in countries in the Global North and the Global South, and considers educational practices and policies that develop to address mobility in diverse contexts. The course examines how cultural, social, political, and economic factors influence im/migrant incorporation, and how educators can facilitate im/migrant students' opportunities for learning through changes in policies, pedagogies, and curricula.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Explain the social, economic, and political dimensions of migration
Audience: Graduate

2. Explain and describe the relationship between migration and education
Audience: Graduate

3. Write clearly and compellingly for diverse audiences, including scholars, policy makers and the public
Audience: Graduate

ED POL/ELPA/PUB AFFR 765 – ISSUES IN EDUCATIONAL POLICY ANALYSIS
3 credits.

Theory, research, and practical experience in educational policy analysis, including the social construction of policy problems in education; the design, implementation, and evaluation of policy responses; and the practical and ethical dilemmas of the policy analyst.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

ED POL 780 – SPECIAL TOPICS IN EDUCATIONAL POLICY STUDIES
3 credits.

Topics vary each semester.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ED POL/COUN PSY/CURRIC/ED PSYCH/ELPA/RP & SE 788 – QUALITATIVE RESEARCH METHODS IN EDUCATION: FIELD METHODS I
3 credits.

Introductory field methods experience in qualitative research. Learn to define good research questions, determine which methods of data collection and analysis are useful for addressing those questions, engage in these methods, reflect on their utility in education research.
Requisites: ED PSYCH/COUN PSY/CURRIC/ED POL/ELPA/RP & SE 719
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ED POL/COUN PSY/CURRIC/ED PSYCH/ELPA/RP & SE 789 – QUALITATIVE RESEARCH METHODS IN EDUCATION: FIELD METHODS II
3 credits.

Focus on data analysis and translation of finds and implications. Gain theoretical and practical knowledge and skills regarding coding and analysis techniques, use of qualitative analytic tools, strategies for sharing findings with audiences beyond research team.
Requisites: ED PSYCH/COUN PSY/CURRIC/ED POL/ELPA/RP & SE 788
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ED POL/GEN&WS/PUB AFFR 805 – GENDER ISSUES IN INTERNATIONAL EDUCATIONAL POLICY
3 credits.

Exploration and analysis of recent debates related to gender issues in international educational policy, including the intersection of education and demographic processes, the play of history and culture, and the social construction of gender.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

ED POL 810 – EDUCATION AND RESISTANCE IN COMMUNITY-BASED SPACES
3 credits.

Engage with and discuss the historical, ideological, and contemporary issues surrounding community-based spaces and programs serving youth. Topics will include: grassroots organizing and activism, pedagogies of the home, academic outcomes and access to higher education, full-service community-schools/school-community partnerships, social identity, funding and philanthropy, neoliberalism and education privatization, and after school and out-of-school time education. Examine the social and political context of community-based educational efforts in order to understand how they can be nurturing spaces of resistance for youth, as well as spaces of conflict and social reproduction.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand the political and social context of community-based spaces engaging youth
Audience: Graduate

2. Disrupt and redefine static notions of "community," "education," and "educator"
Audience: Graduate

3. Understand the heterogeneity of community-based spaces engaging youth
Audience: Graduate

4. Examine the relationships of power undergirding community-based spaces
Audience: Graduate

5. Explore the role, challenges, and experiences of community-based leaders, educators, and youth workers
Audience: Graduate

6. Explore the experiences of diverse youth participants in community-based programs
Audience: Graduate

7. Understand the relationship between community-based educational spaces and traditional school contexts
Audience: Graduate

8. Engage in critical dialogue about the role of "youth work" and community-based spaces in broader education discourse and reform
Audience: Graduate

ED POL/ED PSYCH/ELPA/RP & SE 842 – LEGAL FOUNDATIONS OF SPECIAL EDUCATION AND PUPIL SERVICES
3 credits.

Legal requirements and issues relative to special education and pupil services programs; special education, juvenile justice, programs for English language learners, programs for children who are homeless; examination of applicable federal and state statutes and case law.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Describe various legal issues and identify those issues inherent in the delivery of pupil services.
Audience: Graduate

2. Explain the foundation created by federal disability law (Section 504, ADA, IDEA).
Audience: Graduate

3. Describe the relationship between state and federal law in the delivery of special education.
Audience: Graduate

4. Apply legal principles to a set of facts.
Audience: Graduate

5. Explain the relationship between statutory and regulatory requirements and practice.
Audience: Graduate

6. Identify various analytic frameworks that guide legal analysis.
Audience: Graduate

7. Apply principles and/or frameworks to a situation or issue.
Audience: Graduate

8. Analyze existing policies and practice from a legal perspective.
Audience: Graduate

9. Explain the dynamic nature of this branch of school law and will identify tools and resources available to help them remain current.
Audience: Graduate

ED POL 860 – PROSEMINAR: THEORY AND METHOD IN COMPARATIVE EDUCATION
3 credits.

Critical analysis of theories, methods, and intellectual perspectives that have been employed in comparative studies of education.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Compare and contrast major theoretical and disciplinary approaches to educational research
Audience: Graduate

2. Compare and critique comparative research methods
Audience: Graduate

3. Analyze the cultural, economic, and political forces that influence educational policy and practice around the world
Audience: Graduate

4. Discuss current debates in the field and to develop your own informed opinion about them
Audience: Graduate

5. Hone critical reading and writing skills and demonstrate these skills in class discussions, oral presentations, and written papers
Audience: Graduate

ED POL 870 – THEORIES OF SOCIAL AND EDUCATIONAL CHANGE
3 credits.

Analysis of several social theories emphasizing the explanation of social change, the role of education in the change process, and the implications for educational policy in contemporary society.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Map central theoretical traditions and contemporary innovations in the field of education
Audience: Graduate

2. Apply, analyze, and evaluate the key concepts from these traditions
Audience: Graduate

3. Compare and contrast social theories
Audience: Graduate

4. Connect theoretical arguments and empirical education research
Audience: Graduate

5. Engage diverse theoretical perspectives to analyze relationships between education and society
Audience: Graduate

6. Analyze education policies and practices from diverse theoretical perspectives
Audience: Graduate

7. Develop specific skills in theoretical discourse, including in writing
Audience: Graduate

ED POL/HISTORY 903 – HISTORY OF EDUCATION OF MULTICULTURAL AMERICA
3 credits.

Selected topics, issues and themes concerning the history of education of various groups of people of color in the United States, as well as selected issues, topics and themes focusing on immigration and ethnicity.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022
Learning Outcomes: 1. Identify and discuss the significance of key actors, events, themes, and historiographical debates relating to the history of education in multicultural America
Audience: Graduate

2. Identify, analyze, and evaluate historical arguments in secondary scholarly works
Audience: Graduate

3. Interpret and contextualize primary historical sources
Audience: Graduate

4. Locate synthesize, and evaluate information from secondary sources and/or primary sources in order to develop and support evidence-based historical and historiographical interpretations
Audience: Graduate

ED POL/HISTORY 906 – PROSEMINAR ON THE HISTORY OF EDUCATION
3 credits.

Reading in European or American educational history.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024
Learning Outcomes: 1. Demonstrate an understanding of diverse historical theories,epistemologies, and methodologies relevant to historical research.
Audience: Graduate

2. Develop a researchable question and design a project on some aspect of the history of childhood/adolescence.
Audience: Graduate

3. Gain experience using primary and secondary sources in historical research.
Audience: Graduate

4. Write clearly and compellingly for diverse audiences.
Audience: Graduate

5. Demonstrate understanding of professional standards for conducting scholarship ethically and responsibly.
Audience: Graduate

ED POL/HISTORY 907 – SEMINAR-HISTORY OF EDUCATION
1-3 credits.

Studies in European and American educational history.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022
Learning Outcomes: 1. Identify and discuss the significance of key actors, events, themes, and historiographical debates pertaining to the history of education
Audience: Graduate

2. Identify, analyze, and evaluate historical arguments in secondary scholarly works
Audience: Graduate

3. Interpret and contextualize primary historical sources
Audience: Graduate

4. Locate, synthesize, and evaluate information from primary and secondary sources in order to develop and support evidence-based historical and historiographical interpretations
Audience: Graduate

ED POL/SOC 908 – SEMINAR-SOCIOLOGY OF EDUCATION
3 credits.

Selected topics.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

ED POL 911 – SEMINAR IN URBAN EDUCATION
3 credits.

Historical and contemporary urban educational issues and policies. Emphasis on the relationship between educational issues in U.S. cities and other issues in cities and metropolitan regions (e.g. housing, poverty, gentrification, community development), as well as the policies and practices that seek to address these issues.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Analyze and articulate the relationship between urban education and broader political, social, and economic contexts.
Audience: Graduate

2. Critically analyze the role that urban educational policy, school structures, and school actors play in causing, ameliorating, or exacerbating educational inequities .
Audience: Graduate

3. Critically analyze the role that out-of-school factors (e.g. home, community, and broader economic and political contexts and conditions) play in causing, ameliorating, or exacerbating educational inequities.
Audience: Graduate

4. Evaluate research and policy on urban educational issues .
Audience: Graduate

5. Effectively communicate what they learned about urban educational issues both orally and in writing, to both academic and non-academic audiences.
Audience: Graduate

ED POL/SOC 955 – SEMINAR-QUALITATIVE METHODOLOGY
3 credits.

An intensive, practice-oriented exploration of one qualitative research method such as participant-observation, interviewing, narrative analysis, oral history or ethnography. Treatment of the method includes: logics of inquiry, analysis of data obtained through the method, and uses of the method.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

ED POL 962 – SEMINAR IN CROSS NATIONAL STUDIES OF EDUCATIONAL PROBLEMS
3 credits.

Topics vary. Examples: education and the formation of elites; education and socio-economic development; the social functions of examinations; comparative studies in church-state-school relationships; the status of teachers; American overseas programs in educational modernization.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023
Learning Outcomes: 1. Demonstrate an understanding of diverse social theories, epistemologies, and methodologies related to education , globally, cross-nationally, and comparatively
Audience: Graduate

2. Develop a researchable question that engages with the social theories explored in class
Audience: Graduate

3. Write clearly and compellingly for diverse audiences about complex education topics
Audience: Graduate

4. Apply professional standards for conducting scholarship ethically and responsibly
Audience: Graduate

5. Explain the social, economic, and/or environmental dimensions of the sustainability challenge(s) of education
Audience: Graduate

6. Apply sustainability principles and/or frameworks to addressing the challenge of educational problems
Audience: Graduate

7. Describe the social, economic, and environmental dimensions of education and identify potential trade-offs and interrelationships among these dimensions at a level appropriate to the course
Audience: Graduate

ED POL/ANTHRO 970 – SEMINAR IN ANTHROPOLOGY AND EDUCATION
3 credits.

Anthropological theory, methodology, and field techniques with specific reference to school ethnography and cross-cultural studies of socialization and education. Topics vary.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2021

ED POL 990 – RESEARCH OR THESIS
1-12 credits.

Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ED POL 999 – INDEPENDENT READING
1-3 credits.

Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

EDUCATIONAL PSYCHOLOGY (ED PSYCH)

ED PSYCH/ASIAN/COUN PSY/PSYCH 120 – THE ART AND SCIENCE OF HUMAN FLOURISHING
3 credits.

Explore perspectives related to human flourishing from the sciences and humanities; investigate themes such as transformation, resilience, compassion, diversity, gratitude, community; expand self-awareness, enhanced social connectivity, and ability to change; formulate a sense of what it means to lead a flourishing life that sustains meaningful and fulfilling engagement with studies, relationships, community, and career.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze and describe the relevant concepts and theories on the nature and cultivation of human flourishing from multiple intellectual fields including psychology, neuroscience, anthropology, philosophy, and religious studies.
Audience: Undergraduate

2. Describe and engage with the many dimensions of flourishing, and the various extrinsic and intrinsic factors influencing them.
Audience: Undergraduate

3. Formulate an account of human flourishing.
Audience: Undergraduate

4. Employ contemplative practices in an inquiry that cultivates qualities of human flourishing from within.
Audience: Undergraduate

5. Integrate contemplative practice and knowledge of course materials in order to establish a foundation for flourishing in your life and the communities in which you live.
Audience: Undergraduate

ED PSYCH 215 – PROBABLY CORRECT: HOW TO THINK WITH STATISTICS AND DATA
3 credits.

Introduces concepts and tools of statistical thinking and analysis, coordinated with activities designed to develop statistical literacy and decision-making skills in real-world problem contexts.
Requisites: Satisfied Quantitative Reasoning (QR) A requirement
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate their understanding of basic concepts that underlie statistics and data analysis
Audience: Undergraduate

2. Use these concepts to make sense of new situations.
Audience: Undergraduate

3. Apply their knowledge to do basic data manipulation and visualization
Audience: Undergraduate

4. Apply their knowledge to identify research questions, formulate hypotheses, conduct data analysis and write a coherent report of what they did and what they learned.
Audience: Undergraduate

ED PSYCH 301 – HOW PEOPLE LEARN
3 credits.

Introduction to theories of learning in formal and informal settings, including theories related to memory, learning, and intelligence; cognitive, social, and affective aspects of learning; the influence of context on learning, including learning with psychological tools, such as language and technological resources; individual differences that may affect learning; and practical applications of learning theory.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Acquire a strong foundation in current and past psychological theories of learning
Audience: Undergraduate

2. Recognize and synthesize multiple perspectives on knowledge, learning, and cognition
Audience: Undergraduate

3. Apply fundamental theories and multiple perspectives to everyday learning environments.
Audience: Undergraduate

4. Communicate effectively in collaborative work, so students may share their knowledge, wisdom, and values with others across social and professional settings
Audience: Undergraduate

5. Understand and evaluate their own learning processes
Audience: Undergraduate

6. Conduct research, analyze, and interpret resulting data; and create clear and concise reports of their research
Audience: Undergraduate

7. Demonstrate a knowledge of and sensitivity to human diversity in terms of individual abilities and orientations and sociocultural backgrounds.
Audience: Undergraduate

ED PSYCH 320 – HUMAN DEVELOPMENT IN INFANCY AND CHILDHOOD
2-3 credits.

Normative processes and individual differences in physical, mental, social and emotional development and behavior from infancy through late childhood.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Summarize and recall scientific studies with infant and child participants
Audience: Undergraduate

2. Differentiate and recall broad theories of infant and child development
Audience: Undergraduate

ED PSYCH 321 – HUMAN DEVELOPMENT IN ADOLESCENCE
2-3 credits.

Physiological, social, and cognitive changes which characterize the transition from childhood to adult life.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and summarize the major developmental milestones of adolescence
Audience: Undergraduate

2. Differentiate and evaluate the theory and methods used to study adolescence
Audience: Undergraduate

ED PSYCH 322 – THE PSYCHOLOGY AND MORAL DEVELOPMENT OF FORGIVENESS
3 credits.

Introduction to the psychology of forgiveness, including development and variations in appropriation of forgiveness, consequences of forgiving, and separating ideas of reconciliation and forgiveness.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Learn what forgiveness is and is not and be able to apply this knowledge as appropriate in situations of injustice
Audience: Undergraduate

2. Acquire knowledge about how forgiveness develops in adults and in children, including empirically-verified studies showing these advances;
Audience: Undergraduate

3. Think critically about forgiveness and address philosophical and psychological objections to forgiveness
Audience: Undergraduate

4. Examine the questions which researchers ask regarding the psychology of forgiveness (basic research questions and applied-psychology questions and empirical results)
Audience: Undergraduate

5. Become familiar with the variations in people's appropriation of forgiveness in different cultures;
Audience: Undergraduate

6. Learn what the consequences of forgiving are for individuals, relationships, and communities, based on the peer-reviewed and published scientific studies;
Audience: Undergraduate

7. Gain proficiency in knowing what forgiveness education is for children and adolescents, including the scientific studies examining the outcomes of such education for the students.
Audience: Undergraduate

ED PSYCH 326 – MIND, BRAIN AND EDUCATION
3 credits.

Provides an overview of methods and findings at the interface between education and neuroscience. Findings on brain development from birth to adolescence, brain changes in response to learning and how individual differences in brains relate to individual differences in learning. Educationally relevant domains including language acquisition and bilingualism, the brain basis of reading and mathematics and executive functions like memory, attention and emotion will be highlighted.
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Summarize and apply research that bridges neuroscience and education.
Audience: Undergraduate

2. Demonstrate ability to work in cross-disciplinary student teams
Audience: Undergraduate

ED PSYCH 331 – HUMAN DEVELOPMENT FROM CHILDHOOD THROUGH ADOLESCENCE
3 credits.

Social and psychological aspects of human development from early childhood through adolescence; implications for education.
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate basic knowledge of how children learn and grow from early childhood through adolescence
Audience: Undergraduate

2. Describe major theories of human development, with attention to physical, cognitive, social, and emotional maturational processes, as well as various factors that affect development. This course provides opportunities for students to reflect through group discussions and written assignments.
Audience: Undergraduate

3. Link theories about cognitive and social development to educational and parenting practices both orally and in writing
Audience: Undergraduate

4. Summarize and critique scientific journal articles about human development
Audience: Undergraduate

ED PSYCH 470 – RESEARCH EXPERIENCE IN EDUCATIONAL PSYCHOLOGY
1-6 credits.

Research experience under the supervision of a faculty member in Educational Psychology. Develop an understanding of research in a topic area and participate in team-based research. Reading includes published research studies relevant to the selected topic, and evaluation includes presentations in group meetings or a paper based on the research conducted.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ED PSYCH 501 – THINKING AND LEARNING
3-4 credits.

Designed to explore the psychological principles that are relevant to learning, knowing, and teaching. Focuses on ideas, questions, and contextual applications. Reflect on personal approaches to learning, knowing, and teaching, and think about past, present, and future experiences through a variety of different lenses.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify foundational theories of learning
Audience: Graduate

2. Demonstrate ability to make connections to perspectives on knowing
Audience: Graduate

3. Analyze types and implications of cognition
Audience: Graduate

4. Identify relationships between theory and application
Audience: Graduate

5. Design learning environments
Audience: Graduate

ED PSYCH 505 – FUNDAMENTAL STATISTICS IN LEARNING ANALYTICS
1 credit.

Logic and methods of statistics used in the field of learning analytics. Emphasizes concepts and application rather than computational details to build fundamentals in the areas of inferential statistics. Reliability and validity, scalability, and the implications of inference in applied statistical methodology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Explore the foundations and practical use of statistics in learning analytics practice and research
Audience: Graduate

2. Understand how to apply quantitative reasoning to learning analytics topics
Audience: Graduate

3. Practice working with introductory descriptive statistics, probability, and statistical inference
Audience: Graduate

4. Acquire a working fluency with statistical theories, concepts, and terminology in learning analytics
Audience: Graduate

ED PSYCH 506 – CONTEMPORARY ISSUES IN EDUCATIONAL PSYCHOLOGY
3 credits.

Influence of educational psychology upon issues and innovations in education.
Requisites: Junior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ED PSYCH 509 – EMBODIED COGNITION & EDUCATION
3 credits.

Theories of embodied cognition, and related theories of enacted, extended, and embedded cognition, have had increasing influence on general theories of cognition and philosophy of mind, and therefore have importance for education. Featuring interdisciplinary work, with readings and topics drawn from scholarly literature from several fields, including: neuroscience, psychology, philosophy, robotics and artificial intelligence, phenomenology, linguistics, and anthropology. Develop familiarity with the prevailing theories, empirical findings, and methodologies used to investigate ways that the body and body-based processes (such as perception) influence and constitute cognition, and the implications and applications of embodied cognition for education, including learning, assessment, and teaching practices. Apply these theories to research and design projects.
Requisites: Junior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate through Thought Papers and class discussion an understanding of theories of cognition and research designs from various perspectives; and assess causal claims.
Audience: Both Grad & Undergrad

2. Express in the Thought Papers and Major Paper a developing knowledge of and sensitivity to the influences of culture, environment, and physical abilities on cognitive behaviors.
Audience: Both Grad & Undergrad

3. Demonstrate through Thought Papers and class discussion facility with the relevant theories and research methods.
Audience: Both Grad & Undergrad

4. Demonstrate in Thought Papers, class discussions, and Major Paper and Paper Presentation the relation among research questions, research designs, and conclusions.
Audience: Both Grad & Undergrad

5. Produce a Major Paper and Paper Presentation based on student's independent intellectual work.
Audience: Graduate

6. Communicate one's own thinking and questions as a Discussion Leader and in class discussions, Thought Papers and Major Paper.
Audience: Both Grad & Undergrad

7. Produce a research paper and presentation based on student's intellectual contributions, supported by the instructor.
Audience: Undergraduate

8. Demonstrate ethical conduct and research standards, including proper documentation of outside sources and presentation of one's own ideas in the Major Paper and Paper Presentation.
Audience: Both Grad & Undergrad

ED PSYCH 525 – LEARNING ANALYTICS THEORY AND PRACTICE
5-6 credits.

Application of data mining techniques to large educational datasets to gain important insights into how people learn. Examines the spectrum of prevalent learning analytics methods and applications, from institutional effectiveness, to classroom-level interventions, to standardized assessments, and beyond.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify the fundamentals of machine learning and database interventions
Audience: Graduate

2. Analyze data ethics, regulations, and privacy issues
Audience: Graduate

3. Utilize prediction methods
Audience: Graduate

4. Engage in structure discovery
Audience: Graduate

5. Demonstrate understanding of relationship mining
Audience: Graduate

ED PSYCH 533 – THINKING, FEELING, & LEARNING
3 credits.

Covers the cognitive and emotional foundations of behavior with special reference to processes of learning and change. How does the science of thinking and feeling inform interventions such as teaching, counseling, or parenting? Topics covered include: dual-systems theories, neural and behavioral aspects of emotion and cognitive control, intuition, and expertise. Focus on the relation between unconscious, automatic processes and deliberate, effortful processes guiding behavior.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025

ED PSYCH 540 – INTRODUCTION TO PROFESSIONAL SCHOOL PSYCHOLOGY
2 credits.

Introduction to the professional roles and functions of school psychologists; historical development; legal and ethical issues; overview of assessment, intervention, and consultation for children and adolescents at risk for, or with, academic, behavioral, emotional, and social difficulties; applied research in school psychology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ED PSYCH 541 – APPLIED BEHAVIOR ANALYSIS IN CLASSROOMS
3 credits.

Application of behavioral analysis to educational situations for both exceptional and normal children and adolescents.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Utilize theory and principles of applied behavior analysis to manage student behavior within the context of instructional environments.
Audience: Graduate

2. Describe and apply a positive behavior support assessment and intervention model
Audience: Both Grad & Undergrad

3. Create operationally-defined behavioral definitions of student behavior.

Audience: Both Grad & Undergrad

4. Outline direct and indirect methods for gathering information about student behavior.
Audience: Both Grad & Undergrad

5. Hypothesize the functions of student behavior and effectively apply a competing behavior pathway model. Learn about experimental methods to confirm hypothesized functions of challenging behavior.
Audience: Both Grad & Undergrad

6. Link behavioral assessment findings to intervention goals and behavioral objectives
Audience: Both Grad & Undergrad

7. Describe and apply strategies related to the components of comprehensive behavior intervention plans
Audience: Both Grad & Undergrad

8. Address critical issues regarding intervention implementation, student outcome monitoring, and evaluation of intervention effectiveness.
Audience: Both Grad & Undergrad

9. Understand the complexities and challenges that school-based settings contribute towards implicit bias and identify how anti-racist practices can be used regarding the identification of and referral for challenging behavior.
Audience: Both Grad & Undergrad

ED PSYCH 542 – THE BIOLOGICAL BASIS OF BEHAVIOR
3 credits.

Focuses on neuroscience foundational concepts relevant to clinical mental health practice, neuroanatomy, neurophysiology, psychopharmacology, disease states; ontological and phylogenic neurodevelopment. Provides an overview of ethical/cultural implications of these scientific advances. Ethical/Cultural/Economic Applications.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the structures and functions of the central nervous system.
Audience: Both Grad & Undergrad

2. Describe the development of the central nervous system across the life span.
Audience: Both Grad & Undergrad

3. Describe the relationship between neuroanatomy structure and function.
Audience: Both Grad & Undergrad

4. Define the clinical significance and application of neuroanatomy.
Audience: Graduate

5. Describe the relationship between the central nervous system and disabilities and disorders.
Audience: Both Grad & Undergrad

6. Describe techniques in imaging and psychophysiology.
Audience: Both Grad & Undergrad

ED PSYCH 551 – QUANTITATIVE ETHNOGRAPHY
3-4 credits.

Explores the theoretical foundations and practical use of quantitative ethnography, focusing on new insights in the field of cognitive modeling and automated coding and their use in applied fields such as anthropology, education, market research, product development, assessment, and training.
Requisites: ED PSYCH 301 or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Explore the foundations and practical use of quantitative ethnography
Audience: Both Grad & Undergrad

2. Discuss the unification of quantitative and qualitative methodologies in a quantitative ethnographic framework
Audience: Both Grad & Undergrad

3. Analyze the validity and reliability of learning analytics
Audience: Both Grad & Undergrad

4. Conduct quantitative ethnographic analyses of their own data including cognitive modeling, automated coding, writing research memos, and writing up their quantitative ethnographic study
Audience: Both Grad & Undergrad

5. Apply peer review commentary and write a final quantitative ethnography analysis
Audience: Graduate

ED PSYCH 560 – FOUNDATIONS OF QUANTITATIVE AND QUALITATIVE RESEARCH METHODS
6 credits.

Presents introductory research procedures in the social sciences, including the exploration of theoretical foundations and practical use of basic tools and programs needed for quantitative and qualitative data analysis. Examines how different methodologies can complement or compete with the other, and showcases how pertinent quantitative and qualitative methods are applied in the field of learning analytics with particular emphasis on data about - and therefore issues in - learning environments such as classrooms, online courses, apprenticeships and internships, museum exhibits, after school programs, and other formal and informal educational contexts.
Requisites: Satisfied Quantitative Reasoning (QR) B requirement or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Draw connections via discovery and analysis of foundational quantitative, qualitative, and mixed methods approaches.
Audience: Both Grad & Undergrad

2. Discover the theoretical foundations of regression analysis as well as apply it to real datasets.
Audience: Both Grad & Undergrad

3. Analyze data and draw meaningful conclusions with regard to research questions.
Audience: Both Grad & Undergrad

4. Critically read and evaluate social science publications that use regression models as analytic tools.
Audience: Both Grad & Undergrad

5. Collect and qualitatively analyze thick collections of data.
Audience: Both Grad & Undergrad

6. Engage in a rigorous process of documenting methods, assumptions, and conclusions.
Audience: Graduate

7. Apply methods to a variety of learning analytics research via written memos and projects.
Audience: Graduate

ED PSYCH 570 – FOUNDATIONS OF EDUCATIONAL MEASUREMENT
3 credits.

Theory of mental measurement, types of scales, reliability, validity, psychometric evaluation of published tests.
Requisites: Declared in Educational Psychology: Professional Educator (MSPE)
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021

ED PSYCH 575 – INSTRUCTIONAL DESIGN FOR LEARNING ANALYTICS
3 credits.

Explores the theoretical foundations and practical use of learning analytics for instructional design. Preparation for professional practice with hands-on experience designing learning environments modeled to predict success and retention. Focuses on understanding the ways in which learning analytics can be used to develop experiences and environments that support strategic learning outcomes.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply a variety of models to learning experience design problems
Audience: Graduate

2. Evaluate and select learning analytics tools and methods to answer pedagogical questions
Audience: Graduate

3. Iteratively improve learning design and facilitation practices using learning analytics data
Audience: Graduate

4. Discuss practices, issues, challenges, and opportunities surrounding the use of learning analytics in instructional design
Audience: Graduate

ED PSYCH 615 – CONVERSATIONS AND VISUALIZATIONS
3 credits.

Introduction to communication methods using learning analytics data. Presentation modes include verbal conversations and visual representations. Addresses questions including: What data is consumable? How can we make this data meaningful for a client? Etc. Practice with stakeholder reports and presentations allows engagement in meaningful and effective communication strategies to enhance understanding of learning analytics data.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the benefits of data visualization for learning analytics
Audience: Graduate

2. Evaluate and select visualizations that are appropriate for a given data story, context, and audience
Audience: Graduate

3. Code and create new information visualizations
Audience: Graduate

4. Discuss practices, issues, challenges, and opportunities surrounding the use of learning analytics visualizations
Audience: Graduate

5. Identify and use appropriate accessibility strategies for visualizations
Audience: Graduate

ED PSYCH 621 – ADOLESCENT DEVELOPMENT IN EDUCATIONAL CONTEXTS
2 credits.

Overview of physical, cognitive, emotional, and social development during adolescence as these factors influence and are influenced by young people's experiences in educational institutions.
Requisites: Declared in Curriculum and Instruction MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and summarize basic features of physical, cognitive, social, and psychological development during the middle and high school years
Audience: Graduate

2. Summarize why and how educational programs can foster healthy individual development and learning in adolescence
Audience: Graduate

ED PSYCH/COM ARTS 626 – YOUTH DEVELOPMENT AND SOCIAL MEDIA: INTERDISCIPLINARY TRAINING SEMINAR
1 credit.

Advanced level seminar that involves critical analysis of conceptual and methodological issues underlying empirical research on how social media affect and are affected by adolescent development, provides a venue for feedback on design of research studies involving youth and social media, and fosters interdisciplinary approaches to studying connections between youth development and social media use.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2021
Learning Outcomes: 1. Become familiar with conceptual and methodological approaches to studying youth development and social media use
Audience: Graduate

2. Sharpen the ability to read, understand, and critique research studies in the social sciences, through sustained readings and class discussion
Audience: Graduate

3. Learn how to formulate an original and theoretically meaningful research proposal in the area of social media, youth, and well-being
Audience: Graduate

4. Become clear and confident public speakers in an academic group setting
Audience: Graduate

ED PSYCH 631 – SUPERVISION OF SCHOOL PERSONNEL
1 credit.

An introduction to principles and techniques used in the supervision of school personnel, including pre-service candidates and professional school staff. A range of supervisory strategies aimed at enhancing teaching and learning in the classroom will be examined. Gain knowledge in clinical supervision, adult learning theory, and evaluation systems used to improve teaching and learning.
Requisites: Declared in Educational Psychology: Professional Educator (MSPE)
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Gain knowledge of models, principles and techniques used in the supervision of school personnel.
Audience: Graduate

2. Gain knowledge in clinical supervision, adult learning theory, and evaluation systems used to improve teaching and learning.
Audience: Graduate

3. Identify interpersonal skills necessary for effective supervision of school personnel
Audience: Graduate

4. Develop strategies for effectively supervising others in school settings.
Audience: Graduate

ED PSYCH 632 – PRACTICUM IN SUPERVISION OF SCHOOL PERSONNEL
1 credit.

Designed to enhance the practical application of principles and techniques used in the supervision of school personnel covered in Supervision of School Personnel. A variety of interactive exercises and activities are incorporated into the course to assist in the development of practical skills. Apply principles covered in the course in school settings and with supervisees.
Requisites: Declared in Educational Psychology: Professional Educator (MSPE)
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Apply principle and techniques used in the supervision of school personnel.
Audience: Graduate

2. Work effectively with supervisees in school settings to enhance student learning and instruction.
Audience: Graduate

3. Identify a personal model of supervision for use in school settings.
Audience: Graduate

4. Develop professional development activities appropriate for school personnel.
Audience: Graduate

ED PSYCH 633 – SUPPORTING STUDENTS' SOCIAL/EMOTIONAL WELL-BEING
3 credits.

Examines promotion, prevention, and intervention approaches and strategies relating to how to best address students' social, emotional, and behavioral needs within the school setting. Examine ways to promote positive development within students. Evaluate prevention programs and approaches and how to implement these in school settings. Explore systematic approaches for addressing social, emotional, and behavioral needs once they are present. Explore these strategies at each level of K-12 education (i.e., elementary, middle, and high).
Requisites: Declared in Educational Psychology: Professional Educator (MSPE) MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Identify, explain, and apply the core foundational concepts within the field of prevention science, including promotive and protective factors, risk factors, models of prevention and early intervention, implementation issues, and an understanding of the role that research plays within prevention and corresponding implementation of programs.
Audience: Graduate

2. Define, understand, and explore the connections between social/emotional/behavioral functioning and academic achievement and general well-being.
Audience: Graduate

3. Be familiar with the principles and criteria of evidence-based research and practice; be able to apply these criteria to describe the strengths, weaknesses and supporting evidence for diverse social, emotional, and behavioral interventions.
Audience: Graduate

4. Identify, examine, and become knowledgeable about school-wide interventions for supporting educationally positive learner environments.
Audience: Graduate

ED PSYCH 640 – FOUNDATIONS OF INSTRUCTIONAL COACHING
3 credits.

As instructional leaders, coaches play an important role in building the capacity and collective efficacy of school teams. Begin to explore the strategies at the heart of this process by engaging in discussions about the role of the instructional coach, the various models of instructional coaching, and the diverse ways instructional coaches collaborate with teachers and school leaders in and out of the classroom to support students as learners. Explore effective questioning techniques, coaching conversations, facilitation strategies, working with adult learners, navigating conflict, and verbal and nonverbal communication skills. While instructional coaches provide confidential, non-evaluative, job-embedded professional learning for fellow educators, they must also advocate for their own ongoing needs as learners, build trusting relationships with colleagues, and garner support from administration.
Requisites: Declared in MS Educational Psychology: Professional Education (MSPE) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the philosophy and core practices for Instructional Coaching.
Audience: Graduate

2. Examine the the core practices for implementing Instructional Coaching.
Audience: Graduate

3. Plan coaching cycles in a way that establishes a culture of collective efficacy in your school or district.
Audience: Graduate

4. Develop strategies for evaluating the impact of coaching on student and teacher learning.
Audience: Graduate

ED PSYCH 641 – ORGANIZATIONAL CHANGE AND INSTRUCTIONAL COACHING
3 credits.

Designed to support coaches and coaching supervisors in leadership, management, and the design of educational organizations. Explore how to build collective knowledge, effective systemic processes, and progress monitoring capacity across an organization. Includes designing and leveraging coaching roles so that they can advance organizational and student learning outcomes.
Requisites: ED PSYCH 640
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2022
Learning Outcomes: 1. Develop a clear understanding of organizational change issues as they relate to instructional coaching.
Audience: Graduate

2. Analyze and critique structural and cultural features of organizations that impede and support coaching efforts.
Audience: Graduate

3. Apply organizational theory to develop strategies to utilize coaching as an organizational change mechanism operating at the individual, school, and system levels.
Audience: Graduate

ED PSYCH 642 – ASSESSMENT ANALYSIS AND INSTRUCTIONAL DECISION-MAKING
3 credits.

Learn about and explore multiple types of assessments and sets of data to conduct analysis that informs instructional practice and instructional adjustments. Focus on how to engage in productive coaching conversations with teachers and other instructional leaders about effectively designing and using assessment data to enhance student learning outcomes.
Requisites: ED PSYCH 640
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the purpose and cycle length of multiple forms of assessments and how they can best be utilized for student learning and success.
Audience: Graduate

2. Become assessment literate.
Audience: Graduate

3. Engage in discussion and collaboration with peers through online Professional Learning Communities (PLCs) as a means of reflecting, analyzing, understanding, and contextualizing course content.
Audience: Graduate

4. Analyze data gathered from different assessments (individually and in PLCs) to better understand how data can be used as an effective coaching tool.
Audience: Graduate

5. Develop a series of coaching conversations.
Audience: Graduate

6. Evaluate your own progress as a coach.
Audience: Graduate

7. Examine and disrupt the historical and institutional biases and inequities in common assessments.
Audience: Graduate

ED PSYCH 643 — PRACTICUM FOR INSTRUCTIONAL COACHING
2 credits.

Designed to integrate and apply concepts and practices from the previous coaching courses, engage in discussions and readings to think critically and reflect on coaching practices. Engage in coaching activities at the individual and/or team level and take an active role in the online Instructional Coaching Professional Learning Community at UW-Madison. Provides additional opportunities to engage in collaborative inquiry into coaching practices that account for sociocultural and student-centered instructional practices, attention to components of adult learning theory, and analysis of coaching roles through language use and norms of facilitation.
Requisites: ED PSYCH 642
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Implement Instructional Coaching cycles to hone your craft through reflective analysis.
Audience: Graduate

2. Engage a critical lens to foster the development of responsive instruction in the classroom (including attention to individual students by designing culturally relevant pedagogy, differentiating instruction for learning needs, providing explicit support for English Language Learners, etc.)
Audience: Graduate

3. Articulate and refine your coaching beliefs by drawing on research and examining your own practice.
Audience: Graduate

ED PSYCH 695 — CAPSTONE IN LEARNING ANALYTICS
5-6 credits.

Introduces guest speakers who specialize in applying learning analytics in a variety of professional environments and to a variety of time-sensitive topics (spanning between the student-level within a classroom, institutional effectiveness at a university, educational technology development, national standardized assessments, and beyond). Engage in a comprehensive consulting project that pairs student teams with a learning organization of their choice to design and produce a consulting report to be presented to key stakeholders. Builds on knowledge and skills learned in prior courses and requires application of program concepts in authentic contexts.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Connect and apply learning analytics theories, concepts, methods, and practices to projects and assignments
Audience: Graduate

2. Explore a variety of learning analytics issues, contexts and careers via guest speaker presentations and interviews
Audience: Graduate

3. Ascertain client needs and collaborate with peers on a professional consulting project
Audience: Graduate

4. Employ analyses and present findings and recommendations for portfolio-worthy capstone project
Audience: Graduate

ED PSYCH 699 — INDEPENDENT READING UNDERGRAD
1-6 credits.

Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ED PSYCH 709 — SEMINAR IN RESEARCH IN EDUCATIONAL PSYCHOLOGY I
3 credits.

Areas of research in field, emphasis on logic of inquiry and development of strategies for investigating particular problems.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ED PSYCH 710 – SEMINAR IN RESEARCH IN EDUCATIONAL PSYCHOLOGY II
3 credits.

Planning and conducting empirical research project, with assistance from faculty advisor and course faculty.
Requisites: ED PSYCH 709
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ED PSYCH 711 – CURRENT TOPICS IN EDUCATIONAL PSYCHOLOGY
1-3 credits.

Current issues in educational psychology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ED PSYCH 712 – EDUCATIONAL PSYCHOLOGY DIVERSITY SEMINAR
1 credit.

Applies principles of educational psychology to the study of various aspects of diversity in human learning and development. Course readings and participation in diversity events sponsored by the department or other university organizations form the basis for class discussions of how diversity impacts the study of educational psychology.
Requisites: Declared in Educational Psychology PhD or School Psychology PhD program.
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Acquire a strong foundation in current and past theories, research findings, and methodologies in student's program area.
Audience: Graduate

2. Use critical thinking skills to synthesize existing knowledge, evaluate strengths and limitations in existing theory and research, and identify issues in need of additional inquiry.
Audience: Graduate

3. Demonstrate a knowledge of and sensitivity to human diversity in terms of individual abilities and orientations and sociocultural backgrounds.
Audience: Graduate

ED PSYCH/COUN PSY/CURRIC/ED POL/ELPA/RP & SE 719 – INTRODUCTION TO QUALITATIVE RESEARCH
3 credits.

Provides an overview of qualitative inquiry, examining assumptions, standards, and methods for generating and communicating interpretations. Methodological and theoretical works illustrate case study, ethnography, narrative, and action research. Does not include a field method component.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ED PSYCH 720 – CHILD DEVELOPMENT
3 credits.

Individual development in infancy and childhood. Individual differences in and contextual influences on physical, cognitive, social, and personality development.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ED PSYCH 721 – ADOLESCENT DEVELOPMENT
3 credits.

Individual differences in and contextual influences on physical, cognitive, social, and personality development.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ED PSYCH/COUN PSY 723 – DEVELOPMENTAL PROCESSES ACROSS THE LIFE SPAN
3 credits.

Life-span perspective on studying individual development from conception to death. Emphasis on multidisciplinary, multidirectional, and contextual approaches to physical, psychological, social, and intellectual developmental processes.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

ED PSYCH/HDFS 725 – THEORY AND ISSUES IN HUMAN DEVELOPMENT
3 credits.

This course covers both classic and contemporary theories, providing students with a firm grounding in the theoretical perspectives that have shaped and are shaping understandings of human development across the life-span. The course explores the historical roots of contemporary perspectives and examines the development of theoretical conceptualizations both within and across theoretical perspectives.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ED PSYCH/COUN PSY/HDFS 726 – ETHNIC AND RACIAL DIVERSITY IN SOCIAL DEVELOPMENT
3 credits.

Review of empirical and theoretical research on ethnic/racial diversity in social development across childhood, adolescence and early adulthood with emphasis on implications for counseling and school psychology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021

ED PSYCH/COUN PSY/RP & SE 736 – SEMINAR IN PSYCHOLOGY OF INDIVIDUAL DIFFERENCES
3 credits.

Seminar in the psychology of individual differences, providing broad and general coverage of theory and research related to individual and cultural differences.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

ED PSYCH/COUN PSY/RP & SE 737 – SEMINAR IN HISTORY AND SYSTEMS OF PSYCHOLOGY
3 credits.

Seminar in the history of psychology, providing broad and general coverage of the development of psychology as a scientific discipline. Includes coverage of philosophy of science and systems of psychological inquiry, with applications to current research in psychology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

ED PSYCH 740 – COGNITIVE ASSESSMENT OF CHILDREN IN THE SCHOOLS
3 credits.

Theories of intelligence and intelligence testing, construction and validation of the Binet and Wechsler tests, administration of tests, interpretation of test results and report writing, recent research in intelligence testing.
Requisites: ED PSYCH 760
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ED PSYCH 741 – SOCIAL, EMOTIONAL, AND BEHAVIORAL ASSESSMENT
3 credits.

Knowledge and skills necessary to conduct comprehensive assessments of social, emotional, and behavioral difficulties in children and adolescents; theoretical foundations; assessment procedures and instruments; diagnostic and eligibility criteria; early identification and intervention.
Requisites: ED PSYCH 740
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ED PSYCH 742 – ASSESSMENT AND INTERVENTION FOR ACADEMIC SKILL PROBLEMS
3 credits.

Assessment methods and intervention strategies for children with academic skill problems in educational settings; practice in application of assessment and intervention approaches to case studies.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ED PSYCH 743 – DESIGN AND ANALYSIS OF SINGLE-CASE RESEARCH
3 credits.

Increases the capacity of graduate students to conduct high-quality single-case intervention research, by improving the scientific credibility of both the methodology; and the visual and statistical analysis of their studies. Equip skills and knowledge to critically analyze published intervention research and to implement quality intervention research studies.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ED PSYCH 745 – DESIGNING AND MANAGING THE LEARNING ENVIRONMENT
2 credits.

Provides knowledge and skills necessary to effectively and efficiently engage with students and manage the classroom environment. Ability to support the academic and social-emotional growth of children enhanced through knowledge gained regarding children's self-regulation, motivation, school climate, multi-tiered behavioral interventions, and school wide positive behavior support.
Requisites: Declared in Educational Psychology: Professional Educator (MSPE)
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe several models of classroom management and identify those that will guide your teaching practices.
Audience: Graduate

2. Identify variables, in particular teacher practices, which affect classroom climate and strategies to facilitate a positive climate.
Audience: Graduate

3. Effectively structure the learning environment and activities.
Audience: Graduate

4. Identify factors that influence students' motivation to achieve in school and identify means to increase student motivation.
Audience: Graduate

5. Identify and teach the skills students need to become self-regulated learners.
Audience: Graduate

6. Analyze challenging behavior in the classroom and apply positive behavioral strategies and supports in class-wide and individual interventions with students.
Audience: Graduate

7. Identify strategies for working effectively with students' families in order to facilitate student development and achievement.
Audience: Graduate

8. Identify school/district policies and procedures that impact classroom management.
Audience: Graduate

ED PSYCH 752 – ENGAGING WITH EDUCATION RESEARCH
3 credits.

An introduction to issues in consuming and conducting education research. Focus on research paradigms and methods frequently used in education research.
Requisites: Declared in Educational Psychology: Professional Educator (MSPE), MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Describe several approaches to educational research and identify them in research articles
Audience: Graduate

2. Review the literature in education and develop research questions
Audience: Graduate

3. Critically evaluate the quality of a research article and identify the limitations of a study
Audience: Graduate

4. Identify issues related to research ethics
Audience: Graduate

5. Prepare a literature review using APA citation and format style
Audience: Graduate

6. Connect research literature to issues of policy and practice
Audience: Graduate

ED PSYCH 760 – STATISTICAL METHODS APPLIED TO EDUCATION I
3 credits.

Introductory descriptive statistics and statistical inference; measures of central tendency and variability, confidence intervals, theory of hypothesis testing, correlation techniques.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ED PSYCH 761 – STATISTICAL METHODS APPLIED TO EDUCATION II
3 credits.

Analysis of variance and covariance, multiple linear regression; chi-square and various nonparametric techniques.
Requisites: ED PSYCH 760
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ED PSYCH 762 – INTRODUCTION TO THE DESIGN OF EDUCATIONAL EXPERIMENTS
3 credits.

Classical experimental designs and their application to educational research, factorial treatment arrangements, confounding, repeated measures design, and related topics.
Requisites: ED PSYCH 761
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ED PSYCH 763 – REGRESSION MODELS IN EDUCATION
3 credits.

An applied introduction to regression techniques is given, covering nonparametric regression, multiple linear regression and logistic regression. All applied analyses are done in the statistical programming language R.
Requisites: ED PSYCH 761
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ED PSYCH/COMP SCI/PSYCH 770 – HUMAN-COMPUTER INTERACTION
3 credits.

Principles of human-computer interaction (HCI); human subjects research methods and procedures, qualitative and quantitative data analysis; and semester-long research project situated in critical domains of HCI, including applications in ubiquitous, affective, assistive, social, and embodied computing.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ED PSYCH 771 – TEST CONSTRUCTION
3 credits.

Procedures for development and analysis of educational tests and questionnaires; strategies for measurement of achievement, attitude, and interests; procedures for item analysis and assessment of reliability and validity.
Requisites: ED PSYCH 760
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ED PSYCH 773 – FACTOR ANALYSIS, MULTIDIMENSIONAL SCALING AND CLUSTER ANALYSIS
3 credits.

Major types of factor models, nonmetric multidimensional scaling methods and clustering procedures. Methods of data collection, mathematical algorithms, estimating the number of factors, transformation and identification of factors.
Requisites: ED PSYCH 761
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ED PSYCH/ELPA 780 – TEACHER LEADERSHIP AND LEARNING COMMUNITIES
3-4 credits.

Focuses on knowledge and skills teachers need to be leaders in their schools in facilitating the development of strong learning communities that include students, teachers, families, administrators, and other educators. Understand key concepts, theories, and models used in building and sustaining effective learning communities; develop skills in creating practices that contribute to effective teacher leadership; and identify and strengthen skills needed to lead schools to build learning communities that promote student learning.
Requisites: Declared in Educational Psychology: Professional Educator (MSPE)
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2020

ED PSYCH/COUN PSY/CURRIC/ED POL/ELPA/RP & SE 788 – QUALITATIVE RESEARCH METHODS IN EDUCATION: FIELD METHODS I
3 credits.

Introductory field methods experience in qualitative research. Learn to define good research questions, determine which methods of data collection and analysis are useful for addressing those questions, engage in these methods, reflect on their utility in education research.
Requisites: ED PSYCH/COUN PSY/CURRIC/ED POL/ELPA/RP & SE 719
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ED PSYCH/COUN PSY/CURRIC/ED POL/ELPA/RP & SE 789 – QUALITATIVE RESEARCH METHODS IN EDUCATION: FIELD METHODS II
3 credits.

Focus on data analysis and translation of finds and implications. Gain theoretical and practical knowledge and skills regarding coding and analysis techniques, use of qualitative analytic tools, strategies for sharing findings with audiences beyond research team.
Requisites: ED PSYCH/COUN PSY/CURRIC/ED POL/ELPA/RP & SE 788
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ED PSYCH 791 – MASTER OF SCIENCE FOR PROFESSIONAL EDUCATORS CAPSTONE
1-4 credits.

Culminating project that must be completed successfully to qualify to earn the degree. Integrates knowledge, skills, and experiential learning to demonstrate a broad mastery of learning across the program curriculum.
Requisites: Declared in Educational Psychology: Professional Educator (MSPE)
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate the application of knowledge from the courses taken in the MSPE program by completing a personalized thesis project, either using evidence-based or researched-based practices.
Audience: Graduate

2. Compile evidence of mastery of evidence-based practices, and information resources to engage and challenge all learners that lead to content knowledge, critical thinking, creativity, self-evaluation, and self-directed learning.
Audience: Graduate

3. Develop and provide a presentation that incorporates reflection of knowledge and skills gained during engagement in the MSPE program.
Audience: Graduate

ED PSYCH 795 – INTRODUCTION TO LEARNING SCIENCES I
3 credits.

Survey of major theories and elementary cognitive and social processes in learning.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ED PSYCH 796 – INTRODUCTION TO THE LEARNING SCIENCES II
3 credits.

Principles of learning emphasizing higher order cognitive and social processes.
Requisites: ED PSYCH 795
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ED PSYCH/CURRIC/L I S 803 – COMPUTATIONAL RESEARCH METHODS
3 credits.

Provides a broad overview of ways of formulating and investigating novel questions with tools from educational data mining and learning analytics including social network analysis, natural language processing, Markov modeling, Bayesian inference, and agent-based modeling.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

ED PSYCH/CURRIC 821 – CONSTRUCTIONISM
3 credits.

Survey of constructionist theory, research, and tools. Develop a deeper understanding of the history, theories, philosophies, tools, research, and technologies of constructionism and its children.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

ED PSYCH/ELPA 822 – INTRODUCTION TO QUANTITATIVE INQUIRY IN EDUCATION
3 credits.

Utilize the concepts and methods of quantitative social science research to conduct research on education issues. Topics include hypothesis testing, statistical inference, point estimates, graphic and numerical data displays, correlation and regression.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ED PSYCH/ELPA 827 – SURVEYS AND OTHER QUANTITATIVE DATA COLLECTION STRATEGIES
3 credits.

Methods and concepts of survey research methods as they are commonly used in education research. Strategies include surveys (phone, mail, electronic, in person), logs/diaries, and experience sampling instruments. Emphasis is given to self-administered surveys, including periodic surveys, since these strategies are the most common in education research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

ED PSYCH 828 – BEGINNING PRACTICUM IN SCHOOL PSYCHOLOGY
1 credit.

Develop foundational competencies in the practice of professional psychology, including professional values and attitudes, individual and cultural diversity; ethical standards and policy; reflective practice/self-care; relationships; scientific knowledge and method; and research/evaluation. Develop professional identities as psychologists and emerging clinical skills.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop knowledge related to basic ethical principles that guide the field of school psychology and apply these to school-based practice.
Audience: Graduate

2. Gain understanding of the purpose of supervision in the field of school psychology and develop knowledge of the developmental model of supervision used in the UW-Madison school psychology program.
Audience: Graduate

3. Acquire knowledge of several introductory clinical skills (i.e., building a therapeutic alliance, listening, influencing responses).
Audience: Graduate

4. Apply developing clinical skills in mock and introductory micro-skill activities.
Audience: Graduate

5. Acquire knowledge of school psychology practice through the observation of a school psychologist.
Audience: Graduate

ED PSYCH 829 – CLINIC PRACTICUM IN SCHOOL PSYCHOLOGY
3 credits.

Develop competence in broad areas of school psychological practice, including assessment, consultation, and intervention. Deliver a wide range of psychological and educational services to clients including individual and group interventions; academic, social, emotional, and behavioral assessments; and parent and/or teacher consultation.
Requisites: ED PSYCH 828
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply foundational skills in clinical supervision and reflective practice to enhance school psychological practice.
Audience: Graduate

2. Develop professional identity and establish professional behaviors necessary to work with a diverse range of clients, including children, adolescents, university students, and families and engage in anti-racist and socially just school psychological practice.
Audience: Graduate

3. Apply skills in psychological assessment, intervention, consultation, supervision, and evaluation through activities and casework in a clinic setting.
Audience: Graduate

4. Identify and apply theoretical foundations relevant to psychological work and articulate case conceptualization applied within casework.
Audience: Graduate

5. Apply diagnostic and classification systems as part of psychoeducational evaluation to identify whether children, adolescents, and university students meet criteria for a range of disabilities and disorders
Audience: Graduate

ED PSYCH 830 – FIELD PRACTICUM IN SCHOOL PSYCHOLOGY
6 credits.

Develop competence in delivering school psychological services in a school or other applied setting under the supervision of a practicing psychologist. Provide assessment, consultation, and intervention with increasing independence under the direct supervision of field supervisors and the university coordinator.
Requisites: ED PSYCH 829
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply skills in psychological assessment, consultation, intervention, supervision, and evaluation in schools or other field settings under supervision
Audience: Graduate

2. Acquire new skills in psychological assessment, consultation, intervention, supervision, and evaluation through interaction with other professionals in the field and with peers in other field settings
Audience: Graduate

3. Receive constructive feedback about professional skills and behavior from supervisors
Audience: Graduate

4. Acquire knowledge about ethics and law in school psychology through readings, class discussions, and applied experiences
Audience: Graduate

5. Apply knowledge about ethical and legal issues in field settings
Audience: Graduate

6. Gain experience with students in special education settings
Audience: Graduate

7. Analyze the culture, climate, organization, and policies of field settings
Audience: Graduate

8. Examine challenging issues confronting psychologists practicing in schools today
Audience: Graduate

9. Identify models of supervision and factors that influence supervision effectiveness
Audience: Graduate

10. Accrue evidence of applied competencies for inclusion in the School Psychology Portfolio
Audience: Graduate

ED PSYCH 840 – ADVANCED PRACTICUM IN SCHOOL PSYCHOLOGY
1 credit.

Expand competence in delivering a range of psychological services in a variety of health service psychology settings. Specific experiences will be individualized and may allow for specialization in a specific area of practice or provide training to enhance foundational skills.
Requisites: ED PSYCH 830
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Utilize effective supervisory strategies as a supervisee within a developmental model of supervision.
Audience: Graduate

2. Identify elements of the supervisory relationship that contribute to success as a supervisee.
Audience: Graduate

3. Engage in group supervision with peers in community and university-based advanced practicum sites.
Audience: Graduate

4. Participate in individual supervision with a university-based licensed psychologist.
Audience: Graduate

5. Identify supervision and professional consultation opportunities in the post-doctoral practice.
Audience: Graduate

ED PSYCH/ED POL/ELPA/RP & SE 842 – LEGAL FOUNDATIONS OF SPECIAL EDUCATION AND PUPIL SERVICES
3 credits.

Legal requirements and issues relative to special education and pupil services programs; special education, juvenile justice, programs for English language learners, programs for children who are homeless; examination of applicable federal and state statutes and case law.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Describe various legal issues and identify those issues inherent in the delivery of pupil services.
Audience: Graduate

2. Explain the foundation created by federal disability law (Section 504, ADA, IDEA).
Audience: Graduate

3. Describe the relationship between state and federal law in the delivery of special education.
Audience: Graduate

4. Apply legal principles to a set of facts.
Audience: Graduate

5. Explain the relationship between statutory and regulatory requirements and practice.
Audience: Graduate

6. Identify various analytic frameworks that guide legal analysis.
Audience: Graduate

7. Apply principles and/or frameworks to a situation or issue.
Audience: Graduate

8. Analyze existing policies and practice from a legal perspective.
Audience: Graduate

9. Explain the dynamic nature of this branch of school law and will identify tools and resources available to help them remain current.
Audience: Graduate

ED PSYCH 844 – CHILDHOOD AND ADOLESCENT PSYCHOPATHOLOGY IN SCHOOLS
3 credits.

Reviews major psychological disorders of childhood and adolescence as relevant to schools; examines etiology and developmental course, documenting major characteristics and behavior correlates of disorders; provides a comparison of major diagnostic and classification systems for childhood psychopathology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ED PSYCH 845 – PSYCHOPHARMACOLOGICAL TREATMENTS FOR CHILDREN AND ADOLESCENTS
3 credits.

Provides an overview of psychopharmacological treatments of childhood and adolescent disorders in educational settings. Topics covered include basic biological principles of drugs and drug treatment, specific drug classifications and their biological actions, drug treatments for childhood disorders, and professional issues.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019

ED PSYCH 871 – TEST THEORY II
3 credits.

Theory underlying validity, scoring procedures, prediction and classification, normal, binomial, Poisson and logistic model, including item response theory models.
Requisites: ED PSYCH 761
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020

ED PSYCH/HDFS/NURSING/SOC WORK 880 – PREVENTION SCIENCE
3 credits.

Theoretical, empirical and practical foundation for prevention science as it relates to the prevention of human social problems. Research and evaluation methods, program design strategies, best practices and policy as they relate to the field of prevention are also examined.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ED PSYCH/HDFS/NURSING/SOC WORK 881 – CAPSTONE SEMINAR IN PREVENTION SCIENCE
1 credit.

An opportunity to meet with prevention professionals and scholars from across campus and the community to explore current and emerging issues of prevention research and professional practice. Students must complete HDFS/ED PSYCH/NURSING/SOC WORK 880 before taking this course.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

ED PSYCH 921 – SEMINAR IN ADOLESCENT DEVELOPMENT
2-3 credits.

Selected aspects of intellectual, emotional, physiological, personality and social development in adolescence. Understanding adolescent behavior in educational settings.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2020

ED PSYCH 925 – ADVANCED SEMINAR IN HUMAN DEVELOPMENT
2-3 credits.

Provides an in-depth review and analysis of specific areas of human development, such as cognitive, moral, language, neurological, social, and personality development.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023

ED PSYCH 942 – SYSTEMS OF CONSULTATION IN SCHOOL PSYCHOLOGY
2-3 credits.

Mental health, behavioral and organization development models of consultation in school psychology. Overview of evidence-based prevention and intervention programs as implemented in a consultation problem-solving process.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ED PSYCH 943 – INTERNSHIP IN SCHOOL PSYCHOLOGY
1-12 credits.

Supervised individualized placements in appropriate schools, institutions, and community agencies; controlled exposure to job demands of school psychologists; experience in dealing with problem children, adolescents, and their families.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ED PSYCH/SOC WORK 945 – EVALUATION RESEARCH
3 credits.

A comprehensive introduction to practice of program evaluation research in social welfare and human development. Developments in descriptive, experimental, quasi-experimental, theory-driven, and naturalistic evaluations detailed. Topics include assessment, evaluation design, monitoring, outcome evaluation, selection bias, program theory, meta-analysis and utilization.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

ED PSYCH 946 – ADVANCED ASSESSMENT AND INTERVENTION TECHNIQUES
3 credits.

Advanced assessment practices and the corresponding link to intervention; intervention strategies and programs designed to improve the academic, emotional, behavioral and social functioning of children and adolescents.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ED PSYCH 947 – EVIDENCED-BASED CHILD AND ADOLESCENT PSYCHOTHERAPY
3 credits.

Critical review of various psychotherapeutic approaches (cognitive, behavioral, psychodynamic) with special emphasis on identifying and implementing evidence-based assessment and interventions for a variety of behavioral and emotional problems experienced by children and adolescents.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ED PSYCH 948 – RESEARCH AND MEASUREMENT SEMINAR IN SCHOOL PSYCHOLOGY
3 credits.

Focus on research and measurement methods, special topics, technical writing, and ethical principles in conducting research in school psychology. Emphasis on skills needed to design and complete individual research projects.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ED PSYCH 960 – STRUCTURAL EQUATION MODELING
3 credits.

Introduction to the theory and practice of structural equation modeling in the educational and social sciences, including path analysis, confirmatory factor analysis and hybrid models.
Requisites: ED PSYCH 763
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ED PSYCH 963 – DESIGN & ANALYSIS OF QUASI-EXPERIMENTS FOR CAUSAL INFERENCE
3 credits.

An applied introduction to causal inference with regression discontinuity designs, interrupted time series designs, non-equivalent control group designs (matching designs), and instrumental variable designs is given.
Requisites: ED PSYCH 762 and 763
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ED PSYCH 964 – HIERARCHICAL LINEAR MODELING
3 credits.

Introduction to the statistical methodology of hierarchical linear modeling, including random intercept and random slope and intercept models; models for longitudinal data; and multilevel generalized linear models.
Requisites: ED PSYCH 763
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify the properties of clustered data and explain statistical treatments of multilevel data
Audience: Graduate

2. Summarize and visualize multilevel data within and across levels
Audience: Graduate

3. Select and apply multilevel models that are appropriate for various forms of clustered data
Audience: Graduate

4. Interpret multilevel analysis results and communicate statistical findings

Audience: Graduate

5. Write a project report for multilevel analysis including program code
Audience: Graduate

ED PSYCH 965 – APPLIED BAYESIAN STATISTICS FOR EDUCATION RESEARCH
3 credits.

Covers the basic elements of Bayesian statistics through lecture, discussion and practice. Focuses on why the Bayesian perspective provides a powerful alternative to the frequentist perspective. Topics to be covered include; Bayes' theorem, Markov chain Monte Carlo sampling and the "rjags" program, Bayesian hypothesis testing, Bayesian model building and evaluation, Bayesian approaches to missing data, Bayesian model averaging, Bayesian multilevel models and latent variable models, and philosophical debates within the Bayesian paradigm of statistics.
Requisites: ED PSYCH 763
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand, analyze and write up an empirical study using methods of Bayesian statistical inference.
Audience: Graduate

2. Analyze and properly interpret data from a Bayesian perspective.
Audience: Graduate

ED PSYCH 967 – META-ANALYSIS
3 credits.

Meta-analysis is the set of statistical methods and practices for synthesizing evidence collected from multiple sources, such as multiple studies on the same topic. Often conducted as part of a systematic literature review, meta-analyses play an increasingly prominent role in education research, psychology, and many other areas of social and behavior science. Covers the stages of the research synthesis process and the statistical methods used for conducting quantitative syntheses of social-scientific research. Focus on practical application and interpretation of meta-analytic methods, enriched with discussion of underlying statistical theory. Major topics include the scope of research syntheses, systematic search and screening procedures, effect size calculations, summary meta-analysis, meta-regression, dependent effect sizes, selective reporting and publication bias analysis.
Requisites: ED PSYCH 763
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Conduct a systematic, replicable search of literature databases for purposes of identifying studies eligible for a meta-analysis.
Audience: Graduate

2. Extract data and calculate effect sizes and associated information from primary study reports.
Audience: Graduate

3. Analyze meta-analytic databases using appropriate statistical techniques.
Audience: Graduate

4. Interpret and critically evaluate the results of summary meta-analyses, meta-regression analyses, and publication bias analyses.
Audience: Graduate

5. Identify limitations and threats to the validity of meta-analytic findings.
Audience: Graduate

ED PSYCH 971 – ADVANCED SEMINAR IN EDUCATIONAL MEASUREMENT AND STATISTICS
1-2 credits.

Discuss a different current article from the educational statistics and measurement literature. Explore a variety of subjects in which one might like to eventually conduct research.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2018

ED PSYCH 990 – RESEARCH OR THESIS
1-12 credits.

Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ED PSYCH/COUN PSY/PSYCH 995 – PREDOCTORAL INTERNSHIP
0 credits.

Registration for Ph.D. students who have successfully defended the dissertation and are in the process of completing the required predoctoral internship.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ED PSYCH 999 – INDEPENDENT READING
1-3 credits.

Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ELECTRICAL AND COMPUTER ENGINEERING (E C E)

E C E 1 – COOPERATIVE EDUCATION PROGRAM
1 credit.

Work experience which combines classroom theory with practical knowledge of operations to provide students with a background upon which to base a professional career.
Requisites: Sophomore standing or member of Engineering Guest Students
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and respond appropriately to real-life engineering ethics cases relevant to co-op work
Audience: Undergraduate

2. Synthesize and apply appropriate technical education to real world technical work
Audience: Undergraduate

3. Communicate effectively in writing and speaking with a range of audiences in the workplace, including those without disciplinary expertise
Audience: Undergraduate

4. Develop professional and transferable habits like time management skills, collaborative problem-solving skills, and research skills for learning new information
Audience: Undergraduate

E C E 203 – SIGNALS, INFORMATION, AND COMPUTATION
3 credits.

Introduction to the signals, information, and computational techniques in electrical engineering.
Requisites: (MATH 211, 217, or 221) or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Manipulate complex numbers in the context of representing sinusoids
Audience: Undergraduate

2. Represent periodic continuous-time signals using the Fourier series
Audience: Undergraduate

3. Represent finite-duration discrete-time signals using the discrete Fourier transform
Audience: Undergraduate

4. Determine sampling parameters for analog-to-digital conversion of signals
Audience: Undergraduate

5. Apply digital filters to discrete-time signals
Audience: Undergraduate

6. Write code using numerical computing software to manipulate signals
Audience: Undergraduate

E C E 204 – DATA SCIENCE & ENGINEERING
3 credits.

A hands-on introduction to Data Science using the Python programming language. Data-centric and computational thinking. Describe, analyze, and make predictions using data from real-world phenomena. Programming in Python. Importing, manipulating, summarizing, and visualizing data of various types. Notions of bias, fairness, and ethics in data science.
Requisites: MATH 112, 114, 171, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Write working code in Python to import, manipulate, analyze, visualize, and otherwise interact with datasets of various types.
Audience: Undergraduate

2. Perform descriptive analyses to extract, summarize, and interpret salient features from datasets.
Audience: Undergraduate

3. Perform predictive analyses to model trends and make predictions from datasets.
Audience: Undergraduate

4. Apply techniques to identify and clean data that contains missing entries, outliers, or other forms of noise or uncertainty.
Audience: Undergraduate

5. Recognize and evaluate potential issues pertaining to bias, fairness, privacy, and ethics in applying data science techniques.
Audience: Undergraduate

E C E 210 – INTRODUCTORY EXPERIENCE IN ELECTRICAL ENGINEERING
2 credits.

An introduction to electrical and electronic devices, circuits and systems including software and hardware focusing on a real-world project.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Create and read electrical circuit schematics and systematically assemble them on a breadboard using discrete components

Audience: Undergraduate

2. Verify operation of electrical circuits using electrical measuring instruments such as multimeters and oscilloscopes
Audience: Undergraduate

3. Use a microcontroller with computer coding to read digital/analog signals, and provide digital/analog outputs that perform simple electrical functions
Audience: Undergraduate

4. Communicate test results from electrical measurements using tables and charts
Audience: Undergraduate

5. Perform simple electrical circuit calculations on quantities such as power, energy, voltage, current, frequency and time
Audience: Undergraduate

E C E 219 – ANALYTICAL METHODS FOR ELECTROMAGNETICS ENGINEERING
2 credits.

Reviews basic calculations in electromagnetic engineering upon which all higher level concepts and physical model construction are based. It emphasizes quantitative calculation mastery in three spatial dimensions. Applies analysis tools from vector calculus to the calculation and prediction of electrical system properties. Examples include calculating electric and magnetic fields, electric potentials, total electric charge, and electric flux from change or current sources.
Requisites: MATH 234 or 376, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Describe infinitesimal increments (length, area, volume) using cartesian, cylindrical, and spherical coordinates
Audience: Undergraduate

2. Compute partial derivatives, gradient, divergence, and curl using cartesian, cylindrical, and spherical coordinates, applied to basic electrostatics and magnetostatics problems
Audience: Undergraduate

3. Compute flux integrals, line integrals, and circulation using cartesian, cylindrical, and spherical coordinates, applied to basic electrostatics and magnetostatics problems
Audience: Undergraduate

4. Calculate total electric charge from specified charge distributions
Audience: Undergraduate

5. Calculate electric fields from specified charge distributions (Coulomb's Law)
Audience: Undergraduate

6. Calculate electric fields from electrostatic potentials
Audience: Undergraduate

7. Calculate electrostatic potentials from electric fields
Audience: Undergraduate

E C E 220 – ELECTRODYNAMICS I
3 credits.

Potential theory; static and dynamic electric and magnetic fields; macroscopic theory of dielectric and magnetic materials; Maxwell's equations; boundary conditions; wave equation; introduction to transmission lines.
Requisites: (PHYSICS 202, 208, or 248) and E C E 219, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Calculate static electric and magnetic fields from charge and current distributions
Audience: Undergraduate

2. Use concepts of electric and magnetic fields to calculate forces, work, and energy
Audience: Undergraduate

3. Develop expressions for macroscopic electric circuit lumped parameters such as inductance and capacitance by applying principles of electric and magnetic fields
Audience: Undergraduate

4. Use boundary conditions on electric and magnetic fields to compute field changes at material discontinuities
Audience: Undergraduate

5. Apply bounce diagrams to calculate time and space distribution of currents and voltages on transmission lines
Audience: Undergraduate

E C E 222 – ELECTRODYNAMICS I
4 credits.

Vector calculus application to electrodynamics problems; potential theory; static and dynamic electric and magnetic fields; macroscopic theory of dielectric and magnetic materials; Maxwell's equations; boundary conditions; wave equation; introduction to transmission lines.
Requisites: (PHYSICS 202, 208, or 248) and (MATH 234 or 376) or member of Engineering Guest Students. Not open to students with credit in E C E 220.
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply concepts from single-variable and vector calculus to solve electrodynamics problems
Audience: Undergraduate

2. Calculate static electric and magnetic fields from charge and current distributions
Audience: Undergraduate

3. Use concepts of electric and magnetic fields to calculate forces, work, and energy
Audience: Undergraduate

4. Use boundary conditions on electric and magnetic fields to compute field changes at interfaces between materials
Audience: Undergraduate

5. Develop expressions for macroscopic electric circuit lumped parameters such as inductance and capacitance by applying principles of electric and magnetic fields
Audience: Undergraduate

6. Apply bounce diagrams to calculate time and space distribution of currents and voltages on transmission lines
Audience: Undergraduate

E C E 230 – CIRCUIT ANALYSIS
4 credits.

Ohm's law, Kirchhoff's laws, resistive circuits, nodal and mesh analysis, superposition, equivalent circuits using Thevenin-Norton theories, op amps and op amp circuits, first-order circuits, second-order circuits, sinusoidal steady state, phasors, RMS value, complex power, power factor, mutual inductance, linear and ideal transformers, ideal filters and transfer functions.
Requisites: MATH 222 and (PHYSICS 202, 208, or 248), or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Solve DC electric circuits composed of resistors, voltage and current sources using Kirchhoff's laws, employing node-voltage and mesh-current analysis along with Thevenin and Norton equivalent circuits
Audience: Undergraduate

2. Analyze circuits employing op amps
Audience: Undergraduate

3. Formulate transient response of first-order and second-order electric circuits incorporating resistors, inductors, capacitors and sources that are switched
Audience: Undergraduate

4. Determine AC steady-state response of electric circuits utilizing phasors and calculation with complex numbers
Audience: Undergraduate

5. Characterize the complex power transferred to and from electric circuits
Audience: Undergraduate

6. Conduct AC analysis of circuits with transformers
Audience: Undergraduate

E C E/PHYSICS 235 – INTRODUCTION TO SOLID STATE ELECTRONICS
3 credits.

An introduction to the physical principles underlying solid-state electronic and photonic devices, including elements of quantum mechanics, crystal structure, semiconductor band theory, carrier statistics, and band diagrams. Offers examples of modern semiconductor structures. Prior experience with MATLAB [such as E C E 203] is strongly encouraged but not required.
Requisites: MATH 222 and (PHYSICS 202, 208, or 248), or member of Engineering Guest Students
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

E C E/COMP SCI 252 – INTRODUCTION TO COMPUTER ENGINEERING
3 credits.

Logic components built with transistors, rudimentary Boolean algebra, basic combinational logic design, basic synchronous sequential logic design, basic computer organization and design, introductory machine- and assembly-language programming.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Perform basic operations on binary representations for data
Audience: Undergraduate

2. Analyze simple combinational and sequential digital logic and memory systems
Audience: Undergraduate

3. Identify the components and operation of an instruction set processor and write programs using assembly language
Audience: Undergraduate

4. Recognize and analyze ethical and professional responsibilities in engineering contexts
Audience: Undergraduate

E C E 270 – CIRCUITS LABORATORY I
1 credit.

Experiments cover Kirchhoff's laws, inductors, basic operational amplifier circuits, and frequency response.
Requisites: E C E 210 and (E C E 230 or concurrent enrollment), or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Compare physical electronic circuit functionality to simulated functionality using computer models
Audience: Undergraduate

2. Create and read electronic circuit schematics and systematically assemble them on a breadboard using discrete components
Audience: Undergraduate

3. Identify electronic components using electronic instruments such as multi-meters, signal generators and oscilloscopes
Audience: Undergraduate

4. Operate electronic circuits with electrical sources such as power supplies and signal generators
Audience: Undergraduate

5. Verify operation of electrical circuits using electronic measuring instruments such as multi-meters and oscilloscopes
Audience: Undergraduate

6. Perform simple electronic circuit calculations on quantities such as voltage, current, power, frequency and time
Audience: Undergraduate

7. Communicate test results from electrical measurements using tables, equations and charts
Audience: Undergraduate

E C E 271 – CIRCUITS LABORATORY II
1 credit.

Experiments cover electronic device characteristics, limitations and applications of operational amplifiers, and feedback circuits.
Requisites: E C E 270 and (E C E 340 or concurrent enrollment), or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Predict electronic circuit outcomes using equations and simulations
Audience: Undergraduate

2. Compare physical electronic circuit functionality to predicted functionality using computer models
Audience: Undergraduate

3. Specify analog circuits to perform linear signal processing with passive and active components such as resistors, capacitors, inductors, transistors and op-amps
Audience: Undergraduate

4. Specify analog circuits to perform non-linear signal processing with passive and active components such as diodes, transistors and op-amps
Audience: Undergraduate

5. Construct circuits to implement linear signal processing such as gain
Audience: Undergraduate

6. Construct circuits to implement non-linear signal processing such as converting AC to DC and boosting DC voltages
Audience: Undergraduate

7. Communicate test results from electrical measurements using tables, equations and charts
Audience: Undergraduate

E C E 303 – INTRODUCTION TO REAL-TIME DIGITAL SIGNAL PROCESSING
2 credits.

Emphasizes the implementation of DSP algorithms on a digital signal processor in "real-time." Many of the signal processing algorithms that were used in E C E 203 will be reviewed in MATLAB and then will be implemented on a floating point signal processor in "real-time" using the C programming language. Explore many basic digital signal processing processes in real-time. Gain the ability to create and develop your own Digital Signal Processing projects for a modern digital signal precessor using an Integrated Development Environment. Lab hardware will be provided.
Requisites: E C E 203 or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Define what it means for a system to be real-time
Audience: Undergraduate

2. Implement a real-time signal processing platform for real-time system evaluation
Audience: Undergraduate

3. Operate a signal processing system to evaluate real-time software performance
Audience: Undergraduate

4. Analyze the performance of real-time software
Audience: Undergraduate

5. Optimize the software performance of a real-time system
Audience: Undergraduate

6. Verify the software performance of a real-time system
Audience: Undergraduate

7. Communicate results from real-time systems using tables, equations and graphs
Audience: Undergraduate

E C E 304 – ELECTRIC MACHINES LABORATORY
1 credit.

Terminal characteristics of electric machines, elements of speed control, voltage regulation, and applications in systems. Emphasis on the experimental approach to the solution of complex physical problems.
Requisites: (E C E 355, 356, or concurrent enrollment) or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the performance characteristics of electric machines, including dc, induction, and synchronous machines
Audience: Undergraduate

2. Use laboratory instrumentation and techniques to take accurate measurements of the performance characteristics of ac machines and their drives
Audience: Undergraduate

3. Prepare high-quality lab reports that accurately and clearly present the results of the experimental tests with explanations of the rationale for the test results, including discussion of discrepancies
Audience: Undergraduate

4. Follow laboratory safety procedures for safely working with ac machines and drives when making experimental measurements
Audience: Undergraduate

E C E 305 – SEMICONDUCTOR PROPERTIES LABORATORY
1 credit.

Introduction to some fundamental properties of semiconductor materials and devices through the use of characterization techniques common in modern electronic industry. These concepts include: charge carriers; energy bands; space charge regions; carrier drift, diffusion and recombination; light emission; and lattice vibrations.
Requisites: E C E 271 and (E C E 335 or concurrent enrollment), or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the relationship between semiconductor material properties and semiconductor device properties, such as mobility, capacitance, and spontaneous/stimulated light emission
Audience: Undergraduate

2. Perform electrical and optical characterization measurements using laboratory instruments
Audience: Undergraduate

3. Write technical reports based on experimental results
Audience: Undergraduate

E C E 313 – OPTOELECTRONICS LAB
1 credit.

Light detection using photovoltaic and photoconductive detectors and phototransistors. Light generation using light emitting diodes and laser diodes. Light transmission using optical fibers. Optoisolators and optical switches. Light emitting diode and liquid crystal displays.
Requisites: E C E 271 and 340, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the relationship between the light emission/detection properties of semiconductors, and the operation of optoelectronic devices, such as light emitting diodes (LEDs), lasers and optical fibers
Audience: Undergraduate

2. Perform optical characterization measurements using laboratory instruments
Audience: Undergraduate

3. Write technical reports based on experimental results
Audience: Undergraduate

E C E 315 – INTRODUCTORY MICROPROCESSOR LABORATORY
1 credit.

Software and hardware experiments with a microcomputer system. Assembly language programming, simple input/output interfacing, and interrupt processing in microcomputer systems.
Requisites: E C E 353 or concurrent enrollment, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop a schematic design using CAD tools for an embedded system
Audience: Undergraduate

2. Design a printed circuit board (PCB) for an embedded system using CAD tools
Audience: Undergraduate

3. Assemble an embedded system on a printed circuit board (PCB)
Audience: Undergraduate

4. Write firmware used to control an embedded system
Audience: Undergraduate

E C E 317 – SENSORS LABORATORY
1 credit.

A hands-on introduction to a variety of different sensor types. Labs incorporate implementation concerns involving interference, isolation, linearity, amplification, and grounding.
Requisites: E C E 271 and (E C E 340 or concurrent enrollment), or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Predict electronic circuit outcomes using equations and simulations
Audience: Undergraduate

2. Compare physical electronic circuit functionality to predicted functionality
Audience: Undergraduate

3. Specify the analog signal processing required to generate usable sensor signals
Audience: Undergraduate

4. Design electronic circuits with the necessary signal processing to convert sensor signals to usable electronic signals
Audience: Undergraduate

5. Construct electronic circuits to process sensors signals
Audience: Undergraduate

6. Verify operation of sensor signal processing circuits using electronic measuring instruments such as multi-meters, oscilloscopes and spectrum analyzers
Audience: Undergraduate

7. Communicate test results from electrical measurements using tables, equations and graphs
Audience: Undergraduate

E C E 320 – ELECTRODYNAMICS II
3 credits.

Static and dynamic electromagnetic fields; forces and work in electromechanical systems; magnetic circuits; plane wave propagation; reflection of plane waves; generalized transmission line equations; current and voltage on transmission lines; impedance transformation and matching; Smith charts.
Requisites: E C E 220, 222, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply Faraday's law to calculate emf induced by time changing magnetic fields
Audience: Undergraduate

2. Use Maxwell's equations to develop the wave equation for electromagnetic fields
Audience: Undergraduate

3. Calculate propagation of plane waves in various media and reflection and refraction at media discontinuities
Audience: Undergraduate

4. Compute voltages and currents on transmission lines under time harmonic excitation
Audience: Undergraduate

5. Use matching techniques to eliminate reflections from mismatched loads on transmission lines
Audience: Undergraduate

E C E 330 – SIGNALS AND SYSTEMS
3 credits.

Time-domain response and convolution; frequency-domain response using Fourier series, Fourier transform, Laplace transform; discrete Fourier series and transform; sampling; z-transform; relationships between time and frequency descriptions of discrete and continuous signals and systems.
Requisites: E C E 203 or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Determine whether a system is linear, time-invariant, stable, and/or causal
Audience: Undergraduate

2. Convert between time-domain and frequency-domain representations of signals
Audience: Undergraduate

3. Analyze the behavior of continuous-time and discrete-time systems using time-domain and frequency-domain techniques
Audience: Undergraduate

4. Compute and evaluate single-input single-output transfer functions from differential and difference equations
Audience: Undergraduate

5. Perform discrete-time processing of continuous-time signals using sampling, filtering, and reconstruction
Audience: Undergraduate

E C E 331 – INTRODUCTION TO RANDOM SIGNAL ANALYSIS AND STATISTICS
3 credits.

Introduction to probability, random variables, and random processes. Confidence intervals, introduction to experimental design and hypothesis testing. Statistical averages, correlation, and spectral analysis for wide sense stationary processes. Random signals and noise in linear systems.
Requisites: (E C E 203 or 330) or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate a working knowledge of the basic axioms and identities of probability theory
Audience: Undergraduate

2. Determine probability distributions for different random variables
Audience: Undergraduate

3. Apply properties of expectation and variance to functions of random variables
Audience: Undergraduate

4. Apply basic statistical methods for parameter estimation
Audience: Undergraduate

5. Apply the methods of probability to everyday problems
Audience: Undergraduate

E C E 332 – FEEDBACK CONTROL SYSTEMS
3 credits.

Modeling of continuous systems; computer-aided solutions to systems problems; feedback control systems; stability, frequency response and transient response using root locus, frequency domain and state variable methods.
Requisites: E C E 330 or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply Laplace Transforms to problems in control
Audience: Undergraduate

2. Employ symbolic computations and apply numerical methods to the simulation and analysis of control systems
Audience: Undergraduate

3. Design control systems using frequency response methods and Bode Diagrams
Audience: Undergraduate

4. Formulate and manipulate signal flow graphs and block diagrams to characterize systems
Audience: Undergraduate

5. Evaluate stability of systems
Audience: Undergraduate

E C E 334 – STATE SPACE SYSTEMS ANALYSIS
3 credits.

Analysis of systems using matrix methods to write and solve state-variable differential equations. Additional topics include stability, controllability, observability, state feedback, observers, and dynamic output feedback.
Requisites: E C E 330, MATH 319, 320, 376, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Formulate state-space models of engineering systems
Audience: Undergraduate

2. Understand solutions of ordinary differential equations (ODE) and visualize them using vector fields and phase portraits
Audience: Undergraduate

3. Linearize nonlinear state-space models and understand the limitations of linear systems analysis
Audience: Undergraduate

4. Solve a system of linear differential equations using matrix exponentials, diagonalizations, and Jordan normal forms
Audience: Undergraduate

5. Systematically analyze linear state-space systems using matrix methods

Audience: Undergraduate

6. Understand and fluently use concepts such as: time-invariance, stability, controllability, and observability
Audience: Undergraduate

7. Design linear state-feedback controllers and observers
Audience: Undergraduate

E C E 335 – MICROELECTRONIC DEVICES
3 credits.

Characteristics of semiconductors; study of physical mechanisms and circuit modeling of solid state electronic and photonic devices; principles of microelectronic processing and examples of integrated circuits.
Requisites: (E C E 220 or 222), E C E 230, and PHYSICS/E C E 235, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain the physical operation of microelectronic devices, such as diodes, bipolar junction transistors, and field-effect transistors
Audience: Undergraduate

2. Identify design tradeoffs for electronic devices
Audience: Undergraduate

3. Identify, evaluate and explain basic microelectronic processing techniques for device fabrication
Audience: Undergraduate

4. Summarize basic semiconductor materials and their properties and implement them to examine new and emerging materials
Audience: Undergraduate

E C E 340 – ELECTRONIC CIRCUITS I
3 credits.

A first course in modeling, characterization, and application of semiconductor devices and integrated circuits. Development of appropriate models for circuit-level behavior of diodes, bi-polar and field effect transistors, and non-ideal op-amps. Application in analysis and design of linear amplifiers. Frequency domain characterization of transistor circuits.
Requisites: (E C E 203 and 230) or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze functions and DC and AC operations of diodes, metal-oxide-semiconductor field transistors, and bipolar junction transistors
Audience: Undergraduate

2. Utilize large and small signal models of diodes, metal-oxide-semiconductor field transistors and bipolar junction transistors in analysis of analog circuits
Audience: Undergraduate

3. Analyze and design single stage analog amplifiers
Audience: Undergraduate

4. Analyze and design basic differential amplifiers and multistage amplifiers
Audience: Undergraduate

5. Analyze basic operational amplifier circuits
Audience: Undergraduate

E C E 342 – ELECTRONIC CIRCUITS II
3 credits.

A second course in modeling and application of semiconductor devices and integrated circuits. Advanced transistor amplifier analysis, including feedback effects. Design for power amplifiers, op-amps, analog filters, oscillators, A/D and D/A converters, and power converters. Introduction to transistor level design of CMOS digital circuits.
Requisites: E C E 340 or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the topologies of feedback amplifiers
Audience: Undergraduate

2. Describe the uses of different feedback amplifier topologies
Audience: Undergraduate

3. Describe the input and output impedances associated with each topology
Audience: Undergraduate

4. Calculate the gain and input and output impedances of feedback amplifiers
Audience: Undergraduate

5. Design feedback amplifiers for specific applications
Audience: Undergraduate

6. Calculate frequency response and stability of feedback amplifiers
Audience: Undergraduate

E C E/COMP SCI 352 – DIGITAL SYSTEM FUNDAMENTALS
3 credits.

Logic components, Boolean algebra, combinational logic analysis and synthesis, synchronous and asynchronous sequential logic analysis and design, digital subsystems, computer organization and design.
Requisites: Satisfied Quantitative Reasoning (QR) A requirement and E C E/COMP SCI 252
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Perform operations on signed and unsigned numbers, including evaluating overflow
Audience: Undergraduate

2. Implement Boolean logic circuits, use Boolean identities to perform algebraic manipulations, use Karnaugh maps to implement any function of 4 variables, use DeMorgans's Theorem, implement any function as SOP or POS
Audience: Undergraduate

3. Design datapath circuits, decoders, muxes, priority encoders, tri-states, understand hierarchy and how to build up larger datapaths from blocks, design ALUs and other digital circuits using rudimentary HDL constructs
Audience: Undergraduate

4. Design sequential circuits, analyze synchronous vs. asynchronous designs and flip-flops vs. latches, trace the behavior of a sequential circuit, design state machines for control Logic
Audience: Undergraduate

5. Analyze basic processor architecture, define a control word and analyze operation of the datapath in relation to it, describe the basic operation of a single-cycle stored program computer
Audience: Undergraduate

E C E 353 – INTRODUCTION TO MICROPROCESSOR SYSTEMS
3 credits.

Introduction to architecture, operation, and application of microprocessors; microprocessor programming; address decoding; system timing; parallel, serial, and analog I/O; interrupts and direct memory access; interfacing to static and dynamic RAM; microcontrollers.
Requisites: E C E/COMP SCI 252 and COMP SCI 300, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Program a microcontroller to meet functional requirements of an embedded system
Audience: Undergraduate

2. Write, debug, and optimize programs for an efficient embedded system
Audience: Undergraduate

3. Interface a microcontroller to various on-chip and off-chip peripherals
Audience: Undergraduate

4. Design and implement a microcontroller-based embedded system
Audience: Undergraduate

5. Interpret technical documents related to embedded system components
Audience: Undergraduate

E C E/COMP SCI 354 – MACHINE ORGANIZATION AND PROGRAMMING
3 credits.

An introduction to fundamental structures of computer systems and the C programming language with a focus on the low-level interrelationships and impacts on performance. Topics include the virtual address space and virtual memory, the heap and dynamic memory management, the memory hierarchy and caching, assembly language and the stack, communication and interrupts/signals, compiling and assemblers/linkers.
Requisites: E C E/COMP SCI 252 and (COMP SCI 300 or 302) or graduate/professional standing or declared in the Capstone Certificate in Computer Sciences for Professionals
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Implement and interpret C programs using standard tools, and relate C language constructs to both assembly language and fundamental computer system structures.
Audience: Undergraduate

2. Differentiate, describe, and diagram the memory segments of a process's virtual address space and explain how each is used in C programs.
Audience: Undergraduate

3. Describe and diagram how dynamically allocated (heap) memory works, analyze the performance of allocation strategies, and implement a dynamic memory manager in C.
Audience: Undergraduate

4. Differentiate memory hierarchy levels, relative performance, and space differences, differentiate between common cache configurations, and appraise the effects of data structures and access patterns on spatial and temporal locality and available memory caching on the performance of C programs.
Audience: Undergraduate

5. Diagram a stack trace of execution for function calls in C programs, and explain how the compiler implements the stack with assembly language code.
Audience: Undergraduate

6. Write C programs that send and receive signals and respond to exceptional circumstances, and explain the underlying mechanism that enables asynchronous execution.
Audience: Undergraduate

7. Identify and summarize the steps required to build an executable program from multiple C source code files and compiled libraries, and describe the processes of linking multiple object code modules to form an executable and loading an executable to run it.
Audience: Undergraduate

E C E 355 – ELECTROMECHANICAL ENERGY CONVERSION
3 credits.

Energy storage and conversion, force and emf production, coupled circuit analysis of systems with both electrical and mechanical inputs. Applications to electric motors and generators and other electromechanical transducers.
Requisites: E C E 230 or 376, graduate/professional standing, member of Engineering Guest Students, or declared in Capstone Certificate in Power Conversion and Control
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply the theory underlying energy conversion between electrical and mechanical systems
Audience: Undergraduate

2. Apply analysis techniques for analyzing electric power flow for single and three phase systems including the effects of harmonics
Audience: Undergraduate

3. Apply knowledge of magnetics concepts for use in transformers, actuators and electromechanical energy conversion devices
Audience: Undergraduate

4. Explain fundamental understanding of Lorentz force machines including dc, induction and synchronous types
Audience: Undergraduate

5. Define and specify power converters and supply systems for application circuits and systems
Audience: Undergraduate

6. Identify operational and design features of electric utility power systems
Audience: Undergraduate

E C E 356 – ELECTRIC POWER PROCESSING FOR ALTERNATIVE ENERGY SYSTEMS
3 credits.

Introduction to electrical power processing technologies that are necessary to convert energy from alternative sources into useful electrical forms. Several specific alternative energy sources are examined, providing platforms for introducing basic concepts in power electronics, electric machines, and adjustable-speed drives.
Requisites: (E C E 230 or 376) or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Analyze and design small-scale solar electric systems
Audience: Undergraduate

2. Analyze and design small-scale wind turbine electric systems
Audience: Undergraduate

3. Analyze and design small-scale electric energy storage systems
Audience: Undergraduate

4. Analyze simple electric transportation drivetrains
Audience: Undergraduate

5. Analyze sustainability practices in electrical energy systems
Audience: Undergraduate

E C E 370 – ADVANCED LABORATORY
2 credits.

Experiments related to the required core material.
Requisites: E C E 271 and (E C E 340 or concurrent enrollment), or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Predict electronic circuit outcomes using equations and simulations
Audience: Undergraduate

2. Build functional electronic sub-systems
Audience: Undergraduate

3. Compare electronic circuit functionality to predicted functionality
Audience: Undergraduate

4. Debug non-functional electronic sub-systems using prediction and measurement tools
Audience: Undergraduate

5. Repair non-functional electronic sub-systems using hardware corrective techniques
Audience: Undergraduate

6. Combine electronic sub-systems into an electronic control system
Audience: Undergraduate

7. Verify electronic system performance utilizing multi-meters, signal generators, and oscilloscopes
Audience: Undergraduate

E C E 376 – ELECTRICAL AND ELECTRONIC CIRCUITS
3 credits.

Ohm's law, Kirchhoff's laws, resistive circuits, nodal and mesh analysis, superposition, equivalent circuits using Thevenin and Norton Theorems, op amps and op amp circuits, capacitors and inductors in first-order circuits, sinusoidal steady state, phasors, RMS value, complex power, power factor, mutual inductance, linear and ideal transformers.
Requisites: MATH 222 and (PHYSICS 202, 208, or 248), or member of Engineering Guest Students. Not open to students with credit for E C E 230.
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Solve DC electric circuits composed of resistors, voltage and current sources
Audience: Undergraduate

2. Analyze electrical behavior of circuits containing inductors, capacitors and transformers
Audience: Undergraduate

3. Formulate transient response of electric circuits incorporating resistors, inductors, capacitors and sources that are switched
Audience: Undergraduate

4. Determine AC steady-state response of electric circuits utilizing phasors and calculation with complex numbers
Audience: Undergraduate

5. Characterize the complex power transferred to and from electric circuits
Audience: Undergraduate

E C E 377 – FUNDAMENTALS OF ELECTRICAL AND ELECTRO-MECHANICAL POWER CONVERSION
3 credits.

Fundamentals of electromagnetic induction and application to transformers and induction heating; Lorentz forces with a focus on the operation and control of DC and AC motors and linear actuators; electrical power conversion using power electronics for motor drives and direct power converters.
Requisites: (MATH 234 or 376), (PHYSICS 202, 208, or 248), and E C E 376, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Formulate theory underlying energy conversion between electrical and mechanical systems
Audience: Undergraduate

2. Determine physical laws for electromagnetic actuators and motors
Audience: Undergraduate

3. Utilize magnetic concepts including magnetic equivalent circuit analysis to model transformers, actuators and electromechanical energy conversion devices
Audience: Undergraduate

4. Evaluate power electronics circuits used for actuators, motors and power supplies
Audience: Undergraduate

E C E 379 – SPECIAL TOPICS IN ELECTRICAL AND COMPUTER ENGINEERING
1-4 credits.

Topics of special interest to undergrads in electrical and computer engineering.
Requisites: Sophomore standing or member of Engineering Guest Students
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2022

E C E 399 – INDEPENDENT STUDY
1-3 credits.

Directed study projects as arranged with instructor.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

E C E 401 – ELECTRO-ACOUSTICAL ENGINEERING
3 credits.

Principles of plane and spherical sound waves; acoustical, mechanical, and electrical analogies; electroacoustic transducer materials and techniques; specific types of transducers such as microphones and loudspeakers.
Requisites: E C E 203, graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Describe the generation and propagation of plane and spherical sound waves
Audience: Undergraduate

2. Analyze acoustic wave transmission and reflection at flat boundaries of different media
Audience: Undergraduate

3. Describe working principles of different types of transducers such as microphones and loudspeakers
Audience: Undergraduate

4. Use computer-based tools to process acoustic signals
Audience: Undergraduate

5. Describe the working mechanism of acoustic beamforming
Audience: Undergraduate

E C E 411 – INTRODUCTION TO ELECTRIC DRIVE SYSTEMS
3 credits.

Basic concepts of electric drive systems. Emphasis on system analysis and application. Topics include: dc machine control, variable frequency operation of induction and synchronous machines, unbalanced operation, scaling laws, adjustable speed drives, adjustable torque drives, coupled circuit modeling of ac machines.
Requisites: (E C E 355, 356, or 377), graduate/professional standing, or member of Engineering Guest Students, or declared in Power Conversion and Control Capstone Certificate
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Predict the steady-state torque, speed, voltage, current, and power relationships of DC, AC-induction and AC-synchronous (including permanent magnet) electric motors and generators for constant-speed and adjustable-speed operation given equivalent circuit parameters.
Audience: Both Grad & Undergrad

2. Identify the impact of second order effects such as temperature, armature reaction magnetic fields, and magnetic circuit saturation on the predicted steady state performance of electric motors and generators for constant-speed and adjustable speed operation.
Audience: Both Grad & Undergrad

3. Determine the power electronics circuit layout for power conversion circuits that are used to adjust input voltage and/or frequency for adjustable-speed electric motor and generator systems.
Audience: Both Grad & Undergrad

4. Describe the basic concepts of torque and speed control of DC and AC electric motors including field-oriented control of AC induction and synchronous motors.
Audience: Both Grad & Undergrad

5. Predict the steady state behavior of a motor drive system composed of a machine, drive and basic control.
Audience: Graduate

E C E 412 – POWER ELECTRONIC CIRCUITS
3 credits.

Operating characteristics of power semiconductor devices such as Bipolar Junction Transistors, IGBTs, MOSFETs and Thyristors. Fundamentals of power converter circuits including dc/dc converters, phase controlled ac/dc rectifiers and dc/ac inverters. Practical issues in the design and operation of converters.
Requisites: E C E 342, graduate/professional standing, member of Engineering Guest Students, or declared in Capstone Certificate in Power Conversion and Control
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze, derive operating principles, and sketch transient voltage and current waveforms for common power electronic circuits (dc-dc, dc-ac, and ac-dc converters)
Audience: Both Grad & Undergrad

2. Dimension and select key components in power electronic circuits in order to meet a design specification
Audience: Both Grad & Undergrad

3. Analyze the performance and conduct basic design steps for closed loop regulation of power electronic circuits
Audience: Both Grad & Undergrad

4. Communicate how power conversion technology is utilized in real-world applications
Audience: Graduate

E C E 420 – ELECTROMAGNETIC WAVE TRANSMISSION
3 credits.

Transmission lines: frequency domain analysis of radio frequency and microwave transmission circuits including power relations and graphical and computer methods. Electromagnetic waves: planar optical components, pulse dispersion, phase front considerations for optical components, conducting waveguides, dielectric waveguides. Radiation: retarded potentials, elemental dipoles, radiating antenna characterization, receiving mode.
Requisites: E C E 320, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Compute transmission line voltages, currents, impedances, and reflection coefficients in transient and harmonic circuits
Audience: Both Grad & Undergrad

2. Design matching networks utilizing a Smith chart
Audience: Both Grad & Undergrad

3. Compute reflection and transmission of plane waves at an interface
Audience: Both Grad & Undergrad

4. Use the Friis transmission equation for link budget analysis in antenna communication systems
Audience: Both Grad & Undergrad

5. Analyze TM and TE modes of circular and rectangular waveguides
Audience: Graduate

E C E 427 – ELECTRIC POWER SYSTEMS
3 credits.

The electric power industry, operation of power systems, load flow, fault calculations, economic dispatch, general technical problems of electric power networks.
Requisites: E C E 330, graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Calculate basic quantities in three-phase power systems, including instantaneous, active and reactive power
Audience: Undergraduate

2. Construct and solve the power flow equations for steady-state operation of power systems using single-phase equivalent systems and per unit analysis
Audience: Undergraduate

3. Use the method of symmetric components to analyze fault conditions
Audience: Undergraduate

4. With a team, complete a power system design project on sustainable energy systems and effectively communicate the results
Audience: Undergraduate

5. Analyze the causes of and solutions for the sustainability challenge of affordable and clean energy
Audience: Undergraduate

6. Analyze sustainability issues and/or practices using a systems-based approach
Audience: Undergraduate

E C E 431 – DIGITAL SIGNAL PROCESSING
3 credits.

Sampling continuous-time signals and reconstruction of continuous-time signals from samples; spectral analysis of signals using the discrete Fourier transform; the fast Fourier transform and fast convolution methods; z-transforms; finite and infinite impulse response filter design techniques; signal flow graphs and introduction to filter implementation.
Requisites: E C E 330, graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Choose filter characteristics and parameters for sampling and interpolating signals
Audience: Undergraduate

2. Relate pole and zero locations to system properties
Audience: Undergraduate

3. Design discrete-time filters
Audience: Undergraduate

4. Perform spectral analysis of signals
Audience: Undergraduate

5. Perform signal processing operations using an engineering software package
Audience: Undergraduate

E C E 432 – DIGITAL SIGNAL PROCESSING LABORATORY
3 credits.

Implementation of digital signal processing algorithms on special-purpose and general-purpose hardware. Use of assembly and high-level languages, and simulator to develop and test IIR, FIR filters and the FFT for modern DSP chips. Scaling for fixed point arithmetic. Use of high level languages to implement real time, object oriented component based DSP systems in general purpose computers. DSP applications, including data and voice communication systems.
Requisites: E C E 330 and COMP SCI 300, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Take specifications for a signal processing system and select an appropriate type of digital filter meeting required behavior
Audience: Both Grad & Undergrad

2. Apply discrete-time linear-system theory to design a filter
Audience: Both Grad & Undergrad

3. Code the filter in an algorithmic computer programming language using paradigms that allow embedding in a large software system
Audience: Both Grad & Undergrad

4. Apply the theory of time-domain and Fourier-domain representations of signals and linear systems operating on those signals to interpret and verify the behavior of the coded filter
Audience: Both Grad & Undergrad

5. Effectively communicate these steps in written documents
Audience: Both Grad & Undergrad

6. Quantify the relative performance of digital filters in different computing environments
Audience: Graduate

E C E 434 – PHOTONICS
3 credits.

Introduction to ray optics, physical optics and interference, applications of Fourier optics, absorption, dispersion, and polarization of light. Light sources, including lasers (gas, solid state, and semiconductor), modulation and detection of light.
Requisites: PHYSICS/E C E 235 and (E C E 320, PHYSICS 322, or concurrent enrollment in either one), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply Maxwell's equations to explain optical propagation, loss, and gain in free space, dielectrics, semiconductors, and metals
Audience: Both Grad & Undergrad

2. Calculate reflectance and transmittance of light at interfaces under a variety of conditions
Audience: Both Grad & Undergrad

3. Explain the principles of interference and the functionality of interferometers and spectrometers
Audience: Both Grad & Undergrad

4. Explain the differences between various light sources, including different types of lasers
Audience: Both Grad & Undergrad

5. Calculate the behavior of rays using ray matrices, especially for imaging
Audience: Both Grad & Undergrad

6. Review and assess current literature in the field of photonics
Audience: Graduate

E C E/COMP SCI/MATH 435 – INTRODUCTION TO CRYPTOGRAPHY
3 credits.

Cryptography is the art and science of transmitting digital information in a secure manner. Provides an introduction to its technical aspects.
Requisites: (MATH 320, 340, 341, or 375) or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe and distinguish between perfect secrecy and computational security.
Audience: Undergraduate

2. State game#based security definitions—IND#CPA, IND#CCA, MAC unforgeability, and signature unforgeability—in both symmetric# and public#key contexts.
Audience: Undergraduate

3. Explain core primitives: pseudorandom functions, block ciphers, and collision#resistant hash functions.
Audience: Undergraduate

4. Contrast foundational hardness assumptions: one#way functions, PRFs, Diffie–Hellman, discrete logarithm, and integer factoring.
Audience: Undergraduate

5. Construct symmetric and public#key encryption and authentication schemes using these primitives, and prove their security.
Audience: Undergraduate

6. Evaluate the security and deployment trade#offs of protocols such as authenticated encryption, key exchange, and digital signatures.
Audience: Undergraduate

E C E 436 – COMMUNICATION SYSTEMS I
3 credits.

Amplitude, frequency, pulse, and pulse-code modulation. Narrow-band noise representation and signal-to-noise ratios for various modulation schemes. Pulse shaping, timing recovery, carrier synchronization, and equalization. Sampling, quantization and coding.
Requisites: (E C E 203 or 330), graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Characterize the energy and power of signals occurring in analog communication systems using the theory of inner products and properties of the Fourier series and the Fourier transform
Audience: Undergraduate

2. Apply the theory of the narrowband representation of signals to the modulation and recovery of signals using the linear analog modulation techniques
Audience: Undergraduate

3. Design phase and frequency modulation systems based on parameters of non-linear modulation
Audience: Undergraduate

4. Apply random process theory to characterize the behavior of analog modulation systems in the presence of interference
Audience: Undergraduate

5. Implement analog communication systems in discrete-time (software-defined radio)
Audience: Undergraduate

6. Design and conduct experiments to confirm the performance of analog modulation systems in the presence of interfering noise
Audience: Undergraduate

E C E 437 – COMMUNICATION SYSTEMS II
3 credits.

Statistical analysis of information transmission systems. Probability of error, design of receivers for digital transmission through additive white Gaussian noise channels and bandlimited channels. Spread spectrum communication systems. Channel capacity, source and error control coding.
Requisites: (E C E 203 or 330), graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Formulate baseband and carrier-modulated waveforms for digital communication including PAM, PSK, QAM and OFDM
Audience: Undergraduate

2. Apply inner product space concepts and the theory of optimal receivers to map waveforms to signal constellations
Audience: Undergraduate

3. Determine performance resulting from sub-optimal receivers
Audience: Undergraduate

4. Calculate exact and upper-bounded probability of error of a digital communication system from a signal constellation
Audience: Undergraduate

5. Quantify inter-symbol interference in a band-limited digital communication system
Audience: Undergraduate

6. Evaluate the performance of a forward error correction code
Audience: Undergraduate

E C E/M E 439 – INTRODUCTION TO ROBOTICS
3 credits.

Hands-on introduction to key concepts and tools underpinning robotic systems in use and development today. Intended to give students the tools to understand robotic systems, to explore robotics for their own purposes, and to pursue advanced study in the field. Students are expected to have familiarity with a high level programming language such as Python (recommended), MATLAB, Java or Julia.
Requisites: Senior standing or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Predict and control the behavior of common mechatronic actuators
Audience: Undergraduate

2. Predict and interpret the response of common sensors in relation to their environment
Audience: Undergraduate

3. Apply standard algorithms to predict and control the behavior of robotic manipulators
Audience: Undergraduate

4. Interpret the operation of a robot control system and add new functionality to it
Audience: Undergraduate

5. Specify a simple task for a robot, and implement sensors, actuators and a control system to accomplish it
Audience: Undergraduate

6. Analyze the ethical challenges presented by specific robotic applications
Audience: Undergraduate

E C E/M E 441 – KINEMATICS, DYNAMICS, AND CONTROL OF ROBOTIC MANIPULATORS
3 credits.

Robotics analysis and design, focusing on the analytical fundamentals specific to robotic manipulators. Serial chain robotic manipulator forward and inverse kinematics, differential kinematics, dynamics, trajectory generation, and controls. Builds on knowledge of high-level computational programming language such as Matlab.
Requisites: M E 340 and (MATH 320, 340, 341, or 375), graduate/professional standing, or member of Engineering Guest Students. Not open to students with credit for E C E 739 prior to fall 2024.
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze and design serial chain robotic manipulator kinematics
Audience: Both Grad & Undergrad

2. Simulate the dynamic motion of serial chain robotic manipulators
Audience: Both Grad & Undergrad

3. Form the equations of motion for robotic manipulators
Audience: Both Grad & Undergrad

4. Use feedback control for tracking and regulation of robotic manipulators for position, force, and hybrid control
Audience: Both Grad & Undergrad

5. Use trajectory generation methods to design robotic manipulator motion and force trajectories
Audience: Both Grad & Undergrad

6. Analyze the kinematics and controls of more complex serial chain manipulators
Audience: Graduate

7. Design the kinematics of serial chain manipulators using kinematic and dynamics analysis methods
Audience: Graduate

E C E 445 – SEMICONDUCTOR PHYSICS AND DEVICES
3 credits.

Physics and properties of semiconductors, p-n junctions, metal-semiconductor contacts, homojunction and heterojunction bipolar transistor and physics, metal-oxide-semiconductor and heterostructure field-effect transistor and physics, thin-film resistors, memory devices, quantum devices.
Requisites: E C E 335, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Describe basic semiconductor materials and physics, including band structure, charge carriers and transport, phonon, optical and thermal properties, and heterojunctions
Audience: Both Grad & Undergrad

2. Describe semiconductor building blocks and devices, including PN junction, metal-semiconductor contact, metal-oxide-semiconductor capacitor, bipolar junction transistor, metal-oxide-semiconductor field-effect transistor, memory devices
Audience: Both Grad & Undergrad

3. Analyze and design homojunction semiconductor devices
Audience: Graduate

4. Describe basic semiconductor device operation principles, including heterojunction bipolar transistor, meta-semiconductor field-effect transistor, modulation-doped field-effect transistor, high-electron-mobility transistor, and thin-film transistor
Audience: Graduate

5. Critique a paper in the current literature in the field of semiconductor physics
Audience: Graduate

E C E 447 – APPLIED COMMUNICATIONS SYSTEMS
3 credits.

Analysis with design problems of electronic communications circuits. Emphasis on the nonlinear effects of large-signal operation of active devices. Complete design of r.f. oscillator, amplifier, and mixer circuits.
Requisites: E C E 320 and 340, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply high-frequency transmission line theory to modeling microwave networks
Audience: Both Grad & Undergrad

2. Use ideal and real transmission lines to design and execute impedance matching networks
Audience: Both Grad & Undergrad

3. Use scattering and noise parameters to design for trade-offs among gain, noise figure, bandwidth, and reflection coefficients in amplifiers
Audience: Both Grad & Undergrad

4. Apply lumped and distributed elements in transistor amplifier design, including design of bias networks
Audience: Both Grad & Undergrad

5. Design and execute filters using microstrip transmission line elements
Audience: Both Grad & Undergrad

6. Apply mixers and directional couplers to microwave measurement principles
Audience: Both Grad & Undergrad

7. Apply negative-resistance amplifier concepts to oscillator design
Audience: Graduate

E C E 453 – EMBEDDED MICROPROCESSOR SYSTEM DESIGN
4 credits.

Hardware and software design for modern microprocessor-based embedded systems; study of the design process; emphasis on major team design project.
Requisites: (E C E 315 and COMP SCI 300) or graduate/professional standing. Not open to special students or students with credit for E C E 454, 455, or 554.
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Design an embedded system that utilizes a commercially available microprocessor
Audience: Undergraduate

2. Incorporate sensors and integrated circuits to solve an engineering problem
Audience: Undergraduate

3. Architect firmware/software solutions used to control embedded systems
Audience: Undergraduate

4. Fabricate a prototype using a printed circuit board (PCB)
Audience: Undergraduate

5. Identify functional requirements and appropriate solutions of an embedded system
Audience: Undergraduate

E C E 454 – MOBILE COMPUTING LABORATORY
4 credits.

End-to-end project management; teamwork; fundamentals of disciplined development practices; introduction to mobile computing platforms and systems; design, implementation, and deployment of mobile systems and applications.
Requisites: COMP SCI 400 or graduate/professional standing. Not open to special students or students with credit for E C E 453, 455, or 554.
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use a contemporary development environment and programming language to develop mobile applications
Audience: Undergraduate

2. Program the typical functionalities of modern smartphones (e.g., motion sensors, audio/video interface, GPS, and wireless networking modules)
Audience: Undergraduate

3. Work effectively as a member of a team to complete a large programming project while utilizing modern collaboration tools
Audience: Undergraduate

4. Communicate effectively through written reports, oral presentations and discussion
Audience: Undergraduate

5. Review and discuss recent technological advancements in the growing mobile application domain
Audience: Undergraduate

E C E 455 – CAPSTONE DESIGN IN ELECTRICAL AND COMPUTER ENGINEERING
4 credits.

Apply electrical and computer engineering knowledge and skills acquired to real-world electrical and computer engineering design projects.
Requisites: COMP SCI 300, E C E 340, (E C E 303, 304, 305, 313, 315, or 317), senior standing, and declared in Electrical Engineering BS or Computer Engineering BS. Not open to students with credit for E C E 453, 454, or 554.
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Communicate effectively through written reports, oral presentations and discussion
Audience: Undergraduate

2. Review and discuss recent technological advancements in the growing electrical and computer engineering domain
Audience: Undergraduate

3. Work effectively as a member of a team
Audience: Undergraduate

4. Integrate and apply the knowledge gained in prior coursework into a real-world design environment
Audience: Undergraduate

5. Use contemporary commercial design tools
Audience: Undergraduate

6. Realize and demonstrate a hardware prototype
Audience: Undergraduate

E C E/B M E 462 – MEDICAL INSTRUMENTATION
3 credits.

Design and application of electrodes, biopotential amplifiers, biosensors, therapeutic devices. Medical imaging. Electrical safety. Measurement of ventilation, blood pressure and flow.
Requisites: E C E 340, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Solve complicated mathematical problems for electrical and electronic circuits
Audience: Both Grad & Undergrad

2. Employ simulation tools to test and analyze electronic circuits for measuring physiological signals
Audience: Both Grad & Undergrad

3. Design electronic schematics for advanced instrumentation system using software tools
Audience: Both Grad & Undergrad

4. Solder and build advanced instrumentation system for measuring physiological signals
Audience: Both Grad & Undergrad

5. Program a microcontroller to acquire and process physiological signals
Audience: Both Grad & Undergrad

6. Perform experiments using the instrumentation system, analyze data and draw conclusions
Audience: Both Grad & Undergrad

7. Demonstrate an ability to formulate, analyze and, independently design and build instrumentation system to measure physiological signals
Audience: Graduate

E C E/B M E 463 – COMPUTERS IN MEDICINE
3 credits.

Study of microprocessor-based medical instrumentation. Emphasis on real-time analysis of electrocardiograms. Labs and programming project involve design of biomedical digital signal processing algorithms. Knowledge of computer programming language like C, C++ or Java, strongly encouraged.
Requisites: E C E 330 and (COMP SCI 200, 220, 300, 301, or placement into COMP SCI 300), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Solve complicated mathematical problems with design of digital filters for biomedical signals
Audience: Both Grad & Undergrad

2. Build electrocardiogram (ECG) instrumentation system to view their ECG and use it as an input to a microcontroller for signal analysis
Audience: Both Grad & Undergrad

3. Employ simulation tools to design and test a variety of linear digital filters
Audience: Both Grad & Undergrad

4. Perform experiments, analyze and interpret the performance of digital filters on a database of ECGs
Audience: Both Grad & Undergrad

5. Write microcontroller code for real-time processing of biomedical signals, particularly the ECG, to attenuate diverse noise sources and find clinically-significant features
Audience: Both Grad & Undergrad

6. Demonstrate an ability to formulate and, independently design and implement digital filters and algorithm to process biomedical signals
Audience: Graduate

E C E 466 – ELECTRONICS OF SOLIDS
3 credits.

Electronic, optical and thermal properties of crystalline solids. Energy-momentum dispersion of fundamental particles and excitations in solids leading to microscopic theories of conductivity, polarizability and permeability. Influence of materials characteristics on the performance of electronic and photonic devices.
Requisites: (E C E 305 or 335), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Construct analytical models to elucidate the physical operation of heterostructure-based devices, including transistors and resonant tunneling diodes
Audience: Both Grad & Undergrad

2. Apply design tradeoffs to electronic device design
Audience: Both Grad & Undergrad

3. Determine the relationship between heterojunction properties and device operation
Audience: Both Grad & Undergrad

4. Determine the relationship between semiconductor material transport properties and device operation
Audience: Both Grad & Undergrad

5. Apply design principles to analyze technical articles related to current device/materials related literature
Audience: Graduate

E C E 489 – HONORS IN RESEARCH
1-3 credits.

Undergraduate honors research projects supervised by faculty members.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

E C E 491 – SENIOR DESIGN PROJECT
3 credits.

Engineering design projects supervised by faculty members.
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Fall 2025

E C E 504 – ELECTRIC MACHINE & DRIVE SYSTEM LABORATORY
3 credits.

Steady state and dynamic performance of electric machines in combination with power electronic converters. Measurement of electric machine parameters, evaluation of synchronization techniques and inverter drive properties, realization of drive operation via real time embedded control system, implementation and comparative evaluation of advanced machine control techniques.
Requisites: E C E 411, or graduate/professional standing, or declared in Capstone Certificate in Power Conversion and Control
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Use safe laboratory procedures to study high voltage electric machines
Audience: Both Grad & Undergrad

2. Use dynamometers, power analyzers and electrical measurements to characterize electric machines
Audience: Both Grad & Undergrad

3. Characterize operation of an inverter and its impact on drive performance
Audience: Both Grad & Undergrad

4. Determine the operating parameters of a motor-generator dynamometer given input and output constraints
Audience: Both Grad & Undergrad

5. Integrate and debug electric drive subsystems to control the torque and/or speed of a motor-generator dynamometer
Audience: Both Grad & Undergrad

6. Interpret and apply techniques from recent research papers on electric drive systems
Audience: Graduate

E C E/COMP SCI 506 – SOFTWARE ENGINEERING
3 credits.

Ideas and techniques for designing, developing, and modifying large software systems. Topics include software engineering processes; requirements and specifications; project team organization and management; software architectures; design patterns; testing and debugging; and cost and quality metrics and estimation. Students will work in large teams on a substantial programming project.
Requisites: (COMP SCI 367 or 400) and (COMP SCI 407, 536, 537, 545, 559, 564, 570, 679 or E C E/COMP SCI 552) or graduate/professional standing, or declared in the Capstone Certificate in Computer Sciences for Professionals
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Execute a significant software development project within a team
Audience: Undergraduate

2. Use software tools for collaboration including source control, project management, and automated testing
Audience: Undergraduate

3. Collaborate effectively on a significant software development project as part of a team, demonstrating professionalism in communication, accountability, and teamwork.
Audience: Undergraduate

4. Describe and participate in various SWE inspection activities (e.g. Group Code Review; Pair Programming; Asynchronous Review).
Audience: Undergraduate

5. Characterize and contrast software engineering methodologies and development techniques, including Agile, Waterfall, DevOps, Test-driven Development, Comment-First Development, and Extreme Programming
Audience: Undergraduate

6. Characterize and contrast software design philosophies and principles.
Audience: Undergraduate

7. Explain and evaluate techniques for software deployment such as Container and VM technologies.
Audience: Undergraduate

E C E 511 – THEORY AND CONTROL OF SYNCHRONOUS MACHINES
3 credits.

The idealized three phase synchronous machine time domain model including saliency, time invariant form using Park's transformation, sudden short circuits and other transient conditions, reduced order models, excitation system and turbine/governor control, dynamics of multiple machine systems, transient stability and subsynchronous resonance.
Requisites: E C E 411 and 427, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2024
Learning Outcomes: 1. Use equivalent circuit models of synchronous machines for studying their performance
Audience: Both Grad & Undergrad

2. Apply computer simulations of synchronous machines to verify the performance characteristics
Audience: Both Grad & Undergrad

3. Develop torque and speed regulator systems for synchronous machines

Audience: Both Grad & Undergrad

4. Analyze the performance of synchronous machines as generators
Audience: Both Grad & Undergrad

5. Predict the behavior of synchronous machines during external faults
Audience: Graduate

E C E 512 – POWER ELECTRONICS LABORATORY
3 credits.

This laboratory introduces the student to measurement and simulation of important operating characteristics of power electronic circuits and power semiconductor devices. Emphasis is on devices, circuits, gating methods and power quality.
Requisites: E C E 412, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Construct and test hardware prototype of power electronic circuits
Audience: Both Grad & Undergrad

2. Develop and test software controllers for power electronic circuits
Audience: Both Grad & Undergrad

3. Design, layout, fabricate board, procure components, assemble and test a power electronic circuit prototype
Audience: Both Grad & Undergrad

4. Design a power electronic system including start-up, scheduling and housekeeping functions
Audience: Graduate

E C E/COMP SCI/I SY E 524 – INTRODUCTION TO OPTIMIZATION
3 credits.

Introduction to mathematical optimization from a modeling and solution perspective. Formulation of applications as discrete and continuous optimization problems and equilibrium models. Survey and appropriate usage of basic algorithms, data and software tools, including modeling languages and subroutine libraries.
Requisites: (COMP SCI 200, 220, 300, 301, 302, 310, or placement into COMP SCI 300) and (MATH 320, 340, 341, or 375) or graduate/professional standing
Course Designation: Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Engage in topics about "optimization in practice".
Audience: Undergraduate

2. Use and analyze the results of state of the art optimization software.
Audience: Undergraduate

3. Use the GAMS modeling system and Jupyter notebooks (in conjunction with elementary Python) or Julia and JUMP.
Audience: Undergraduate

4. Design good models for realistic applications in engineering and the sciences.
Audience: Undergraduate

5. Develop a "commercial strength" application of optimization technology.
Audience: Undergraduate

E C E/N E/PHYSICS 525 – INTRODUCTION TO PLASMAS
3 credits.

Basic description of plasmas: collective phenomena and sheaths, collisional processes, single particle motions, fluid models, equilibria, waves, electromagnetic properties, instabilities, and introduction to kinetic theory and nonlinear processes. Examples from fusion, astrophysical and materials processing processing plasmas.
Requisites: (E C E 320 or PHYSICS 322), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

E C E/N E/PHYSICS 527 — PLASMA CONFINEMENT AND HEATING
3 credits.

Principles of magnetic confinement and heating of plasmas for controlled thermonuclear fusion: magnetic field structures, single particle orbits, equilibrium, stability, collisions, transport, heating, modeling and diagnostics. Discussion of current leading confinement concepts: tokamaks, tandem mirrors, stellarators, reversed field pinches, etc.
Requisites: E C E/N E/PHYSICS 525, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

E C E/N E 528 — PLASMA PROCESSING AND TECHNOLOGY
3 credits.

Introduction to basic understanding and techniques. Plasma processing of materials for semiconductors, polymers, plasma spray coatings, ion implantation, etching, arcs, extractive metallurgy and welding. Plasma and materials diagnostics.
Requisites: PHYSICS 322 or E C E 320, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021

E C E/COMP SCI/M E 532 — MATRIX METHODS IN MACHINE LEARNING
3 credits.

Linear algebraic foundations of machine learning featuring real-world applications of matrix methods from classification and clustering to denoising and data analysis. Mathematical topics include: linear equations, regression, regularization, the singular value decomposition, and iterative algorithms. Machine learning topics include: the lasso, support vector machines, kernel methods, clustering, dictionary learning, neural networks, and deep learning. Previous exposure to numerical computing (e.g. Matlab, Python, Julia, R) required.
Requisites: (MATH 234, 320, 340, 341, or 375) and (E C E 203, COMP SCI 200, 220, 300, 301, 302, 310, 320, or placement into COMP SCI 300), graduate/professional standing, or declared in Capstone Certificate in Computer Sciences for Professionals
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use matrices and vectors to formulate classification, prediction and matrix completion problems using techniques such as least squares, regularized least squares, the singular value decomposition, subspace methods, support vector machines, neural networks and kernel methods.
Audience: Both Grad & Undergrad

2. Implement machine learning techniques for classification, prediction and matrix completion problems in software, and validate their performance on datasets using cross validation.
Audience: Both Grad & Undergrad

3. Apply advanced techniques to formulate and prove optimality of various matrix based techniques in machine learning.
Audience: Graduate

E C E/COMP SCI 533 – IMAGE PROCESSING
3 credits.

Mathematical representation of continuous and digital images; models of image degradation; picture enhancement, restoration, segmentation, and coding; pattern recognition, tomography.
Requisites: E C E 330 and (MATH 320 or 340), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Process digital images using available engineering software
Audience: Both Grad & Undergrad

2. Use time-domain and frequency-domain methods to analyze images and their properties
Audience: Both Grad & Undergrad

3. Apply nonlinear filters to images such as morphological operations, edge-preserving nonlinearities, and optimization-based filters
Audience: Both Grad & Undergrad

4. Segment images using both small-scale and large-scale techniques
Audience: Both Grad & Undergrad

5. Apply classification techniques to image recognition
Audience: Both Grad & Undergrad

6. Extract features from images and apply to tasks such as registration and super-resolution
Audience: Both Grad & Undergrad

7. Lead team in meeting objectives of image processing operations
Audience: Graduate

E C E 535 – INTRODUCTION TO QUANTUM SENSING
3 credits.

Operating principles and applications of quantum sensing and metrology. Topics include light-matter interactions with atoms and solid-state emitters, atom spectroscopy, electron microscopy, quantum electric-field sensors and magnetometers, microwave and optical clocks, laser and matter-wave interferometry, single-photon emission and detection.
Requisites: (E C E 220, PHYSICS 202, or 208) and (PHYSICS/E C E 235 or PHYSICS 241), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain critical concepts in quantum mechanics, including Schrodinger's equation, the uncertainty principle, and wave-particle duality, and relate these concepts to observed phenomena in atoms and atom-like quantum systems.
Audience: Both Grad & Undergrad

2. Identify quantum material platforms (such as neutral atoms, ions, and solid-state systems) and describe their defining characteristics relevant to sensing
Audience: Both Grad & Undergrad

3. Formulate operational principles of quantum sensing of physical quantities such as electromagnetic fields, inertial forces, temperature, pressure, etc.
Audience: Both Grad & Undergrad

4. Effectively communicate the benefits and challenges of various quantum sensing technologies
Audience: Both Grad & Undergrad

5. Numerically model quantum sensing systems in order to analyze their performance.
Audience: Graduate

E C E 536 – INTEGRATED OPTICS AND OPTOELECTRONICS
3 credits.

Characteristics of semiconductors; study of physical mechanisms and modeling of solid state electronic and photonic devices; principles of optoelectronic processing and examples of integrated optoelectronics.
Requisites: E C E 335 and (E C E 420 or 434), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Evaluate and analyze the physical operation of optoelectronic devices, such as waveguides, lasers, and photodetectors
Audience: Both Grad & Undergrad

2. Apply the design tradeoffs to optoelectronic devices
Audience: Both Grad & Undergrad

3. Evaluate the basic optoelectronic processing techniques for device fabrication
Audience: Both Grad & Undergrad

4. Evaluate basic compound semiconductor materials and their properties

Audience: Both Grad & Undergrad

5. Review and assess current literature in the field of optoelectronics
Audience: Graduate

E C E 537 – COMMUNICATION NETWORKS
3 credits.

Study of communication networks with focus on performance analysis. Layered network structure. Basic protocol functions such as addressing, multiplexing, routing, forwarding, flow control, error control, and congestion response. Overview of transport, network, and link layer protocol standards. Introduction to wireless and mobile networks.
Requisites: E C E 203 and COMP SCI 400, graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the components of present-day communication networks
Audience: Undergraduate

2. Characterize the components and the corresponding functions of Internet infrastructure
Audience: Undergraduate

3. Determine how information is transferred from one end to the other reliably and efficiently and re-create the same
Audience: Undergraduate

4. Analyze and evaluate the underlying algorithms and protocols in a communication network
Audience: Undergraduate

E C E/COMP SCI/M E 539 – INTRODUCTION TO ARTIFICIAL NEURAL NETWORKS
3 credits.

Theory and applications of artificial neural networks: multi-layer perceptron, self-organization mapdeep neural network convolutional neural network, recurrent network, support vector machines genetic algorithm, and evolution computing. Applications to control, pattern recognition, prediction, and object detection and tracking.
Requisites: COMP SCI 200, 220, 300, 301, 302, 310, placement into COMP SCI 300, or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify if a given data analysis task is a pattern classification problem or a model approximation problem.
Audience: Undergraduate

2. Apply multi-layer perceptron neural network training algorithm to develop artificial neural network (ANN) based pattern classifiers and data predictors.
Audience: Undergraduate

3. Apply deep learning network for pattern classification
Audience: Undergraduate

4. Apply support vector machine (SVM) to develop pattern classifiers.
Audience: Undergraduate

5. Apply self-organization map and k-means to perform clustering operations of a given data set.
Audience: Undergraduate

6. Apply stochastic optimization methods, including simulated annealing, genetic algorithm and random search to solve a discrete optimization problem.
Audience: Undergraduate

E C E 541 – ANALOG MOS INTEGRATED CIRCUIT DESIGN
3 credits.

Analysis, design and applications of modern analog circuits using integrated bipolar and field-effect transistor technologies. Develop a working knowledge of the basic circuits used in modern analog integrated circuits and techniques for analysis and design.
Requisites: E C E 340, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Master the functions and DC and AC operations of metal-oxide-semiconductor field transistors and bipolar junction transistors for analog integrated circuits
Audience: Both Grad & Undergrad

2. Analyze, design and simulate single stage and multiple stage analog amplifiers
Audience: Both Grad & Undergrad

3. Analyze, design and simulate current references, voltage references, and output stages for analog amplifiers
Audience: Both Grad & Undergrad

4. Analyze, design and simulate basic operational amplifiers
Audience: Both Grad & Undergrad

5. Analyze, design and simulate analog amplifiers utilizing negative feedback
Audience: Both Grad & Undergrad

6. Analyze, design and simulate analog amplifiers considering frequency response and stability
Audience: Both Grad & Undergrad

7. Extract target metrics for analog circuit operation given specific end application
Audience: Graduate

E C E 542 – INTRODUCTION TO MICROELECTROMECHANICAL SYSTEMS
3 credits.

Introduction to MEMS technology, devices and systems. Fundamentals of MEMS in fabrication, process integration, material mechanics of MEMS structures, sensors and actuators. Main topics in MEMS - microfluidics, optical MEMS, RF MEMS, BioMEMS, packaging, and CAD.
Requisites: (E C E 335 or 340), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Master fundamental fabrication techniques in integrated circuits and microelecromechanical systems (MEMS)
Audience: Both Grad & Undergrad

2. Analyze and construct fabrication process flows for MEMS
Audience: Both Grad & Undergrad

3. Analyze and design mechanical structures for MEMS
Audience: Both Grad & Undergrad

4. Analyze and design mechanical sensors and actuators
Audience: Both Grad & Undergrad

5. Analyze thermal and magnetic transducers, microfluidics, lab on chips, optical MEMS devices and radio frequency MEMS devices
Audience: Both Grad & Undergrad

6. Design systems integrating MEMS devices with integrated circuits
Audience: Graduate

E C E 545 – ADVANCED MICROWAVE MEASUREMENTS FOR COMMUNICATIONS
3 credits.

Measurements at VHF and microwave frequencies; characteristics of microwave generators, amplifiers, passive devices and detection systems; measurement of frequency, noise and simple antenna patterns; time domain reflectometry, swept frequency network and spectrum analyzer techniques; lecture and lab.
Requisites: (E C E 440 or 447), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021

E C E 547 – ADVANCED COMMUNICATIONS CIRCUIT DESIGN
3 credits.

Principles underlying the design of r.f. and microwave communications circuits. Analysis and design of wideband nonlinear power amplifiers, S-parameter techniques for r.f. active circuit design, computer aided design techniques, r.f. integrated circuits, fundamentals of low noise r.f. design.
Requisites: (E C E 420 or 447), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

E C E 548 – INTEGRATED CIRCUIT DESIGN
3 credits.

Bipolar and MOS devices in monolithic circuits. Device physics, fabrication technology. IC-design for linear and nonlinear circuitry.
Requisites: E C E 335, graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Solve problems related to operation and fabrication of semiconductor devices (diodes, BJTs, MOSFETs)
Audience: Undergraduate

2. Draw semiconductor band diagrams and apply these drawings to explain effects that appear at interfaces between materials such as differently doped semiconductors, semiconductor-metal interface
Audience: Undergraduate

3. Analyze advanced effects that appear in MOSFETs when their size is reduced to nanometer scale
Audience: Undergraduate

4. Develop and design device physics models using simulation platform such as TCAD
Audience: Undergraduate

E C E 549 – INTEGRATED CIRCUIT FABRICATION LABORATORY
4 credits.

Monolithic integrated circuit fabrication; mask making, photolithography, oxidation, diffusion, junction evaluation, metallization, packaging, and testing.
Requisites: (E C E 335 or 548), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze, design and execute process flow used during semiconductor device fabrication
Audience: Both Grad & Undergrad

2. Perform simple electrical measurements of MOSFET transistors
Audience: Both Grad & Undergrad

3. Explain operating principles of clean room tools such as mask aligner, plasma etcher, metal deposition sputterer, etc.
Audience: Both Grad & Undergrad

4. Perform silicon processing steps in the clean room such as lithography, wet and dry etching, and metal deposition
Audience: Both Grad & Undergrad

5. Solve engineering problems related to silicon processing
Audience: Both Grad & Undergrad

6. Design and perform advanced electrical measurements of MOSFET devices
Audience: Graduate

E C E 551 – DIGITAL SYSTEM DESIGN AND SYNTHESIS
3 credits.

Introduction to the use of hardware description languages and automated synthesis in design. Advanced design principles. Verilog and VHDL description languages. Synthesis from hardware description languages. Timing-oriented synthesis. Relation of integrated circuit layout to timing-oriented design. Design for reuse.
Requisites: E C E/COMP SCI 352, graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe a digital design using a Hardware Description Language (HDL) such that it will synthesize efficiently using the intended mix of sequential and combinational cells. Demonstrate proficiency in coding in both dataflow and behavioral HDL styles
Audience: Undergraduate

2. Write a thorough testbench to validate a digital design. This includes consideration of corner test cases and ensuring testbench is self-checking

Audience: Undergraduate

3. Simulate and debug a digital design using a HDL simulator
Audience: Undergraduate

4. Constrain and Synthesize a digital design targeting a standard cell library. Explore options and methods to optimize synthesis results for speed/power/area. Interpret static timing reports generated by synthesis tool
Audience: Undergraduate

5. Partition and complete the implementation (design/validation/synthesis) of a complex digital system as a member of a project team
Audience: Undergraduate

E C E/COMP SCI 552 – INTRODUCTION TO COMPUTER ARCHITECTURE
3 credits.

The design of computer systems and components. Processor design, instruction set design, and addressing; control structures and microprogramming; memory management, caches, and memory hierarchies; and interrupts and I/O structures. E C E 551 or knowledge of Verilog is recommended.
Requisites: (E C E/COMP SCI 352 and E C E/COMP SCI 354) or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use standard performance metrics to compare performance of different digital systems
Audience: Undergraduate

2. Design a pipelined data path for a RISC (reduced instruction set computer) instruction set and identify concepts of data dependence, pipelined hazards and out of order execution
Audience: Undergraduate

3. Design basic data and control cache subsystems and be able to operate basic memory systems
Audience: Undergraduate

4. Design a pipelined RISC micro-processor system with data cache using computer aided design tool and validate the correctness of the design using logic simulation
Audience: Undergraduate

E C E 553 – TESTING AND TESTABLE DESIGN OF DIGITAL SYSTEMS
3 credits.

Faults and fault modeling, test equipment, test generation for combinational and sequential circuits, fault simulation, memory and microprocessor testing, design for testability, built-in self-test techniques, and fault location.
Requisites: COMP SCI/E C E 352 and COMP SCI 300, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify factors that impact economics of testing of integrated circuits
Audience: Both Grad & Undergrad

2. Model and simulate faults that can occur in integrated circuits
Audience: Both Grad & Undergrad

3. Apply state-of-the-art test generation algorithms
Audience: Both Grad & Undergrad

4. Utilize design for testability and built-in self-test techniques
Audience: Both Grad & Undergrad

5. Generate tests to detect path delay faults
Audience: Graduate

E C E 554 – DIGITAL ENGINEERING LABORATORY
4 credits.

Practical aspects of computer system design. Design, construction, and testing of significant digital subsystems. Design, construction, and programming of pipelined digital computers.
Requisites: E C E 551 and E C E/COMP SCI 552. Not open to special students or students with credit for E C E 453, 454 or 455.
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Specify a novel instruction set architecture (ISA)
Audience: Undergraduate

2. Specify the design of a processor that implements a novel ISA
Audience: Undergraduate

3. Develop, verify, and demonstrate a working prototype of a processor
Audience: Undergraduate

4. Collaborate effectively as a member of a moderate-sized team
Audience: Undergraduate

5. Communicate project status and results effectively both orally and in writing
Audience: Undergraduate

E C E 555 – DIGITAL CIRCUITS AND COMPONENTS
3 credits.

Principles and characterization of logic circuits. Design and analysis techniques for applied logic circuits. Transmission lines in digital applications. Families of circuit logic currently in use and their characteristics.
Requisites: (E C E/COMP SCI 352 and E C E 340), graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Summarize theory of advanced MOS devices and operations
Audience: Undergraduate

2. Identify challenges and solutions in scaling of CMOS devices
Audience: Undergraduate

3. Analyze power, performance, area metrics for CMOS logic families
Audience: Undergraduate

4. Analyze design of sequential circuits with timing constraints
Audience: Undergraduate

5. Produce circuit schematic and layout in CAD tools
Audience: Undergraduate

6. Test transient behavior of circuits in simulation tools
Audience: Undergraduate

7. Describe operation of VLSI memory and identify critical components
Audience: Undergraduate

E C E 556 – DESIGN AUTOMATION OF DIGITAL SYSTEMS
3 credits.

Use of digital computers to simulate, partition, place and interconnect digital electronic systems.
Requisites: E C E/COMP SCI 352 and COMP SCI 300, graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Identify different steps of the design flow of integrated circuits
Audience: Undergraduate

2. Map a high-level netlist in Verilog to a gate-level logic circuit using a standard-cell library
Audience: Undergraduate

3. Identify different steps of layout design including placement, global, and detailed routing
Audience: Undergraduate

4. Perform static timing analysis in a combinational logic circuit
Audience: Undergraduate

5. Identify and apply physical-synthesis techniques in integrated circuits such as gate sizing and logic restructuring
Audience: Undergraduate

E C E/COMP SCI 561 – PROBABILITY AND INFORMATION THEORY IN MACHINE LEARNING
3 credits.

Probabilistic tools for machine learning and analysis of real-world datasets. Introductory topics include classification, regression, probability theory, decision theory and quantifying information with entropy, relative entropy and mutual information. Additional topics include naive Bayes, probabilistic graphical models, discriminant analysis, logistic regression, expectation maximization, source coding and variational inference.
Requisites: (MATH 320, 340, 341, 375, or M E/COMP SCI/E C E 532 or concurrent enrollment) and (E C E 331, STAT/MATH 309, 431, STAT 311, 324, M E/STAT 424 or MATH 531) or grad/profsnl standing or declared in Capstone Certificate in Computer Sciences for Professionals
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Identify how ambiguity and noise leads to the need for probabilistic methods in machine learning
Audience: Both Grad & Undergrad

2. Implement classification, prediction and generative algorithms using a variety of techniques based in probability, information theory and machine learning
Audience: Both Grad & Undergrad

3. Prove optimality of a variety of algorithms and demonstrate understanding of sample complexity bounds
Audience: Graduate

E C E/I SY E 570 – ETHICS OF DATA FOR ENGINEERS
3 credits.

Introduction to ethical issues in data engineering and principled solutions. Algorithmic fairness (individual fairness, group fairness, counterfactual fairness), differential privacy and its applications, and robustness.
Requisites: (I SY E 521, 562, M E/COMP SCI/E C E 532, or 539) and (E C E 331, MATH/STAT 309, STAT 311, MATH 331, or STAT/MATH 431), or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the importance of ethical data science/engineering
Audience: Both Grad & Undergrad

2. Identify challenges of trustworthy data use in engineering such as fairness, privacy, and robustness
Audience: Both Grad & Undergrad

3. Apply the definitions of trustworthy data engineering to real-world datasets
Audience: Both Grad & Undergrad

4. Analyze the data analysis pipelines and evaluate the trustworthiness of their outcomes
Audience: Both Grad & Undergrad

5. Create proper data analysis pipelines with ethical considerations
Audience: Both Grad & Undergrad

6. Implement cutting-edge techniques to enhance the fairness, privacy, and robustness of data analysis processes
Audience: Graduate

7. Conduct independent research on emerging challenges in ethical data engineering
Audience: Graduate

E C E/M E 576 – PRINTED AND FLEXIBLE ELECTRONICS: MANUFACTURING, DEVICES, AND APPLICATIONS
3 credits.

Exploration of additive fabrication of thin-film electronics. Various techniques, materials, and applications of printable electronics with a key focus on mechanically flexible electronic devices. Identify the appropriate printing technology and materials to achieve desired device performance.
Requisites: E C E 230 or 376, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Define the broad field of printed/thin-film electronics
Audience: Both Grad & Undergrad

2. Describe the multiple techniques for printing electronics
Audience: Both Grad & Undergrad

3. Identify the appropriate technique for specific target applications
Audience: Both Grad & Undergrad

4. Describe applications of materials for insulating, conducting, and semiconducting, required for advanced thin-film electronics
Audience: Both Grad & Undergrad

5. Benchmark printed devices including sensors and thin-film transistors
Audience: Both Grad & Undergrad

6. Design printable electronic sensors to desired specifications
Audience: Graduate

7. Describe the current challenges of the field of printable electronics
Audience: Graduate

E C E/M E 577 – AUTOMATIC CONTROLS LABORATORY
4 credits.

Control theory is reduced to engineering practice through the analysis and design of actual systems in the laboratory. Experiments are conducted with modern servo systems using both analog and digital control. Systems identification and modern controls design are applied to motion and torque control.
Requisites: M E 346 or E C E 332, or graduate/professional standing or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

E C E 601 – SPECIAL TOPICS IN ELECTRICAL AND COMPUTER ENGINEERING
1-4 credits.

Advanced topics of special interest to students in various areas of Electrical and Computer Engineering.
Requisites: Junior standing or member of Engineering Guest Students
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

E C E 610 – SEMINAR IN ELECTRICAL AND COMPUTER ENGINEERING
1 credit.

Survey of topics within the department of electrical and computer engineering that introduce students to the materials/techniques to assist them in being successful graduate students. Faculty seminars spanning energy and power systems, applied physics, electromagnetic fields, plasmas, communications and signal processing, controls, photonics, solid state, and computers will be given. Additionally, students will participate in weekly group exercises to enhance their skills in engineering/technical communications, writing, ethics, and project management.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

E C E 611 – INTRODUCTION TO DOCTORAL RESEARCH IN ELECTRICAL & COMPUTER ENGINEERING
2 credits.

A focus on topics within the department of electrical and computer engineering that introduce students to the materials/techniques that will assist them in being successful graduate students. Faculty seminars spanning energy and power systems, applied physics, electromagnetic fields, plasmas, communications and signal processing, controls, photonics, solid state, and computers will be given. Additionally, students will participate in weekly group exercises to enhance their skills in engineering/technical communications, writing, ethics, and project management. Graded homework and a final project are assigned.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

E C E 697 – CAPSTONE PROJECT IN MACHINE LEARNING AND SIGNAL PROCESSING
5 credits.

Individual or team project to gain hands-on-experience applying machine learning and signal processing concepts.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2024
Learning Outcomes: 1. Identify a real-world problem that can be addressed and answered using techniques in machine learning and signal processing
Audience: Graduate

2. Think critically about the end-to-end formulation of a real-world machine learning and signal processing task
Audience: Graduate

3. Apply MLSP concepts to a real-world machine learning and signal processing task
Audience: Graduate

4. Ask and answer deep and driving questions about a machine learning and signal processing project
Audience: Graduate

5. Gain, sharpen, and showcase skills in teamwork, problem solving, reflection, and communication
Audience: Graduate

E C E 699 – ADVANCED INDEPENDENT STUDY
1-6 credits.

Directed study projects as arranged with instructor.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

E C E 702 – GRADUATE COOPERATIVE EDUCATION PROGRAM
1-2 credits.

Work experience that combines classroom theory with practical knowledge of operations to provide students with a background on which to develop and enhance a professional career. The work experience is tailored for MS students from within the U.S. as well as eligible international students.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and respond appropriately to real-life engineering ethics cases relevant to co-op work
Audience: Graduate

2. Synthesize and apply appropriate technical education to real world technical work
Audience: Graduate

3. Communicate effectively in writing and speaking with a range of audiences in the workplace, including those without disciplinary expertise
Audience: Graduate

4. Develop professional and transferable habits like time management skills, collaborative problem-solving skills, and research skills for learning new information
Audience: Graduate

E C E/COMP SCI 707 – MOBILE AND WIRELESS NETWORKING
3 credits.

Design and implementation of protocols, systems, and applications for mobile and wireless networking, particularly at the media access control, network, transport, and application layers. Focus is on the unique problems and challenges presented by the properties of wireless transmission, various device constraints such as limited battery power, and node mobility. Knower of computer networking is strongly encouraged, such as from COMP SCI 640 or E C E 537.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

E C E 711 – DYNAMICS AND CONTROL OF AC DRIVES
3 credits.

Principles of power converters, two axis models of AC machines and AC drives, simulation of drive systems, analytical modeling of drives, dynamic behavior of induction and synchronous motors and drive systems. Knowledge of Simulink required.
Requisites: E C E 411 and (graduate/professional standing or declared in Capstone Certificate in Power Conversion and Control)
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Develop coupled circuit model of ac machines, including induction and synchronous machines
Audience: Graduate

2. Develop complex variable model of induction machines
Audience: Graduate

3. Perform digital simulation of electric machines and drives
Audience: Graduate

4. Develop DQ models for power converters and current regulation
Audience: Graduate

5. Develop field orientation control, vector control, and direct torque control
Audience: Graduate

6. Develop small-signal dynamic response of electric machines
Audience: Graduate

E C E 712 – SOLID STATE POWER CONVERSION
3 credits.

Advanced course in power electronics which provides an understanding of switching power converters. Included are DC-to-DC, AC-to-DC, DC-to-AC, and AC-to-AC converters, commutation techniques, converter control, interfacing converters with real sources and loads.
Requisites: E C E 412 and graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

E C E 713 – ELECTROMAGNETIC DESIGN OF AC MACHINES
3 credits.

Electromagnetic design concepts and application to AC machines, magnetic circuit concepts, calculation of equivalent circuit parameters of induction, synchronous and permanent magnet machines from geometric data, copper and iron loss calculations, theory and application of finite elements to electromagnetic devices.
Requisites: (E C E 411 or 511) and graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze, derive operating principles, and sketch voltage, current, and air gap field phasors and waveforms for synchronous and asynchronous ac machines.
Audience: Graduate

2. Use analytic techniques to dimension and size electric and magnetic components of ac machines (permanent magnets, magnetic steel, windings)
Audience: Graduate

3. Model and evaluate the performance of ac machine designs using a finite element analysis tool
Audience: Graduate

4. Investigate trade-offs in the design space and propose Pareto optimal designs by using finite element analysis techniques to model ac machines
Audience: Graduate

E C E 714 – UTILITY APPLICATION OF POWER ELECTRONICS
3 credits.

Power electronic application to utility systems is a rapidly growing field with major impact on the industry. Covers material on HVDC transmission, energy storage systems, renewable sources, static compensators, and flexible ac transmission systems.
Requisites: E C E 412, 427, and graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

E C E 717 – LINEAR SYSTEMS
3 credits.

Equilibrium points and linearization; natural and forced response of state equations; system equivalence and Jordan form; Lyapunov, asymptotic, and BIBO stability; controllability and duality; control-theoretic concepts such as pole-placement, stabilization, observers, dynamic compensation, and the separation principle. Knowledge of linear algebra [such as MATH 340] required.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

E C E/B M I/COMP SCI/MED PHYS 722 – COMPUTATIONAL OPTICS AND IMAGING
3 credits.

Computational imaging includes all imaging methods that produce images as a result of computation on collected signals. Learn the tools to design new computational imaging methods to solve specific imaging problems. Provides an understanding of the physics of light propagation and measurement, and the computational tools to model it, including wave propagation, ray tracing, the radon transform, and linear algebra using matrix and integral operators and the computational tools to reconstruct an image, including linear inverse problems, neural networks, convex optimization, and filtered back-projection. Covers a variety of example computational imaging techniques and their applications including coded apertures, structured illumination, digital holography, computed tomography, imaging through scattering media, compressed sensing, and non-line-of-sight imaging.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Apply ray and wave based light propagation models
Audience: Graduate

2. Explain the process of image formation in conventional imaging systems using theory and computational models
Audience: Graduate

3. Select and combine the different components required in an imaging system to perform light manipulation, collection, and image reconstruction

Audience: Graduate

4. Apply the linear matrix and integral operators that model light propagation
Audience: Graduate

5. Apply the linear inverse algorithms that allow an imaging system to reconstruct properties of the scene from collected data
Audience: Graduate

6. Simulate different computational imaging systems and perform computation on simulated datasets
Audience: Graduate

7. Understand the most common computational imaging techniques and be able to use and adapt them for their own applications
Audience: Graduate

E C E 723 – ON-LINE CONTROL OF POWER SYSTEMS
3 credits.

State estimation based on line-flow measurements. Detection and correction of incorrect on-line measurements. Reduction techniques. Network security evaluation. On-line contingency studies and contingency remedial action. Calculation of penalty factors and optimal power dispatch strategies. On-line stability determination. Parallel processors for on-line studies. Knowledge of basic probability analysis [such as E C E 331, STAT/MATH 431, or STAT 311] strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

E C E/N E/PHYSICS 724 – WAVES AND INSTABILITIES IN PLASMAS
3 credits.

Waves in a cold plasma, wave-plasma interactions, waves in a hot plasma, Landau damping, cyclotron damping, magneto-hydrodynamic equilibria and instabilities, microinstabilities, introduction to nonlinear processes, and experimental applications. Basic knowledge of plasmas [such as PHYSICS/E C E/N E 525] and advanced electromagnetics [such as PHYSICS 721 or E C E 740] strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

E C E/N E/PHYSICS 725 – PLASMA KINETIC THEORY AND RADIATION PROCESSES
3 credits.

Coulomb Collisions, Boltzmann equation, Fokker-Planck methods, dynamical friction, neoclassical diffusion, collision operators radiation processes and experimental applications. Basic knowledge of plasmas [such as PHYSICS/E C E/N E 525] and advanced electromagnetics [such as PHYSICS 721 or E C E 740] strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

E C E/N E/PHYSICS 726 – PLASMA MAGNETOHYDRODYNAMICS
3 credits.

MHD equations and validity in hot plasmas; magnetic structure and magnetic flux coordinates; equilibrium in various configurations; stability formulation, energy principle, classification of instabilities; ideal and resistive instability in various configurations, evolution of nonlinear tearing modes; force-free equilibria, helicity, MHD dynamo; experimental applications. Basic knowledge of plasmas [such as PHYSICS/E C E/N E 525] and advanced electromagnetics [such as PHYSICS 721 or E C E 740] strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

E C E 729 – INFORMATION THEORY
3 credits.

Definition of measures of information and their properties, capacity of discrete and continuous channels with noise, source and channel coding theorems, fundamentals of channel coding, noiseless source coding, and source coding with a fidelity criterion. Knowledge of basic probability analysis [such as E C E 331, STAT/MATH 431, or STAT 311] required.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Calculate the entropy of a random variable from its distribution, the mutual information between two random variables from their joint distribution, the Kullback-Leibler divergence between two probability distributions, and the entropy rate of a Markov process
Audience: Graduate

2. Construct source codes such as the Huffman code, the Shannon code, and the Elias-Fano code for a given probability distribution of the source
Audience: Graduate

3. Define channel capacity and apply Shannon's channel coding theorem to Calculate the channel capacities of discrete channels such as the binary symmetric channel and the binary erasure channel, and continuous channels such as the additive Gaussian noise channel
Audience: Graduate

E C E 730 – PROBABILITY AND RANDOM PROCESSES
3 credits.

Review of basic probability. Advanced probability concepts. Random vectors; linear filtering of random processes; stationarity; power spectral densities; estimation; convergence; Markov chains; Poisson process; Wiener process. Knowledge of basic probability analysis [such as E C E 331, STAT/MATH 431, or STAT 311] strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Compute probabilities and expectations using probability mass functions and densities together with the laws of total probability and substitution, along with the property of independence when applicable
Audience: Graduate

2. Work with Gaussian random vectors, joint densities, and characteristic functions
Audience: Graduate

3. Determine in what sense(s) a sequence of random variables converges
Audience: Graduate

4. Perform calculations using properties of the Poisson process and the Wiener process
Audience: Graduate

E C E 731 – ADVANCED POWER SYSTEM ANALYSIS
3 credits.

Electrical transients due to faults and switching. Effect on power system design and operation. Traveling waves and surge protection. Computerized analysis of power transients.
Requisites: E C E 427 and graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021

E C E/M E 732 – DYNAMICS OF CONTROLLED SYSTEMS
3 credits.

Emphasis on obtaining equations which define the behavior of physical systems frequently subjected to control; mechanical processing, fluid power, and thermal systems; analytical, experimental, and computer techniques. Knowledge of Automatic Controls [such as M E 446 or E C E 322] is required.
Requisites: Graduate/professional standing or declared in Capstone Certificate in Power Conversion and Control. Not open to students with credit for M E 746.
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Describe how physical state feedback affects dynamic stiffness of a control system
Audience: Graduate

2. Analyze the sensitivity of the system with eigenvalue migration analysis
Audience: Graduate

3. Develop improved control systems by implementing active state feedback which mimics the physical system and augments the system performance
Audience: Graduate

4. Differentiate command tracking from disturbance rejection. The student will characterize the necessary command feedforward structure in order to achieve optimal command tracking.
Audience: Graduate

5. Manipulate observer inputs and state feedback inputs to achieve zero-lag properties
Audience: Graduate

6. Draw the block diagram of physical systems identifying the appropriate inputs required for a properly formed observer
Audience: Graduate

7. Implement observers for state estimation in multi-variable control systems
Audience: Graduate

E C E/M E 733 – ADVANCED COMPUTER CONTROL OF MACHINES AND PROCESSES
3 credits.

Digital control theory, design methodology, and techniques for controller implementation on digital computers. Advanced single and multi-axis motion generation algorithms. Multiple processor control systems. Multiple objective control systems for machinery guidance and manufacturing processes. Precision control. Knowledge of continuous and discrete time control [such as M E 447 or E C E 332] is required.
Requisites: Graduate/professional standing. Not open to students with credit for M E 747.
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain and apply physics-based discrete time system modeling
Audience: Graduate

2. Analyze and design in both the continuous and discrete domains
Audience: Graduate

3. Analyze and design control systems using tools such as Matlab and Simulink
Audience: Graduate

4. Describe physics-based control structures for computer control systems
Audience: Graduate

E C E 734 – VLSI ARRAY STRUCTURES FOR DIGITAL SIGNAL PROCESSING
3 credits.

An overview of the architectures and design methodologies of VLSI array processors for digital signal processing. Emphasis is placed on the techniques of mapping algorithms onto array structures for real time signal processing. Knowledge of digital signal processing [such as E C E 431] and computer architecture [such as E C E/COMP SCI 552] strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022

E C E 735 – SIGNAL SYNTHESIS AND RECOVERY TECHNIQUES
3 credits.

Signals and their representation. Signal synthesis subject to constraints on peak voltage, energy, duration-bandwidth product. The theory of alternating projections onto convex sets and applications to inverse problems in signal processing: signal recovery using incomplete data, image recovery in tomography using limited views, phase retrieval in optical astronomy.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020

E C E 736 – WIRELESS COMMUNICATIONS
3 credits.

Theory, design and analysis of mobile wireless communication systems from a signal processing perspective. Emphasis on code-division multiple-access (CDMA) systems employing direct-sequence spread-spectrum (DS-SS) signaling. Topics include characterization of mobile wireless channels, demodulation of DS-SS signals, diversity techniques, interference suppression methods, and low-complexity adaptive receivers. Knowledge of probability [such as E C E 730] and digital communication [such as E C E 437] strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

E C E 738 – ADVANCED DIGITAL IMAGE PROCESSING
3 credits.

Deterministic and stochastic spatio-temporal image models, transform domain processing, Markov random fields and anisotropic diffusion; MAP parameter estimation, ill-posed inverse problems, robust statistics and non-linear digital filtering in image processing. Applications to image restoration, motion estimation, (video) image compression (MPEG, JPEG) and tomography. Knowledge of image processing [such as E C E/ COMP SCI 533] strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

E C E 740 – ELECTROMAGNETIC THEORY
3 credits.

Time harmonic fields and waves in linear media with applications to radiation, guiding and scattering; wave and surface impedance and admittance concepts; duality, uniqueness, image theory, equivalence principle, induction and compensation theorems, reciprocity, Green's functions, wave functions, potential and transform theory. Knowledge of electromagnetics [such as E C E 420] strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

E C E 741 – SEMICONDUCTOR DIODE LASERS AND OTHER OPTOELECTRONIC DEVICES
3 credits.

An overview of modern photonic technology and an introduction to key parameters and concepts; the basic mechanisms determining the relationship between optical gain and current density, and quantum-well laser structures; physics of high-power phase-locked laser arrays or other optoelectronics devices. Knowledge of electromagnetics [such as E C E 320] and solid-state electronics [such as E C E 335] strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Apply simulation tools to characterize the physical operation of semiconductor lasers
Audience: Graduate

2. Construct analytical models to evaluate semiconductor laser performance
Audience: Graduate

3. Apply design tradeoffs to semiconductor laser design
Audience: Graduate

4. Determine the relationship between compound semiconductor material properties and semiconductor laser operation
Audience: Graduate

E C E 742 – COMPUTATIONAL METHODS IN ELECTROMAGNETICS
3 credits.

Computational techniques for solving differential and integral equations that govern static, frequency-domain, and time-domain electromagnetic field phenomena. Applications of the finite-difference time-domain method, finite-element method, and method of moments to practical electromagnetics engineering problems. Knowledge of high-level programming language like MATLAB strongly encouraged. Knowledge of electromagnetics [such as E C E 320] strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

E C E 743 – HIGH-POWER DIODE LASERS AND AMPLIFIERS
3 credits.

Single-mode diode lasers and amplifiers and their applications; an in-depth treatment of the four basic types of high-power coherent diodes: phase-locked arrays, master-oscillator power amplifiers, unstable resonators, and external-cavity-controlled resonators. Knowledge of electromagnetics [such as E C E 320] and solid-state electronics [such as E C E 335] strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020
Learning Outcomes: 1. Apply simulation tools to characterize the physical operation of high-power semiconductor lasers
Audience: Graduate

2. Construct analytical models to evaluate high-power semiconductor laser performance
Audience: Graduate

3. Apply design tradeoffs to high-power semiconductor laser and amplifier design
Audience: Graduate

4. Determine the photonic-crystal laser equivalence to phase-locked array of semiconductor lasers
Audience: Graduate

E C E 744 – THEORY OF MICROWAVE CIRCUITS AND DEVICES
3 credits.

Scattering matrices; symmetrical junctions; impedance and ABCD matrices; equivalent circuits. Wave propagation in periodic structures and anisotropic media; Floquet's theorem; Brillouin diagrams; Hartree harmonics; tensor permeability, conductivity, and permittivity; coupled wave equations; normal modes; applications in ferrite devices. Knowledge of advanced engineering electromagnetics [such as E C E 740] strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022

E C E 745 – SOLID STATE ELECTRONICS
3 credits.

Physical principles underlying the action of semiconductor devices, chemical bonding and energy band structure, Boltzmann transport theory, optical and high frequency effects, diffusion and drift, interfaces, properties of elemental and compound semiconductors.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

E C E/PHYSICS 746 – QUANTUM ELECTRONICS
3 credits.

Elementary aspects of Lagrange theory of fields and field quantization; Bose, Fermi and Pauli operators; interaction of fields; quantum theory of damping and fluctuations; applications to lasers, nonlinear optics, and quantum optics. Knowledge of lasers [such as PHYSICS 546] and graduate-level electromagnetics [such as E C E 740 or PHYSICS 721] strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

E C E 747 – NANOPHOTONICS
3 credits.

Optics/photonics at nanometer and micrometer length scales, including EM waves in dielectrics and metals, computational electromagnetics, waveguides and waveguide coupling, optical resonators, basic nanofabrication techniques, thin-film interference, surface-plasmon polaritons, localized surface-plasmon resonances, applications of plasmonics, super-resolution imaging, photonic crystals, composite materials and metamaterials, metasurfaces. Knowledge of Maxwell's equation and basic ray/wave optics, as would typically be obtained from junior-level or higher electromagnetics or optics courses [such as E C E 320 or E C E 434], is strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate an understanding of electromagnetic waves in various media, at boundaries and interfaces, and in various types of waveguides
Audience: Graduate

2. Carry out a variety of two-dimensional (and, depending on the project, three-dimensional) simulations using the finite-difference time-domain method
Audience: Graduate

3. Recall, summarize, and evaluate basic nanofabrication concepts as they relate to nanophotonic structures
Audience: Graduate

4. Identify, formulate, and solve problems describing localized and propagating surface plasmons in various geometries
Audience: Graduate

5. Demonstrate awareness and understanding of various applications of nanophotonics and plasmonics, especially in the areas of sensing and biomedical applications
Audience: Graduate

6. Recall the similarities and differences between composite materials, metamaterials, metasurfaces, and related photonic structures
Audience: Graduate

E C E/PHYSICS 748 – LINEAR WAVES
3 credits.

General considerations of linear wave phenomena; one dimensional waves; two and three dimensional waves; wave equations with constant coefficients; inhomogenous media; random media. Lagrangian and Hamiltonian formulations; asymptotic methods. Knowledge of electromagnetics [such as E C E 320 or PHYSICS 321], mechanics [such as M E 340], or vibrations [such as M E 440] strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

E C E/N E/PHYSICS 749 – COHERENT GENERATION AND PARTICLE BEAMS
3 credits.

Fundamental theory and recent advances in coherent radiation charged particle beam sources (microwave to X-ray wavelengths) including free electron lasers, wiggler/wave-particle dynamics, Cerenkov masers, gyrotrons, coherent gain and efficiency, spontaneous emission, beam sources and quality, related accelerator concepts experimental results and applications.
Requisites: E C E 740
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

E C E/COMP SCI 750 – REAL-TIME COMPUTING SYSTEMS
3 credits.

Introduction to the unique issues in the design and analysis of computer systems for real-time applications. Hardware and software support for guaranteeing timeliness with and without failures. Resource management, time-constrained communication, scheduling and imprecise computations, real-time kernels and case studies. Students are strongly encouraged to have knowledge of computer architecture (e.g., E C E/COMP SCI 552) and operating system functions (e.g., COMP SCI 537)
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

E C E 751 – EMBEDDED COMPUTING SYSTEMS
3 credits.

Embedded applications, embedded processors and multiprocessors, embedded system design and simulation, configurable/reconfigurable embedded systems, embedded compilers and tool chains, run-time systems, application design and customization, hardware and software co-design, low-power design. Knowledge of computer architecture [such as E C E 552] strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

E C E/COMP SCI 752 – ADVANCED COMPUTER ARCHITECTURE I
3 credits.

Processor design, computer arithmetic, pipelining, multi-operation processors, vector processors, control units, precise interrupts, main memory, cache memories, instruction set design, stack machines, busses and I/O, protection and security. Students are strongly encouraged to have knowledge of computer architecture (e.g., E C E/COMP SCI 552).
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

E C E 753 – FAULT-TOLERANT COMPUTING
3 credits.

Fault modeling, redundancy techniques and reliability evaluation, error detecting and correcting codes, self-checking circuits, fault diagnosis, software fault tolerance, and case studies. Knowledge of probability [such as E C E 431] and computer architecture [such as E C E/COMP SCI 552] strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

E C E/COMP SCI 755 – VLSI SYSTEMS DESIGN
3 credits.

Overview of MOS devices and circuits; introduction to integrated circuit fabrication; topological design of data flow and control; interactive graphics layout; circuit simulation; system timing; organizational and architectural considerations; alternative implementation approaches; design project. E C E 555 or equivalent experience is strongly recommended.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

E C E/COMP SCI 756 – COMPUTER-AIDED DESIGN FOR VLSI
3 credits.

Broad introduction to computer-aided design tools for VLSI, emphasizing implementation algorithms and data structures. Topics covered: design styles, layout editors, symbolic compaction, module generators, placement and routing, automatic synthesis, design-rule checking, circuit extraction, simulation and verification. Students are strongly encourage to have programming skills and to have taken a course in Digital System Fundamentals such as E C E/COMP SCI 352.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

E C E/COMP SCI 757 – ADVANCED COMPUTER ARCHITECTURE II
3 credits.

Parallel algorithms, principles of parallelism detection and vectorizing compilers, interconnection networks, MIMD machines, processor synchronization, data coherence, multis, dataflow machines, special purpose processors. Students are strongly encouraged to have knowledge of computer architecture (e.g., E C E/COMP SCI 552).
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

E C E/COMP SCI/E M A/E P/M E 759 – HIGH PERFORMANCE COMPUTING FOR APPLICATIONS IN ENGINEERING
3 credits.

An overview of hardware and software solutions that enable the use of advanced computing in tackling computationally intensive Engineering problems. Hands-on learning promoted through programming assignments that leverage emerging hardware architectures and use parallel computing programming languages. Students are strongly encourage to have completed COMP SCI 367 or COMP SCI 400 or to have equivalent experience.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

E C E/COMP SCI 760 – MACHINE LEARNING
3 credits.

Computational approaches to learning: including inductive inference, explanation-based learning, analogical learning, connectionism, and formal models. What it means to learn. Algorithms for learning. Comparison and evaluation of learning algorithms. Cognitive modeling and relevant psychological results.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify different aspects of machine learning, including supervised learning, unsupervised learning, and reinforcement learning
Audience: Graduate

2. Implement and analyze a variety of supervised models for classification and regression, including decision trees, instance-based models, naive Bayes, support vector machines, a variety of neural networks, linear and logistic regression, and others
Audience: Graduate

3. Implement and analyze neural network models, starting with the perceptron, and continuing to multilayer perceptrons, convolutional neural networks, recurrent neural networks, along with deep generative models
Audience: Graduate

4. Identify various types of regularization techniques and their properties
Audience: Graduate

5. Implement optimization techniques used in modern machine learning, including gradient descent and stochastic gradient descent
Audience: Graduate

6. Apply various concepts and metrics involved in evaluating models: accuracy, F measures, ROC, and precision/recall curves, and implement cross-validation
Audience: Graduate

7. Analyze unsupervised learning techniques for clustering, dimensionality reduction, and latent models
Audience: Graduate

8. Identify classical and modern techniques to improve models or deal with dearth of data: ensemble methods, semi-supervised learning, weak supervision
Audience: Graduate

E C E/COMP SCI 761 – MATHEMATICAL FOUNDATIONS OF MACHINE LEARNING
3 credits.

Mathematical foundations of machine learning theory and algorithms. Probabilistic, algebraic, and geometric models and representations of data, mathematical analysis of state-of-the-art learning algorithms and optimization methods, and applications of machine learning. Knowledge of probability [such as MATH/STAT 431 or COMP SCI/E C E 561] and linear algebra [such as MATH 341 or M E/COMP SCI/E C E 532] is required.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Derive and apply mathematical tools for machine learning from probability, statistics, linear algebra, and optimization
Audience: Graduate

2. Perform mathematical analysis and characterization of generative and discriminative models
Audience: Graduate

3. Perform mathematical analysis of machine learning algorithms
Audience: Graduate

4. Perform derivation of basic machine learning error bounds and related performance analysis
Audience: Graduate

5. Read and understand theoretical papers from machine learning conferences
Audience: Graduate

E C E/COMP SCI 763 – TRUSTWORTHY ARTIFICIAL INTELLIGENCE
3 credits.

Explore security and privacy aspects of trustworthy artificial intelligence. Three core subjects will be considered: differential privacy and algorithmic fairness; adversarial machine learning; and end-to-end trustworthy systems. A selection of more advanced topics may be covered such as additional notions of privacy, language-based security, and robust optimization. Knowledge of probability/statistics (such as MATH 431), cryptography (such as MATH 435), security (such as COMP SCI 642), and modern machine learning (such as M E/COMP SCI/E C E 539 or 540) is required.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Evaluate machine learning and AI systems from an adversarial, security and privacy mindset.
Audience: Graduate

2. Identify common pitfalls and problems in ensuring security and privacy for AI.
Audience: Graduate

3. Summarize the commonalities and differences between notions of security and privacy (e.g., the difference between privacy and cryptographic security).
Audience: Graduate

4. Explain the strengths and limitations of candidate definitions of robustness, security, privacy, and fairness properties in AI.
Audience: Graduate

5. Apply useful primitives from end-to-end trustworthiness to machine learning and AI systems.
Audience: Graduate

6. Use modern tools to design attacks and implement defensive measures.
Audience: Graduate

E C E/COMP SCI 766 – COMPUTER VISION
3 credits.

Fundamentals of image analysis and computer vision; image acquisition and geometry; image enhancement; recovery of physical scene characteristics; shape-from techniques; segmentation and perceptual organization; representation and description of two-dimensional objects; shape analysis; texture analysis; goal-directed and model-based systems; parallel algorithms and special-purpose architectures. Students are strongly encouraged to have basic proficiency in calculus and linear algebra, such as MATH 340, and basic programming such as COMP SCI 300.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Develop basic computer vision applications using a programming environment
Audience: Graduate

2. Formulate computer vision research problems motivated from real-world applications
Audience: Graduate

3. Evaluate and compare existing solutions to a computer vision problem
Audience: Graduate

4. Design approaches for solving computer vision problems based on a broad range of fundamental concepts in 2D and 3D computer vision, sensing and recognition
Audience: Graduate

5. Communicate solutions verbally and in writing to justify choices while designing solutions
Audience: Graduate

E C E/B M E/MED PHYS 778 – MACHINE LEARNING IN ULTRASOUND IMAGING
3 credits.

Concepts and machine learning techniques for ultrasound beamforming for image formation and reconstruction to image analysis and interpretation will be presented. Key machine learning and deep learning concepts applied to beamforming, compressed sampling, speckle reduction, segmentation, photoacoustics, and elasticity imaging will be evaluated utilizing current peer-reviewed publications.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Critically read and evaluate peer-reviewed journal papers describing machine learning applications in ultrasound imaging.
Audience: Graduate

2. Apply, implement and expand upon ideas from these publications to applications in ultrasound imaging.
Audience: Graduate

3. Present the results of their critical evaluation and implementation to the class.
Audience: Graduate

4. Write a research paper based on their findings suitable for publication.
Audience: Graduate

E C E/COMP SCI 782 – ADVANCED COMPUTER SECURITY AND PRIVACY
3 credits.

Security and privacy issues in software, networks, and hardware systems. Security vulnerabilities, privacy threats, threats modeling, and mitigation strategies. Privacy issues related to user interaction with devices, online systems, and networks. In addition, a selection of more advanced topics will be covered. Possible examples include applied cryptography in the context of systems, security and privacy policies, user authentication, and cyber-physical systems. Builds on prior experiences with one or more of the following: networking, security, modern machine learning, embedded systems, and mobile computing.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify contemporary research problems related to the security and privacy of modern computer systems
Audience: Graduate

2. Implement known security attacks to identify weaknesses that led to those attacks and evaluate defense strategies
Audience: Graduate

3. Differentiate among the different dimensions involved in protecting users' security and privacy as they relate to effectiveness, practicality, and usability
Audience: Graduate

4. Analyze, interpret, and critique research papers from top-tier security conferences by identifying their strengths and weaknesses
Audience: Graduate

5. Propose original research by defining a problem, outlining a plan, performing the original research, and designing, implementing, and evaluating the proposed solution
Audience: Graduate

6. Work effectively in teams to complete a research project
Audience: Graduate

7. Communicate effectively through written reports, oral presentations, and discussion
Audience: Graduate

E C E 790 – MASTER'S RESEARCH
1-9 credits.

Independent work on master's research overseen by a qualified instructor.
Requisites: Declared in Electrical Engineering: Research, M.S. or Electrical Engineering: Power Engineering, M.S.
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate an ability to formulate, analyze, and independently solve advanced engineering problems
Audience: Graduate

2. Communicate research results orally and in writing
Audience: Graduate

E C E 817 – NONLINEAR SYSTEMS
3 credits.

Modelling nonlinear systems, linearization, equilibria, solution concepts, phase plane analysis, stability concepts, Lyapunov methods, oscillations, vector space methods, control system nonlinearities and design. Selected topics from the following: input-output methods, switching and variable structure systems, feedback linearization, and Lyapunov robustness. Knowledge of linear systems [such as E C E 717] strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023

E C E 821 – OPTIMAL CONTROL AND VARIATIONAL METHODS
3 credits.

Variational principles in optimization and optimal control, constrained control and reachability analysis, stability of optimal control, data-driven methods for optimal control. Knowledge of linear systems [such as E C E 717] strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Identify appropriate notions of optimality for controls in autonomous systems
Audience: Graduate

2. Formulate optimal control problems in a rigorous mathematical framework
Audience: Graduate

3. Use systematic design procedures for optimal controls
Audience: Graduate

4. Use data driven optimal control for dynamical systems
Audience: Graduate

E C E 826 – THEORETICAL FOUNDATIONS OF LARGE-SCALE MACHINE LEARNING
3 credits.

Mathematical foundations of large-scale machine learning and optimization. Focus on recent texts in machine learning, optimization, and randomized algorithms, focused on tradeoffs that are driving algorithmic design in this new discipline. These trade-offs revolve around speed of convergence, statistical accuracy, robustness, scalability, algorithmic complexity, and implementation.
Requisites: COMP SCI/E C E 761
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Prove convergence rates for stochastic optimization algorithms
Audience: Graduate

2. Describe systems tradeoffs that drive algorithmic design in large-scale machine learning
Audience: Graduate

3. Summarize recent literature in large-scale optimization and machine learning
Audience: Graduate

4. Design, tune, or tailor a given machine learning algorithm for a new system
Audience: Graduate

5. Evaluate statements about parallelizability, generalization, convergence of optimization algorithms
Audience: Graduate

E C E 830 – ESTIMATION AND DECISION THEORY
3 credits.

Estimation and decision theory applied to random processes and signals in noise: Bayesian, maximum likelihood, and least squares estimation; the Kalman filter; maximum likelihood and maximum aposteriori detection; adaptive receivers for channels with unknown parameters or dispersive, fading characteristics; the RAKE receiver; detection systems with learning features.
Requisites: E C E 730
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019

E C E 835 – LIGHT INTERACTIONS WITH QUANTUM MATERIALS
3 credits.

Light-matter interactions with quantum systems and their applications in quantum computing, communications, and sensing. Brief review of quantum mechanics and derivation of quantum structure of atoms. Deeper exploration of concepts and applications of quantum optics (such as use of nonclassical light, entangled photons) and experimental techniques on how to control and measure quantum systems with photons (including atom cooling and trapping, coherent interactions, putting atoms in cavities). Knowledge of introductory-level classical electromagnetism (such as E C E 220 or PHYSICS 202) and modern physics (such as PHYSICS/E C E 235 or PHYSICS 241) required.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain concepts in the interactions of light with quantum systems, such as absorption and emission processes, Rabi oscillations, and cavity quantum electrodynamics
Audience: Graduate

2. Formulate techniques to prepare, manipulate, and detect quantum states using common light sources and optical components
Audience: Graduate

3. Apply numerical methods to model and analyze interactions in quantum systems
Audience: Graduate

4. Identify critical differences between classical and non-classical light sources and recognize experimental approaches to generate, characterize, and utilize these light sources in quantum measurements
Audience: Graduate

5. Analyze and effectively communicate the use of atom-photon interactions in state-of-the-art quantum computing, communication, and sensing experiments
Audience: Graduate

E C E 841 – ANTENNAS
3 credits.

Applications of Maxwell's field equations to radiation problems; transmission of radio waves; radiation and impedance characteristics of various antennas and arrays. Analysis of complete antenna systems.
Requisites: E C E 740
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Perform wireless system analysis, including link budget calculation for wireless communications and radar systems
Audience: Graduate

2. Use Maxwell’s equations to solve basic radiation problems from electric and magnetic current distributions in space
Audience: Graduate

3. Analyze and design basic types of wire antennas, including dipole and loop antennas, and aperture antennas, including horn, reflector, patch, slot, lens, and reflectarray antennas
Audience: Graduate

4. Analyze and design basic types of antenna arrays, including linear and planar arrays
Audience: Graduate

5. Synthesize antennas and antenna arrays to achieve a given desired radiation pattern in the far field
Audience: Graduate

6. Demonstrate a fundamental understanding of antenna measurement techniques including common techniques used to measure the radiation pattern, gain, directivity, polarization, and bandwidth of an antenna under test
Audience: Graduate

7. Determine a suitable antenna to use for a given application from the system level performance metrics desired including, bandwidth, gain, radiation pattern, frequency of operation, etc.
Audience: Graduate

E C E/MATH 842 – TOPICS IN APPLIED ALGEBRA
3 credits.

Applied topics with emhasis on algebraic constructions and structures. Examples include: algebraic coding theory; codes (algebraic-geometric, convolutional, low-density-parity-check, space-time); curve and lattice based cryptography; watermarking; computer vision (face recognition, multiview geometry).
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

E C E 845 – TRANSPORT IN SEMICONDUCTOR DEVICES
3 credits.

Transport of carriers in electronic devices, starting from the Boltzmann equation and the quantum mechanical treatment of scattering, and covering applications to devices; transport in 2D structures; modeling of transport; experiments and devices involving hot electrons.
Requisites: E C E 745
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

E C E/PHYSICS 848 – NONLINEAR WAVES
3 credits.

General considerations of nonlinear wave phenomena; nonlinear hyperbolic waves; nonlinear dispersion; nonlinear geometrical optics; Whitham's variational theory; nonlinear and parametric instabilities; solitary waves; inverse scattering method. Knowledge of electromagnetics [such as E C E 320 or PHYSICS 321] or mechanics [such as M E 340] encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019

E C E/COMP SCI/STAT 861 – THEORETICAL FOUNDATIONS OF MACHINE LEARNING
3 credits.

Advanced mathematical theory and methods of machine learning. Statistical learning theory, Vapnik-Chevronenkis Theory, model selection, high-dimensional models, nonparametric methods, probabilistic analysis, optimization, learning paradigms.
Requisites: E C E/COMP SCI 761 or E C E 830
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

E C E/MATH/STAT 888 – TOPICS IN MATHEMATICAL DATA SCIENCE
1-3 credits.

Advanced topics in the mathematical foundations of data science
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply advanced mathematical concepts to solve a variety of data science problems
Audience: Graduate

2. Analyze rigorously the mathematical properties of methods used in data science
Audience: Graduate

E C E 890 – PRE-DISSERTATOR'S RESEARCH
1-9 credits.

Independent work on doctoral research overseen by a qualified instructor.
Requisites: Declared in Electrical Engineering PhD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate an ability to formulate, analyze, and independently solve advanced engineering problems
Audience: Graduate

2. Communicate research results in writing and seminars
Audience: Graduate

E C E 901 – SPECIAL TOPICS IN ELECTRICAL AND COMPUTER ENGINEERING
1-3 credits.

Special advanced topics across Electrical and Computer Engineering. The topics covered, instructors, and prerequisites all vary with semester and with section. Particular topics typically reflect state-of-the-art ideas and research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

E C E/N E/PHYSICS 922 – SEMINAR IN PLASMA PHYSICS
0-1 credits.

Current topics in plasma physics.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

E C E 990 – DISSERTATOR'S RESEARCH
1-12 credits.

Independent work on dissertation overseen by a qualified instructor.
Requisites: Declared in Electrical Engineering PhD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate an ability to formulate, analyze, and independently solve advanced engineering problems
Audience: Graduate

2. Communicate research results in writing and seminars
Audience: Graduate

E C E 999 – ADVANCED INDEPENDENT STUDY
1-3 credits.

Directed study projects as arranged with instructor.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

EMERGENCY MEDICINE (EMER MED)

EMER MED 699 – INDEPENDENT STUDY
1-4 credits.

Offers undergraduates majoring in related fields an opportunity to participate in basic emergency medicine research. Assists in the preparation for graduate or medical school coursework.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply concepts learned in coursework to real life situations
Audience: Undergraduate

2. Read and effectively search scientific literature
Audience: Undergraduate

3. Develop critical, analytical, and independent thinking skills
Audience: Undergraduate

4. Critically review emergency medicine research protocols
Audience: Undergraduate

EMER MED 909 – EMERGENCY MEDICINE INTERNSHIP PREP COURSE
1 credit.

Designed to highlight, review, and allow practice of key concepts in Emergency Medicine. Practice with case simulation, case discussion, didactics, panel discussions, and procedural skills to prepare for success in the first few weeks of an Emergency Medicine residency. Will lead and participate in simulations. Explore critical interplay between medical care and communication. Discuss common challenges encountered early in residency and throughout an EM career, and develop individualized plans to address these challenges.
Requisites: MED SC-M 810, 811, 812, 813, and EMER MED 961
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Diagnose and manage common and critical medical conditions
Audience: Graduate

2. Practice initial orders for acute situations
Audience: Graduate

3. Develop competency as a potential first responder to urgent or emergent patient care situations
Audience: Graduate

4. Accurately interpret and apply laboratory information to clinical scenarios
Audience: Graduate

5. Demonstrate effective communication with peers, patients, families and all members of the healthcare team
Audience: Graduate

6. Develop competency in providing meaningful feedback to peers in clinical environment
Audience: Graduate

7. Develop strategies to address the stresses of transitioning to internship during residency and throughout medical career
Audience: Graduate

8. Develop a framework for performing basic procedures in the Emergency Department
Audience: Graduate

9. Develop ultrasound skills that can be used to aid in stabilization and diagnosis of critically ill patients
Audience: Graduate

10. Develop an approach to evaluating and stabilizing ill pediatric patients
Audience: Graduate

11. Demonstrate familiarity with basic procedures commonly performed in the Emergency Department (intubation, central venous catheter placement, etc.)
Audience: Graduate

12. Demonstrate familiarity with the medications that are utilized during procedural sedation and Rapid Sequence Intubation (RSI) in the Emergency Department
Audience: Graduate

EMER MED 911 – INTRODUCTION TO PREHOSPITAL MEDICINE AND DETERMINANTS OF UTILIZATION OF THE PREHOSPITAL SYSTEM
2 credits.

Provides a unique opportunity for fourth year medical students to gain experience in the prehospital system while utilizing their public health knowledge to determine factors that lead to patient utilization of this system. During this course, students will gain understanding of the prehospital system through first-hand experience with prehospital providers while appreciating the environment in which their patients live and work. Students will be asked to observe patient care, conduct posttransport interviews in the emergency department, and examine the social and environmental determinants that led to activation of the prehospital system.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

EMER MED 912 – GUATEMALA HEALTH ADVANCED ELECTIVE
2 credits.

Builds on the skills students developed during the Guatemala Service Learning experience in their first-year. The Service Learning trip partners with the San Lucas Mission to provide traveling health clinics around the southern/eastern sides of Lake Atitlan. In this selective, students will take a leadership role in the Service Learning Trip. Course is intended for M4 or Phase 3 medical students who have participated in the Guatemala Service Learning Experience. Students should have intermediate Spanish-language skills. Exceptions to these requirements will be considered on a case-by-case basis by Clerkship Director.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

EMER MED 913 – GUATEMALA PUBLIC HEALTH FIELD PROJECT
2 credits.

Design and implement a public health field project in the community of San Lucas Tolimán, Guatemala. This project will fulfill the field project for students on the path of distinction in public health or the dual MD-MPH program. In participating in the Guatemala service learning experience, students will have provided traveling health clinics to indigenous Mayan populations in rural Guatemala, collaborating with the San Lucas Mission. Course is intended for M4 or Phase 3 medical students who have participated in the Guatemala Service Learning Experience. Students should have intermediate Spanish-language skills. Exceptions to these requirements will be considered on a case-by-case basis by Clerkship Director.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020

EMER MED 914 – WILDERNESS MEDICINE
2 credits.

Complete an Advanced Wilderness Life Support Course, which will cover topics such as Altitude Illnesses, Hyper- and Hypothermia, Toxicology, Envenomations, general trauma, and more, through lectures, skills sessions, and simulation. Focus on medical decision-making that can be executed early in disease or injury processes, in austere environments, with a focus on acute stabilization and evacuation to appropriate medical care. Learn foundational backcountry skills such as land navigation; fire and stove operation; water and waste management; and Leave-No-Trace principles. Technical workshops and field experiences give participants the opportunity to learn from experienced kayakers and climbers from the area, to apply backcountry skills on a self-supported backpacking trip, and to continue exploring wilderness medicine through interactive sessions.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. DEMONSTRATE an appreciation of "Leave No Trace" principles in the backcountry, and how these ethics guide not only an individual's approach to outdoor stewardship, but also how the first principle – "Plan Ahead and Prepare" – informs a medical provider's approach to wilderness medicine.
Audience: Graduate

2. UTILIZE basic backcountry knowledge, skills, and materials – such as navigation and emergency communication skills, water management, fire construction, waste management and sanitation – not only to illness and injury, but also to prevent illness and injury in resource-limited settings.
Audience: Graduate

3. DISPLAY appropriate decision-making, risk-management, and leadership qualities when addressing environmental hazards such as extremes of temperature, precipitation, storms, altitude, wildlife, and dangerous moving water conditions.
Audience: Graduate

4. PRACTICE basic backcountry skills that are foundational to safe enjoyment of the outdoors, such as land navigation using a map and compass, water treatment, stove operation, fire building, river crossings, knot tying, and gear maintenance.
Audience: Graduate

5. APPLY knowledge from didactic and hands-on topics, specifically trauma topics, hypothermia, drowning and submersion, to common water hazards in a pool session led by a team of experienced whitewater kayakers and a rope session led by a team of experienced climbers.
Audience: Graduate

6. APPROACH the injured patient safely in a backcountry setting using a standardized algorithm, the Patient Assessment System, paying attention to scene safety concerns, as well as standard primary and secondary surveys, care plan development, and frequent reassessment.
Audience: Graduate

7. MANAGE a patient with multisystem trauma with standard and improvised means, including spinal trauma with manual and improvised spinal immobilization, blunt chest injuries with needle decompression and occlusive dressings, pelvic injuries with improvised pelvic binding, and orthopedic injuries with improvised splinting, particularly traction splinting of the femur.
Audience: Graduate

8. DIFFERENTIATE high altitude illnesses, specifically acute mountain

EMER MED 919 – INDIVIDUALIZED PHASE 3 CLINICAL ELECTIVE IN EMERGENCY MEDICINE
2-4 credits.

Care for emergency medicine patients in the Emergency Department. Participate in multidisciplinary work to transition patients to the next level of care. Evaluate and manage patients requiring collaboration with consulting specialties. Complete other patient care related learning activities as assigned by instructors (e.g., literature reviews, presentations on specific topics); these are dependent on the individual student, attending physician, and clinical site.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Perform a hypothesis driven history and complete a targeted exam.
Audience: Graduate

2. Develop and present a weighted differential diagnosis, diagnostic and treatment plans.
Audience: Graduate

3. Adapt differential diagnosis and plans to changing patient circumstances and data
Audience: Graduate

4. Complete written documentation in a comprehensive, concise, accurate and timely manner.
Audience: Graduate

5. Review, interpret and present current literature to support patient care.
Audience: Graduate

6. Develop clinically relevant questions to advance learning.
Audience: Graduate

7. Communicate effectively with patients, families, physicians and non-physician team members.
Audience: Graduate

8. Engage patients in shared decision making regarding tests, orders and procedures.
Audience: Graduate

EMER MED 920 – ART AND SCIENCE OF RESUSCITATION
2 credits.

Gain comfort with necessary skills in leadership and communication to effectively run a resuscitation and to review the basic science, which guide the principles of resuscitation of a variety of critical-illness disease states. Students will first attain ACLS certification via AHA approved curriculum, followed by in-depth reviews of skills and underlying basic science behind the creation of ACLS guidelines. In addition to hands-on skills such as CPR, BVM respiration, I/O access, and airway management, simulation will be utilized to teach advanced skills in leadership, teamwork, and communication, which are integral to success in running ACLS-based resuscitation's. Crisis-Resource Management skills will be introduced and practiced in a variety simulated resuscitation scenarios, with students having the opportunity to practice various roles, including leading a code team.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe and understand ACLS resuscitation protocols and resuscitation skills
Audience: Graduate

2. Demonstrate an understanding of the principles of Teamwork and Communication using the Crisis Resource Management model
Audience: Graduate

3. Through hands on simulation scenarios, identify physiology, pharmacology, and pathophysiology of common causes of cardiac arrest
Audience: Graduate

4. Through hands on simulation scenarios, articulate the scientific basis of ACLS protocols
Audience: Graduate

5. Through review of the primary literature, develop an understanding of the scientific basis of modern resuscitation algorithms.
Audience: Graduate

6. Demonstrate how to successfully lead a simulated resuscitation scenario
Audience: Graduate

EMER MED 930 – WILDERNESS MEDICINE
1 credit.

Introduces students to the epidemiology, pathophysiology and clinical practice of Wilderness Medicine: the care of patients in remote environments lacking typical health care resources, often under harsh conditions.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023

EMER MED 940 – PEDIATRIC EMERGENCY MEDICINE ELECTIVE
2 credits.

Clinical experience in the Pediatric Emergency Department setting. With guidance and supervision, provide primary and autonomous evaluation and care for the full spectrum of ED pediatric. Pediatric bronchiolitis, asthma, croup, appendicitis, orthopedic injuries, lacerations, and other common presentations.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the path and options for a career in pediatric emergency medicine.
Audience: Graduate

2. Help plan and deliver the treatment of acutely ill pediatric patients in an emergency department setting.
Audience: Graduate

3. Perform a hypothesis-driven history and complete a targeted exam.
Audience: Graduate

4. Develop and present a weighted differential diagnosis with an emphasis on pediatric diagnoses
Audience: Graduate

5. Present a diagnostic plan, including laboratory and imaging modalities.
Audience: Graduate

6. Present a treatment plan, including symptom management, disease modification, and disposition.
Audience: Graduate

7. Interpret imaging and laboratory findings and communicate results to patients and team members.
Audience: Graduate

8. Complete written documentation in a comprehensive, concise, accurate, and timely manner.
Audience: Graduate

9. Review, interpret, and present current literature to support patient care.

Audience: Graduate

10. Develop clinically relevant questions to advance learning.
Audience: Graduate

11. Communicate effectively with patients, families, physicians, and non-physician team members.
Audience: Graduate

12. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care.
Audience: Graduate

13. Engage families in shared decision-making regarding tests, orders and procedures.
Audience: Graduate

14. Identify the problems associated with medical jargon and use commonly understood language when communicating with patients and families.
Audience: Graduate

EMER MED 958 – INTRODUCTION TO BEDSIDE ULTRASOUND ELECTIVE
2 credits.

Focus on learning and practicing skills in clinical ultrasound (US) in the Emergency Department setting, under direct supervision by Emergency Medicine faculty. Receive teaching in core clinical US skills including evaluation of the aorta, echocardiography, gallbladder, renal, inferior vena cava, female pelvis, FAST, deep vein thrombosis, ocular, and lung exams. Complete hands-on scanning with ultrasound-trained faculty focusing on the above areas of expertise.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Correctly interpret ultrasound images with regards to pathology vs normal.
Audience: Graduate

2. Correctly acquire the appropriate views for the above listed Clinical US areas of interest.
Audience: Graduate

3. Explain the limitations of Clinical US.
Audience: Graduate

4. Describe how Clinical US is applicable in bedside evaluation and applications in clinical decision-making.
Audience: Graduate

EMER MED 959 – EMERGENCY MEDICINE REGIONAL SITE
2-4 credits.

Learn and gain clinical experience in the Emergency Department setting. Evaluate and care for the full spectrum of Emergency Department patients under the guidance and supervision of Emergency Medicine attending physicians.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Gain experience in the treatment of acutely ill patients in an Emergency Department setting.
Audience: Graduate

2. Perform a hypothesis driven history and complete a targeted exam.
Audience: Graduate

3. Develop and present a weighted differential diagnosis.
Audience: Graduate

4. Using clinical evidence, adapt and justify the working diagnosis.
Audience: Graduate

5. Present a diagnostic plan including laboratory and imaging modalities.
Audience: Graduate

6. Present a treatment plan including symptom management, disease modification, and disposition.
Audience: Graduate

7. Correctly interpret imaging and laboratory findings and communicate results to patients and team members.
Audience: Graduate

8. Complete written documentation in a comprehensive, concise, accurate and timely manner.
Audience: Graduate

9. Review, interpret and present current literature to support patient care.
Audience: Graduate

10. Develop clinically relevant questions to advance learning.
Audience: Graduate

11. Communicate effectively with patients, families, physicians and non-physician team members.
Audience: Graduate

12. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care.
Audience: Graduate

13. Engage patients in shared decision making regarding tests, orders and procedures.
Audience: Graduate

14. Avoid medical jargon when communicating with patients and families.
Audience: Graduate

15. Recognize limitations and seek assistance as appropriate.
Audience: Graduate

EMER MED 960 – BASIC EMERGENCY MEDICINE (EM) ELECTIVE
2 credits.

Learn and gain clinical experience in the Emergency Department setting. Evaluate and care for the full spectrum of Emergency Department patients primarily and autonomously under the guidance and supervision of Emergency Medicine Attendings.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Gain experience in the treatment of acutely ill patients in an Emergency Department setting.
Audience: Graduate

2. Perform a hypothesis driven history and complete a targeted exam.
Audience: Graduate

3. Develop and present a weighted differential diagnosis.
Audience: Graduate

4. Using clinical evidence, adapt and justify the working diagnosis.
Audience: Graduate

5. Present a diagnostic plan including laboratory and imaging modalities.
Audience: Graduate

6. Present a treatment plan including symptom management, disease modification, and disposition.
Audience: Graduate

7. Correctly interpret imaging and laboratory findings and communicate results to patients and team members.
Audience: Graduate

8. Complete written documentation in a comprehensive, concise, accurate and timely manner.
Audience: Graduate

9. Review, interpret and present current literature to support patient care.
Audience: Graduate

10. Develop clinically relevant questions to advance learning.
Audience: Graduate

11. Communicate effectively with patients, families, physicians and non-physician team members.
Audience: Graduate

12. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care.
Audience: Graduate

13. Engage patients in shared decision making regarding tests, orders and procedures.
Audience: Graduate

14. Avoid medical jargon when communicating with patients and families.
Audience: Graduate

15. Recognize limitations and seek assistance as appropriate.
Audience: Graduate

EMER MED 961 – ADVANCED EM ELECTIVE
4 credits.

Learn and gain clinical experience in the Emergency Department setting. Evaluate and care for the full spectrum of Emergency Department patients primarily and autonomously under the guidance and supervision of Emergency Medicine Attendings.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Gain experience in the treatment of acutely ill patients in an Emergency Department setting.
Audience: Graduate

2. Perform a hypothesis driven history and complete a targeted exam.
Audience: Graduate

3. Develop and present a weighted differential diagnosis.
Audience: Graduate

4. Using clinical evidence, adapt and justify the working diagnosis.
Audience: Graduate

5. Present a diagnostic plan including laboratory and imaging modalities.
Audience: Graduate

6. Present a treatment plan including symptom management, disease modification, and disposition.
Audience: Graduate

7. Correctly interpret imaging and laboratory findings and communicate results to patients and team members.
Audience: Graduate

8. Complete written documentation in a comprehensive, concise, accurate and timely manner.
Audience: Graduate

9. Review, interpret and present current literature to support patient care.
Audience: Graduate

10. Develop clinically relevant questions to advance learning.
Audience: Graduate

11. Communicate effectively with patients, families, physicians and non-physician team members.
Audience: Graduate

12. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care.
Audience: Graduate

13. Engage patients in shared decision making regarding tests, orders and procedures.
Audience: Graduate

14. Avoid medical jargon when communicating with patients and families.
Audience: Graduate

15. Recognize limitations and seek assistance as appropriate.
Audience: Graduate

EMER MED 970 – TEACHING IN EMERGENCY MEDICINE
2-4 credits.

Develop clinical education skills and knowledge by teaching junior (Phase 2) medical students in a clinical setting. Learn effective teaching techniques. Become familiar with using and adept at researching the primary literature in health professions education. Understand effective approaches to providing feedback while spending clinical time advising and mentoring junior (Phase 2) students who are on their Acute Care Block (ACB) rotations in the Emergency Department (ED). Develop novel instructional, curricular, and interpersonal skills as an educator and use this knowledge to improve the clinical learning environment for future junior (Phase 2) students. Effectively assist junior (Phase 2) students with their approaches to undifferentiated patients in the ED, including developing an initial diagnostic and treatment plan, navigating a complex healthcare system, and setting personal learning goals in a clinical environment.
Requisites: EMER MED 961
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and implement evidence-based teaching methods in health professions education
Audience: Graduate

2. Assist junior medical students with approaching ED patients in a real-life clinical setting
Audience: Graduate

3. Provide specific and actionable feedback to other students based on their performance
Audience: Graduate

4. Create brief educational didactic for an audience of junior medical students
Audience: Graduate

5. Provide appropriate guidance and coaching for a junior medical student working in the ED regarding the diagnosis and treatment of undifferentiated ED patients presenting with a variety of common chief complaints.
Audience: Graduate

6. Assess a junior medical student's performance and give effective (e.g., specific, actionable) feedback
Audience: Graduate

7. Implement a variety of instructional methods available in a real-life clinical setting.
Audience: Graduate

8. Facilitate simulated ED patient encounters and subsequent debriefing for Phase II medical students.
Audience: Graduate

9. Identify effective strategies for creating and giving educational content (e.g., blog posts, presentations)
Audience: Graduate

10. Understand career pathways involving health professions education and academic medicine
Audience: Graduate

EMER MED 990 – INDEPENDENT READING AND RESEARCH IN EMERGENCY MEDICINE
2-8 credits.

Individual Master or PhD student interests and research provide the opportunity to work with faculty members. Tailored to each specific student research proposal/project.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Engage in clinical research through an apprenticeship-style learning experience with a physician-scientist mentor.

Audience: Graduate

2. Understand clinical research design by writing or contributing to a research proposal.
Audience: Graduate

3. Develop skills in the analysis of clinical research data.
Audience: Graduate

4. Develop a plan for communicating the results of the clinical research project.
Audience: Graduate

5. Improve verbal and written communication skills by preparing findings to be able to present clinical research experience and results.
Audience: Graduate

6. Formulate a hypothesis or specific objective if the study does not involve hypothesis generating research.
Audience: Graduate

7. Conduct a thorough literature review of the specific research question.
Audience: Graduate

8. Select and apply statistical methodologies appropriate for the proposed analyses.
Audience: Graduate

9. Interpret results correctly and in context of previous findings from literature review.
Audience: Graduate

EMER MED 998 – INDEPENDENT STUDY
1-8 credits.

Offers MD students interested in emergency medicine an opportunity to participate in advanced and translational research. Expands basic research knowledge and exposes MD students to current advanced research.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Develop practical research skills that can be used across multiple disciplines.
Audience: Graduate

2. Read and effectively search scientific literature
Audience: Graduate

3. Understand and adhere to ethical standards of research conduct
Audience: Graduate

4. Assist with data reviewing and analysis
Audience: Graduate

5. Critically review emergency medicine research protocols
Audience: Graduate

ENGINEERING MECHANICS AND AEROSPACE ENGINEERING (E M A)

E M A 1 – COOPERATIVE EDUCATION PROGRAM
1 credit.

Work experience which combines classroom theory with practical knowledge of operations to provide students with a background upon which to base a professional career in industry.
Requisites: Sophomore standing only
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and respond appropriately to real-life engineering ethics cases relevant to co-op work
Audience: Undergraduate

2. Synthesize and apply appropriate technical education to real world technical work
Audience: Undergraduate

3. Communicate effectively in writing and speaking with a range of audiences in the workplace, including those without disciplinary expertise
Audience: Undergraduate

4. Develop professional and transferable habits like time management skills, collaborative problem-solving skills, and research skills for learning new information
Audience: Undergraduate

E M A 103 – PRINCIPLES OF ENGINEERING FROM THE RENAISSANCE TO MODERN TIMES
3 credits.

Engineering achievements of the Renaissance period and their relation to modern engineering practice, key principles developed, and errors in understanding of that time. Innovative work of notable figures such as Galileo Galilei and Leonardo da Vinci and their contributions to fundamental mechanics principles of engineering, traced through modern engineering practice and current engineering applications. Introduction to concepts of stress, strain, tension, compression, deflection of beams, flaws, and fracture. Not for engineering majors.
Requisites: Satisfied Quantitative Reasoning (QR) A requirement
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Demonstrate a working understanding of basic concepts in engineering mechanics.
Audience: Undergraduate

2. Use experiments to produce a model and draw conclusions about material behavior under different loading situations.
Audience: Undergraduate

3. Interpret experimental data to test a hypothesis and/or compare to theoretical prediction.
Audience: Undergraduate

4. Explain how concepts in engineering mechanics were understood in the Renaissance compared to modern times.
Audience: Undergraduate

E M A 105 – INTRODUCTION TO UNMANNED AIRCRAFT SYSTEMS
3 credits.

Prepares students to operate Unmanned Aircraft Systems (UAS) for commercial purposes. Focuses on remote sensing, automation / artificial intelligence, data analytics and business applications / opportunities for UAS. Teaches all applicable subjects and provides hands-on experience necessary to 1) safely, legally and ethically operate UAS for commercial purposes; 2) effectively apply UAS to solve business problems and 3) manage, process and analyze data collected via UAS. Optional Federal Aviation Administration exam for a remote pilot-in-command (RPIC) certification. Group projects involving real-world drone flights to collect data and produce commercially viable products.
Requisites: None
Repeatable for Credit: No
Learning Outcomes: 1. Recall the following topics: UAS structure, remote sensing, automation, artificial intelligence and performance; UAS data management, processing and analytics; UAS regulations, airspace, flight planning and weather; and UAS business types, markets and opportunities
Audience: Undergraduate

2. Gain experience managing UAS-related projects to solve real-world business problems
Audience: Undergraduate

3. Apply photogrammetry techniques to process drone imagery into geo-rectified 3D models
Audience: Undergraduate

4. Apply different sensors such as visible imagery cameras, thermal cameras, multi-spectral cameras and lidar sensors to solve various engineering / business problems
Audience: Undergraduate

E M A 200 – INTRODUCTION TO AEROSPACE ENGINEERING
3 credits.

An introduction to the fields of aerospace engineering and mechanics. Fundamental concepts in engineering, including modeling, analysis, design, fabrication and experimental testing. Career paths, engineering ethics, shop safety, and oral and written technical communication.
Requisites: (Concurrent enrollment in MATH 113), MATH 114, 217, 221, or placement into MATH 221
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use the COE makerspace and shop for prototype fabrication and as needed in future coursework
Audience: Undergraduate

2. Utilize the fundamentals of the engineering design process and apply them in a laboratory setting
Audience: Undergraduate

3. Implement individual learning and cooperative teamwork skills through independent research and collaborative problem solving
Audience: Undergraduate

4. Utilize technical written and oral communication skills including making plots and formatting figures, creating parts and technical drawings, and writing concisely and clearly to communicate ideas
Audience: Undergraduate

5. Utilize engineering software that is required in upper-level engineering courses
Audience: Undergraduate

E M A 201 – STATICS
3 credits.

Principles of mechanics, force systems, equilibrium, structures, distributed forces, moments of inertia of areas, and friction.
Requisites: (MATH 222 or concurrent enrollment) or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Interpret a given engineering schematic in the context of equilibrium
Audience: Undergraduate

2. Determine the need for free body diagram(s) or appropriate sketch(es)
Audience: Undergraduate

3. Draw the free body diagram(s) with appropriate annotations
Audience: Undergraduate

4. Generate the governing equations informed by the free body diagram(s)
Audience: Undergraduate

5. Solve the governing equations
Audience: Undergraduate

6. Critically review results to ensure answers are realistic
Audience: Undergraduate

E M A 202 – DYNAMICS
3 credits.

Kinematics, force-mass-acceleration relations, work and energy, impulse and momentum, moments of inertia and mass.
Requisites: E M A 201 or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Derive kinematic relationships among position, velocity and acceleration for systems of particles and rigid bodies
Audience: Undergraduate

2. Apply and solve Newton-Euler equations to analyze the motion of systems of particles and rigid bodies
Audience: Undergraduate

3. Apply and solve work-energy equations to analyze the motion of systems of particles and rigid bodies
Audience: Undergraduate

4. Apply and solve momentum equations to analyze the motion of systems of particles and rigid bodies
Audience: Undergraduate

E M A 303 – MECHANICS OF MATERIALS
3 credits.

Stress and strain, torsion, bending of beams, shearing stresses in beams, compound stresses, principal stresses, deflections of beams, statically indeterminate members, columns. For civil engineers.
Requisites: E M A 201 and MATH 222, or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Compute stresses, strains, and deformations for structures experiencing tension, compression, torsion, bending, and thermal loads
Audience: Undergraduate

2. Combine analyses for different types of loading
Audience: Undergraduate

3. Analyze engineering structures for failure by yield and buckling
Audience: Undergraduate

E M A/M E 307 – MECHANICS OF MATERIALS LAB
1 credit.

Data processing, tension/compression tests, creep stress concentrations, fatigue, fracture, composite materials, combined stress, beam flexure, dynamic loads, buckling.
Requisites: (M E 306, E M A 303 or concurrent enrollment) or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a tensile test
Audience: Undergraduate

2. Calculate material properties from tensile test data
Audience: Undergraduate

3. Compare experimentally determined values to theoretical values
Audience: Undergraduate

4. Plot experimental data in an efficient and effective manner
Audience: Undergraduate

5. Identify sources of error and uncertainty in mechanical tests
Audience: Undergraduate

E M A/CIV ENGR 395 – MATERIALS FOR CONSTRUCTED FACILITIES
3 credits.

Properties and tests of materials used in the initial construction or repair of facilities (including buildings, transportation systems, utility systems, and reinforced earth). Introduction to laboratory and field measurement techniques to assess material performance capabilities. Technical report preparation.
Requisites: (E M A 303 or M E 306), graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use knowledge of construction materials behavior to select and specify materials for construction of civil engineering facilities
Audience: Undergraduate

2. Use knowledge of construction materials behavior to monitor construction of civil engineering facilities
Audience: Undergraduate

3. Conduct experiments with standardized testing protocols, interpret test results, and communicate results and interpretation in technical reports
Audience: Undergraduate

4. Design and conduct forensic studies to determine the role of material properties or construction methods in facility failures
Audience: Undergraduate

5. Use teamwork and communication skills relevant to the selection, specification, monitoring, and testing of construction materials
Audience: Undergraduate

E M A 405 – PRACTICUM IN FINITE ELEMENTS
3 credits.

Use of finite elements (FE) for solving practical problems in mechanics. Elementary theory of FE is discussed. A commercial computer program is used for applications. Major emphasis is on behavior of FE, modeling, and evaluation of results for correctness.
Requisites: (E M A 303 or M E 306), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the nature of an engineering problem and devise a simplified model that estimates expected behavior
Audience: Undergraduate

2. Perform various types of finite element analyses such as static structural, thermal, modal, harmonic, transient, random vibration, nonlinear materials, nonlinear contact, and buckling analyses
Audience: Undergraduate

3. Qualitatively and quantitatively verify the results using visual observations, a variety of simplified calculations, preliminary analysis, tabulated results, and numerical techniques
Audience: Undergraduate

4. Prepare and present informative reports on finite element modeling results
Audience: Undergraduate

E M A 469 – DESIGN PROBLEMS IN ENGINEERING
3 credits.

The design philosophy is presented. Students will be required to apply their knowledge of elementary mechanics, engineering and basic science to arrive at acceptable solutions to a variety of design problems.
Requisites: Declared in Engineering Mechanics and (E M A 303 or M E 306)
Repeatable for Credit: No
Last Taught: Fall 2025

E M A/E P 471 – INTERMEDIATE PROBLEM SOLVING FOR ENGINEERS
3 credits.

Use of computational tools for the solution of problems encountered in engineering physics applications. Topics covered include orbital mechanics, structural vibrations, beam and plate deformations, heat transfer, neutron diffusion, and criticality. Emphasis will be on modeling, choice of appropriate algorithms, and model validation.
Requisites: (E P 271 or COMP SCI 220) and (MATH 319, 320, 376 or concurrent enrollment), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Numerically solve systems of ordinary differential equations (ODEs)
Audience: Undergraduate

2. Numerically solve 1-D boundary value problems
Audience: Undergraduate

3. Numerically solve eigenvalue problems
Audience: Undergraduate

4. Apply the basic techniques of Monte Carlo methods
Audience: Undergraduate

5. Apply the basic techniques of numerically solving partial differential equations (PDEs)
Audience: Undergraduate

6. Apply techniques from outcomes 1-5 to multi-step engineering problems
Audience: Undergraduate

E M A/E P 476 – INTRODUCTION TO SCIENTIFIC COMPUTING FOR ENGINEERING PHYSICS
3 credits.

Background for professional numerical computation in Linux environments begins with shell scripting and software archiving. Programming skills in a compiled language are then developed through scientific and engineering examples. Engineering problem-solving skills are reinforced through applications that require numerical solutions to systems of differential and/or integral equations, while motivating progressively more advanced computational methods.
Requisites: (E P 271, COMP SCI 300, or 310) and (MATH 319, 320, or 375), or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Create UNIX or Linux shell scripts to aid workflow in scientific computing
Audience: Undergraduate

2. Formulate physical problems in mathematical and computational terms
Audience: Undergraduate

3. Identify software needs for solving numerical models of science and engineering applications
Audience: Undergraduate

4. Write and modify computer programs in a compiled programming language
Audience: Undergraduate

5. Estimate the accuracy of computed results
Audience: Undergraduate

E M A/M E 488 – HONORS IN RESEARCH I
1-3 credits.

Independent work in aerospace engineering, engineering mechanics, or mechanical engineering, supervised by a qualified instructor.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions

E M A 489 – HONORS IN RESEARCH
1-3 credits.

Undergraduate research and senior honors thesis in engineering mechanics and astronautics.
Requisites: Declared in Engineering Mechanics Honors in Research
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply basic physical and mathematical principles to engineering research problems
Audience: Undergraduate

2. Apply basic mechanics principles to engineering research problems
Audience: Undergraduate

3. Communicate technical concepts to a diverse audience via verbal or written media
Audience: Undergraduate

E M A 506 – ADVANCED MECHANICS OF MATERIALS I
3 credits.

Analysis and design of load-carrying members, shear center, unsymmetrical bending, curved beams, beams on elastic foundations, energy methods, theories of failure, thick-walled cylinders, stress concentrations, design to prevent failure by excessive elastic deformation, plastic deformation and fracture.
Requisites: (E M A 303 or M E 306), graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025

E M A/CIV ENGR/M E 508 – COMPOSITE MATERIALS
3 credits.

Physical properties and mechanical behavior of polymer, metal, ceramic, cementitious, cellulosic and biological composite systems; micro- and macro-mechanics; lamination and strength analyses; static and transient loading; fabrication; recycling; design; analytical-experimental correlation; applications.
Requisites: (E M A 303 or M E 306), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. List the different types of composite materials and describe their manufacturing processes
Audience: Both Grad & Undergrad

2. Describe the mechanical behavior of various composite materials under different types of loading conditions
Audience: Both Grad & Undergrad

3. Derive mathematical models and solve them for engineering stresses and deformations in a composite structure
Audience: Both Grad & Undergrad

4. Describe special theories for heterogeneous and non-isotropic materials and solve boundary value problems associated with composite structures
Audience: Both Grad & Undergrad

5. Use the knowledge acquired in this class to design and conduct a complex analysis, design, and/or experiment to address key challenges relevant to composite materials
Audience: Graduate

E M A 519 – FRACTURE MECHANICS
3 credits.

Introduction to the mechanics of fracture of linear and nonlinear materials. Crack stress and deformation fields; stress intensity factors; crack tip plastic zone; fracture toughness testing; energy release rate; J-integral. Criteria for crack growth initiation/stability; application to design.
Requisites: (E M A 303 or M E 306), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe mechanisms for initiation and growth of flaws in materials
Audience: Both Grad & Undergrad

2. Derive the fields of stresses, strains, and displacements near a crack
Audience: Both Grad & Undergrad

3. Predict crack growth using concepts of energy release rate and stress intensity factors
Audience: Both Grad & Undergrad

4. Analyze the effects of plasticity and nonlinearity on crack propagation
Audience: Both Grad & Undergrad

5. Evaluate the use of fracture mechanics concepts and equations in a research manuscript
Audience: Graduate

E M A 521 – AERODYNAMICS
3 credits.

Potential flow theory; stream functions; vortex filaments and sheets. Two- and three-dimensional wing theory. Doublet and panels methods. Propeller theory.
Requisites: MATH 321, (E M A 202, M E 240, or PHYSICS 311), and (CIV ENGR 310 or M E 363), or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

E M A 522 – AERODYNAMICS LAB
3 credits.

Experimental methods for aerodynamic measurements: wind tunnel tests with 6-component sting balance, pitot probe, hot wire anemometer; flow visualization with smoke generator and laser sheet; digital data acquisition; practical considerations for experimental design. Methods for comparing theoretical predictions to experimental measurements and computational simulations.
Requisites: E M A 521, or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

E M A 523 – FLIGHT DYNAMICS AND CONTROL
3 credits.

Aircraft longitudinal and lateral static stability. Aircraft equations of motion. Stability derivatives. Longitudinal and lateral dynamic stability of uncontrolled motion. Open-loop aircraft control. Closed-loop aircraft control.
Requisites: E M A 521 and 542, or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

E M A 524 – ROCKET PROPULSION
3 credits.

Rocket performance. One dimensional gasdynamics. Thrust chambers, nozzle design criteria. Fundamentals of combustion. Rocket configurations.
Requisites: M E 363, CIV ENGR 310, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

E M A/M E 540 – EXPERIMENTAL VIBRATION AND DYNAMIC SYSTEM ANALYSIS
3 credits.

Application of digital data acquisition to the investigation of mechanical components, structures and systems using time histories, transforms and response functions to characterize free, forced and transient inputs. Introduction to sensors, instrumentation and methods appropriate for dynamic system response.
Requisites: (M E 440, E M A 545, or concurrent enrollment) or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply common laboratory techniques to measure dynamic system responses
Audience: Both Grad & Undergrad

2. Demonstrate knowledge of instrumentation, data acquisition, signal processing, and results display for dynamic systems
Audience: Both Grad & Undergrad

3. Formulate analytical models with parameters identified from measured signals
Audience: Graduate

E M A/M S & E 541 – HETEROGENEOUS AND MULTIPHASE MATERIALS
3 credits.

Principles of the mechanics of solid multiphase systems. Role of heterogeneity and anisotropy in determining physical properties including elastic, dielectric and piezoelectric properties. Applications in lightweight structures, ultrastrong materials, materials for protection of the body, and materials for the replacement of human tissues. Materials with fibrous, lamellar, particular, and cellular structures. Heterogeneous materials of biological origin. Biomimetic and bio-inspired materials.
Requisites: E M A 303, M E 306, or M S & E 441, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022

E M A 542 – ADVANCED DYNAMICS
3 credits.

Kinematics and kinetics of plane and three-dimensional motion, Coriolis acceleration, general methods of linear and angular momentum, central force motion, gyrodynamics, generalized coordinates. Lagrange's equations.
Requisites: (E M A 202, M E 240, or PHYSICS 311), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

E M A 545 – MECHANICAL VIBRATIONS
3 credits.

General theory of free, forced, and transient vibrations; vibration transmission, isolation, and measurement; normal modes and generalized coordinates; method of matrix equation formulation and solution. The application of theory and methods to the analysis, measurement and design of dynamic systems.
Requisites: (E M A 202, M E 240, or PHYSICS 311), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Convert practical problems/systems into suitable mathematical models
Audience: Undergraduate

2. Develop the analytical vibratory response of a structure subjected to various types of excitation
Audience: Undergraduate

3. Apply computational methods to explore mathematical models of the vibratory response of structures subjected to various types of excitation
Audience: Undergraduate

E M A/E P 547 – ENGINEERING ANALYSIS I
3 credits.

Methods of higher mathematics; stress on problem solving rather than rigorous proofs; linear algebra, calculus of variations, Green's function.
Requisites: MATH 321, or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Solve ordinary differential equations in the form of initial-value and boundary-value problems through substitution, integrating factors, and Laplace and Fourier transforms
Audience: Both Grad & Undergrad

2. Apply methods of undetermined coefficients, variation of parameters, and Green’s functions to solve inhomogeneous ordinary differential equations
Audience: Both Grad & Undergrad

3. Identify whether linear algebraic systems have a unique solution, no solution, or an infinite number of solutions and apply methods for solving algebraic systems
Audience: Both Grad & Undergrad

4. Determine eigenvalues and eigenvectors of algebraic eigenvalue problems
Audience: Both Grad & Undergrad

5. Determine whether a function is analytic in the neighborhood of some point in the complex plane and apply contour integration to evaluate integrals
Audience: Both Grad & Undergrad

6. Identify appropriate combinations of methods for solving problems arising in engineering and scientific applications
Audience: Graduate

E M A/E P 548 – ENGINEERING ANALYSIS II
3 credits.

Function of complex variable, series solution of differential equations, partial differential equations. A year of math beyond calculus
Requisites: (MATH 322 and 320), (MATH 322 and E P/E M A 547), or (MATH 322, 319, and 340), or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply local analysis and asymptotic methods to distinguish analytical and singular behavior of ordinary differential equations to approximate their solutions
Audience: Both Grad & Undergrad

2. Apply asymptotic methods to estimate the values of integrals
Audience: Both Grad & Undergrad

3. Use perturbative methods such as boundary-layer theory, WKB theory, and multi-scale analysis to analyze ordinary differential equations
Audience: Both Grad & Undergrad

4. Apply the method of characteristics and separation of variables to solve partial differential equations
Audience: Both Grad & Undergrad

5. Identify appropriate combinations of methods for solving problems arising in engineering and scientific applications
Audience: Graduate

E M A/ASTRON 550 – ASTRODYNAMICS
3 credits.

Coordinate system transformations, central force motion, two body problem, three and n-body problem, theory of orbital perturbations, artificial satellites, elementary transfer orbits, and elementary rocket dynamics.
Requisites: (E M A 202, M E 240, or PHYSICS 311, or concurrent enrollment), or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

E M A 569 – SENIOR DESIGN PROJECT
3 credits.

Students will select specific engineering design projects. These projects will be student team efforts supervised by individual faculty members.
Requisites: E M A 469 and (have completed or be concurrently enrolled in two of E M A 506, 519, 521, 542, 545)
Repeatable for Credit: No
Last Taught: Spring 2025

E M A/M E 570 – EXPERIMENTAL MECHANICS
3 credits.

Experimental methods for design and analysis of mechanical components, structures and materials. Electrically and optically recorded stress, strain and deformation data; computer acquisition/reduction/presentation techniques; applications to static and transient events, sensors, transducer design, NDT, fracture and residual stresses.
Requisites: Senior standing and (M E 306, E M A 303 or 304) or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022
Learning Outcomes: 1. Apply knowledge of experimental techniques and measurement systems for mechanical components, structures and materials
Audience: Both Grad & Undergrad

2. Work in groups in the formulation of analytical models, configuration of measurement systems, interpretation of experimental and theoretical results, and presentation of conclusions
Audience: Both Grad & Undergrad

3. Use digital data acquisition systems, computer aided data reduction and display, and commercial software packages for modeling and data analysis
Audience: Both Grad & Undergrad

4. Evaluate clarity and/or accuracy of written work
Audience: Graduate

E M A 599 – INDEPENDENT STUDY
1-3 credits.

Directed study projects as arranged with instructor.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply physical and mathematical principles to engineering research problems
Audience: Undergraduate

2. Apply mechanics principles to engineering research problems
Audience: Undergraduate

3. Communicate technical concepts to a diverse audience via verbal or written media
Audience: Undergraduate

E M A 601 – SPECIAL TOPICS IN ENGINEERING MECHANICS
1-3 credits.

Selected topics in such areas as structural mechanics, dynamics, experimental mechanics, vibrations, engineering materials, soil mechanics, engineering analysis, rheology, etc.
Requisites: Graduate/professional standing or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and describe key theories, concepts, and methods in a special topic of Engineering Mechanics
Audience: Both Grad & Undergrad

2. Apply key theories, concepts, and methods in a special topic of Engineering Mechanics, using appropriate tools, processes, and/or software
Audience: Both Grad & Undergrad

3. Apply, Analyze or evaluate advanced theories, concepts, or methods in a special topic of Engineering Mechanics
Audience: Graduate

E M A 605 – INTRODUCTION TO FINITE ELEMENTS
3 credits.

A first course in finite elements, with theory and applications in stress analysis and in areas related to structural mechanics. Practice in the use and/or development of computer programs.
Requisites: (E M A 303 or M E 306), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Motivate variational treatment of free energy to obtain governing equations
Audience: Both Grad & Undergrad

2. Formulate finite element approximations to linear partial differential equations
Audience: Both Grad & Undergrad

3. Choose appropriate approximation space (mesh, basis, quadrature) for a given application
Audience: Both Grad & Undergrad

4. Assess stability and accuracy of linear finite element computations
Audience: Graduate

E M A 610 – STRUCTURAL FINITE ELEMENT MODEL VALIDATION
3 credits.

An introduction to test-based validation of finite element models for the design and analysis of dynamic structures.
Requisites: E M A 545 or M E 440, or graduate/professional standing or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Demonstrate knowledge of the use and limitations of finite element models in structural analysis
Audience: Both Grad & Undergrad

2. Formulate and document results using common dissemination methods such as technical report writing and/or oral presentations
Audience: Both Grad & Undergrad

3. Apply common methods of finite element validation including vibration test design, test and analysis correlation, and model calibration
Audience: Graduate

E M A 611 – ADVANCED MECHANICAL TESTING OF MATERIALS
3 credits.

Theory and use of servo-controlled, electro-hydraulic equipment for research of mechanical properties of engineering materials. Measurement of stress, strain, hysteresis energy, and material properties during deformation and at fracture. Analysis of four significant components of total strain.
Requisites: (E M A/M E 307 or M E/E M A 307) and (E M A 506 or concurrent enrollment), or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Perform experiments to measure mechanics quantities of interest
Audience: Both Grad & Undergrad

2. Measure mechanical properties of materials
Audience: Both Grad & Undergrad

3. Analyze experimental data in the context of theoretical solutions and experimental error
Audience: Both Grad & Undergrad

4. Communicate methods, results, and analysis through written reports and/or oral presentations
Audience: Both Grad & Undergrad

5. Evaluate clarity and/or accuracy of written work
Audience: Graduate

E M A/E P 615 – MICRO- AND NANOSCALE MECHANICS
3 credits.

An introduction to micro- and nanoscale science and engineering with a focus on the role of mechanics. A variety of micro- and nanoscale phenomena and applications covered, drawing connections to both established and new mechanics approaches.
Requisites: Graduate/professional standing or E M A 303 or M E 306
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Describe the current state and potential future impact of micro and nanotechnology
Audience: Both Grad & Undergrad

2. Explain how mechanics enters a new regime at the micro and nano scales where surfaces, interfaces, defects, material property variations, and quantum effects play more dominant roles
Audience: Both Grad & Undergrad

3. Use or adapt engineering mechanics concepts to describe behavior at the micro and nano scale
Audience: Both Grad & Undergrad

4. Describe cross-disciplinary intersections and how mechanics is integrated with the fields of materials science, chemistry, physics, and biology at the micro/nano scale
Audience: Graduate

E M A 630 – VISCOELASTIC SOLIDS
3 credits.

Linear theory of viscoelasticity; non-aging materials; Boltzmann superposition principle; time-temperature superposition boundary value problems. Applications: vibration damping, relaxation of stress, creep, droop, and sag in structural members, sound absorption, creep buckling, settlement of foundations, tire mechanics, and shock attenuation.
Requisites: M E 306 or E M A 303, or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe, qualitatively and quantitatively, the response of viscoelastic materials in creep, relaxation, and cyclic loading
Audience: Both Grad & Undergrad

2. Demonstrate proficiency in solving problems related to viscoelasticity
Audience: Both Grad & Undergrad

3. Describe underlying mechanisms for viscoelastic behavior
Audience: Both Grad & Undergrad

4. Apply concepts of viscoelasticity in an open-ended project
Audience: Graduate

E M A 642 – SATELLITE DYNAMICS
3 credits.

Review of Euler's equations, torque-free motion, stability of rotation, energy dissipation effects, gyroscopic instruments, gyrodynamics of the Earth, gravity gradient stabilized satellites, spin stabilized satellites, dual spin satellites, tethered satellites, mass movement techniques, space vehicle motion and rocket dynamics.
Requisites: E M A 542 or PHYSICS 311, or graduate/professional standing or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Formulate and solve problems using attitude parameterizations to describe the motion of aerospace systems
Audience: Both Grad & Undergrad

2. Formulate and solve problems using linear and angular momentum to generate equations of motion for spacecraft
Audience: Both Grad & Undergrad

3. Formulate and solve problems using energy methods to predict the attitude motion of spacecraft
Audience: Both Grad & Undergrad

4. Demonstrate knowledge of spacecraft stability and control theory to assess and enforce spacecraft attitude
Audience: Graduate

E M A 700 – THEORY OF ELASTICITY
3 credits.

Equations of elasticity in curvilinear and rectangular coordinates; two dimensional problems; problems of prismatic bars; variational methods and energy principles; complex variable and numerical methods; thermal stress problems. Knowledge of advanced mechanics of materials [such as E M A 506] and vector calculus [such as MATH 321] strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

E M A 702 – GRADUATE COOPERATIVE EDUCATION PROGRAM
1-2 credits.

Work experience that combines classroom theory with practical knowledge of operations to provide students with a background on which to develop and enhance a professional career. The work experience is tailored for MS students from within the U.S. as well as eligible international students.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025
Learning Outcomes: 1. Identify and respond appropriately to real-life engineering ethics cases relevant to co-op work
Audience: Graduate

2. Synthesize and apply appropriate technical education to real world technical work
Audience: Graduate

3. Communicate effectively in writing and speaking with a range of audiences in the workplace, including those without disciplinary expertise
Audience: Graduate

4. Develop professional and transferable habits like time management skills, collaborative problem-solving skills, and research skills for learning new information
Audience: Graduate

E M A/M E 703 – PLASTICITY THEORY AND PHYSICS
3 credits.

Physical foundations of plasticity as a basis for choices made in the formulation of theories representing plastic deformation and their limitation. Motion of dislocations and formation and growth of deformation twins. Experimental results in the context of plasticity models. Traditional and research topics of plasticity and theories for rate-independent, rate-dependent, single and polycrystal descriptions. Numerical solution of equations and computational plasticity. Knowledge of mechanics of materials [such as E M A 303 or M E 306] and continuum mechanics [such as E M A 622] required.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Identify the physical sources of plastic deformation in materials
Audience: Graduate

2. Explain and apply traditional and advanced theories of plasticity
Audience: Graduate

3. Execute a computational study of plasticity with a common engineering material
Audience: Graduate

4. Given a material model, know how to evaluate the material parameters in the model
Audience: Graduate

5. Provide critical assessment of seminal and modern plasticity literature
Audience: Graduate

E M A 705 – ADVANCED TOPICS IN FINITE ELEMENTS
3 credits.

Finite element methods for problems with linear and nonlinear media. Stress analysis, heat transfer, and fluid dynamics. Vibration and transient analysis. Weighted residual methods. Material and geometric nonlinearity. Nonlinear iteration methods. Instructor may also select additional material. Knowledge of finite element theory [such as E M A 605] strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Identify the principal attributes of the finite element method
Audience: Graduate

2. Explain and apply all components of the finite element method including strengths and weaknesses of approaches
Audience: Graduate

3. Execute a computational development project by deriving a method and coding within a solver
Audience: Graduate

4. Derive finite element formulations of general order
Audience: Graduate

5. Demonstrate clear proficiency in all aspects of the finite element method
Audience: Graduate

E M A/M E 708 – ADVANCED COMPOSITE MATERIALS
3 credits.

Contemporary topics in composite materials, including innovations in sandwich structures, textile composites, and architected materials; fracture mechanics; durability and damage tolerance; experimental techniques; transient, micro, nonlinear, inelastic and environmental effects; advanced manufacturing methods: repair and applications. Knowledge of basic composite materials [such as CIV ENGR/E M A/M E 508] is strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2016
Learning Outcomes: 1. Describe different types of advanced composites and manufacturing processes
Audience: Graduate

2. Describe the mechanical behavior of various composite materials under different types of loading conditions
Audience: Graduate

3. Mathematically model and solve for engineering stresses and deformations in a composite structure
Audience: Graduate

4. Assess the key challenges and impact of technical work being conducted in the area of composite materials
Audience: Graduate

E M A 710 – MECHANICS OF CONTINUA
3 credits.

Tensor analysis; analysis of stress, strain and rate of strain; application of Newtonian mechanics to deformable media; mechanical constitutive equations; field equations of fluid mechanics and elasticity. Knowledge of linear algebra [such as MATH 340] required.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Recall many important identities used in vector and tensor algebra
Audience: Graduate

2. Understand and use basic kinematics principles used in many fields of study
Audience: Graduate

3. Describe the breadth of conservation principles commonly employed for use in more advanced applications
Audience: Graduate

4. Employ thermodynamic relationships readily with fundamentals of continuum mechanics
Audience: Graduate

5. Acquire skills in rigorous continuum mechanics principles
Audience: Graduate

E M A/M E 722 – INTRODUCTION TO POLYMER RHEOLOGY
3 credits.

Formulation of constitutive equations using embedded base vectors. Viscosity, normal stress differences, stress relaxation, elastic recoil. Polymer rheology; homogeneous strain history. Knowledge of differential equations [such as MATH 320] strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2023

E M A 745 – ADVANCED METHODS IN STRUCTURAL DYNAMICS
3 credits.

Emphasis is placed on techniques used to analyze aerospace structures. Variational principles, Hamilton's extended principle, Lagrange's equations, mathematical models for continuous systems, natural modes of vibrations, dynamic response using mode superposition, mode acceleration, residual flexibility, vibration analysis using finite element methods, advanced substructure representations, component mode synthesis, systems with rigid body modes for aeronautical and astronautical systems. Knowledge of vibrations [such as E M A 545 or M E 440] strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022

E M A 747 – NONLINEAR AND RANDOM MECHANICAL VIBRATIONS
3 credits.

Exact solutions and sectorial linearization; free and forced vibration of mechanical systems with nonlinear restoring force; self-excited mechanical vibrations and relaxation vibrations; subharmonic responses; nonlinear vibration of mechanical systems with more than one degree of freedom; nonlinear vibration of bounded continuous media; random excitation and random response, random vibrations of mechanical systems and structures; random vibrations of nonlinear mechanical systems; failure of materials under random vibrations.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

E M A/COMP SCI/E C E/E P/M E 759 – HIGH PERFORMANCE COMPUTING FOR APPLICATIONS IN ENGINEERING
3 credits.

An overview of hardware and software solutions that enable the use of advanced computing in tackling computationally intensive Engineering problems. Hands-on learning promoted through programming assignments that leverage emerging hardware architectures and use parallel computing programming languages. Students are strongly encourage to have completed COMP SCI 367 or COMP SCI 400 or to have equivalent experience.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

E M A/CIV ENGR/M E 775 – TURBULENT HEAT AND MOMENTUM TRANSFER
3 credits.

Stochastic methods in turbulent heat and momentum transfer; fully developed turbulence; numerical methods including model applications to boundary layers, reacting flows, mass transfer, and unsteady flows; linear and non-linear stability and transition; emphasis on applications of interest to Mechanical, Aerospace, and Environmental Engineers. Knowledge of fluid mechanics [such as M E 363 or CBE 320] strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the physics and mathematics of turbulence theory and modeling
Audience: Graduate

2. Describe general features of turbulence
Audience: Graduate

3. Use analysis tools to solve problems and process data related to turbulence
Audience: Graduate

4. Use turbulence concepts to understand and explain turbulent behavior in more complex systems
Audience: Graduate

E M A 790 – MASTER'S RESEARCH AND THESIS
1-9 credits.

Directed study projects as arranged with instructor.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

E M A 890 – PRE-DISSERTATOR RESEARCH
1-9 credits.

Directed study projects as arranged with instructor.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

E M A 990 – RESEARCH AND THESIS
1-12 credits.

Directed study projects as arranged with instructor.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENGINEERING PHYSICS (E P)

E P 271 – ENGINEERING PROBLEM SOLVING I
3 credits.

Solution of engineering problems using commercially-available software tools (spreadsheets, symbolic manipulators, and equation solvers). The emphasis will be on nuclear engineering problems, including radioactive decay, nuclear cross sections, scattering, and criticality.
Requisites: MATH 222 and (E M A 201, PHYSICS 201, 207, 247, or concurrent enrollment) or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply mathematical models to describe engineering problems across an array of disciplines
Audience: Undergraduate

2. Implement computational solutions of mathematical models that represent engineering problems
Audience: Undergraduate

3. Combine multiple computational problem solving steps for complex problems
Audience: Undergraduate

4. Demonstrate a fundamental understanding of data, conditional execution, and loops for basic programming
Audience: Undergraduate

E P 418 – SUSTAINABLE ENERGY CHALLENGES AND SOLUTIONS
1 credit.

Interdisciplinary survey of energy research topics. Understand how sustainable energy challenges are being studied and solved by different disciplines, from science and engineering to social sciences and humanities. Analyze energy sustainability using a multi-disciplinary, systems-based approach.
Requisites: Declared in the Certificate in Engineering for Energy Sustainability or Engineering: Sustainable Systems Engineering, MEng
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze the causes of and solutions for the sustainability challenge of affordable and clean energy
Audience: Undergraduate

2. Analyze sustainability issues and/or practices using a systems-based approach
Audience: Undergraduate

3. Describe the technical, social, economic, and environmental dimensions of affordable and clean energy and identify potential trade-offs and interrelationships among these dimensions at a level appropriate to the course
Audience: Undergraduate

E P 468 – INTRODUCTION TO ENGINEERING RESEARCH
1 credit.

An introduction to the conduct of engineering research: the scientific method, ethics in research, documentation and treatment of research data, publication practices, and the structure of the broader research community are covered.
Requisites: Declared in Engineering Physics
Course Designation: Honors - Accelerated Honors (!)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop an introductory understanding of research practices involving documentation and treatment of research data and publication practices in research
Audience: Undergraduate

2. Demonstrate knowledge of professional and ethical standards and a basic understanding of research safety
Audience: Undergraduate

3. Demonstrate skills associated with finding and citing relevant technical literature
Audience: Undergraduate

4. Identify a campus research project and research mentor for further engagement during the remainder of the research sequence courses
Audience: Undergraduate

E P 469 – RESEARCH PROPOSAL IN ENGINEERING PHYSICS
1 credit.

An introduction to current research topics in engineering physics. Development of an undergraduate research proposal supervised by faculty members.
Requisites: E P 468 and declared in Engineering Physics
Course Designation: Honors - Accelerated Honors (!)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Design a research project with clear milestones and a detailed timeline in collaboration with a research mentor
Audience: Undergraduate

2. Establish deeper understanding of the literature in the research project area, including the ability to analyze and interpret relevant techniques and data
Audience: Undergraduate

3. Demonstrate technical writing skills
Audience: Undergraduate

4. Demonstrate technical presentation skills
Audience: Undergraduate

5. Demonstrate the ability to critique the research and technical writing of others
Audience: Undergraduate

6. Develop and present a research proposal in both written and oral form
Audience: Undergraduate

E P/E M A 471 – INTERMEDIATE PROBLEM SOLVING FOR ENGINEERS
3 credits.

Use of computational tools for the solution of problems encountered in engineering physics applications. Topics covered include orbital mechanics, structural vibrations, beam and plate deformations, heat transfer, neutron diffusion, and criticality. Emphasis will be on modeling, choice of appropriate algorithms, and model validation.
Requisites: (E P 271 or COMP SCI 220) and (MATH 319, 320, 376 or concurrent enrollment), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Numerically solve systems of ordinary differential equations (ODEs)
Audience: Undergraduate

2. Numerically solve 1-D boundary value problems
Audience: Undergraduate

3. Numerically solve eigenvalue problems
Audience: Undergraduate

4. Apply the basic techniques of Monte Carlo methods
Audience: Undergraduate

5. Apply the basic techniques of numerically solving partial differential equations (PDEs)
Audience: Undergraduate

6. Apply techniques from outcomes 1-5 to multi-step engineering problems
Audience: Undergraduate

E P/E M A 476 – INTRODUCTION TO SCIENTIFIC COMPUTING FOR ENGINEERING PHYSICS
3 credits.

Background for professional numerical computation in Linux environments begins with shell scripting and software archiving. Programming skills in a compiled language are then developed through scientific and engineering examples. Engineering problem-solving skills are reinforced through applications that require numerical solutions to systems of differential and/or integral equations, while motivating progressively more advanced computational methods.
Requisites: (E P 271, COMP SCI 300, or 310) and (MATH 319, 320, or 375), or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Create UNIX or Linux shell scripts to aid workflow in scientific computing
Audience: Undergraduate

2. Formulate physical problems in mathematical and computational terms
Audience: Undergraduate

3. Identify software needs for solving numerical models of science and engineering applications
Audience: Undergraduate

4. Write and modify computer programs in a compiled programming language
Audience: Undergraduate

5. Estimate the accuracy of computed results
Audience: Undergraduate

E P/E M A 547 – ENGINEERING ANALYSIS I
3 credits.

Methods of higher mathematics; stress on problem solving rather than rigorous proofs; linear algebra, calculus of variations, Green's function.
Requisites: MATH 321, or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Solve ordinary differential equations in the form of initial-value and boundary-value problems through substitution, integrating factors, and Laplace and Fourier transforms
Audience: Both Grad & Undergrad

2. Apply methods of undetermined coefficients, variation of parameters, and Green’s functions to solve inhomogeneous ordinary differential equations
Audience: Both Grad & Undergrad

3. Identify whether linear algebraic systems have a unique solution, no solution, or an infinite number of solutions and apply methods for solving algebraic systems
Audience: Both Grad & Undergrad

4. Determine eigenvalues and eigenvectors of algebraic eigenvalue problems
Audience: Both Grad & Undergrad

5. Determine whether a function is analytic in the neighborhood of some point in the complex plane and apply contour integration to evaluate integrals
Audience: Both Grad & Undergrad

6. Identify appropriate combinations of methods for solving problems arising in engineering and scientific applications
Audience: Graduate

E P/E M A 548 – ENGINEERING ANALYSIS II
3 credits.

Function of complex variable, series solution of differential equations, partial differential equations. A year of math beyond calculus
Requisites: (MATH 322 and 320), (MATH 322 and E P/E M A 547), or (MATH 322, 319, and 340), or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply local analysis and asymptotic methods to distinguish analytical and singular behavior of ordinary differential equations to approximate their solutions
Audience: Both Grad & Undergrad

2. Apply asymptotic methods to estimate the values of integrals
Audience: Both Grad & Undergrad

3. Use perturbative methods such as boundary-layer theory, WKB theory, and multi-scale analysis to analyze ordinary differential equations
Audience: Both Grad & Undergrad

4. Apply the method of characteristics and separation of variables to solve partial differential equations
Audience: Both Grad & Undergrad

5. Identify appropriate combinations of methods for solving problems arising in engineering and scientific applications
Audience: Graduate

E P 568 – RESEARCH PRACTICUM IN ENGINEERING PHYSICS I
3 credits.

Undergraduate research projects supervised by faculty members.
Requisites: E P 469 and declared in Engineering Physics
Course Designation: Honors - Accelerated Honors (!)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Acquire new and apply existing knowledge of mathematics, science and engineering to research
Audience: Undergraduate

2. Use techniques, skills and modern engineering tools for engineering research in collaboration with a research mentor
Audience: Undergraduate

3. Conduct a research project, using applicable experimental, theoretical, and computational methods
Audience: Undergraduate

4. Function effectively in a diverse research environment
Audience: Undergraduate

5. Demonstrate technical writing skills
Audience: Undergraduate

6. Demonstrate technical presentation skills
Audience: Undergraduate

7. Adjust to research obstacles by adapting technical approach, milestones, and/or timeline
Audience: Undergraduate

E P 569 – RESEARCH PRACTICUM IN ENGINEERING PHYSICS II
3 credits.

Undergraduate research projects supervised by faculty members. Senior thesis.
Requisites: E P 568 and declared in Engineering Physics
Course Designation: Honors - Accelerated Honors (!)
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Acquire new and apply existing knowledge of mathematics, science and engineering to research
Audience: Undergraduate

2. Use techniques, skills and modern engineering tools for engineering research in collaboration with a research mentor
Audience: Undergraduate

3. Conduct a research project, including analyzing and interpreting data
Audience: Undergraduate

4. Function effectively in a diverse research environment
Audience: Undergraduate

5. Communicate technical information effectively
Audience: Undergraduate

6. Complete a research thesis project and present it in both written and oral form
Audience: Undergraduate

E P 602 – SPECIAL TOPICS IN ENGINEERING PHYSICS
1-3 credits.

Subject matter, credits and prerequisites vary.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2022

E P/E M A 615 – MICRO- AND NANOSCALE MECHANICS
3 credits.

An introduction to micro- and nanoscale science and engineering with a focus on the role of mechanics. A variety of micro- and nanoscale phenomena and applications covered, drawing connections to both established and new mechanics approaches.
Requisites: Graduate/professional standing or E M A 303 or M E 306
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Describe the current state and potential future impact of micro and nanotechnology
Audience: Both Grad & Undergrad

2. Explain how mechanics enters a new regime at the micro and nano scales where surfaces, interfaces, defects, material property variations, and quantum effects play more dominant roles
Audience: Both Grad & Undergrad

3. Use or adapt engineering mechanics concepts to describe behavior at the micro and nano scale
Audience: Both Grad & Undergrad

4. Describe cross-disciplinary intersections and how mechanics is integrated with the fields of materials science, chemistry, physics, and biology at the micro/nano scale
Audience: Graduate

E P/COMP SCI/E C E/E M A/M E 759 – HIGH PERFORMANCE COMPUTING FOR APPLICATIONS IN ENGINEERING
3 credits.

An overview of hardware and software solutions that enable the use of advanced computing in tackling computationally intensive Engineering problems. Hands-on learning promoted through programming assignments that leverage emerging hardware architectures and use parallel computing programming languages. Students are strongly encourage to have completed COMP SCI 367 or COMP SCI 400 or to have equivalent experience.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

E P/M E 777 – VACUUM TECHNOLOGY
3 credits.

Topics defining modern vacuum technology, including the kinetic theory of gases, conductance, pumping systems, pump technologies, pressure measurement, gas-surface interactions, sealing technologies, leak detection, and residual gas analysis will be addressed through a combination of lectures, laboratory activities, problem solving, and group discussions. Knowledge of fluid mechanics [such as M E 363 or B M E 320] strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Use kinetic theory to determine key characteristics of a rarified gas such as the mean free path length, molecular flux and the average velocity
Audience: Graduate

2. Calculate the conductance of a vacuum system for molecular, viscous, and transitional flow regimes
Audience: Graduate

3. Calculate the time dependent pump down behavior of a vacuum system

Audience: Graduate

4. Repair a rotary vane vacuum pump
Audience: Graduate

5. Characterize the operation, advantages and disadvantages of low, medium, and high vacuum pumps
Audience: Graduate

6. Characterize the operation, advantages and disadvantages of low and high vacuum gauges
Audience: Graduate

7. Define and utilize appropriate leak detection methods for small, medium, and large leak rates
Audience: Graduate

E P 920 – ENGINEERING PHYSICS GRADUATE SEMINAR
0-1 credits.

Students will be able to enroll for credit more than once because the topics of the course will differ substantially from semester to semester. Our MS requirements permit up to 3 credits within the 30-credit minimum for the degree.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate curiosity for topics within their broader field but outside of their specific specialty
Audience: Graduate

ENGINEERING PROFESSIONAL DEVELOPMENT (E P D)

E P D 361 – FUNDAMENTALS OF ENGINE THERMODYNAMICS
2 credits.

Theory and application of energy methods in engineering; conservation of mass and energy; energy transfer by heat, work and mass; thermodynamic properties; analysis of open and closed systems; the second law of thermodynamics and entropy; vapor and gas power cycles.
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Summer 2023
Learning Outcomes: 1. Recognize and apply the methodology of thermodynamics
Audience: Undergraduate

2. Use properties to analyze a thermodynamic system undergoing a process or cycle
Audience: Undergraduate

3. Recognize and evaluate closed and open systems
Audience: Undergraduate

4. Analyze and evaluate cycles
Audience: Undergraduate

E P D 398 – TECHNICAL COMMUNICATIONS INTERNSHIP
1 credit.

Internship with local corporation, industry, government agency, or educational unit. Includes classroom components: use and misuse of social media; managing workplace-related conflicts; communicating technical information to colleagues; identifying and resolving engineering ethics challenges; practicing group discussion and presentation skills.
Requisites: INTEREGR 397 and declared in Certificate in Technical Communication
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

E P D 416 – ENGINEERING APPLICATIONS OF STATISTICS
3 credits.

Provides knowledge and skills to apply statistics to many types of engineering problems. Focuses on developing statistically-based experimental techniques and tests for measures of validity, application of computer-based statistical tools, and approaches to distillation of data.
Requisites: Graduate/professional standing or declared in Capstone Certificate in Artificial Intelligence for Engineering Data Analytics
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply statistical thinking, regression analysis, and descriptive analytics to evaluate data and assess process or product performance
Audience: Graduate

2. Evaluate process performance against output requirements and identify improvement opportunities using process capability evaluation and design of experiments
Audience: Graduate

3. Detect changes in process signals with noise and address factors impacting performance
Audience: Graduate

4. Design and implement experiments to identify and model input-output relationships and optimize performance
Audience: Graduate

5. Build traditional and artificial intelligence (AI) models to enhance process capability and develop actionable plans to drive measurable improvements
Audience: Graduate

E P D 455 – PYTHON FOR APPLICATIONS IN ENGINEERING
1 credit.

Introduction to Python's concepts of objects and reference; classes and nested objects. Elements of object-oriented programming in Python. Container types: lists, dictionaries, and tuples. Installing Python packages and managing environments. Scientific computing with Numpy and SciPy. Applications of Python to Data Analysis. Applications of Python to Machine Learning. Applications of Python to embedded systems/robotics.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Perform computations typically encountered in Engineering (data reading/writing, solving linear systems, perform regressions, etc.) using Python scripts with hundreds to thousands of lines of code
Audience: Graduate

2. Produce a software design solution that can be subsequently implemented in Python to solve a task/practical problem that draws on a computing component
Audience: Graduate

3. Increase their productivity in tasks that require Python programming by taking advantages of 3rd party Python packages
Audience: Graduate

4. Justify the rationale behind using Python in Engineering; explain how this programming language provides support of numerical analysis, statistical analysis, robotics, machine learning, data visualization, computer vision, and AI
Audience: Graduate

E P D 499 – SENIOR INDEPENDENT STUDY
1-3 credits.

Under faculty supervision.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

E P D 518 – QUALITY ENGINEERING AND QUALITY MANAGEMENT
3 credits.

Enhances the learners' basic business and decision-making skills related to quality systems and process improvement.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Work effectively on a team-based experiential project focused on process design, analysis, and resource management and integrating the concepts of continual improvement, customer focus, and teamwork
Audience: Graduate

2. Apply problem solving and management/planning tools for effectively defining problems, feasible alternative solutions, and measurable goals in a real-world environment
Audience: Graduate

3. Demonstrate ability to lead an industry-based team project integrating contemporary change management frameworks and considering organizational culture
Audience: Graduate

4. Describe how and when to use statistical techniques for process improvement and control
Audience: Graduate

5. Understand and identify the impact of organizational and cultural influences on the planning and implementation of change
Audience: Graduate

E P D 522 – GENERATIVE ARTIFICIAL INTELLIGENCE FOR ENGINEERING APPLICATIONS
3 credits.

Comprehensive coverage of AI-powered chatbots, from understanding generative AI fundamentals to developing sophisticated chatbot applications. Hands-on experience with generative AI tools. Explore retrieval-augmented generation (RAG) techniques. Examine critical aspects such as security, privacy, and memory models. Knowledge of Python [such as COMP SCI 220 or E P D 455] strongly recommended.
Requisites: Graduate/professional standing or declared in Capstone Certificate in Artificial Intelligence for Engineering Data Analytics
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Design and develop a fully functional Generative AI-based chatbot application that can be personalized to the user
Audience: Graduate

2. Implement and optimize Retrieval-Augmented Generation (RAG) to enhance chatbot responses
Audience: Graduate

3. Integrate memory management systems to improve context retention in chatbot interactions
Audience: Graduate

4. Utilize agents to perform specialized tasks within the chatbot framework
Audience: Graduate

5. Demonstrate the ability to deploy, test, and maintain chatbot applications in a production environment
Audience: Graduate

E P D 605 – FUNDAMENTALS OF TECHNICAL PROJECT MANAGEMENT
1 credit.

Learn techniques to plan, execute, and deliver projects with desired scope on time and on budget. Document clear project objectives and goals, accurately estimate project time and costs, schedule and allocate time-critical resources, and establish feedback systems for optimal project control. Best paired with a work experience, such as an internship or co-op, where you can apply these project management skills.
Requisites: Junior standing or declared in Capstone Certificate in Applied Engineering Management
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Plan and manage successful engineering projects using appropriate methods, tools, and techniques
Audience: Both Grad & Undergrad

2. Estimate project costs, resources, and schedules
Audience: Both Grad & Undergrad

3. Immediately apply project management principles regarding the five major project stages: initiate, plan, execute, control, and close
Audience: Both Grad & Undergrad

4. Apply or customize the project management framework to engineering organizational needs
Audience: Both Grad & Undergrad

5. Assess and improve the current project management system
Audience: Graduate

E P D 606 – LEADING AND MANAGING TECHNICAL TEAMS
1 credit.

Key team management concepts, principles, and practices. Team dynamics, team roles, leading and facilitating teamwork, and managing team conflict in the context of STEM (science, technology, engineering, and mathematics)-related work.
Requisites: Junior standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Describe team dynamics, roles, and expectations that influence a STEM team's performance
Audience: Both Grad & Undergrad

2. Identify and effectively deploy specific team member strengths relevant for technical projects / deliverables
Audience: Both Grad & Undergrad

3. Plan, lead and facilitate productive team meetings
Audience: Both Grad & Undergrad

4. Identify and manage team conflict more effectively and constructively
Audience: Both Grad & Undergrad

5. Assess and improve their current STEM team leadership methods and practices
Audience: Graduate

E P D 610 – ENGINEERING ANALYSIS FOR DECISION MAKING
3 credits.

Quantitative and qualitative analysis and visualization tools. Structured decision-making methodology for engineering applications such as variations in materials and production, process control, forecasting and executive decision making. Facilitate persuasive problem-solving and decision making in engineering applications. Builds on foundational knowledge of statistics.
Requisites: Graduate/professional standing or declared in Capstone Certificate in Applied Engineering Management
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply foundational quantitative and qualitative analysis tools and data visualization techniques to engineering applications

Audience: Graduate

2. Apply a structured decision-making methodology to identify, evaluate and recommend the most suitable solution to engineering applications
Audience: Graduate

3. Present an analysis and proposed solutions in a structured written and/or presentation format designed to facilitate persuasive problem-solving and decision making in engineering applications
Audience: Graduate

E P D 611 – ENGINEERING ECONOMICS AND MANAGEMENT
3 credits.

Addresses principles and practices of interpreting financial information and performing engineering-related economic analyses. Focuses on the practical use of economic information for decision-making.
Requisites: Graduate/professional standing or declared in Capstone Certificate in Applied Engineering Management
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Perform financial statement analysis using financial ratios, vertical analysis, and horizontal analysis for comparison within a company and across companies
Audience: Graduate

2. Evaluate advantages and disadvantages of alternative costing methods, including alternative ways of charging overhead to products
Audience: Graduate

3. Apply techniques in using budgeting and performance-evaluation systems to enhance operational control and lead to improved organizational performance
Audience: Graduate

4. Develop skills to evaluate the nuances of financial decision making and capital budgeting using cost data and the time value of money
Audience: Graduate

E P D 612 – TECHNICAL PROJECT MANAGEMENT
3 credits.

Learn key principles and tools of project management applicable to a broad range of engineering projects. Covers techniques for project planning, scheduling, resource allocation, and project tracking, as well as the interface between projects and the organizations within which they are executed.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Assess project goals and desired outcomes to ensure alignment with organizational strategic goals/objectives
Audience: Graduate

2. Apply project management knowledge, skills, tools, and practices to complex workplace challenges and teams
Audience: Graduate

3. Manage constrained resources within a project plan under conditions of change/uncertainty
Audience: Graduate

4. Develop and implement an actionable learning plan for professional and career development of project management competencies
Audience: Graduate

5. Demonstrate the critical role that ethics, culture, and context plays in effective project management
Audience: Graduate

E P D 613 – INTERNATIONAL ENGINEERING STRATEGIES AND PRACTICES
3 credits.

Provides a deeper understanding of various elements of culture related to business, avoiding the pitfalls, and finding the complementary strengths that will benefit the business. International strategy and the managerial implications such as product, country, location, and organization choices for a multinational engineering operation will be assessed, analyzed and applied. Further discussion will be focused on multi-cultural organization issues and exploring best practices.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and analyze their assumptions, attitudes, and practices that may inhibit effective working relationship with people (peers, clients/customers, suppliers) from differing cultures and create a plan to address opportunities for improvement
Audience: Graduate

2. Identify a set of strategies and best practices to draw from when interacting with individuals of differing cultural backgrounds
Audience: Graduate

3. Lay out a framework for developing and applying an international strategy that creates value for the engineering organization and corporation
Audience: Graduate

4. Apply an analytic process to assess the managerial implications of international strategy, including product, country, location, and organization choices for a multinational engineering operation
Audience: Graduate

E P D 614 – MARKETING FOR TECHNICAL PROFESSIONALS
3 credits.

Role and contribution of marketing and product management to overall operations; target marketing and market segmentation; product lifecycle positioning; develop product and marketing plan as part of balanced marketing effort; technical perspective on social, ethical, environmental, and sustainability of marketing and product management decisions.
Requisites: Graduate/professional standing. Not open to students declared in Business: Marketing, MBA.
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the role and contribution of marketing and product management to overall business operations and the technical contributions required
Audience: Graduate

2. Describe the structure and content of a Marketing Plan, the elements of the marketing mix, and a balanced marketing effort across the marketing and technical teams
Audience: Graduate

3. Apply target marketing, market segmentation, target market product or service positioning, and how technical information is required to add accuracy and specificity to achieve market success
Audience: Graduate

4. Assist marketing and product management teams on competitive offerings, product comparisons, product life-cycle positioning, and innovation possibilities
Audience: Graduate

5. Develop and present a comprehensive product and marketing plan for a product that delivers a value proposition to the customer
Audience: Graduate

6. Provide the technical perspective on the social, ethical, environmental, and sustainability implications of marketing and product management decisions
Audience: Graduate

E P D 616 – ENGINEERING LAW
2 credits.

Addresses important legal issues especially relevant to the practice of engineering. Gain awareness and ability to properly address patents, trade secrets, contracts, employment and non-disclosure agreements, as well as product and professional liability. Learn to avoid legal problems that often affect engineering projects and organizations.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply the basics of patent law including how to obtain patents, how to analyze patent claims, how patents are infringed or infringement can be avoided, how to recognize and capture patentable innovation, how to approach international patents, and the differentiation between trade secrets and patents.
Audience: Graduate

2. Appraise the innovation IP infrastructure at their organization in order to become more effective in interacting with it.
Audience: Graduate

3. Apply the basics of contract law including some key contract terms and often-encountered agreements such as Non-Disclosure Agreements (NDAs) and Employment Agreements.
Audience: Graduate

4. Engage the legal contractual infrastructure within their organization in order to become more effective in proactively interacting with it.
Audience: Graduate

5. Gain an improved ability to avoid legal liabilities by identifying commonly-occurring legal issues that may give rise to liability, and how to address them.
Audience: Graduate

E P D 617 – COMMUNICATING TECHNICAL INFORMATION
3 credits.

Develops skills necessary for engineering professionals to communicate technical and managerial information. Covers approaches for communicating to diverse audiences and for action-oriented purposes. Emphasizes communication problem solving and communication efficiency. Includes individual and collaborative projects using oral, written, and electronic media.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Differentiate and use key aspects of rhetoric and communication ethics
Audience: Graduate

2. Distinguish communication needs in a variety of contexts and for a variety of audiences
Audience: Graduate

3. Write and edit technical documents that reflect the 5 Cs of writing: correctness, clarity, conciseness, coherence, and cogency
Audience: Graduate

4. Craft and deliver technical presentations that are persuasive and easy to understand
Audience: Graduate

5. Collaborate with others to accomplish communication goals
Audience: Graduate

E P D 618 – APPLIED LEADERSHIP AND MANAGEMENT OF ENGINEERING ORGANIZATIONS
3 credits.

Addresses strategies, models, and practices for leading and managing engineering organizations in a context directly relevant to practicing engineers. Engage in self-reflection about styles, beliefs, and past experiences with leadership and management. Course project of direct relevance to student's organization will integrate theory, models, case studies, and real-time experiences from student's workplace. Gain broad exposure to diverse approaches to leadership and management, and a deeper understanding of how to put what is being learned into effective action.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply knowledge of individual, team, and organizational dynamics to improve organizational effectiveness through continuous improvement of engineering processes
Audience: Graduate

2. Apply tools and techniques to motivate and develop employees to improve performance
Audience: Graduate

3. Articulate the value and methods to proactively engage human resources for management issues
Audience: Graduate

4. Identify and prioritize key issues in personal and professional life to help navigate changing circumstances and mediate stress
Audience: Graduate

5. Interpret how the business case for diversity, equity, and inclusion (DEI) pertains to effectively managing engineering teams and organizations
Audience: Graduate

E P D 619 – FOSTERING AND LEADING INNOVATION
3 credits.

Learn to develop vision, culture, and practices that value and drive innovation within engineering and technical organizations. Grow your ability to build an enterprise that values, pursues, and delivers innovative technical services and products.
Requisites: Declared in Master of Engineering: Engineering Management, Data Analytics, Engine Systems, Manufacturing Systems Engineering, or Sustainable Systems Engineering
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Evaluate whether a technological solution is a business opportunity.
Audience: Graduate

2. Understand and discuss the process of commercializing technology and the challenges associated with each phase of that process.
Audience: Graduate

3. Identify and develop the skills and resources required for successfully managing technologies and innovative processes.
Audience: Graduate

4. Assess and present the commercial potential of a technological solution.
Audience: Graduate

5. Cultivate the leadership characteristics of technical organizations that successfully foster and sustain a culture of innovation.
Audience: Graduate

E P D 620 – ELECTRIFIED POWERTRAIN SYSTEMS
2 credits.

Micro, mild, full, and plug-in electrical powertrain systems, their components and the interactions between them, with special attention paid to generators, motors, and inverters. Learn about key metrics for sizing and matching components based on performance.
Requisites: Graduate/professional standing or declared in Capstone Certificate in Powertrain Electrification
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify, and select class of hybrid to match their use case.
Audience: Graduate

2. Distinguish working principles of all components in electrified powertrain systems.
Audience: Graduate

3. Use modeling and simulation to analyze and size components.
Audience: Graduate

4. Construct control systems for electrified powertrain systems.
Audience: Graduate

E P D 621 – BATTERIES FOR XELECTRIFIED VEHICLES
2 credits.

Concepts of vehicle hybridization levels; battery accessories, components, and materials; battery life and management; as well as various failure modes of batteries. Development of equivalent circuit models (ECM) for cells that can be used for real time control and diagnostics.
Requisites: Graduate/professional standing or declared in Capstone Certificate in Powertrain Electrification
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Identify the basic aspects of lead acid, nickel metal hydride, and lithium ion cells
Audience: Graduate

2. Compare and Contrast how cells are connected to make modules and packs for power and energy applications
Audience: Graduate

3. Value USABC battery test procedures for PHEV targets
Audience: Graduate

4. Describe and evaluate battery management systems
Audience: Graduate

E P D 622 – ENGINE DESIGN I
3 credits.

Provides an understanding of engine applications, customer need assessment, and engineering product planning.
Requisites: Graduate/professional standing or declared in Capstone Certificate in Engine Design
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Estimate engine displacement requirements and assess trade-offs between displacement and supercharging
Audience: Graduate

2. Assess the trade-offs between various engine configurations and relate them to the specific needs of your application
Audience: Graduate

3. Evaluate the work of product planners and market researchers in determining new product opportunities and requirements
Audience: Graduate

4. Comparatively assess the various materials and processing choices for cylinder block and head design and make design decisions based on weight, durability, and cost requirements for particular engine applications
Audience: Graduate

5. Create a design for an overall engine system layout including package dimensions, durability, cost, and installation
Audience: Graduate

6. Evaluate reliability analysis and accelerated testing and the considerations that determine the required durability development effort for a new engine
Audience: Graduate

E P D 623 – ENGINE DESIGN II
3 credits.

Provides an advanced understanding of internal combustion engine design.
Requisites: E P D 622
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the major steps and resource requirements for a new engine development project
Audience: Graduate

2. Develop a basic engine layout utilizing input from this course and Engine Design I
Audience: Graduate

3. Document the design with sufficient depth (calculation, assumptions, base dimensions) that the concept engine could be assigned to a design team to begin detail design
Audience: Graduate

4. Integrate the learning, knowledge, and skills from the various disciplines of engine development to the total engine design process
Audience: Graduate

5. Develop methods for making the necessary compromises and trade-offs during the concept/initial design layout stages of the engine
Audience: Graduate

E P D 624 – ENGINE PERFORMANCE AND COMBUSTION
3 credits.

Provides a physically based understanding of combustion, efficiency, and exhaust emission formation and control in internal combustion engines.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Explain theoretical and practical limits of maximum engine performance
Audience: Graduate

2. Analyze engine combustion phenomena from a fundamental thermo-chemical perspective, including effects of mixture preparation strategy, in-cylinder gas composition, and in-cylinder charge motion
Audience: Graduate

3. Identify coupling between a single control input and the remainder of the engine system
Audience: Graduate

4. Compare and contrast mixture preparation strategies and alternative energy conversion strategies
Audience: Graduate

E P D 625 – ENGINE GAS DYNAMICS
3 credits.

Provides a physically based understanding of gas dynamics with applications to internal combustion engines.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze the major physical processes that occur in gas dynamic flows within internal combustion engines.
Audience: Graduate

2. Evaluate the performance and design of the principal air-handling systems in engine combustion.
Audience: Graduate

3. Apply control volume analysis to solve fluid mechanics problems, for fluids at rest and in movement
Audience: Graduate

4. Use the equations of fluid mechanics to solve realistic engineering problems involving fluids by making appropriate assumptions
Audience: Graduate

5. Develop a mathematical working knowledge of the common manipulations that are performed for three dimensional time-dependent flows
Audience: Graduate

6. Implement numerical solutions to selected fluid problems
Audience: Graduate

E P D 627 – PERSPECTIVES ON ENGINE MODELING SEMINAR
1 credit.

Problem definition and planning, tool selection, model construction, calibration, application and data presentation in order to integrate the most appropriate modeling tools into an engine design and development project.
Requisites: Graduate/professional standing, declared in Capstone Certificate in Engine Design, or declared in Capstone Certificate in Powertrain Electrification
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Define an effective framework for using and assessing computer modeling tools and procedures.
Audience: Graduate

2. Select the analytical tools most appropriate for any given engine design/development project.
Audience: Graduate

3. Evaluate the capability, application, and limitations of the various classes of engine analysis tools and describe how experiment and analysis complement those tools.
Audience: Graduate

E P D 628 – ANALYSIS OF TRENDS IN ENGINES
1 credit.

Scientifically-based look at trends in energy availability, emission control and regulation, and technological advances to make an assessment of the future of engines and powertrain systems for vehicles throughout the world. Emphasis on trends for sustainable mobility solutions.
Requisites: Graduate/professional standing, declared in Capstone Certificate in Engine Design, or declared in Capstone Certificate in Powertrain Electrification
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2024
Learning Outcomes: 1. Use past and present regulatory drivers to assess the impact of future regulatory trends on engine developments
Audience: Graduate

2. Determine the market-by-market availability and development of non-petroleum fuels and assess how those developments can impact engine design and marketing both at the macro and the micro scale
Audience: Graduate

3. Evaluate technology developments that achieve compliance with regulatory demands and support customer performance and efficiency requirements
Audience: Graduate

4. Formulate a framework for selecting technology related to powertrain architectures, sub-systems, and components for specific applications
Audience: Graduate

5. Evaluate market requirements for powertrain configurations and features, generating a family of engine variants to satisfy customer needs over a range of applications and sectors
Audience: Graduate

6. Generate a coherent powertrain production lifecycle plan that balances the drivers and constraints of the multi-objective criteria covered by the course
Audience: Graduate

E P D 629 – POWERTRAIN SYSTEMS AND CONTROLS
3 credits.

Explore fundamental control concepts for development and analysis, modeling requirements and considerations related to control and diagnostics, and the application of these tools to powertrain systems.
Requisites: Declared in Engineering: Engine Systems ME or Capstone Certificate in Powertrain Electrification
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop powertrain system dynamic models.
Audience: Graduate

2. Develop powertrain system controls.
Audience: Graduate

3. Test controls in simulation using MATLAB and Simulink.
Audience: Graduate

E P D 630 – ENGINE DESIGN III
3 credits.

Builds further experience in engine development project organization; materials and processes; and engine validation. Project organization lessons emphasizing the phases of engine development and the importance of a design freeze with increased scrutiny of design modifications as the engine progresses toward production. Additional engine system components and processes such as forging, plastic molding, and billet machining. Reliability validation expanded to component and system-level validation through rig and engine testing. Test plans calibrated to engine volumes and cost in order to develop an appropriate mechanical development and reliability plan.
Requisites: E P D 623
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Create engine development projects and their key design points, incorporating resource estimates and justification.
Audience: Graduate

2. Use flexible tooling approaches for machining major engine components, identifying the advantages and disadvantages and other key variables.
Audience: Graduate

3. Select any component or sub-system within a particular engine and create and justify a design validation test sequence appropriate to the selection for that engine.
Audience: Graduate

E P D 631 – ELECTRIFIED VEHICLE-LEVEL MODELING
2 credits.

Development of hybrid and electric vehicle powertrain and sub-system mathematical models. Simulations of drive cycles for evaluating component, sub-system, or package performance in the vehicle for fuel economy and emissions.
Requisites: Graduate/professional standing or declared in Capstone Certificate in Powertrain Electrification
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Evaluate vehicle losses, efficiencies, and opportunities for improvements.
Audience: Graduate

2. Analyze opportunities for fuel economy improvement for certain technologies.
Audience: Graduate

3. Defend how government and regulators calculate fuel economy and CO2 emissions and assess CO2 credits.
Audience: Graduate

E P D 633 – ENGINE BOOSTING
2 credits.

Application of fundamental fluid dynamics and thermodynamics principles to intake air boosting for internal combustion engines. Turbocharger and Supercharger design and operating principles, applications to engine system design. Includes both simple, single-stage systems, and multi-stage systems (series, series-sequential, parallel-sequential). Pulse conservation and exhaust gas recirculation will be addressed. Includes advanced considerations including the Miller Cycle, turbocompounding, and e-boosting.
Requisites: E P D 625 or concurrent enrollment
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Design a turbocharger compressor for a specific engine and speed range. Demonstrate how the match is impacted by charge air cooling and exhaust gas recirculation
Audience: Graduate

2. Analyze and evaluate a turbocharger match for margin against surge, choke and overspeed.
Audience: Graduate

3. Break down control points for compressor switching and turbine bypass for a given engine and turbocharger maps lay out the operation of a two-stage, series-sequential system.
Audience: Graduate

4. Evaluate the impact of Miller Cycle application at constant BMEP and as a means on increasing BMEP.
Audience: Graduate

E P D 635 – EXHAUST AFTERTREATMENT SYSTEMS
2 credits.

Fundamental development of the science and engineering underlying the design of exhaust aftertreatment (catalyst) systems for automotive (internal combustion engine containing) systems. Emphasis is on gasoline and diesel, spark-ignition and compression-ignition combustion engines, though the same fundamentals may be applied to other fuels or combustion types. Introductory material is included on aspects that are related to emissions, including regulatory standards, gasoline and diesel engine basics, fuels, lubricants, combustion, instrumentation, and formation of pollutants. Several causes of emissions and pollutants are intertwined throughout the various topics and the control and treatment of specific emissions species are discussed by device type.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Explain the process that drive emissions formation, know what a catalyst is, and be familiar with the ever-changing landscape of regulations.
Audience: Graduate

2. Compare/contrast emissions testing protocols and emissions measurement equipment to be able to choose the ones best suited to their needs
Audience: Graduate

3. Explain the purpose of the Exhaust Aftertreatment System (EAS) and its reliance on On-Board Diagnostics (OBD) for operations and warranty issues
Audience: Graduate

4. Analyze and describe the operations of the Oxidation Catalysts (OCs) and describe the operations of the Three-Way Catalyst (TWC)
Audience: Graduate

5. Analyze and describe the operations of the Particulate Filters
Audience: Graduate

6. Analyze and describe the operations of the Selective Catalytic Reduction (SCR) catalyst and include Ammonia Slip Catalysts
Audience: Graduate

E P D 636 – INTRODUCTION TO POLYMERS
3 credits.

Introduction to the chemistry and physics of polymeric materials. Concepts of polymer synthesis as well as physical properties are introduced, including molecular weight, chain conformation, step growth and chain growth kinetics, basic rheology and viscoelasticity as well as glass transition and crystallinity.
Requisites: Graduate/professional standing or declared in Capstone Certificate in Polymer Processing & Manufacturing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the common synthetic strategies for the fabrication of polymers.
Audience: Graduate

2. Analyze outcomes of polymer materials based on properties such as viscoelasticity.
Audience: Graduate

3. Evaluate issues in manufacture and processing to make a material or compound.
Audience: Graduate

E P D 637 – POLYMER CHARACTERIZATION
3 credits.

Basic principles used for both quantitative and qualitative characterization of polymeric materials, including both assessment of their synthesis and of their structural features at different length scales. Discussion of techniques such as NMR (Nuclear Magnetic Resonance) and GPC (Gel Permeation Chromatography), thermal characterization, rheological characterization, as well as scattering of various types of electromagnetic radiation. Introduction to characterization methods used in industry and polymer crystallography.
Requisites: Graduate/professional standing or declared in Capstone Certificate in Polymer Processing & Manufacturing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze the chemical composition of an unknown polymeric sample.
Audience: Graduate

2. Evaluate the molecular weight of an unknown material through multiple methods.
Audience: Graduate

3. Quantify characteristics such as percent crystallinity or orientation in order to relate processing conditions to mechanical properties.
Audience: Graduate

E P D 638 – POLYMER COATINGS AND ADHESIVES
3 credits.

Introduction to coatings and adhesives, with a focus on the polymer science and chemistry underlying these materials. Topics include film formation, adhesion mechanisms, material characterization, application techniques, and the role of additives in common formulations.
Requisites: Graduate/professional standing or declared in Capstone Certificate in Polymer Processing & Manufacturing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Explain the purpose of additives included in various paints and coatings systems.
Audience: Graduate

2. Design a formulation for an appropriate system for a given type of paint or coating.
Audience: Graduate

3. Design a hypothetical smart coating system.
Audience: Graduate

4. Apply materials requirements to different applications of adhesives.
Audience: Graduate

E P D 639 – PLASTICS RECYCLING AND SUSTAINABILITY
3 credits.

Sustainability and recycling aspects in the life cycles of plastics and polymeric materials. Chemistries that can be used to make polymers from sustainable or renewable sources and biodegradable polymers. Current recycling practices and their limitations including polymer-based materials such as composites and layered packaging. Textile recycling and plastic pollution including microplastics are covered.
Requisites: Graduate/professional standing or declared in Capstone Certificate in Polymer Processing & Manufacturing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze the life cycle of a plastic product and the related causes of and solutions for recycling and sustainability issues.
Audience: Graduate

2. Assess benefits and costs of sustainability planning in the public and private sectors.
Audience: Graduate

3. Explain the environmental dimensions of the sustainability challenges associated with plastics manufacture, use and disposal.
Audience: Graduate

4. Apply sustainability principles to address the challenges of plastics disposal, especially in developing countries.
Audience: Graduate

E P D 640 – INTRODUCTORY POLYMER RHEOLOGY
3 credits.

Introduction to polymer rheology. Concepts of continuum mechanics are introduced, specifically the fluid dynamics of non-Newtonian and linear viscoelastic fluids. Material functions, constitutive equations and rheometry and experimental methods for measuring material functions (rheometry) are discussed. Knowledge of linear differential equations [such as MATH 319 or 320] and fluid mechanics [such as M E 363] or momentum transfer [such as CBE 320] required.
Requisites: Graduate/professional standing or declared in Capstone Certificate in Polymer Processing & Manufacturing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Differentiate between Newtonian and Non-Newtonian Fluids
Audience: Graduate

2. Explain and apply the mathematics of continuum mechanics
Audience: Graduate

3. Apply constitutive equations to analyze non-Newtonian phenomena exhibited by polymeric fluids
Audience: Graduate

4. Analyze real flow processes involving polymer solutions or melts
Audience: Graduate

5. Recommend solutions to problems using data from rheological properties of polymer fluids and melts
Audience: Graduate

E P D 642 – THERMODYNAMICS OF ENGINE SYSTEMS
3 credits.

Use the 1st and 2nd laws of thermodynamics in the analysis of engines. Use ideal gas mixtures, thermodynamics and combustion principles to determine adiabatic flame temperature and chemical equilibrium - with focus on Engine Systems
Requisites: Declared in Engineering: Engine Systems MEng
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Apply thermodynamic equations, equations of state, and the energy equation
Audience: Graduate

2. Calculate thermodynamic properties of reactants and products, enthalpies of reaction, adiabatic flame temperature, and equilibrium species concentration, with application to simple reactions
Audience: Graduate

3. Apply thermodynamic analysis to IC Engines
Audience: Graduate

E P D 645 – ELECTRIC MACHINES FOR TRACTION APPLICATIONS
2 credits.

Reviews the physics of electric machines. Covers electric machine operation used both in motoring and generating modes necessary in traction applications. The fundamentals of brush DC, PM synchronous, reluctance, and induction machines are explored. Begins with the basics of DC machines and extends to the concept of field orientation in AC machines.
Requisites: Graduate/professional standing or declared in Capstone Certificate in Powertrain Electrification
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the physics of DC and AC machines
Audience: Graduate

2. Develop techniques to control the electromagnetic torque of the machine using our understanding of physics
Audience: Graduate

3. Compare various forms of control of electric machines
Audience: Graduate

4. Apply the knowledge from IEEE publications on this topic
Audience: Graduate

5. Provide specific application examples of motors used in traction applications
Audience: Graduate

E P D 646 – ELECTRIC DRIVES FOR TRACTION APPLICATIONS
2 credits.

Electric drives operation used both in motoring and generating modes necessary in traction applications. The fundamental drives of brush DC, PM synchronous, reluctance, and induction machines are explored. Begins with the basics of drives and extends to the device physics of power electronics used in drives.
Requisites: E P D 645 or declared in Capstone Certificate in Powertrain Electrification
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the basics of DC and AC electric drives
Audience: Graduate

2. Develop techniques to control the electromagnetic torque of the machine with drives
Audience: Graduate

3. Compare various forms of control of electric machines
Audience: Graduate

4. Gain background to apply technical publications on this topic
Audience: Graduate

5. Provide specific application examples of drives used in traction applications
Audience: Graduate

E P D 647 – TRENDS IN ELECTRIFICATION SEMINAR
1 credit.

Discussion of major trends in the automotive and transportation industry, focused on electrification for hybrids, fuel cells, and fully electric vehicles.
Requisites: Graduate/professional standing or declared in Capstone Certificate in Powertrain Electrification
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Discuss key electrification trends and developments in the automotive and transportation industries
Audience: Graduate

2. Assess the impact of regulatory trends on electrification developments
Audience: Graduate

3. Evaluate technology developments for compliance with regulations, performance, and energy efficiency requirements
Audience: Graduate

4. Formulate a framework for selecting technology related to powertrain architectures, sub-systems, and components for specific applications
Audience: Graduate

5. Generate a coherent powertrain production lifecycle plan that balances the drivers and constraints of performance and customer demands
Audience: Graduate

E P D 650 – INTRODUCTION TO POLYMERS PROCESSING
3 credits.

Introduction to the principles of polymer processing. Review of the basic techniques primarily in use by industry as well as foundational principles of polymer physics, viscoelasticity and rheology. Focus on understanding how design of process is used to achieve desired structure and properties. Includes introduction to topics such as 3-d printing and recycling of polymer waste in the context of reprocessing such materials.
Requisites: E P D 636 and (E P D 640 or CHEM/M S & E 421, or concurrent enrollment), or declared in Capstone Certificate in Polymer Processing Manufacturing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. State the differences between the various processing techniques used to convert polymers to useful products including those, for example, for automotive, aerospace, energy, consumer, and medical applications.
Audience: Graduate

2. Apply the concepts of transport phenomena (i.e. fluid, heat, and mass transfer) to the design of polymer processing operations and add topics typically not covered in undergraduate courses (e.g. non-Newtonian fluid mechanics, radiation heating, self-diffusion).
Audience: Graduate

3. Describe the connection between polymer molecular structure and polymer flow by using basic concepts in polymer rheology.
Audience: Graduate

4. Analyze the connection between properties of the product (e.g. strength, stiffness, degree of crystallinity, degree of molecular orientation) and processing conditions (e.g. stress generated during flow, heat transfer conditions).
Audience: Graduate

5. Theorize as to requirements for the design of recycling schemes for polymers.
Audience: Graduate

6. Compare what is possible via traditional processing methods vs. modern methods such as 3-D printing.
Audience: Graduate

E P D 654 – TEACHING IN SCIENCE AND ENGINEERING
2-3 credits.

Introduction to teaching and learning in science and engineering at the college level. Includes exploration of the learning process, teaching methodology, assessment strategies, course design, teaching philosophies, and careers in education, science, and engineering.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

E P D 660 – CORE COMPETENCIES OF SUSTAINABILITY
3 credits.

Introduces real-world pragmatic skills and applications in sustainability competencies. Content reaches across engineering expertise, from chemical engineering to buildings to product design and energy. Modules cover ecological footprinting, lifecycle assessment, resource use and integrated engineering practice.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Calculate and analyze carbon and ecological footprints
Audience: Graduate

2. Compare and evaluate different sustainability frameworks
Audience: Graduate

3. Analyze sustainability issues and/or practices using a systems-based approach, utilizing life-cycle thinking and assessment
Audience: Graduate

4. Explain the social, economic, and/or environmental dimensions of the sustainability challenge of resource consumption, and how sustainable development can fuel innovation
Audience: Graduate

5. Characterize sustainability as a global challenge associated with social inequity and requiring engineering/science leadership, multiple perspectives and solutions
Audience: Graduate

6. Synthesize course lessons as they relate to engineering applications and decision making
Audience: Graduate

7. Assess the relevant professional competencies and how sustainability could affect those choices
Audience: Graduate

E P D 669 – SUSTAINABLE SYSTEMS ENGINEERING CAPSTONE
3 credits.

Provides the opportunity to demonstrate ability to think globally, sustainably, and creatively. Gain real-world experience by applying theory, tools, and research to conceptualize, analyze, and design a solution to a real-world problem within a social and environmental context. Showcase the knowledge and analytical skills acquired, and integrate tools, science, and communication to address a community or industry need. Work with an industry mentor and customer throughout your project.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Pose a problem effectively
Audience: Graduate

2. Apply sustainability principles and/or frameworks to address the challenge of the selected problem, and balance structure and flexibility in problem-solving approaches
Audience: Graduate

3. Analyze sustainability issues and/or practices using a systems-based approach, and creatively consider alternative solutions
Audience: Graduate

4. Perform a targeted literature/document review
Audience: Graduate

5. Integrate sustainable engineering knowledge and tools into social contexts
Audience: Graduate

6. Design a solution to the problem statement, and account for the perspectives of various stakeholders
Audience: Graduate

7. Document and present context, proposed solutions, analysis, results and conclusions
Audience: Graduate

E P D 678 – SUPPLY CHAIN MANAGEMENT FOR ENGINEERS
3 credits.

Examines concepts, management techniques, and current trends in the field of supply chain management with emphasis on topics relevant to engineers. Topics include global logistics, logistics engineering techniques, new product introduction process, purchasing strategy, managing transportation providers, distribution center technology and operations, outsourcing supply chain functions, and an introduction to supply chain information systems.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze supply chain concepts and principles and show fluency in the language used in supply chain management.
Audience: Graduate

2. Apply logistics engineering techniques to plan and optimize transportation routes and costs across multiple modes of transportation using actual data from large businesses.
Audience: Graduate

3. Implement recent technology and business practices adopted by supply chain participants to improve efficiency and environmental sustainability.
Audience: Graduate

4. Design inventory management systems prioritizing manufacturing capacity, inventory investment, and product availability.
Audience: Graduate

5. Demonstrate use of ERP systems to execute supply chain processes including purchasing, receiving, manufacturing planning, inventory control, and logistics functions.
Audience: Graduate

E P D 690 – SPECIAL TOPICS IN ENGINEERING PROFESSIONAL DEVELOPMENT
1-3 credits.

Topics vary.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

E P D 699 – INDEPENDENT STUDY
1-3 credits.

Under faculty supervision.
Requisites: Graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

E P D 701 – WRITING FOR PROFESSIONALS
1 credit.

Preparation to produce effective written communication that is suitable for inter-professional and inter-disciplinary audiences in a variety of workplaces. Apply these strategies and tools.
Requisites: Graduate/professional standing or declared in Capstone Certificate in Applied Engineering Management
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2024
Learning Outcomes: 1. Differentiate and use key aspects of rhetoric and communication ethics
Audience: Graduate

2. Distinguish communication needs in a variety of contexts and for a variety of audiences
Audience: Graduate

3. Write and edit technical documents that reflect the 5 Cs of writing: correctness, clarity, conciseness, coherence, and cogency
Audience: Graduate

4. Craft and deliver technical presentations that are persuasive and easy to understand
Audience: Graduate

5. Collaborate with others to accomplish communication goals
Audience: Graduate

E P D 702 – PROFESSIONAL PRESENTATIONS
1 credit.

Sharpen your ability to create, edit, review, and present information in an efficient, clear, and effective way for your audiences. Develop your presentation skills through a series of presentations related to your professional interests and work.
Requisites: Graduate/professional standing or declared in Capstone Certificate in Applied Engineering Management
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze audience needs in a variety of situations
Audience: Graduate

2. Construct content that is easily understood by stakeholders
Audience: Graduate

3. Craft more effective slides that persuade, engage, and inform their audience
Audience: Graduate

4. Exhibit confidence while presenting
Audience: Graduate

5. Apply the lessons learned from this course to academic work and professional careers
Audience: Graduate

E P D 704 – ORGANIZATIONAL COMMUNICATION AND PROBLEM SOLVING
1 credit.

Improve your problem solving within complex organizations, with a special emphasis on case studies and improving communication, using cross-disciplinary sources.
Requisites: Graduate/professional standing or declared in Capstone Certificate in Foundations of Professional Development
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Summarize the biases that affect decision making

Audience: Graduate

2. Influence others to make better decisions
Audience: Graduate

3. Design your decisions and solve your problems using a better process based on empirical social science
Audience: Graduate

4. Design your teams and groups to maximize performance and innovation based on principles from social science
Audience: Graduate

5. Apply strategies to increase open communication and strategically use conflict in organizations to increase productivity and decision quality
Audience: Graduate

6. Create environments and situations that nudge ethical decisions in organization
Audience: Graduate

7. Identify blind spots that lead to unethical decisions
Audience: Graduate

E P D 706 – CHANGE MANAGEMENT
1 credit.

Provides emerging and practicing professionals foundational knowledge to develop a change management strategy and implement it using proven processes and tools. Become better prepared to deliver effective organizational performance. Applies contemporary concepts and methods in change management through student-selected projects.
Requisites: Graduate/professional standing or declared in Capstone Certificate in Foundations of Professional Development
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. List and describe and evaluate three change management frameworks
Audience: Graduate

2. Describe elements necessary to successfully initiate organizational change
Audience: Graduate

3. Plan organizational change using components of one or more change management frameworks
Audience: Graduate

4. Identify challenges inherent in change management and leadership and list methods for addressing these challenges
Audience: Graduate

5. Describe approaches for sustaining change and change benefits
Audience: Graduate

6. Apply methods for influencing stakeholders in affecting outcomes of change initiatives
Audience: Graduate

E P D 708 – CREATING BREAKTHROUGH INNOVATIONS
1 credit.

Explore innovation and how design thinking is a driver of innovation. Learn to use various design thinking methods and tools for analysis and decision-making.
Requisites: Graduate/professional standing or declared in Capstone Certificate in Foundations of Professional Development
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2024
Learning Outcomes: 1. Express what innovation is and how innovation is driven by design thinking
Audience: Graduate

2. Plan and conduct design research
Audience: Graduate

3. Synthesize themes, patterns, and insights from qualitative design research data
Audience: Graduate

4. Plan, structure, and facilitate ideation and concepting sessions
Audience: Graduate

5. Use design thinking tools to frame, plan and execute a challenge relevant to their work, community or personal
Audience: Graduate

E P D 710 – FOUNDATIONS OF ENGINEERING LEADERSHIP
2 credits.

Build the foundations for developing, refining, and strengthening your effectiveness as a leader of engineering teams, projects, and organizations. Enhance your understanding of how to match your leadership style to a team's focus, organization, and culture. Grow your understanding of your strengths and weaknesses as a leader using proven assessment tools. Develop a plan for growing your leadership competency.
Requisites: Graduate/professional standing or declared in Capstone Certificate in Applied Engineering Management
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Develop a clear understanding of strengths and developmental needs as a manager and leader
Audience: Graduate

2. Create a development plan to intentionally grow foundational management and leadership qualities
Audience: Graduate

3. Manage both engineers and engineering processes with confidence
Audience: Graduate

4. Enhance the ability to strategically adapt leadership styles to the unique context of an engineering setting
Audience: Graduate

E P D 712 – ETHICS FOR PROFESSIONALS
1 credit.

Explores how our actions affect others and influence the choices we make within the workplace. Enhance ethical competencies by providing opportunities to discuss challenges to behavior and decision-making in different professional contexts.
Requisites: Graduate/professional standing or declared in Capstone Certificate in Applied Engineering Management
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify when a decision has ethical dimensions, articulate what professional ethical behavior means, and explain why it matters
Audience: Graduate

2. Apply ethical decision-making strategies and relevant codes of ethics to explore, analyze, and effectively resolve workplace and profession-specific ethical challenges
Audience: Graduate

3. Apply behavioral science concepts to explore the role of self-interest in our decision making and to explain why good people sometimes behave unethically
Audience: Graduate

4. Identify and explain the diverse social, global, and cultural frameworks that play a role in some ethical challenges
Audience: Graduate

E P D 720 – ENGINE NOISE AND VIBRATION
2 credits.

Introduces the engineer to fundamental NVH (Noise, Vibration, and Harshness) concepts with an emphasis on how NVH can be integrated throughout the engine development process from initial concept inception through to validation testing for production.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2020
Learning Outcomes: 1. Analyze how changes to emissions and noise legislation can impact the powertrain architecture
Audience: Graduate

2. Identify sources of NVH in the vehicle and be able to cascade vehicle level metrics down to system level targets
Audience: Graduate

3. Quantify fundamental source mechanisms excitation relating to gas pressure torque and inertia loading
Audience: Graduate

4. Analyze key transmission NVH challenges and the impact of changes to the micro/macro geometry of gears
Audience: Graduate

5. Apply the principles of pipe acoustics towards the design of intake and exhaust systems
Audience: Graduate

6. Explain the role of the mounting system and evaluate the ideal mount configuration
Audience: Graduate

E P D 730 – SUSTAINABLE FACILITIES
3 credits.

Explore the environmental impacts of commercial and residential buildings, including energy, water, materials, transportation, waste, human health, and land use. All phases of a building's life cycle will be considered, along with relevant case studies, benchmarking tools, public policies and emerging concepts.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Describe the environmental impacts of residential and commercial buildings
Audience: Graduate

2. Explain the stages of the building life-cycle, identify the decision-makers, and analyze how the environmental impacts and opportunities change in each stage
Audience: Graduate

3. Evaluate improvement strategies appropriate to each life-cycle stage of a building
Audience: Graduate

4. Utilize benchmarking and analysis tools used in the building sector for environmental and energy performance
Audience: Graduate

5. Compare and justify policies used to influence the building sector, and critique their effectiveness
Audience: Graduate

6. Create and deliver a presentation on a selected green building strategy, citing resources and case studies
Audience: Graduate

E P D 731 – ENERGY EFFICIENCY IN BUILDINGS
3 credits.

Core principles of energy use and efficiency in the building sector (residential, commercial, institutional buildings.) Factors that influence energy demand (design, equipment, controls, operation, maintenance). Review of engineering fundamentals of heat transfer, heating and cooling loads, psychrometrics. Topics include building envelope principles (climate, orientation, materials, massing), heating and cooling systems, ventilation indoor air quality, plumbing water heating, lighting daylighting, and internal energy uses (plug loads, equipment). Zero energy building concepts, energy modeling, and energy benchmarking are also covered. Applications include existing building operation and improvement, and new building design and planning.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify energy end-uses in commercial and residential buildings
Audience: Graduate

2. Describe the purpose and operation of energy-using building systems
Audience: Graduate

3. Create an energy model to simulate building energy performance
Audience: Graduate

4. Calculate the impact of energy efficiency options
Audience: Graduate

5. Use energy benchmarking tools such as Energy Star Target Finder
Audience: Graduate

6. Analyze the causes of and solutions for the sustainability challenge of excessive energy use in commercial and residential buildings
Audience: Graduate

7. Analyze sustainability issues and/or practices using a systems-based approach to identify opportunities for energy efficiency while maintaining human health
Audience: Graduate

E P D/ACCT I S/GEN BUS 781 – FINANCIAL AND BUSINESS ACUMEN
1 credit.

This course is designed with a keen awareness for the needs of the non-financial student or professional. For this class, no previous financial training is required. The intent is to equip you with the essential concepts used to develop financial literacy. Content will cover basic financial terms and reports, analytical tools to help interpret financial data and using financial data in budgets and forecasts.
Requisites: Graduate/professional standing. Not open to students declared in an MBA program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Apply the language and foundational tools of finance to analyze how a company's economic activity is reflected in its financial reports
Audience: Graduate

2. Perform high-level financial statement analysis to identify important information from financial reports
Audience: Graduate

3. Apply basic financial concepts of valuation, capital budgeting, and financial decision making
Audience: Graduate

E P D/GEN BUS/MARKETNG 782 – MARKETING FOR NON-MARKETING PROFESSIONALS
1 credit.

An overview of marketing's role within an organization, the key elements of a marketing plan, and how the plan is implemented. Students will learn about buyer demographic, psychographic and purchasing decision behavior. A thorough understanding of the customer enables students to develop a coordinated marketing mix (product, price promotion and place) that will satisfy the customer better than the competition and at the required margin. Students will leave the course understanding the degree to which all company functions must be coordinated and focused on the customer. This course will not apply toward fulfilling the MBA degree requirements.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Explain how the marketing function impacts an organization’s business operations
Audience: Graduate

2. Identify and use marketing terminology and concept
Audience: Graduate

3. Use both demographic and psychographic information to segment markets and select a target market
Audience: Graduate

4. Research and create a basic marketing plan that aligns customer expectations with organizational marketing activities and the organization's resources
Audience: Graduate

5. Coordinate consistency between product, price, promotion, and place (distribution)
Audience: Graduate

6. Relate and utilize the product life cycle concept to product and service offerings
Audience: Graduate

E P D/GEN BUS/M H R 783 – LEADING TEAMS
1 credit.

Students will gain the knowledge and skills to continuously enhance their own team performance and productivity as well as the teams they are involved with. They will also be in a much better position to lead teams effectively.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Describe team dynamics, roles, and expectations that influence a STEM team’s performance
Audience: Graduate

2. Identify and effectively deploy specific team member strengths relevant for technical projects
Audience: Graduate

3. Plan, lead, and facilitate productive team meetings
Audience: Graduate

4. Identify and manage team conflict more effectively and constructively
Audience: Graduate

5. Assess and improve their current STEM team leadership methods and practices
Audience: Graduate

E P D/GEN BUS/OTM 784 – PROJECT MANAGEMENT ESSENTIALS
1 credit.

Techniques that will help to plan, execute, and deliver projects with desired scope on time and on budget. Learn to document clear project objectives and goals, accurately estimate project time and costs, schedule and allocate time-critical resources, and establish feedback systems for optimal project control.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2023
Learning Outcomes: 1. Plan and manage successful engineering projects using appropriate methods, tools, and techniques
Audience: Graduate

2. Estimate project costs, resources, and schedules
Audience: Graduate

3. Immediately apply project management principles regarding the five major project stages: initiate, plan, execute, control, and close
Audience: Graduate

4. Apply or customize the project management framework to engineering organizational needs
Audience: Graduate

5. Assess and improve the current project management system
Audience: Graduate

E P D/GEN BUS/M H R 785 – EFFECTIVE NEGOTIATION STRATEGIES
1 credit.

Improves students' negotiating skills, doing so by providing a theoretical underpinning that will help them to understand the sources of effective and ineffective approaches to negotiations.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Describe game theory and distinguish between distributive and integrative bargaining, recognizing appropriate tactics
Audience: Graduate

2. Identify bargaining styles, set goals, improve relationships, and leverage interests effectively
Audience: Graduate

3. Analyze ethical issues in negotiations and create mutual gain through value creation
Audience: Graduate

4. Demonstrate thorough preparation for negotiations, use individual and team techniques, and evaluate post-negotiation strengths and areas for improvement
Audience: Graduate

ENGLISH (ENGL)

ENGL 100 – INTRODUCTION TO COLLEGE COMPOSITION
3 credits.

Focuses on development of rhetorical reading, listening, and writing abilities; provides practice in written and spoken communication (emphasis on writing); develops information literacy; provides a foundation for a variety of college course work and post-college careers.
Requisites: Students required to take the MSN ESLAT cannot enroll until the ESL 118 requirement is satisfied
Course Designation: Gen Ed - Communication Part A
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ENGL/THEATRE 120 – INTRODUCTION TO THEATRE AND DRAMATIC LITERATURE
3-4 credits.

Reading important plays, attending stage productions, writing and thinking critically about theatre and drama. Emphasis on developing analytic skills in dramatic literature and theatre production.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ENGL 140 – COMM B TOPICS IN ENGLISH LITERATURE
4 credits.

A course on literature written in English that satisfies the Comm B requirement. Topic will vary by semester.
Requisites: None
Course Designation: Gen Ed - Communication Part B
Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

ENGL 141 – SCIENCE FICTION AND FANTASY
3 credits.

An introduction to the literature of science fiction and fantasy; specific topics will vary.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENGL/GEN&WS 144 – WOMEN'S WRITING
3 credits.

An introduction to literature in English written by women in various periods and places; specific topics will vary.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENGL 145 – AMERICAN DREAMERS
3 credits.

A study of novels, plays, poems, and films that focus on individuals who strive to achieve success and security in America.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

ENGL/ASIAN AM 150 – LITERATURE & CULTURE OF ASIAN AMERICA
3 credits.

Since the 19th century, "America" has often been defined by its relationship with "Asia," through cultural influence, immigration, imperialism, and war. Traces the role of Asia and Asians in American literature and culture, from the Chinese and Japanese cultural influences that helped shape literary modernism to the rise of a distinctive culture produced by Asian immigrants to America and their descendants.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ENGL/ENVIR ST 153 – LITERATURE AND THE ENVIRONMENT
3 credits.

An introduction to literature in English about the natural world and humankind's relationship with it; specific topics will vary.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENGL 155 – MYTH AND LITERATURE
3 credits.

Introduction to concepts of myth and mythology, myth-making and the modern study of myth in relation to myths and legends common in English and American literature.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ENGL 156 – LITERATURE AND MEDICINE
3 credits.

Exploration of literature as both a source of knowledge about medicine and as a catalyst for reflection about medical concepts and practices, including health, illness, dying, and disability. Students will consider ways that literature can serve as a resource for patients and healthcare practitioners.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENGL/LEGAL ST 160 – TRUTH AND CRIME
3 credits.

Examines the development, scope, and effects of the "True Crime" genre in the United States. Using literary analysis and legal studies methods, explore various areas of the genre (written, podcasts, documentaries, etc.) and try to find answer as to why we are so compelled by true crime narratives and what true crime's "truth" is. Untangle the complex relationship between law and narrative (background on each will be provided) and the various epistemological systems it combines, including the role of science and technology. Gain a detailed understanding of what our culture's relationship to "real life" crime narratives tells us about the fundamental and complex role criminality plays in defining us as a society.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the fundamentals of legal narrative and its relationship to criminal law functions (what are the elements of a crime, and what is "evidence"?)
Audience: Undergraduate

2. Identify the ways the legal system is subject to human, social, and literary construction—not only in a theoretical sense but through actual cases.
Audience: Undergraduate

3. Analyze the various ways in which media "tells" crime stories and what the potential motivation for these stories might be.
Audience: Undergraduate

4. Develop a nuanced understanding of the true crime genre through a close examination of exemplary representations of the genre (literature, podcasts, documentaries, etc.)
Audience: Undergraduate

ENGL 162 – SHAKESPEARE
3 credits.

Introduction to several of Shakespeare's most popular plays and their relation to other works of English and American literature.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

ENGL 167 – BRITISH AND AMERICAN WRITERS
3 credits.

An introduction to British and American literature through particular writers and themes.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENGL 168 – MODERN LITERATURE
3 credits.

A thematic introduction to literary works in a variety of genres written in English from the turn of the twentieth century to the present day. Emphasis may vary between writers from the U.S., Britain, Ireland, and other Anglophone nations.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENGL 169 – MODERN AMERICAN LITERATURE
3 credits.

An introduction to selected fiction, prose, drama and poetry written by Americans from the early twentieth century to the present day.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENGL/AMER IND 172 – LITERATURES OF NATIVE AMERICA
3 credits.

Introduction to the oral and written literatures of the peoples of native North America. An engagement with texts across historical periods, tribal groups, and regions to examine forms such as oratory, sermon, testimony, autobiography, and contemporary poetry and novels.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Engage in thoughtful and respectful group discussions revolving not only around course texts, but controversial subjects that lie within.
Audience: Undergraduate

2. Familiarize and display understanding of community in Indigenous culture(s).
Audience: Undergraduate

3. Identify and make skillful use of relevant, reliable, and high-quality research sources appropriate to the study of Native and Indigenous literatures.
Audience: Undergraduate

4. Develop a fledgling idea into a formal paper presenting stages of the process to peers, including brainstorming, drafting, incorporating feedback, and revising.
Audience: Undergraduate

ENGL 173 – ETHNIC AND MULTICULTURAL LITERATURE
3 credits.

Introduction to literature that reflects the writing and experience of minority and ethnic groups. Texts will focus on a theme or problem.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENGL 174 – LITERATURE AND SOCIAL JUSTICE
3 credits.

An introduction to the multiple ways writers have used literary texts to engage with pressing questions about class, race, gender, equality, immigration, and other issues of social justice. Specific topics will vary.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENGL 175 – LITERATURE AND THE OTHER DISCIPLINES
3 credits.

The depiction and valuation of other academic disciplines and intellectual work in selected works of British and American literature and the intellectual influences of other disciplines on selected works and movements of British and American literature.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ENGL 176 – TOPICS IN LITERATURE AND FILM
3 credits.

An introduction to the interplay of literature and film in English, with a focus on the analysis of novels, stories, poems and other writings and their representation and transformation in and through film; specific topics will vary.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENGL 177 – LITERATURE AND POPULAR CULTURE
3 credits.

A selected topic studying the intersection of literature and popular culture in various forms and media.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENGL 178 – DIGITAL MEDIA, LITERATURE, AND CULTURE
3 credits.

An introduction to the intersection of ever-evolving digital technologies with the production and reception of literature. Examine the role of digital media in structuring the knowledge and experience of literary works; and provides an opportunity for critical and potentially creative practice.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

ENGL 179 – INTRODUCTION TO LANGUAGE AND IDEOLOGY
3 credits.

Explores myths and ideologies about English language usage in the US (present and past) from a linguistic perspective. Discusses how common perceptions towards language use and language varieties, especially those associated with ethnic or racial minorities, are socially (not linguistically) constructed. Addresses questions like: Where do linguistic myths, especially those regarding varieties of American English used by persistently marginalized groups, come from and how does one check if there is a factual basis for them? Who gets to decide which words are entered into a dictionary or what constitutes 'proper' English? What perceptions do people have about 'good' and 'bad' dialects and accents? Who benefits and who is harmed by such perceptions? Approaches these and related questions within an anti-racist framework, showing that perceptions towards certain English varieties are often not grounded in linguistic facts but rather in bias against certain demographic groups.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe relationships between varieties of American English and society that underly the construction of language ideologies
Audience: Undergraduate

2. Outline how socio-historical factors have contributed to the development of ethnically or racially affiliated varieties of English in the US

Audience: Undergraduate

3. Evaluate social perceptions about ethnically or racially affiliated varieties of American English using data-based methods
Audience: Undergraduate

4. Develop awareness of biases against speakers from historically marginalized groups
Audience: Undergraduate

5. Demonstrate self-awareness and empathy towards the cultural perspectives, lived experiences, and worldviews of others
Audience: Undergraduate

6. Apply course concepts to their lives outside the classroom by respectfully participating in our multicultural society
Audience: Undergraduate

ENGL 181 – FIRST-YEAR HONORS SEMINAR
3 credits.

Honors literature seminar for first year students. Topic and materials will vary.
Requisites: First Year students only and declared in an Honors program
Course Designation: Gen Ed - Communication Part B
Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

ENGL 182 – INTRODUCTION TO LITERATURE FOR HONORS
3 credits.

Introductory honors course in discussion format. Topic and materials will vary.
Requisites: Declared in an Honors program
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENGL 200 – WRITING STUDIO
1 credit.

The focus is on students' own writing in this workshop-oriented course for writers in any discipline. Theoretical and practical foundations for drafting, revising, and reviewing a range of academic genres and approaches. Students should be enrolled concurrently in another course where academic writing is assigned.
Requisites: Consent of instructor
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ENGL 201 – INTERMEDIATE COMPOSITION
3 credits.

Provides practice in persuasive writing in various modes, styles, and genres; develops an understanding of the different contexts of writing, both scholarly and public; provides opportunities for exploring the relation between writing and speaking; and provides critical tools for the rhetorical analysis of expository prose. Not open to auditors
Requisites: Satisfied Communications A requirement and sophomore standing
Course Designation: Gen Ed - Communication Part B
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ENGL 204 – INTRODUCTION TO RHETORIC AND WRITING STUDIES
3 credits.

What does writing do? How? For whom? How and why do writers and readers compose texts that have an impact? Approaches these enduring questions of English studies from the perspective of Composition Rhetoric, one of English's subfields. Emphasizing critical reading and writing and built around a central theme that varies by semester, the course prepares students to analyze historical and/or contemporary examples of how writing creates communities, influences beliefs, and shapes knowledge.
Requisites: Satisfied Communications A requirement and sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze and evaluate public discourse
Audience: Undergraduate

2. Learn about and use conceptual tools and theories to aid analysis and evaluation
Audience: Undergraduate

3. Consume and produce rhetoric
Audience: Undergraduate

4. Be familiar with key questions, methods, and ideas in the field of composition and rhetoric
Audience: Undergraduate

5. Critically examine, from multiple perspectives, how public discourse affects you and means to respond
Audience: Undergraduate

6. Understand historical and contemporary contexts when rhetoric had consequences for the public
Audience: Undergraduate

7. Learn about and use tools for working with and drawing insights from writing in all forms
Audience: Undergraduate

ENGL 207 – INTRODUCTION TO CREATIVE WRITING: FICTION AND POETRY WORKSHOP
3 credits.

Fiction writing and poetry writing, with readings of writers as models.
Requisites: First Year, freshman or sophomore standing only
Course Designation: Gen Ed - Communication Part B
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ENGL 214 – THE ENGLISH LANGUAGE
3 credits.

An overview of the structure, use, and development of the English language and its varieties.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ENGL 220 – SHAKESPEAREAN DRAMA
3 credits.

A survey covering most of the plays after 1600.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2021

ENGL/LITTRANS 223 – VLADIMIR NABOKOV: RUSSIAN AND AMERICAN WRITINGS
3 credits.

The major novels of Vladimir Nabokov studied in the context of Russian and American literatures. Nabokov as a quintessential artist in exile, whose work explores loss of language, country and home.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ENGL 224 – INTRODUCTION TO POETRY
3 credits.

A survey of elements and styles of poetic form. Readings will be selected from British and American literature written in English.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023

ENGL 236 – BASCOM COURSE
3 credits.

A low-enrollment course developing skills in critical reading, logical thinking, use of evidence, and use of library resources. Emphasis on writing in the conventions of specific fields.
Requisites: Satisfied Communications A requirement
Course Designation: Gen Ed - Communication Part B
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

ENGL 241 – LITERATURE AND CULTURE I: TO THE 18TH CENTURY
3 credits.

What is a person, a home, a nation, a world? What we now call "English literature" begins with these questions, imagining a cosmos filled with gods and heroes, liars and thieves, angels and demons, dragons and dungeons, whores and witches, drunken stupor and religious ecstasy. Authors crafted answers to these questions using technologies of writing from parchment to the printing press, and genres old and new, from epic and romance to drama and the sonnet. Develops skills of critical reading and writing that are essential to majors and non-majors alike.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ENGL 242 – LITERATURE AND CULTURE II: FROM THE 18TH CENTURY TO THE PRESENT
3 credits.

Considers a period of unparalleled tumult: a time of vast world empires and startling new technologies, revolutions that radically redefined self and community, two cataclysmic world wars, the emergence of ideas of human rights, and the first truly global feelings of interconnectedness. How has literature captured and contributed to these dramatic upheavals? Some writers worldwide have struggled to invent new forms, new words, and new genres to do justice to a world in crisis, while others have reached back in time, seeking continuity with the past. Explore enduring traditions of poetry and drama and think about experiments in the new, globally popular genre of the novel. Develops skills of critical reading and writing that are essential to majors and non-majors alike.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ENGL 243 – AMERICAN LITERARY CULTURES
3 credits.

Is America a new world, a city on a hill, an imperial power? Are American literatures revolutionary, nationalist, countercultural? Explores how writers have wrestled with such questions for several hundred years. We will encounter literary figures from white whales to red wheelbarrows, focusing on the diverse geographies, cultural practices, and political mythologies that compose the Americas, and interrogating what is meant by American literature and what it means to be American. We will consider the ways that genres from Native stories to slave narratives to postmodern novels have contributed to social, intellectual, and political currents of American cultures. Develops skills of critical reading and writing that are essential to majors and non-majors alike.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023

ENGL 245 – SEMINAR IN THE MAJOR
3 credits.

Offers close instruction in the principles and practices of informed, engaged, critical reading and writing. While the texts and topics vary, each seminar will reinforce fundamental skills taught across the English major, strengthening students' capacities to write and speak powerfully and to build convincing, original, well-organized arguments that persuade audiences of their significance.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ENGL/AMER IND 246 – LITERATURE BY AMERICAN INDIAN WOMEN
3 credits.

Presents a broad range of literatures from diverse Native traditions and eras, to provide students with a basic knowledge of major issues affecting and best-known texts by American Indian women authors.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop critical thinking skills about subject matter presented by Indigenous female writers.
Audience: Undergraduate

2. Articulate critical thinking in both written forms and verbal exchange.
Audience: Undergraduate

3. Display productive use of core library resources appropriate to the study of Native and Indigenous literatures as evidence in written work.
Audience: Undergraduate

4. Communicate a deeper understanding of community, both in Native America and the smaller and larger communities of which we are members.

Audience: Undergraduate

ENGL/GEN&WS 248 – WOMEN IN ETHNIC AMERICAN LITERATURE
3 credits.

American literature by and about women, written by authors from ethnic groups.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ENGL/ASIAN AM 270 – A SURVEY OF ASIAN AMERICAN LITERATURE
3 credits.

Survey of Asian American literature from 1880 to present.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2022

ENGL 279 — TOPICS IN ENGLISH, STUDY ABROAD - LITERATURE
1-6 credits.

Provides an equivalency for intermediate-level English literature courses taken on a UW-Madison study abroad program.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2001

ENGL 304 — HISTORY AND THEORY OF RHETORIC AND WRITING STUDIES
3 credits.

Surveys the study of writing and rhetoric, and covers major theories, practices, and research areas in the field of Rhetoric and Composition, with attention to their importance both inside and outside the University.
Requisites: Satisfied Communications A requirement and sophomore standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Describe the purpose (and limitations) of the teaching and learning of writing in the US
Audience: Undergraduate

2. Effectively employ at least one conventional research method in Composition and Rhetoric
Audience: Undergraduate

3. Evaluate the effectiveness of various writing pedagogies in the history of Composition and Rhetoric according to modern understandings of learning science and educational equity.
Audience: Undergraduate

4. Read and write with rhetorical awareness
Audience: Undergraduate

ENGL/ENVIR ST 305 — RHETORIC, SCIENCE, AND PUBLIC ENGAGEMENT
3 credits.

Focuses on theoretical and practical aspects of public engagement with scientific research, policy, and management, with an emphasis on writing, rhetoric, and scientific discourse.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023

ENGL 307 — CREATIVE WRITING: FICTION AND POETRY WORKSHOP
3 credits.

Writing of literary fiction and poetry, reading selected contemporary writers as models.
Requisites: Junior standing or ENGL 207. Students may not be concurrently enrolled with ENGL 407, 408, 409, 410, 469, 508, 509, or 695
Course Designation: Gen Ed - Communication Part B
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENGL 314 — STRUCTURE OF ENGLISH
3 credits.

Linguistic methods of analysis and description of English syntax and morphology.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ENGL 315 — ENGLISH PHONOLOGY
3 credits.

Basic principles of phonetics and phonology applied to the description of English and other languages.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify basic acoustic features of human language sounds
Audience: Both Grad & Undergrad

2. Identify basic articulatory descriptions of human language sounds
Audience: Both Grad & Undergrad

3. Observe and describe the distribution of sounds in human languages
Audience: Both Grad & Undergrad

4. Understand different levels of representation in the speech chain
Audience: Both Grad & Undergrad

5. Develop language specific materials to support acoustic phonetic and phonological analysis
Audience: Graduate

ENGL 316 – ENGLISH LANGUAGE VARIATION IN THE U.S.
3 credits.

Description and analysis of geographical and social variation in English in the United States.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ENGL 318 – SECOND LANGUAGE ACQUISITION
3 credits.

Systematic study of how people learn ESL and other second languages. An interdisciplinary survey emphasizing research in linguistics, psychology, education, and sociology into the phenomenon of second language acquisition.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ENGL 319 – LANGUAGE, RACE, AND IDENTITY
3 credits.

Relation of culture and genetics to formal properties of human language; consideration of American English dialects and language disorders. Topics include: biological basis of language disorders; racial affiliation and social identity; maintenance of social boundaries; politics of education, speech therapy.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Biological Science or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025

ENGL 320 – LINGUISTIC THEORY AND CHILD LANGUAGE
3 credits.

An introduction to the linguistic study of child language within the generative theory. According to this theory, humans are born with genetically determined linguistic knowledge called Universal Grammar, which guides children in learning language. Learn the basic concepts of the generative theory and learn to apply them to the study of child language. Topics include universal linguistic principles that govern children's acquisition of syntax and semantics and cross-linguistic influence in children acquiring more than one language from birth or early childhood. Discuss empirical research studies testing the Universal Grammar theory of language acquisition.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain main characteristics of first language acquisition (how children learn words, grammar, etc.)
Audience: Undergraduate

2. Apply the current linguistic theory to explain child language
Audience: Undergraduate

3. Be able to explain how language acquisition is underpinned by innate linguistic principles by drawing on concrete research findings
Audience: Undergraduate

4. Critically evaluate and analyze research studies on first language
Audience: Undergraduate

5. Demonstrate knowledge of current experimental methods on language acquisition
Audience: Undergraduate

6. Interpret statistical data analysis of quantitative data
Audience: Undergraduate

ENGL 328 – THE SIXTEENTH CENTURY
3 credits.

Literature and culture of Britain in the sixteenth century.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ENGL 334 – EIGHTEENTH CENTURY LITERATURE AND CULTURE
3 credits.

Eighteenth-century literature and culture, including such writers as Dryden, Defoe, Swift, and Pope.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ENGL 335 – STAGE AND PAGE IN THE LONG EIGHTEENTH CENTURY
3 credits.

What happens to English drama after Shakespeare's death? Public theaters closed, considered too racy for the moral health of the population. When they reopened in 1660, sex took center stage in productions of plays both old and new. Women acted on stages in London for the first time, both in roles originally written for cross-dressing boys and in new ones designed for female actors. Female playwrights entered the scene as well, writing for financial profit alongside their male counterparts. Read a sampling of plays and theatrical entertainments performed during the Restoration and eighteenth century as well as publications surrounding the world of the theater to gain a sense of drama on the page and on the stage.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ENGL 336 – EIGHTEENTH-CENTURY NOVEL
3 credits.

Study of 18th-Century English novel.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023

ENGL 340 – ROMANTIC LITERATURE AND CULTURE
3 credits.

Literature of the Romantic age in relation to philosophical, cultural, historical, artistic or scientific backgrounds and contexts.
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ENGL 345 – NINETEENTH-CENTURY NOVEL
3 credits.

Nineteenth-century novel. The century begins with Jane Austen, includes some of the great realist novelists, such as George Eliot and Charles Dickens, and ends with experiments in novel-writing by Oscar Wilde and Joseph Conrad.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

ENGL/GEN&WS 350 – SPECIAL TOPICS IN GENDER & LITERATURE
3 credits.

Investigation of some specific topic in gender and women's studies related to gender and literature. Topic differs each semester.
Requisites: GEN&WS 101, 102, 103, or SOC/GEN&WS 200
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENGL 351 – MODERNIST NOVEL
3 credits.

Modernist novelists such as Virginia Woolf, James Joyce, and E. M. Forster.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ENGL 352 – MODERNIST POETRY
3 credits.

Exploration of British, Irish, and Anglophone poets working in the early twentieth century, such as W. B. Yeats, T. S. Eliot, Gertrude Stein, and Ezra Pound.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

ENGL 353 – BRITISH LITERATURE SINCE 1900
3 credits.

Survey of twentieth-century British literature including fiction, poetry, and drama.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENGL/GEN&WS 359 – VISIONARY AND SPECULATIVE FICTION: SOCIAL JUSTICE APPROACHES
3 credits.

Explores the genre of visionary fiction - speculative fiction written for social justice purposes - as a means to create, build and maintain new worlds. Examines the political potential of literature and multiple examples of visionary fiction.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Understand the social and political potential of literature to impart knowledge about gender, sexuality, race, and other intersectional social issues
Audience: Undergraduate

2. Develop interdisciplinary techniques to blend research with creative expression
Audience: Undergraduate

3. Develop critical thinking and creative writing skills
Audience: Undergraduate

ENGL/HISTORY/RELIG ST 360 – EARLY MEDIEVAL ENGLAND
3 credits.

Introduction to the peoples and cultures of Early Medieval England (c450-c1100), with primary emphasis on texts written in Old English and Latin. Interdisciplinary approach including history, literature, religion, and material culture. Attention to literary genres ranging from elegy to riddles; the development of Christianity; encounters with Romans, Vikings, and Normans; and other political and social concerns. All readings in translation.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Recognize and discuss major forms, techniques, social conditions, values, and genres that have shaped the history of English literature, language, and culture.
Audience: Undergraduate

2. Discern and integrate divergent and contradictory perspectives, identify and question assumptions, and assess evidence and methods related to Early Medieval England.
Audience: Undergraduate

3. Write original, coherent, and compelling arguments about assigned texts and/or objects that push beyond summary to analysis and independent and critical thinking in clear prose that meets expectations for grammatical correctness.
Audience: Undergraduate

ENGL 361 – MODERN AND CONTEMPORARY AMERICAN LITERATURE
3 credits.

Survey of modern and contemporary American literature including fiction, poetry, drama, and criticism.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENGL/CHICLA 368 – CHICANA/O AND LATINA/O LITERATURES
3 credits.

Historical, political, and aesthetic roots and directions of Latin@ and Chican@ short stories, novels, poetry, music, plays, films, and essays.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. History of literature and language: Recognize and demonstrate knowledge of major forms, techniques, social conditions, values, genres, as well as cultural, aesthetic, philosophical and ideological factors that are relevant to the history of Chicanx and Latinx literatures.
Audience: Undergraduate

2. Awareness of history's impact on the present: Appraise and contrast literary approaches to depicting a variety of social, cultural, and historical events and experiences.
Audience: Undergraduate

3. Critical thinking / Ability to recognize and question assumptions: Assess textual evidence leading to interpretation and discern multiple (and even contradictory) interpretations while querying textual meaning and significance.
Audience: Undergraduate

4. Creativity: Generate original ideas and texts, experimenting and taking risks, solving problems, and answering questions in a range of genres and media.
Audience: Undergraduate

5. Critical writing and communication: Write and present original, coherent, and compelling arguments that push beyond summary to analysis; are grounded in textual evidence; and offer independent and original thinking clear prose that meets expectations for grammatical correctness.
Audience: Undergraduate

6. Citizenship/ A consciousness of self and other: Develop empathy by learning about the experiences of others and develop self-awareness of one's own positionality and views, and employ this consciousness in participating with others in the classroom while also creating productive patterns of study and work for yourself based on this growing self-awareness.
Audience: Undergraduate

ENGL/JEWISH 370 – JEWISH HUMOR
3-4 credits.

What is humor? Why and when do people tell jokes? And what do we make of the fact that a certain form of humor has come to be labeled "Jewish"? Examine the notion of "Jewish humor" by reading a variety of texts (jokes, short stories, films, websites, conceptual art, and cultural kitsch). Begin by considering theoretical explorations of humor and "Jewish humor." Then trace techniques of Jewish humor from eastern Europe to central Europe to North America, paying specific attention to Jewish American humor. Themes to be examined include: in-group vs. out-group humor; humor and ethnicity; performance and "Jewface"; Jewish-Christian difference; humor and the Holocaust; gender and ethnicity; the notion of self-hatred; American popular culture; and the relationship between humor, repetition, and innovation. The general goal is to answer the question: Is there such a thing as "Jewish humor"? (Hint: The answer may be "no.")
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Discern and integrate divergent and contradictory perspectives, identify and question assumptions, and assess evidence and methods
Audience: Undergraduate

2. Demonstrate close-reading skills with which to analyze humor and American ethnicity, question assumptions about the popular representation of Jewish identity, and explore how humor manages and mobilizes questions of race, ethnicity, and religion
Audience: Undergraduate

3. Engage in reflective writing practices, respond critically to feedback, and assess one's own communicative strengths
Audience: Undergraduate

4. Engage in deep discussion with peers in a respectful and empathetic manner, ask each other constructive questions, develop a shared vocabulary with which to speak about Jewish humor, and, in doing so, explore preconceived notions about identities "inside" and "outside" students' social circles
Audience: Undergraduate

ENGL 373 – CONTEMPORARY POETRY
3 credits.

Study of significant recent poetry written in English.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ENGL 374 – AFRICAN AND AFRICAN DIASPORA LITERATURE AND CULTURE
3 credits.

Explore classic literary and cultural texts from three regions: Africa, the Caribbean, and African America. Consider the origins and evolution of the African diaspora, and the many forms of its expression. Consider how the African diaspora has shaped US society today, exploring significant themes such as slavery and colonialism, race and cultural identity; intra-racial/cultural and cross-continental alliances and antagonisms; gender and genre; and the paradoxical fate so far-cultural visibility but peripheral political and economic power- of global Afro-cultures. Think about how African-American writers have been influenced by the experience of the African diaspora, and also about the ways that cultural expression from around the world has shaped US culture.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023

ENGL 375 – LITERATURES OF MIGRATION AND DIASPORA
3 credits.

Literature by or about people who leave homes and homelands by choice or compulsion.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025

ENGL 376 – LITERATURE AND ANIMAL STUDIES
3 credits.

How does literature help us understand animals and our relation to them? We address this question by exploring two types of representation: representation as depiction (the attempt to describe animals in literature) and representation as a legal or political act (the attempt to speak or act on behalf of animals). Organized around familiar animal categories - dogs, cats, horses, apes, birds, insects - we examine the representation of animals in modern literature as a way to give an account of the cultural history of human-animal relations and, in doing so, to make us reflect upon the social, political, and environmental consequences of this history at a time when animal species are disappearing at an alarming rate.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2021
Learning Outcomes: 1. Discern and integrate divergent and contradictory perspectives, identify and question assumptions, and assess evidence and methods (Critical Thinking).
Audience: Undergraduate

2. Write original, coherent, and compelling arguments that push beyond summary to analysis and independent and critical thinking in clear prose that meets expectations for grammatical correctness (Critical Writing).
Audience: Undergraduate

ENGL 379 – POSTCOLONIAL AND WORLD LITERATURE
3 credits.

English language literatures of former colonies, primarily in Africa and South Asia. While scrutinizing the concept of the "postcolonial" and evaluating its many meanings, class will read some of the significant writers of the postcolonial world and attend to the literary traditions that produced them.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

ENGL 400 – ADVANCED COMPOSITION
3 credits.

Focuses on developing complex understandings of rhetorical, ethical, and literary strategies for writing. Practice in writing a range of nonfiction genres with attention to varieties of style, context, critical standards, and conventions. Designed for students with a strong interest in writing. May include multi-modal assignments.
Requisites: Satisfied Communications A requirement and junior standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ENGL/GEN&WS 401 – RACE, SEX, AND TEXTS (HOW TO DO THINGS WITH WRITING)
3 credits.

Uses writing in many forms and genres to help students explore how race, gender, and sexuality intersect with language and inform textual experiences. From marriage licenses, passports, and don't ask, don't tell policies to literacy requirements and gag rules, written texts have played major roles in enforcing expectations about race and sex in the United States. At the same time, anti-slavery petitions, letters to the editor, wheat-pasted posters, and hashtag activism all also harness the power of writing to challenge and revise those expectations. In light of that active textual production and negotiation, this class traces public debates and daily experiences where people write or talk about race and sex in order to make a difference. Ultimately, the class takes on the power of words to break bones and heal wounds. Through reading and writing informed by scholarship in writing studies and rhetoric, students in this class will examine historical and contemporary interconnections among race, sexuality, gender, and texts in the United States, developing analytical tools for understanding how language works on and in their world.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ENGL 403 – SEMINAR ON TUTORING WRITING ACROSS THE CURRICULUM
3 credits.

Explores current theory and research on the writing process and analyzes disciplinary genres and conventions. Teaches strategies for helping writers revise their work. As Undergraduate Writing Fellows, students will help their peers improve their writing in courses across the curriculum. For students accepted into the Writing Fellows Program. For students accepted into the Writing Fellows program
Requisites: Consent of instructor
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Accelerated Honors (!)
Repeatable for Credit: No
Last Taught: Fall 2025

ENGL 407 – CREATIVE WRITING: NONFICTION WORKSHOP
3 credits.

Explores a variety of non-fictional prose writing forms including (at the instructor's discretion) personal essay, memoir, travel writing, opinion pieces, investigative journalism, public science writing, and natural history writing. Covers theory and technique, reading the work of established writers and some short writing exercises. Focuses on student writing, both in the classroom and in individual conferences.
Requisites: ENGL 207, 307, 407, 408, 409, 410, 411, or graduate/professional standing. Students may not be concurrently enrolled with ENGL 307, 408, 409, 410, 469, 508, 509, or 695
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENGL 408 – CREATIVE WRITING: FICTION WORKSHOP
3 credits.

Writing literary fiction.
Requisites: ENGL 207, 307, 407, 408, 409, 410, 411, or graduate/professional standing. Students may not be concurrently enrolled with ENGL 307, 407, 409, 410, 411, 469, 508, 509, or 695
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENGL 409 – CREATIVE WRITING: POETRY WORKSHOP
3 credits.

Writing literary poetry.
Requisites: ENGL 207, 307, 407, 408, 409, 410, 411, or graduate/professional standing. Students may not be concurrently enrolled with ENGL 307, 407, 408, 410, 411, 469, 508, 509, or 695
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENGL 410 – CREATIVE WRITING: PLAYWRITING WORKSHOP
3 credits.

Explores the art and craft of writing for the stage. Examines strategies that writers can use to tell stories and communicate ideas both theatrically and dramatically. Covers theory and technique, reading the work of established writers and some short writing exercises. Focuses on student writing, both in the classroom and in individual conferences.
Requisites: ENGL 207, 307, 407, 408, 409, 410, 411, or graduate/professional standing. Students may not be concurrently enrolled with ENGL 307, 407, 408, 409, 411, 469, 508, 509, or 695
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENGL 411 – CREATIVE WRITING: SPECIAL TOPICS WORKSHOP
3 credits.

Variable topics including: the informal essay, the long poem, the novel, the novella, genre fiction (detective, juvenile, humor, science fiction, etc.), experimental prose and poetry, etc. Students will read models and write their own exercise and full-length pieces.
Requisites: ENGL 207, 307, 407, 408, 409, 410, 411, or graduate/professional standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Honors - Accelerated Honors (!)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

ENGL 412 – BAD GRAMMAR AND METALINGUISTIC AWARENESS
3 credits.

Explores the relationship between descriptive and prescriptive grammar. Examines the role of prescriptivism in linguistics from a disciplinary view (why are linguists against it when the public is so clearly interested in singling out some constructions as 'bad grammar'). Provides a historical view (the tradition of grammar writing -- who gets to decide what is 'correct') and a variationist view (corpus-based studies on phenomena like preposition stranding, split infinitives, the distinction of who/whom etc.) of grammar writing. Covers the historical and cultural roots of beliefs about what constitutes 'good' and 'bad' grammar. Introduces linguistic tools and methods to check claims about grammar.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. understand the difference between prescriptive and descriptive approaches to grammar
Audience: Both Grad & Undergrad

2. formulate and test hypotheses about English grammar with data-based tools and methods
Audience: Both Grad & Undergrad

3. design and present a research project on grammar variation and change

Audience: Graduate

ENGL 413 – ENGLISH WORDS: GRAMMAR, CULTURE, MIND
3 credits.

Words and rules of combination (grammar) are the two basic building blocks of language. Looks at English words from different linguistic perspectives: As objects of grammar, words follow certain rules of combination (you wouldn't say "these dog), but they also have internal structure. For example, a word like "hopefulness is fine, while "hopenessful" does not exist. From a psycholinguistic perspective examine how children learn these formal properties as well as the meaning of words. Study how words are stored in the mind and what one can learn from situations in which one cannot access the mental dictionary properly (for example, when one feels a word is on "the tip of one's tongue). From a sociolinguistic perspective, look at historical and current influences on English vocabulary, including the role of dictionaries and spelling as a source of standardization. Does not require previous knowledge of linguistics.
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

ENGL 414 – GLOBAL SPREAD OF ENGLISH
3 credits.

Examination of the linguistic, social, and political impact of the spread of English around the world. Analysis of geographical, social, and stylistic variation in English in diverse world contexts.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ENGL 415 – INTRODUCTION TO TESOL METHODS
3 credits.

Teaching of English to speakers of other languages. Exploration of the contexts in which English is taught, and methods and materials used to teach it.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ENGL 416 – ENGLISH IN SOCIETY
3 credits.

Social and public uses of English; relationships of English structure, lexicon, and discourse to race, gender, class, education, ethnicity, age, and identity; the role of English in public policy.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2021

ENGL 417 – HISTORY OF THE ENGLISH LANGUAGE
3 credits.

Linguistic and sociolinguistic change in English from its beginnings to the present.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021

ENGL 420 – TOPICS IN ENGLISH LANGUAGE AND LINGUISTICS
3 credits.

Study of a topic in English language and linguistics.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENGL 422 – OUTSTANDING FIGURE(S) IN LITERATURE BEFORE 1800
3 credits.

Study of major figure or figures in literature written before 1800.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENGL/MEDIEVAL 423 – TOPIC IN MEDIEVAL LITERATURE AND CULTURE
3 credits.

Study of a topic in medieval literature.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENGL/MEDIEVAL 424 – MEDIEVAL DRAMA
3 credits.

Dramatic traditions of medieval England, from early church rituals performed inside quiet monasteries in the tenth century to the elaborate and often raucous urban guild cycles and morality plays of the fifteenth, and with special attention to the significance of spirituality, work, and play in medieval culture.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023

ENGL/MEDIEVAL 425 – MEDIEVAL ROMANCE
3 credits.

Important early form of narrative fiction, covering tales of adventure, magic, courtly love, and King Arthur from the twelfth through the fifteenth century.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2022

ENGL/MEDIEVAL 426 – CHAUCERS COURTLY POETRY
3 credits.

Poetry of the most famous and influential medieval English poet, from his short lyrics on love through his dream visions of talking birds and castles built on ice to the historical romance Troilus and Criseyde. Readings will be in the original Middle English; no prior experience with the language is required.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023

ENGL/MEDIEVAL 427 – CHAUCER'S CANTERBURY TALES
3 credits.

Study of the most famous and influential medieval English poet through his best-known work and its playful and profound responses to some of the most pressing literary, social, political, and spiritual issues of his time. Readings will be in the original Middle English; no prior experience with the language is required.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ENGL 430 – TOPIC IN EARLY MODERN LITERATURE AND CULTURE
3 credits.

Study of a topic in Early Modern literature.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2022

ENGL 431 – EARLY WORKS OF SHAKESPEARE
3 credits.

Study of four Shakespeare plays through 1600, with the reading of several others.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ENGL 432 – LATER WORKS OF SHAKESPEARE
3 credits.

Study of four Shakespeare plays after 1600 with the reading of several others.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2022

ENGL 433 – SPENSER
3 credits.

Study of Edmund Spenser's major poems.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023

ENGL/RELIG ST 434 – MILTON
3 credits.

Study of John Milton's poems and selected prose.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ENGL 438 – TOPIC IN EIGHTEENTH-CENTURY LITERATURE AND CULTURE
3 credits.

Study of a topic in 18th-Century literature.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

ENGL 443 – OUTSTANDING FIGURE(S) IN LITERATURE SINCE 1800
3 credits.

Study of outstanding figure(s) in literature.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

ENGL 444 – TOPIC IN ROMANTIC OR VICTORIAN LITERATURE AND CULTURE
3 credits.

Study of a topic in 19th-Century British literature.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ENGL 453 – TOPIC IN BRITISH LITERATURE AND CULTURE SINCE 1900
3 credits.

Study of a topic in British literature since 1900.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENGL 454 – JAMES JOYCE
3 credits.

Study of the works of James Joyce.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

ENGL 455 – A STUDY OF AN OUTSTANDING FIGURE OR FIGURES IN AMERICAN LITERATURE
3 credits.

Study of a figure in American literature.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

ENGL 456 – TOPIC IN NINETEENTH-CENTURY AMERICAN LITERATURE AND CULTURE
3 credits.

Study of a topic in 19th-Century American literature.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023

ENGL 457 – TOPIC IN AMERICAN LITERATURE AND CULTURE SINCE 1900
3 credits.

Study of a topic in American literature.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

ENGL 458 – MAJOR AMERICAN WRITER OR WRITERS
3 credits.

Study of major American writer(s).
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2023

ENGL 459 – THREE AMERICAN NOVELISTS
3 credits.

Concentrated study of US novelists.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

ENGL/CHICLA 460 – BLACK AND LATINX IN LITERATURE AND VISUAL CULTURE
3 credits.

Chicanxs and Latinxs are frequently imagined in ways that erase the history, presence, and influence of African-descended peoples within these groups. However, this anti-Blackness does not go unanswered in Chicanx and Latinx cultural production. Covers literature, life-writing/autoethnography, visual culture, philosophy/theory, and history that takes up Black Latinx experience and/or that comparatively explores the African American and Latinx convergences, exploring a rich vein of thought and representation in U.S. literatures that is often more transamerican than American and that offers new definitions of both Latinx and Black. Readings on racial paradigms in the Americas, paying attention to the differences between US and Latin American contexts, as well readings on decoloniality, intersectional feminisms, borderlands, and diaspora.
Requisites: Declared in Chicana/o and Latina/o Studies (major or certificate) or English major, and sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Know major forms, techniques, social conditions, values, genres, as well as cultural, aesthetic, philosophical and ideological factors that have shaped the history of Black and Latinx literatures.
Audience: Undergraduate

2. Appraise and contrast literary approaches to depicting a variety of social, cultural, and historical events and experiences.
Audience: Undergraduate

3. Understand multiple interpretations, question textual meanings and significance, discern and integrate divergent and contradictory perspectives, identify and question assumptions, and assess evidence and methods.
Audience: Undergraduate

4. Generate original ideas and texts, conduct thought experiments, and answer critical questions about and in a range of genres and media.
Audience: Undergraduate

5. Write original, coherent, and compelling arguments that push beyond summary to analysis that is grounded in textual evidence and offer independent and critical thinking in clear prose that meets expectations for grammatical correctness.
Audience: Undergraduate

6. Develop empathy by learning about the experiences of others and develop self-awareness of one's own positionality and views, and to employ this consciousness in participating with others in the classroom. Create productive patterns of study and work for yourself based on this growing self-awareness.
Audience: Undergraduate

ENGL 461 – TOPICS IN ETHNIC AND MULTICULTURAL LITERATURE
3 credits.

Literature in English by authors whose work reflects the experience of ethnic and minority groups.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENGL/ASIAN AM 462 – TOPIC IN ASIAN AMERICAN LITERATURE
3 credits.

Topics will vary. All topics will emphasize the following learning outcomes: awareness of history's impact on the present, ability to recognize and question assumptions, development of critical thinking skills, awareness of relations between self and others, and effective participation in a multicultural society.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENGL/ASIAN AM/GEN&WS 463 – RACE AND SEXUALITY IN AMERICAN LITERATURE
3 credits.

Explores the intersection between race and sexuality in American literature with an emphasis on sex/gender difference, feminism, transgenderism, and nationalism. Focuses on the nature of literature as advocacy, with an emphasis on Asian-American issues.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

ENGL/ASIAN AM/GEN&WS 464 – ASIAN AMERICAN WOMEN WRITERS
3 credits.

Major texts by Asian American women writers.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ENGL/ASIAN AM 465 – ASIAN AMERICAN POETRY
3 credits.

Throughout the history of Asian America, poetry has been a vehicle for the creation and exploration of an Asian American voice; in poetry we can see the continuing struggle over what form Asian American expression will take. Will it follow Asian or European models? Will it employ traditional forms, or experiment in search of new styles? Will it be individual or collective, introspective or political? We will explore these questions through a study of a wide range of Asian American poets from a variety of historical periods and ethnicities, including Janice Mirikitani, Lawson Fusao Inada, Li-Young Lee, John Yau, Myung Mi Kim, and Linh Dinh.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023

ENGL 469 – INTERDISCIPLINARY STUDIES IN THE ARTS
1-4 credits.

Guest artists will offer interdisciplinary courses on topics appropriate to their specializations. Students may not be concurrently enrolled with ENGL 307, 407, 409, 408, 410, 411, 508, 509, or 695
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2019

ENGL 473 – TOPIC IN POSTCOLONIAL OR WORLD LITERATURE
3 credits.

Study of a theme or question in literature that crosses national boundaries, inviting students to think about forces of imperialism and globalization. Specific focus will vary.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2021

ENGL 474 – TOPIC IN CONTEMPORARY LITERATURE
3 credits.

Study of recent literature written in English. Specific topic will vary.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

ENGL 475 – COMEDY AS GENRE
3 credits.

Survey of the genre of comedy from antiquity to the present.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Engage with the history and development of comedy as a form from its beginnings in Greek and Roman antiquity up to the twentieth century through reading, discussion and work on a research paper.
Audience: Undergraduate

2. Improve skills in analyzing and researching literary texts.
Audience: Undergraduate

3. Develop writing and critical thinking skills.
Audience: Undergraduate

ENGL/THEATRE 477 – DIASPORA AND THEATRE
3 credits.

Study of the drama and theatre of a variety of immigrant communities in three Western locations: Britain, the United States, and Canada. Focuses on current theories of diaspora and transnationalism, the place of theatre in diasporic writing, and the literary, performative, and material dimensions of the genre.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2018

ENGL/ASIAN 478 – INDIAN WRITERS ABROAD: LITERATURE, DIASPORA AND GLOBALIZATION
3 credits.

Study of literature, drama, and film produced by authors of South Asian origin in Europe, North America, and the Caribbean. Course considers theories of diaspora, changing patterns of subcontinental migration, and relation of diasporic forms to the cultures of origin and adoption. Not open to students with credit for LCA 478 prior to Fall 2019.
Requisites: Junior standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2018

ENGL 505 – TOPICS IN COMPOSITION AND RHETORIC
3 credits.

In-depth intellectual engagement with the perspectives, concerns, and methods of Composition Rhetoric. Topics vary in relation to writing, rhetoric, literacy, and multimodal or digital approaches to any of these.
Requisites: Satisfied Communications A requirement and junior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

ENGL 508 – CREATIVE WRITING: ADVANCED FICTION WORKSHOP
3 credits.

Fiction writing.
Requisites: ENGL 408 or graduate/professional standing. Students may not be concurrently enrolled with ENGL 307, 407, 408, 409, 410, 411, 469, 509, or 695
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Honors - Accelerated Honors (!)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENGL 509 – CREATIVE WRITING: ADVANCED POETRY WORKSHOP
3 credits.

Intensive poetry workshop. Write original poetry and see it through drafting and revision, to final form; read and give detailed feedback on the work of peers; study published poetry to analyze craft elements for use in original work.
Requisites: ENGL 409 or graduate/professional standing. Students may not be concurrently enrolled in ENGL 307, 407, 408, 409, 410, 411, 469, 508, or 695
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Know how to develop the creative and technical skills necessary to conceive, execute, and revise original literary work in poetry.
Audience: Undergraduate

2. Demonstrate sensitivity to language and style on both the artistic and technical levels.
Audience: Undergraduate

3. Develop the critical, analytical, and editing skills necessary to evaluate literary works in progress, both the student's own work in progress and that of the student's peers.
Audience: Undergraduate

4. Develop the ability to read literary works not only for their social, historical, intellectual, formal, and interpretive value, but for their capacity to inspire and generate new work, and to see in a finished work the process of its being made.
Audience: Undergraduate

5. Develop the critical and analytical skills necessary to evaluate literary works in progress, to guide classroom discussion, and to convey concepts of craft to undergraduate students
Audience: Graduate

6. Demonstrate sensitivity to language and style on both the artistic and technical levels.
Audience: Graduate

ENGL 514 – ENGLISH SYNTAX
3 credits.

Syntactic theory as applied to the analysis of English sentences.
Requisites: ENGL 314 or graduate/professional standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

ENGL 515 – TECHNIQUES AND MATERIALS FOR TESOL
3 credits.

Supervised practice in the use of current techniques and materials in the teaching of English to speakers of other languages, including peer and community teaching with videotaped sessions.
Requisites: ENGL 415
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ENGL 516 – ENGLISH GRAMMAR IN USE
3 credits.

Functions of English grammar, covering use in a variety of contexts and text types. Involves analysis of spoken and written English across genres and settings.
Requisites: ENGL 314 or graduate/professional standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ENGL/MEDIEVAL 520 – OLD ENGLISH
3 credits.

The elements of Old English grammar with selected readings.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Honors - Accelerated Honors (!)
Repeatable for Credit: No
Last Taught: Fall 2025

ENGL/MEDIEVAL 521 – ADVANCED OLD ENGLISH LITERATURE
3 credits.

An intensive study of a major work or works of Old English, usually focusing on either Beowulf or the poems of a single manuscript. Line-by-line translation of the text will be supplemented by discussion of related issues (whether linguistic, thematic, or contextual) as well as by readings from relevant critical literature. Primary texts will be read in Old English.
Requisites: MEDIEVAL/ENGL 520
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Honors - Accelerated Honors (!)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2020

ENGL/HIST SCI/MED HIST 525 – HEALTH AND THE HUMANITIES
3 credits.

Explores how a humanistic perspective can broaden our understanding of health and medicine. Specifically, we will examine the role of language and culture in the creation and circulation of biomedical knowledge; our lived experiences with illness (physical and mental); the intricate intersections of race, gender, sexuality, disability and medicine; the political dimensions of diagnosis, disease, and epidemics, and the role that fiction, creative non-fiction, comics, and film play in shaping our experiences with health and medicine as health care providers and as patients. The course does not assume any background in science or medicine. One of our recurrent topics, in fact, will be to consider how non-experts interact with medicine and its technical vocabularies. Although the primary objective of the course is to understand the cultural, social, and political dimensions of health and medicine, a secondary objective is for students to become more savvy patients and, for the few students who might emerge on the other side of the stethoscope one day, more well rounded health care professionals.
Requisites: Declared in the Health and the Humanities certificate
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

ENGL/ENVIR ST 533 – TOPIC IN LITERATURE AND THE ENVIRONMENT
3 credits.

Explores the ways that literary texts represent, imagine, and re-imagine the environment.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENGL/JEWISH 539 – JEWISH LITERATURES IN DIASPORA
3 credits.

An exploration of Jewish literature in English and in Anglophone contexts.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2021

ENGL 543 – DISCOURSES OF DISABILITY, ANTIQUITY TO 1800
3 credits.

Concepts of physical disability from antiquity to the Renaissance. Literary theory, philosophy, and history will help frame thinking about how disability is produced. Along with considering how canonical texts represent disabled figures, class will investigate the generic, social, and spatial contexts from which these representations arise.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ENGL 546 – TOPIC IN TRAVEL WRITING BEFORE 1800
3 credits.

Examination of aspects of travel literature before 1800. It will pay attention to texts written by travelers of many stripes - pilgrims, missionaries, crusaders, counselors, merchants, and dreamers. It will explore how writers narrate relations between the familiar and the strange, the near and far. And it will ask students to consider the relationship of geography to conceptions of personal and collective identity. How do travel writers represent "us" and "them," "self" and "other"? Who claims space, who characterizes it, and on what grounds?
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ENGL 548 – TOPIC IN LITERATURE AND POLITICS
3 credits.

Study of a topic in literature and politics.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022

ENGL 559 – TOPIC IN LITERARY OR CULTURAL THEORY
3 credits.

An exploration of the methods and principles of criticism; generally an experiment in the application of a particular critical method or a group of related critical presuppositions to an appropriate body of English and American literature. Content varies.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

ENGL/THEATRE 575 – BRITISH DRAMA, 1914 TO PRESENT
3 credits.

Plays and playwrights from the first World War to the present, including movements leading to the "revolt" of 1956 and subsequent proletarian and absurdist drama. Plays by Shaw, O'Casey, Maugham, Coward, Eliot, Osborne, Beckett, Pinter, Stoppard, Arden, Wesker, Bond, Churchill and others.
Requisites: Junior standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021

ENGL/THEATRE 576 – SURVEY: THEORIES OF DRAMA
3 credits.

Selected major critical and theoretical sources, from Aristotle to the present day; the influences of theories upon playwriting and modes of theatrical production.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

ENGL/THEATRE 577 – POSTCOLONIAL THEATRE: DRAMA, THEORY AND PERFORMANCE IN THE GLOBAL SOUTH
3 credits.

Study of drama, dramatic theory and theatrical practices in postcolonial cultures, primarily in Asia, Africa and the Caribbean. Considers status of drama/theatre in postcolonial studies and focuses on issues of form, language, intertextuality, trans-culturation, material organization and reception.
Requisites: Junior standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

ENGL/THEATRE 578 – MODERN AMERICAN DRAMA AND THEATRE
3 credits.

Representative twentieth-century plays from Glaspell and O'Neill to the present considered within contemporary cultural, theatrical and academic context.
Requisites: Junior standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020

ENGL/HIST SCI/MED HIST 599 – DIRECTED STUDY IN HEALTH AND THE HUMANITIES
1 credit.

Offers students enrolled in the Health and the Humanities certificate an opportunity to conduct independent research under the guidance of a faculty member. It allows students who have enrolled in or completed a Health and the Humanities Capstone an opportunity to go into greater depth on a topic covered in the capstone course. In consultation with a faculty member, students will design a project that builds on lessons learned or work completed as part of their capstone experience.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2020
Learning Outcomes: 1. Design scholarly research questions based on their knowledge of the existing literature
Audience: Undergraduate

2. Conduct original primary research by identifying, accessing, and interpreting appropriate sources
Audience: Undergraduate

3. Effectively convey the results of their research through writing or other creative media
Audience: Undergraduate

4. Work independently and manage a large project through to completion
Audience: Undergraduate

ENGL 613 – TESOL: PEDAGOGICAL GRAMMAR I
1 credit.

A focus on understanding English grammar from a pedagogical perspective for the purpose of teaching English as a second or foreign language.
Requisites: ENGL 415
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

ENGL 614 – TESOL: PEDAGOGICAL GRAMMAR II
1 credit.

A focus on understanding English grammar from a pedagogical perspective for the purpose of teaching English as a second or foreign language. The emphasis is on theory and techniques applicable to teaching English grammar.
Requisites: ENGL 415
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

ENGL 615 – TESOL: TEACHING LISTENING AND SPEAKING
1 credit.

An overview of listening and speaking skills and how to teach them.
Requisites: ENGL 415
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

ENGL 616 – TESOL: TEACHING OF READING
1 credit.

An overview of reading and vocabulary skills and how to teach them.
Requisites: ENGL 415
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ENGL 617 – TESOL: TEACHING OF WRITING
1 credit.

Practical modular workshop on key aspects of language teaching, stressing the application of techniques and theory to classroom needs.
Requisites: ENGL 415
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ENGL 618 – TESOL: TEACHING PRONUNCIATION
1 credit.

An overview of the features of English pronunciation and how to teach them.
Requisites: ENGL 415
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ENGL 622 – TOPICS IN ENGLISH: STUDY ABROAD
1-6 credits.

A course carried with a UW-Madison Study Abroad Program which has no equivalent on this campus. Current enrollment in a UW-Madison study abroad program
Requisites: None
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2001

ENGL 651 – SPECIAL TOPICS IN THEATRE AND PERFORMANCE STUDIES RESEARCH
3 credits.

Specialized subjects relevant to the study of the theory, history and criticism of theatre and performance studies.
Requisites: Junior standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Advanced understanding of course topic through reading, analysis and discussion of key primary and secondary readings
Audience: Both Grad & Undergrad

2. Improved research and writing skills through completion of presentations, short essays and longer research papers
Audience: Both Grad & Undergrad

3. Improved analytical ability by performing research transcending traditional disciplinary boundaries
Audience: Both Grad & Undergrad

4. Improved presentation and teaching skills through opportunities to lead briefly course discussions, presentations or projects
Audience: Graduate

ENGL 653 – APPLIED THEATRE
3 credits.

Theory and practice of using applied theatre in educational settings to engage audiences (usually students) in important social or cultural issues. Includes readings, research, discussion and the devising, production and performance of a play by the students in the course for community audiences.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. be able to understand the historic relationship between TIE and other forms of product and process oriented theatre by, with and for youth;
Audience: Both Grad & Undergrad

2. be able to analyze critically applied scripts and descriptions of programs and discuss how these programs structure young people's experiences;
Audience: Both Grad & Undergrad

3. be able to identify and apply the basic terms, skills, philosophies, and methodologies for devising an applied program, with a focus on Theatre in Education approaches
Audience: Both Grad & Undergrad

4. be able to understand and engage in the process of creative collaboration, the job of an actor-teacher, and the crucial role of research in devising, revising, and evaluating a TIE program;
Audience: Both Grad & Undergrad

5. be able to demonstrate and apply effective devising, facilitating, and acting/teaching techniques.
Audience: Both Grad & Undergrad

6. be able to apply theories and practices studied in this course in their scholarly research and creative activities at a postgraduate level
Audience: Graduate

ENGL 654 – DRAMATURGY IN THEORY AND PRACTICE
3 credits.

Study of the historical, theoretical and practical approaches to theatre and performance dramaturgy. Read and discuss scholarship about the field, and produce dramaturgical research education, production and outreach tasks through diverse written assignments and practical exercises.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Gain an understanding of the history of dramaturgy, a dramaturg's role in differentinstitutional and creative contexts, and the theoretical principles that ground the practice
Audience: Both Grad & Undergrad

2. Learn about different tasks dramaturgs encounter, including working within differentinstitutions, glossing texts, working with and selecting adaptations and translations, and developing educational materials
Audience: Both Grad & Undergrad

3. Create a dramaturg's production casebook and complete other assignments that will give you experience trying out the dramaturg's work
Audience: Both Grad & Undergrad

4. Discover the creative potential of dramaturgical thinking in broader areas of theatre and performance practice and scholarship
Audience: Both Grad & Undergrad

5. Develop more experience and expertise in presenting dramaturgical research orally and and in written form.
Audience: Graduate

6. Develop a more confident style of writing about process and production as a mode of theatre and performance research
Audience: Graduate

ENGL 656 – THEATRE OF THE AVANT-GARDE, 1850-1950
3 credits.

The development of realistic and post realistic forms in modern and postmodern drama, from Zola, Ibsen, Strindberg and Chekhov through futurism, expressionism, Dada, surrealism, epic theatre, there of the absurd, and contemporary theatre and performance avant-garde works.
Requisites: Junior standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Be able to recognize and analyze significant historical and contemporary avant-garde movements
Audience: Both Grad & Undergrad

2. Be able to analyze literature in the context of other disciplinary approaches, including visual culture, science, theatre design/technology
Audience: Both Grad & Undergrad

3. Develop reading, analytical, presentation and writing skills through in-class participation and written assignments.
Audience: Both Grad & Undergrad

4. Be able to analyze literature in the context of other disciplinary approaches, including visual culture, science, theatre design/technology
Audience: Graduate

5. Develop a stronger academic writing style by writing a significant research paper for the course
Audience: Graduate

ENGL/AFROAMER 672 – SELECTED TOPICS IN AFRO-AMERICAN LITERATURE
3 credits.

An intensive analysis of specific themes in the Afro-American experience. Subjects vary with instructor.
Requisites: Junior standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ENGL 680 – HONORS PROJECT
3 credits.

For further information, consult the department's Honors Coordinator or Undergraduate Advisor.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2025

ENGL 681 – SENIOR HONORS THESIS IN THE MAJOR
3 credits.

Mentored individual study for students completing honors theses.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025

ENGL 682 – SENIOR HONORS THESIS IN THE MAJOR
3 credits.

Mentored individual study for students completing honors theses.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2025

ENGL 691 – SENIOR THESIS
3 credits.

Mentored individual study for students completing theses.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ENGL 692 – SENIOR THESIS
3 credits.

Mentored individual study for students completing theses.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

ENGL 695 – DIRECTED CREATIVE WRITING
3 credits.

Individually directed writing of a poetry or fiction manuscript.
Requisites: Complete 9 credits from ENGL 307, 407, 408, 409, 410, 411, 508, or 509
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop the creative and technical skills necessary to conceive, execute, and revise original literary work in the relevant genre/s (fiction/poetry/playwriting/creative non-fiction)
Audience: Undergraduate

2. Demonstrate sensitivity to language and style on both the artistic and technical levels
Audience: Undergraduate

3. Develop the critical, analytical, and editing skills necessary to evaluate literary works in progress, both the student's own work in progress and that of the student's peers.
Audience: Undergraduate

4. Develop the ability to read literary works not only for their social, historical, intellectual, formal, and interpretive value, but for their capacity to inspire and generate new work, and to see in a finished work the process of its being made.
Audience: Undergraduate

ENGL 699 – DIRECTED STUDY
1-3 credits.

Intended for students with Junior or Senior standing who have undertaken previous or concurrent work at intermediate level in same subject. Junior or Senior standing; previous or concurrent work at intermediate level in same subject. Students should consult with the English department's academic advisor before enrolling.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENGL 700 – INTRODUCTION TO COMPOSITION STUDIES
3 credits.

Rhetorical, linguistic, psychological, and social foundations of writing; implications for instruction.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ENGL 701 – WRITING AND LEARNING
3 credits.

Historical, critical and philosophical perspectives on the relationship between writing and learning. In addition to reviewing current research, students will have the opportunity to carry out their own investigation designed to study possible relationships between writing and learning.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

ENGL 702 – PERSPECTIVES ON LITERACY
3 credits.

Social, historical, and educational perspectives on literacy and literacy learning.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ENGL 703 – RESEARCH METHODS IN COMPOSITION STUDIES
3 credits.

Introduction to quantitative and qualitative research methods in composition studies.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023

ENGL 705 – INTELLECTUAL SOURCES OF CONTEMPORARY COMPOSITION THEORY II-MODERN
3 credits.

Historical, critical, and philosophical perspectives on the development of composition studies during the modern era, with special emphasis on the 20th Century.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ENGL 706 – SPECIAL TOPICS IN COMPOSITION THEORY
3 credits.

In-depth treatment of specific problems, questions, themes, authors, texts, or historical periods in composition and rhetoric. Subject will differ each year.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

ENGL 709 – ADVANCED ENGLISH PHONOLOGY
3 credits.

Problems of English segmental and suprasegmental phonology, including morphophonemic alterations and stress assignment.
Requisites: ENGL 315
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ENGL 711 – RESEARCH METHODS IN APPLIED LINGUISTICS
3 credits.

An introduction to various research paradigms in applied linguistics and second language acquisition. A preparation for critically evaluating published research in applied linguistics and second language acquisition.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ENGL 713 – TOPICS IN CONTEMPORARY ENGLISH LINGUISTICS
3 credits.

Study of a topic in contemporary English linguistics.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENGL 715 – ADVANCED SECOND LANGUAGE ACQUISITION
3 credits.

An examination of linguistic, psychological, and sociological theories of second language acquisition and their application to research in syntax, phonology, lexicon, or pragmatics of a second language.
Requisites: ENGL 318
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ENGL 719 – SUMMER WRITING WORKSHOP
1-3 credits.

A workshop intended for high school teachers or other post-baccalaureate students. Intended for University Special Students, the class generally does not satisfy requirements for any graduate or undergraduate major in English.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

ENGL 720 – SEMINAR IN EARLY MODERN STUDIES
2 credits.

Provides an overview of recent scholarly debates in the study of early modernity. Considers two key challenges involved in the study of early modernity: first, what (and when) constitutes early modernity; second, the study of early modernity is necessarily cross-disciplinary. Beginning with the question of what constitutes the "early modern," approach the topic of early modernity from a variety of disciplinary and thematic lenses. The themes include periodization, early modern legal and state formation, women in early modernity, race and early modernity, religion in early modernity, and global early modernities.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Communicate effectively, in both speech and writing, concepts, theories, and arguments related to the study of early modernity.
Audience: Graduate

2. Develop a familiarity with methods and approaches to the study of early modernity from a variety of disciplines.
Audience: Graduate

3. Develop the capacity to critique and analyze, in both speech and writing, studies of early modernity from a variety of disciplines.
Audience: Graduate

ENGL 722 – COMPOSITION AND CRITICAL THEORIES
3 credits.

Study of the relationship between composition and critical theories.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ENGL/THEATRE 731 – ADVANCED THEATRE HISTORY 500 BC TO 1700
3 credits.

Problems of scholarship in the dramatic, performance and staging practices of major traditions of world theatre history between 500 BCE and 1700 including the theatres of ancient Greece and Rome; medieval, Renaissance and early modern Europe; and the Muromachi and Tokugawa eras in Japan.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2020

ENGL/THEATRE 732 – ADVANCED THEATRE HISTORY 1700 TO PRESENT
3 credits.

Problems of scholarship in the dramatic, performance and staging practices of major traditions of world theatre history since 1700, including melodrama, naturalism, the avant-garde, and other movements that helped shaped contemporary theatre.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

ENGL/GEN&WS 737 – FEMINIST THEORY AND CRITICISM
3 credits.

Feminist theory, with an emphasis on literary and cultural theory and criticism in English.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ENGL 780 – CREATIVE WRITING: GRADUATE WORKSHOP
3 credits.

Professional training in the writing of fiction, poetry, or creative non-fiction. The topic will vary from semester to semester.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023

ENGL 781 – GRADUATE FICTION WORKSHOP
3 credits.

Students write short stories and novel chapters, critique the work of fellow students and read contemporary fiction.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENGL 782 – GRADUATE POETRY WORKSHOP
3 credits.

Students write poems, critique the work of fellow students and read contemporary poetry.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENGL 783 – CREATIVE WRITING PEDAGOGY SEMINAR
3 credits.

Creative writing pedagogy for MFA in creative writing students.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ENGL 785 – MFA THESIS
3-6 credits.

Thesis hours for MFA creative writing students. Students work to complete a book of short stories, poems or a novel.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENGL 790 – PROSEMINAR IN THE TEACHING OF WRITING
1 credit.

Introduction to the teaching of writing; guides first-time and prospective teachers in teaching and evaluating a first-year writing class.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ENGL 795 – ONE-CREDIT SEMINAR
1 credit.

Study of a topic in English language and literature.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENGL 799 – INDEPENDENT READING
1-6 credits.

Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENGL 800 – CRITICAL METHODS IN LITERARY STUDIES
3 credits.

A gateway course that introduces students to theories and methods that are important to literary studies.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ENGL/MEDIEVAL 803 – TOPICS IN MEDIEVAL LITERATURE
3 credits.

Study of a topic in Medieval literature.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023

ENGL 804 – TOPICS IN EARLY MODERN LITERATURE
3 credits.

Study of a topic in Early modern literature.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

ENGL 805 – TOPICS IN EIGHTEENTH-CENTURY LITERATURE
3 credits.

Selected works, with an emphasis on literary and cultural background.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENGL 806 – TOPICS IN ROMANTICISM
3 credits.

Study of a topic in Romanticism.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2019

ENGL 807 – TOPICS IN VICTORIAN LITERATURE AND CULTURE
3 credits.

Study of a topic in Victorian literature.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2022

ENGL 808 – TOPICS IN MODERNISM
3 credits.

Study of a topic in Modernism.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ENGL 810 – TOPICS IN EARLY AMERICAN LITERATURE
3 credits.

Study of a topic in Early American literature.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENGL 811 – TOPICS IN NINETEENTH-CENTURY AMERICAN LITERATURE AND CULTURE
3 credits.

Study of a topic in 19th-Century American literature.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

ENGL 812 – TOPICS IN AMERICAN LITERATURE SINCE 1900
3 credits.

Study of a topic in American literature since 1900.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2019

ENGL 813 – WORLD AND/OR POSTCOLONIAL LITERATURE IN ENGLISH
3 credits.

Literatures in English with origins outside Britain and the United States; theories and/or histories in postcolonial, Anglophone, and/or world literatures in English. Topics will vary.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023

ENGL 814 – TOPICS IN CONTEMPORARY LITERATURE
3 credits.

Study of a topic in contemporary literature.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023

ENGL 816 – TOPICS IN ETHNIC AND MULTICULTURAL LITERATURE
3 credits.

Study of a topic in ethnic and multicultural literature.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ENGL 817 – SEMINAR-AMERICAN LITERATURE
3 credits.

Study of a theme in American literature.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2021

ENGL 820 – TOPICS IN POETRY
3 credits.

Study of a topic in poetry.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2019

ENGL 822 – TOPICS IN LITERARY AND CULTURAL THEORY
3 credits.

Study of a topic in literary theory.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENGL 825 – TOPICS IN LITERATURE AND THE ENVIRONMENT
3 credits.

Study of a topic in literature and the environment.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENGL 829 – TOPICS IN MIGRATION AND DIASPORA
3 credits.

Study of a topic in migration diaspora as they relate to literature.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

ENGL 850 – PROSEMINAR IN THEATRE RESEARCH
2 credits.

Provides a foundation for postgraduate theatre and performance research by examining the methods used in the study of theatre and performance. Consider how criticism, theory, historiography and other methods have been employed in analysis of performance. Discuss professional issues around working in theatre and performance studies as a teacher, scholar, dramaturge or applied theatre practitioner.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize current theatre research methodologies and theories by reading and discussing a range of relevant texts
Audience: Graduate

2. Employ advanced research and archival schools by learning about available books, journals and archives available on campus, online and in other locations
Audience: Graduate

3. Practice advanced critical writing and presentation skills by writing weekly responses to course readings, make a class presentation, and a write a performance review
Audience: Graduate

ENGL 851 – ADVANCED STUDIES IN THEATRE AND PERFORMANCE STUDIES RESEARCH
3 credits.

Specialized subjects relevant to the graduate-level study of the theory, history, criticism and literature of theatre and performance studies.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2021
Learning Outcomes: 1. Advanced understanding of course topic through reading, analysis and discussion of key primary and secondary readings
Audience: Graduate

2. Improved research and writing skills through completion of presentations, short essays and longer research papers
Audience: Graduate

3. Improved analytical ability by performing research transcending traditional disciplinary boundaries
Audience: Graduate

4. Improved presentation and teaching skills through opportunities to present or lead class discussion briefly as part of the course
Audience: Graduate

ENGL 859 – SEMINAR-INTERDISCIPLINARY THEATRE STUDIES
2-3 credits.

Topics related to advanced research in theatre and performance studies. Topics vary by semester.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ENGL 879 – ADVANCED SEMINAR IN LITERARY STUDIES
3 credits.

Study of a topic or theme in literature.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

ENGL 890 – PRE-DISSERTATOR PRELIMINARY EXAM RESEARCH
1-12 credits.

Mentored reading and research for pre-dissertator students.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Develop and/or refine Preliminary Examination lists according to established fields
Audience: Graduate

2. Read, study and assess primary, secondary and critical sources on these lists
Audience: Graduate

3. When appropriate, develop and draft required materials: i.e. exam lists, list rationales and/or final research statements
Audience: Graduate

ENGL 905 – SEMINAR-TOPICS IN APPLIED ENGLISH LINGUISTICS
3 credits.

Study of a topic in applied English linguistics.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ENGL 906 – SEMINAR-THE ENGLISH LANGUAGE
3 credits.

Study of a theme in the English language.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023

ENGL 990 – DISSERTATION RESEARCH IN ENGLISH
1-12 credits.

In connection with the doctoral thesis. Consult graduate advisor.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENGLISH AS A SECOND LANGUAGE (ESL)

ESL 110 – INTENSIVE ENGLISH AS A SECOND LANGUAGE
4-6 credits.

Listening, speaking, reading, and writing skills for nonnative speakers of English; academically oriented. Not open to auditors
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Spring 2020

ESL 113 – ESSENTIALS OF ACADEMIC READING AND WRITING
3 credits.

Improvement of listening, speaking, reading, writing and grammar skills that are essential in an academic setting. Introduction to the expectations for an undergraduate at a U.S. university.
Requisites: Enrolled in the International Student Summer Institute
Repeatable for Credit: No
Last Taught: Summer 2022

ESL 114 – INTERMEDIATE ENGLISH LANGUAGE SKILLS
3 credits.

Semi-intensive course in intermediate English language skills. A multi-skills focus on reading, writing, and communication skills essential in an academic setting. Not open to auditors
Requisites: Placement into ESL 114
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Heighten their awareness of correct usage of English grammar in writing and speaking
Audience: Undergraduate

2. Improve their speaking ability in English both in terms of fluency and comprehensibility
Audience: Undergraduate

3. Improve oral presentation skills.
Audience: Undergraduate

4. Increase their reading speed and comprehension of academic articles
Audience: Undergraduate

5. Develop efficient note-taking skills
Audience: Undergraduate

6. Improve their reading fluency skills through extensive reading
Audience: Undergraduate

7. Enlarge their vocabulary by keeping a vocabulary journal
Audience: Undergraduate

8. Strengthen their ability to write academic papers, essays and summaries using the process approach.
Audience: Undergraduate

ESL 115 – GRAMMAR FOR ACADEMIC USE
3 credits.

A review of English grammar through intensive written and oral practice to promote accurate and appropriate language use for students who have already studied grammar extensively and need to refine the ability to produce acceptable academic English. Not open to auditors
Requisites: ESL 114 or placement into ESL 115
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Improve their accuracy and fluency in producing and understanding spoken and written English.
Audience: Undergraduate

2. Review the grammatical forms of English and the use of these forms in specific communicative contexts, which include: class activities, homework assignments, reading of texts and writing
Audience: Undergraduate

3. Attain and enhance competence in the four modes of literacy: writing, speaking, reading and listening
Audience: Undergraduate

4. Develop their ability as critical readers and writers
Audience: Undergraduate

5. Produce a short research paper using the drafting process
Audience: Undergraduate

ESL 116 – ACADEMIC READING AND VOCABULARY SKILLS
3 credits.

Reading strategies for academic work; reading with increased comprehension and speed, vocabulary expansion, and summary writing. Not open to auditors.
Requisites: ESL 115 or placement into ESL 116
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Become a more competent, efficient, and perceptive academic reader who is able to communicate to others through writing and speaking the contents and main ideas of what is read.
Audience: Undergraduate

2. Develop reading skills and reading speed
Audience: Undergraduate

3. Read university texts and expand their vocabulary
Audience: Undergraduate

4. Read for intensive information retrieval and interpretation required by university studies
Audience: Undergraduate

5. Develop abilities as critical thinkers, readers and writers
Audience: Undergraduate

6. Attain and enhance competence in the four modes of literacy: writing, speaking, reading & listening
Audience: Undergraduate

7. Write three summaries in which they will communicate appropriately, accurately and effectively what has been read
Audience: Undergraduate

ESL 117 – ACADEMIC WRITING I
3 credits.

Basic elements of academic writing, emphasizing improved fluency and accuracy, paragraph structure, summarizing and paraphrasing, short essays, and a final research project. Not open to auditors.
Requisites: ESL 116 or placement into ESL 117
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop skills that enable them to communicate effectively in writing. They will learn to present ideas clearly and logically to achieve a specific purpose and to be appropriate for an intended audience.
Audience: Undergraduate

2. Paraphrase information from outside sources effectively and accurately

Audience: Undergraduate

3. Summarize information from academic sources, distinguishing between main ideas and details
Audience: Undergraduate

4. Use online library databases to locate appropriate academic sources
Audience: Undergraduate

5. Write two academic essays in which they demonstrate their understanding of writing as a series of tasks, including finding, evaluating, analyzing and synthesizing sources and as a process that involves planning, drafting, revising and editing
Audience: Undergraduate

6. Learn the conventions of APA documentation and how to avoid plagiarism
Audience: Undergraduate

ESL 118 – ACADEMIC WRITING II
3 credits.

Academic writing, critical reading and argumentation, documentation, and style and organization of research papers; oral communication skills for effective class participation and presentations. Not open to auditors.
Requisites: ESL 117 or placement into ESL 118
Course Designation: Gen Ed - Communication Part A
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Practice writing through assignments that ask you to plan, draft, revise and edit your essays over time.
Audience: Undergraduate

2. Produce three substantial essays that you can be proud of: clear, organized, sophisticated, well-researched, and polished.
Audience: Undergraduate

3. Develop your abilities as a critical reader and writer.
Audience: Undergraduate

4. Understand the demands of academic research at UW-Madison, which means learning about our libraries and the print and electronic sources there and learning to develop good questions, find relevant sources, evaluate those sources and integrate them thoughtfully, responsibly, and ethically in your own writing.
Audience: Undergraduate

5. Develop your public speaking abilities by giving you opportunities to speak in class, both informally and formally.
Audience: Undergraduate

6. Increase your self-awareness about the English language and the culturally-bound conventions of American academic writing.
Audience: Undergraduate

ESL 200 – ACADEMIC AND PROFESSIONAL SPEAKING SKILLS FOR ENGLISH LANGUAGE LEARNERS
2 credits.

Practice in informal and formal English communication skills essential in academic and professional settings, including formal presentations, discussions, and interviews.
Requisites: ESL 118
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate effective verbal (volume, pace, pronunciation) and nonverbal (gestures, eye contact, posture) communication skills.
Audience: Undergraduate

2. Prepare and deliver organized, engaging presentations.
Audience: Undergraduate

3. Effectively utilize verbal and cultural strategies for participating in both formal and informal discussions.
Audience: Undergraduate

4. Improve pronunciation, intonation and general fluency through continued self-monitoring and practice.
Audience: Undergraduate

5. Develop confidence, as well as skills and techniques useful for participating in interviews.
Audience: Undergraduate

ESL 328 – ACADEMIC SKILLS WORKSHOPS
1-3 credits.

Academic skills for ESL students; workshops on skills required for effective academic communication; topics vary, but include general and discipline-specific academic skills. Intended for graduate students. Not open to auditors
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ESL 343 – ORAL COMMUNICATION SKILLS
3 credits.

Practice in formal and informal communication skills, including listening comprehension, pronunciation, and conversational and presentation skills useful in an academic setting. Not open to auditors
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025

ESL 344 – ACADEMIC PRESENTATIONS AND DISCUSSION
2-3 credits.

Oral communication and presentation skills essential for participation in seminars, conferences, and other academic and professional settings. Not open to auditors
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ESL 345 – AMERICAN ENGLISH PRONUNCIATION
1 credit.

Techniques for improvement of the pronunciation of American English for non-native speakers of English. Not open to auditors
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025

ESL 349 – ACADEMIC WRITING FOR GRADUATE STUDENTS
2-3 credits.

Aspects of research writing, including data presentation, literature review, summarizing, critical summarizing, and discussion. Grammar and editing skills are also emphasized. Not open to auditors
Requisites: Graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ESL 350 – PROFESSIONAL AND ACADEMIC WRITING SKILLS
2-3 credits.

Workshop approached to writing students' fields, including dissertations, articles and research reports. Also covers general writing skills, documentation and genre-specific styles. Not open to auditors
Requisites: Graduate/professional standing
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ESL 352 – ENGLISH FOR LAWYERS
3 credits.

Opportunities to express ideas through oral presentations and formal written work. Focus on specific topics in law. Not open to auditors
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2020

ESL 370 – INTERNATIONAL TA TRAINING
0-2 credits.

Focuses on the communication skills, classroom culture, and teaching strategies essential for effective classroom teaching at an American university. Not open to auditors
Requisites: Graduate/professional standing
Repeatable for Credit: No
Last Taught: Fall 2025

ENTOMOLOGY (ENTOM)

ENTOM/AGROECOL/C&E SOC/ENVIR ST 103 – AGROECOLOGY: AN INTRODUCTION TO THE ECOLOGY OF FOOD AND AGRICULTURE
3 credits.

Agroecology has blossomed across the world in recent decades as not only a science, but also a practice, and a movement. Employ the multiple disciplines and perspectives that Agroecology affords to analyze our agricultural and food systems within a broader context of dynamic social and ecological relationships.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain and analyze basic biophysical processes of agricultural ecosystems and the challenges and benefits of various management systems
Audience: Undergraduate

2. Interrogate social, economic, and political structures underlying agriculture at local, regional, national, and global scales
Audience: Undergraduate

3. Describe how they personally connect to local to global agricultural landscape as humans, ecological actors, food and fuel consumers, and thoughtful citizens
Audience: Undergraduate

ENTOM/ENVIR ST 201 – INSECTS AND HUMAN CULTURE-A SURVEY COURSE IN ENTOMOLOGY
3 credits.

Importance of insects in the environment, emphasizing beneficial insects, disease carriers, and agricultural pests that interfere with the food supply. Environmental problems due to insect control agents.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ENTOM/NUTR SCI 203 — INTRODUCTION TO GLOBAL HEALTH
3 credits.

Introduces students to global health concepts through multidisciplinary speakers dedicated to improving health through their unique training. It targets students with an interest in public health and those who wish to learn how their field impacts their global issues.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define global health and identify major global health trends and metrics
Audience: Undergraduate

2. Recognize the "determinants of health" that contribute to health disparities/inequities
Audience: Undergraduate

3. Examine global health through the lens of agriculture, food, and nutrition
Audience: Undergraduate

4. Describe the role of ecology and the changing environment in global health
Audience: Undergraduate

5. Explain the importance of collaborative and interdisciplinary approaches in global health
Audience: Undergraduate

6. Discuss a variety of global health careers and areas of specialty through guest speakers and connections with their area of interest
Audience: Undergraduate

ENTOM/ENVIR ST 205 — OUR PLANET, OUR HEALTH
3 credits.

An introduction to the multiple determinants of health, global disease burden and disparities, foundational global health principles, and the overlap between ecosystem stability, planetary boundaries, and human health. Explore the core fundamentals of global health scholarship, including but not limited to infectious disease, sanitation, and mental health, and also consider ecological perspectives on these issues through the lens of planetary boundaries. Attention is placed on how human-mediated global change (e.g. climate change, biodiversity loss, land-use patterns, geochemical cycling, agricultural practice) impacts human health and the ecosystem services we depend on. An overview of pertinent issues in sustainability science and planetary health discourse, including the 'Anthropocene' and resilience to understand and critically assess global trends.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use a local to global perspective to assess the historical, current and future trends in human health and well-being
Audience: Undergraduate

2. Describe the use of planetary boundaries to measure Earth system sustainability and the potential impacts of instability in these systems on global health and human well being
Audience: Undergraduate

3. Describe current primary global health challenges, their distribution, and prevention strategies
Audience: Undergraduate

4. Analyze global health disparities through a social justice and human rights lens
Audience: Undergraduate

5. Demonstrate a basic understanding of contemporary issues, problems, and controversies in global health through an interdisciplinary perspective that recognizes the complex relationships between social, economic, political, and environmental systems.
Audience: Undergraduate

6. Analyze ecological perspectives on the connections among human health and well being, animal health, and ecosystem health
Audience: Undergraduate

7. Assess and reflect on the successes and failures of global health interventions and become familiar with current events and current literature that describes these efforts
Audience: Undergraduate

8. Reflect on personal goals, objectives, and role as a global citizen and future professional or researcher
Audience: Undergraduate

ENTOM 289 – HONORS INDEPENDENT STUDY
1-2 credits.

Research work for Honors students under direct guidance of a faculty member in an area of Entomology. Students are responsible for arranging the work and credits with the supervising instructor.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2005

ENTOM 299 – INDEPENDENT STUDY
1-3 credits.

Research work for students under direct guidance of a faculty member in an area of Entomology. Students are responsible for arranging the work and credits with the supervising instructor.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENTOM/ZOOLOGY 302 – INTRODUCTION TO ENTOMOLOGY
4 credits.

Principles including morphology and classification.
Requisites: ZOOLOGY/BIOLOGY 101, ZOOLOGY/BIOLOGY/BOTANY 151, ZOOLOGY 153, or BIOCORE 381
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ENTOM 321 – PHYSIOLOGY OF INSECTS
3 credits.

Anatomy, histology and basic physiology of organ systems in insects.
Requisites: ZOOLOGY/ENTOM 302 or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021

ENTOM 331 – TAXONOMY OF MATURE INSECTS
4 credits.

Principles of taxonomy, identification and taxonomic morphology of adult insects.
Requisites: ZOOLOGY/ENTOM 302 or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ENTOM 344 – FROM FLOWERS TO FOOD: POLLINATOR ECOLOGY AND CONSERVATION
3 credits.

Explores the vital roles that pollinators play in ecosystems and agriculture. Dives into the biology, diversity, and ecology of pollinators, examining plant-pollinator interactions, co-evolution, and pollinator foraging behaviors. Examines pollinator decline and the stressors that affect pollinators, such as climate change, land-use changes, pesticides, and pathogens, as well as conservation strategies. Offers opportunities to directly observe pollinators and apply pollinator ecology.
Requisites: (ZOOLOGY/BIOLOGY 101 and 102), BOTANY/BIOLOGY 130, (ZOOLOGY/BIOLOGY/BOTANY 151 and 152), or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Describe the breadth of animal pollinator taxa and the role of pollinators in both natural and agricultural systems
Audience: Both Grad & Undergrad

2. Explain basic concepts of pollination ecology and apply these concepts to real-world phenomena in ecosystems
Audience: Both Grad & Undergrad

3. Evaluate factors affecting pollinator populations and compare their consequences on pollinator decline
Audience: Both Grad & Undergrad

4. Analyze, interpret and critique scientific literature
Audience: Both Grad & Undergrad

5. Create an educational piece to teach pollinator ecology concepts to peers
Audience: Both Grad & Undergrad

6. Communicate scientific concepts related to pollinator ecology and conservation in written and oral formats
Audience: Both Grad & Undergrad

7. Develop a research proposal related to pollinator ecology
Audience: Graduate

ENTOM/M M & I/PATH-BIO/ZOOLOGY 350 – PARASITOLOGY
3 credits.

The biology of water-borne, food-borne, soil-borne and vector-borne parasites of animals including humans. Parasites are explored in the context of transmission, associated disease, diagnosis and treatment options, and environmental, cultural and socioeconomic drivers of disease epidemiology.
Requisites: ZOOLOGY/BIOLOGY 101 and 102, or ZOOLOGY/BIOLOGY/BOTANY 152 or ZOOLOGY 153, or BIOCORE 381
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Be conversant in terminology used in the field of Parasitology.
Audience: Undergraduate

2. Recall scientific and common names for parasites and hosts, and the name of the resulting disease in humans or animals.
Audience: Undergraduate

3. Attribute parasite behavior and characteristics to specific disease features in the host.
Audience: Undergraduate

4. Identify appropriate means to diagnose infections with parasites.
Audience: Undergraduate

5. Describe and identify factors that determine when, where, and why parasitic diseases exist.
Audience: Undergraduate

6. Integrate terminology, scientific nomenclature, diagnostic features and demographics to solve case studies where the parasitic culprit is unknown.
Audience: Undergraduate

7. Compare and contrast commonalities in parasite life cycles to demonstrate how flexibility in those life cycles has resulted in many different potential means of transmission.
Audience: Undergraduate

8. Deconstruct the impact of parasitic diseases on human and animal health, from disease symptoms and pathology in an individual, to socioeconomics in communities and countries.
Audience: Undergraduate

9. Identify reliable resources (primarily internet-based) available for researching the biology and epidemiology parasitic diseases.
Audience: Undergraduate

ENTOM 351 – PRINCIPLES OF ECONOMIC ENTOMOLOGY
3 credits.

Major economic insects: identification, life histories, bionomics, distribution, control; procedures in fundamental and practical inquiry.
Requisites: ZOOLOGY/BIOLOGY 101, ZOOLOGY/BIOLOGY/BOTANY 151, BIOCORE 381, ZOOLOGY 153, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

ENTOM/ZOOLOGY 371 – MEDICAL ENTOMOLOGY: BIOLOGY OF VECTOR AND VECTOR-BORNE DISEASES
3-4 credits.

Explore the biological and molecular adaptations of parasitic arthropods that allow them to feed on vertebrate host and facilitate the transmission of vector-borne pathogens. Examines how anthropogenic activities, behaviors, and effects on climate affect the biology of vectors, the pathogens they transmit, and the emergence of vector-borne epidemics in the world. Emphasis on the molecular and physiological interaction between pathogens, their vector, and the vertebrate host and the fundamentals on how vectors and vector-borne pathogens cause disease in humans. Evaluate real control programs deployed globally for the control of vector-borne diseases.
Requisites: ZOOLOGY/BIOLOGY 101, ZOOLOGY/BIOLOGY/BOTANY 151, BIOCORE 383, ZOOLOGY 153, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify vector-borne pathogens of public health importance and their respective vectors.
Audience: Both Grad & Undergrad

2. Distinguish how biological and physiological adaptations facilitate the relationship between vectorsand particular pathogens.
Audience: Both Grad & Undergrad

3. Apply information on disease epidemiology, vector ecology, vector distribution, and disease manifestation to solve hypothetical scenarios of vector-borne disease transmission.
Audience: Both Grad & Undergrad

4. Discuss current issues delaying the development of diagnostics, prevention, treatment, and control of vector-borne diseases.
Audience: Both Grad & Undergrad

5. Evaluate vector control programs currently deployed internationally based on knowledge of vector biology.
Audience: Both Grad & Undergrad

6. Design project proposals to study different aspects of vector physiology, biology, ecology, and pathogen-vector interactions.
Audience: Graduate

ENTOM 375 – SPECIAL TOPICS
1-4 credits.

Specialized subject matter of current interest to undergraduate students.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENTOM 399 – COORDINATIVE INTERNSHIP/COOPERATIVE EDUCATION
1-8 credits.

An internship under guidance of a faculty or instructional academic staff member in Entomology and internship site supervisor. Students are responsible for arranging the work and credits with the faculty or instructional academic staff member and the internship site supervisor.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2017

ENTOM 400 – STUDY ABROAD IN ENTOMOLOGY
1-6 credits.

Provides an area equivalency for courses taken on Madison Study Abroad Programs that do not equate to existing UW courses. Current enrollment in a UW-Madison study abroad program
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions

ENTOM 432 – TAXONOMY AND BIONOMICS OF IMMATURE INSECTS
4 credits.

Covers anatomy/morphology, taxonomy, and bionomics of immature insects (ordinal and familial levels). Identification of insects (order and family) using taxonomic keys.
Requisites: ZOOLOGY/ENTOM 302 or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ENTOM 450 – BASIC AND APPLIED INSECT ECOLOGY
3 credits.

Covers population and community ecology, plant-insect interactions, insect biodiversity and biogeography, and applied ecology. Weaves basic ecological theory and principles with their application to entomological problems such as conservation, biological control, agriculture, and insect-vectored diseases of plants and humans. Uses current entomological and ecological scientific literature and draws on examples from a broad range of natural and managed ecosystems. Broadens from pairwise species interactions (e.g., a predator and its prey) to the entire community of organisms and their physical environment. Emphasizes the theoretical principles and historical background underlying the various topics with a link to potential applications in agriculture, conservation, pest management, and/or invasion biology.
Requisites: ZOOLOGY/BIOLOGY 101, ZOOLOGY/BIOLOGY/BOTANY 152, BIOCORE 381, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ENTOM 468 – STUDIES IN FIELD ENTOMOLOGY
3 credits.

Concentration on structural, behavioral adaptations of insects to diverse habitats; dynamic relations between insects and plants, other animals and other insects.
Requisites: ZOOLOGY/ENTOM 302
Repeatable for Credit: No
Last Taught: Summer 2025

ENTOM/BOTANY/ZOOLOGY 473 – PLANT-INSECT INTERACTIONS
3 credits.

Multiple ways in which arthropods exploit plants, plant traits that deter or augment insects, environmental mediation of these interactions, effects on population dynamics, community ecology and co-evolution, and implications to natural resource management, environmental quality, and sustainable development.
Requisites: F&W ECOL/BOTANY/ZOOLOGY 460, FW ECOL 500, ENTOM/BOTANY/PL PATH 505, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

ENTOM 490 – BIODIVERSITY AND GLOBAL CHANGE
3 credits.

Explores the impact of global environmental change on biodiversity and the subsequent consequences for ecosystem function and human well-being. Examines species response to these environmental changes, such as migration, adaptation, and extinction, and the implications for the delivery of ecosystem services and planetary health. Applies ecological principles to identify and evaluate practical solutions to pressing environmental challenges.
Requisites: (BIOLOGY/ZOOLOGY 101, BOTANY/BIOLOGY/ZOOLOGY 151, BOTANY/BIOLOGY 130, ZOOLOGY 153, BIOCORE 381, GEOSCI/ATM OCN/ENVIR ST 102, ILS/ENVIR ST 126, GEOG/ENVIR ST 120, 127, or 139) and (MATH 112, 114, 171, or placement into MATH 221) or grad/prof standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Identify key aspects of climate change and other human-driven environmental changes across the globe in the Anthropocene
Audience: Both Grad & Undergrad

2. Evaluate the impacts of these changes on biological systems across scales of organization, including individual organisms, populations, communities, and ecosystems
Audience: Both Grad & Undergrad

3. Explain the importance of feedbacks, interactions, non-linear responses, and irreversible changes in driving ecosystem responses to global change
Audience: Both Grad & Undergrad

4. Compare and contrast the values and services provided by biological diversity
Audience: Both Grad & Undergrad

5. Evaluate the role of biodiversity in mitigating or exacerbating the impacts of global environmental change, and in supporting human health and wellbeing
Audience: Both Grad & Undergrad

6. Critically interpret data and results from primary literature and apply this interpretation to supporting scientific arguments
Audience: Both Grad & Undergrad

7. Synthesize and critically evaluate scientific claims and hypotheses in global change biology using quantitative data analysis
Audience: Graduate

ENTOM/BOTANY/PL PATH 505 — PLANT-MICROBE INTERACTIONS: MOLECULAR AND ECOLOGICAL ASPECTS
3 credits.

Molecular and ecological aspects of the interactions between plants and microorganisms. Explores many of the themes, from genetic to integrative, of modern biology, and illustrates how study of plant-microbe interactions contributes to understanding of fundamental plant science.
Requisites: MICROBIO 303, GENETICS 466, 468, BIOCHEM 501, 508, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ENTOM/ZOOLOGY 540 — THEORETICAL ECOLOGY
3 credits.

Introduction to theoretical ecology, including hands-on experience in computer modeling.
Requisites: STAT/F&W ECOL 571
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ENTOM 570 — SYSTEMS THINKING IN GLOBAL HEALTH
3 credits.

A systems approach to examination of the multiple determinants of health and well-being. Case studies and group projects explore complex issues including, but not limited to, the root causes of infectious and noncommunicable disease, health inequities in the context of global change, and trade-offs in addressing global and planetary health problems, particularly where information is incomplete, projections about future states are uncertain, or social equity concerns must be taken into account as scientific knowledge is applied. Group projects emphasize systems thinking to critically assess global issues. Teamwork and communication skills are required for case study analysis and project management.
Requisites: ENVIR ST/ENTOM 205
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze place-based case studies to understand the complex relationships and connections between human health and the preservation and restoration of our environment. Analysis will link to global and planetary health precepts.
Audience: Undergraduate

2. Work within groups to identify and describe complex problems from different and multiple disciplinary perspectives.
Audience: Undergraduate

3. Identify and practice methods for designing interventions and making decisions that are informed by systems thinking, understanding of complexity and uncertainty, and planetary health principles.
Audience: Undergraduate

4. Work in groups to develop reports and presentations that apply a systems thinking lens to questions related to human health and well-being from multiple perspectives.
Audience: Undergraduate

5. Communicate about working strategy/directions, and find and share reliable and appropriate information for the audience indicated (specialists, members of the public, children, etc.)
Audience: Undergraduate

6. Reflect on and specify personal goals, values, and ethics as a global (and local) citizen and future professional or researcher, describe how your thinking has evolved over time in your study of global and planetary health.

Audience: Undergraduate

ENTOM/GENETICS/ZOOLOGY 624 – MOLECULAR ECOLOGY
3 credits.

Basic principles of molecular ecology. Lecture topics include population genetics, molecular phylogenetics, rates and patterns of evolution, genome evolution, and molecular ecology.
Requisites: GENETICS 466, 467, BIOCORE 383, or graduate student standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and describe common molecular genetic techniques.
Audience: Both Grad & Undergrad

2. Demonstrate knowledge about the significance of genetic diversity in species biology.
Audience: Both Grad & Undergrad

3. Differentiate how ecological and evolutionary processes shape genetic variation.
Audience: Both Grad & Undergrad

4. Analyze genetic data and communicate the results.
Audience: Both Grad & Undergrad

5. Evaluate whether genetic data are appropriate for answering scientific questions.
Audience: Both Grad & Undergrad

6. Summarize and critique the primary literature in the field of Molecular Ecology.
Audience: Graduate

ENTOM 681 – SENIOR HONORS THESIS
2-4 credits.

Individual study for undergraduate students in an Honors program completing a thesis in the area of Entomology, as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025

ENTOM 682 – SENIOR HONORS THESIS
2-4 credits.

Second semester of individual study for undergraduate students in an Honors program completing a thesis in the area of Entomology, as arranged with a faculty member. ENTOM 681
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2023

ENTOM 691 – SENIOR THESIS
2 credits.

Individual study for undergraduate students completing a thesis in the area of Entomology, as arranged with a faculty member.
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Fall 2024

ENTOM 692 – SENIOR THESIS
1-3 credits.

Individual study for undergraduate students completing a thesis in the area of Entomology, as arranged with a faculty member.
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Investigate a topic in conjunction with other investigators to develop a deep understanding of a research problem
Audience: Undergraduate

2. Identify a research problem and develop a set of testable hypotheses
Audience: Undergraduate

3. Carry out analysis of data related to the testable hypotheses
Audience: Undergraduate

4. Communicate the results of investigations via written and/or oral means to an appropriate audience
Audience: Undergraduate

5. Write an honors thesis that contains an abstract, background, a demonstration of research skills, analysis of the research question, and a summary of the impact of the work
Audience: Undergraduate

ENTOM 699 – SPECIAL PROBLEMS
1-4 credits.

Individual advanced work in an area of Entomology under the direct guidance of a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENTOM 701 – ADVANCED TAXONOMY
3 credits.

Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

ENTOM/F&W ECOL 711 – MULTIVARIATE ANALYSIS OF ECOLOGICAL AND COMMUNITY DATA
2 credits.

Examines common methods of multivariate data analysis in ecology and environmental science. Covers methods for the analysis of complex, multidimensional datasets that are collected in the study of plant, invertebrate, fish, and bird communities. Addresses the concurrent analysis of the environmental factors that may drive community distributions. Provides the basis for predictive modeling of distributions across landscapes. General methods covered include ordination (PCA, DCA, NMDS, CCA), clustering (or classification), and other comparative analyses of data matrices (ANOSIM, Mantel tests). Includes an applied, "hands-on" approach on how to use these tools, and the circumstances under which their uses are either appropriate or inappropriate.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ENTOM 799 – PRACTICUM IN ENTOMOLOGY TEACHING
1-3 credits.

Instructional orientation to teaching at the higher education level in the agricultural life sciences, direct teaching experience under faculty supervision, experience in testing and evaluation of students, and the analysis of teaching performance.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ENTOM 801 – COLLOQUIUM
1 credit.

Provides exposure to current research in Entomology. Weekly speakers represent diverse career backgrounds.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ENTOM/BOTANY/GENETICS/ZOOLOGY 820 – FOUNDATIONS OF EVOLUTION
2 credits.

Explore some of the most important themes and debates that have permeated evolutionary biology over the last 50 years. Read key papers related to each controversial topic, debate the pros and cons of competing viewpoints, and reflect on the relevance of the issue to contemporary evolutionary biology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ENTOM/BOTANY/F&W ECOL/ZOOLOGY 821 – FOUNDATIONS OF ECOLOGY
2 credits.

Foundational ideas in the field of ecology. Discussion topics trace the development of ecology as a discipline, and the roots of modern ecological thought, as well as the research approaches in ecology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and describe key debates in the history of ecology and ongoing controversies in the field.
Audience: Graduate

2. Differentiate ecological processes and how they sustain ecological systems.
Audience: Graduate

3. Moderate and participate in discussions about the significance of important ecological concepts.
Audience: Graduate

4. Summarize, interpret, and synthesize conceptual theories of ecology orally and in writing.
Audience: Graduate

5. Evaluate peer work and provide constructive, professional feedback.
Audience: Graduate

ENTOM 875 – SPECIAL TOPICS
1-4 credits.

Specialized subject matter of current interest to graduate students.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023

ENTOM 901 – SEMINAR IN ORGANISMAL ENTOMOLOGY
1 credit.

Presentations from the original literature on developments in natural products chemistry, biochemistry, physiology, developmental biology and/or ultrastructure of insects.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENTOM/AGROECOL/ATM OCN/BOTANY/ENVIR ST/F&W ECOL/GEOG/ZOOLOGY 953 — INTRODUCTION TO ECOLOGY RESEARCH AT UW-MADISON
1-2 credits.

Introduction to diverse ecological research across the UW-Madison Campus. Discussions on adapting to graduate school and graduate-level ecological research, key topics in professional development, and research presentations by faculty members.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop an appreciation for the foundations and legacy of ecology research and conservation science at UW-Madison
Audience: Graduate

2. Recognize the diversity and strength of current research in ecology at UW-Madison
Audience: Graduate

3. Differentiate expectations between undergraduate education and those of independent research for graduate degrees in ecology
Audience: Graduate

4. Develop appropriate expectations for advisors and advisees
Audience: Graduate

5. Reason through hypothetical ethical challenges and identify potential solutions based on professional codes of ethics
Audience: Graduate

6. Develop an understanding of the suite of skills associated with success in graduate school and in science
Audience: Graduate

ENTOM 990 — GRADUATE RESEARCH AND THESIS
1-12 credits.

Independent laboratory research in preparation of a graduate thesis under supervision of a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENVIRONMENTAL STUDIES - GAYLORD NELSON INSTITUTE (ENVIR ST)

ENVIR ST/F&W ECOL 100 — FORESTS OF THE WORLD
3 credits.

Ecology and conservation of a wide range of forests, from tropical rain and dry forests, boreal forests, to temperate forests, outside of the USA. The main threats to forests, and different strategies to solve conservation and sustainable management issues in international forestry. Trade-offs in forest conservation and management, resulting from different values that people place on forests, issues in equity and equality in access to forest resources. The role of forests in climate change and extinction of species.
Requisites: None
Course Designation: Breadth - Either Biological Science or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify relevant stakeholders in forest landscapes across the world
Audience: Undergraduate

2. Give examples of conservation threats to forests in countries other than the USA and relevant solutions
Audience: Undergraduate

3. Communicate about evidence on forest conservation and threats rigorously, correctly, and under different formats
Audience: Undergraduate

4. Demonstrate, on specific examples, how trade-offs in forest conservation originate and work
Audience: Undergraduate

5. Explain the role of forests in solutions to climate change and species extinctions
Audience: Undergraduate

ENVIR ST/SOIL SCI 101 — FORUM ON THE ENVIRONMENT
1-2 credits.

Lectures and discussions about environmental issues. Historical and contemporary environmental impacts of humans on the biosphere. Global futures: population, technology, societal values, resources and prospects for sustainable management.
Requisites: None
Course Designation: Breadth - Either Social Science or Natural Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the breadth of the environmental sciences field
Audience: Undergraduate

2. Explain how research contributes to understanding of contemporary environmental issues
Audience: Undergraduate

3. Provide examples of the relationships between science, issues, and solutions in environmental topics
Audience: Undergraduate

4. Apply critical reading skills to understand issues and evaluate reliability of information sources
Audience: Undergraduate

5. Communicate and collaborate with a team of peers
Audience: Undergraduate

6. Explain how to pursue interests in environmental issues within and outside of the classroom
Audience:

ENVIR ST/ATM OCN/GEOSCI 102 — CLIMATE AND CLIMATE CHANGE
3 credits.

Describes the basic climate principles governing the climate system. It describes the climate and climate variability at present, climate evolution in the past, and the projected climate change into the future. The scientific principles underlying the natural and anthropogenic greenhouse effect and climate model forecasts are elucidated.
Requisites: None
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ENVIR ST/AGROECOL/C&E SOC/ENTOM 103 — AGROECOLOGY: AN INTRODUCTION TO THE ECOLOGY OF FOOD AND AGRICULTURE
3 credits.

Agroecology has blossomed across the world in recent decades as not only a science, but also a practice, and a movement. Employ the multiple disciplines and perspectives that Agroecology affords to analyze our agricultural and food systems within a broader context of dynamic social and ecological relationships.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain and analyze basic biophysical processes of agricultural ecosystems and the challenges and benefits of various management systems
Audience: Undergraduate

2. Interrogate social, economic, and political structures underlying agriculture at local, regional, national, and global scales
Audience: Undergraduate

3. Describe how they personally connect to local to global agricultural landscape as humans, ecological actors, food and fuel consumers, and thoughtful citizens
Audience: Undergraduate

ENVIR ST/GEOSCI 106 — ENVIRONMENTAL GEOLOGY
3 credits.

Application of geology to problems resulting from the ever more intense use of the earth and its resources.
Requisites: Not open to students with credit for GEOSCI 100
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ENVIR ST 112 – ENVIRONMENTAL STUDIES: SOCIAL SCIENCE PERSPECTIVES
3 credits.

Explores different social science approaches to interpreting the relationship between environment and society at various scales, from the local to the global. Traces the social origins of environmental concerns, their social impacts, and the different responses they engender.
Requisites: Not open to students with credit for GEOG/ENVIR ST 337
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify different social science approaches that can be used to understand environment-society relations
Audience: Undergraduate

2. Analyze and explain how social, economic, and political conditions affect the environment and environmental issues
Audience: Undergraduate

3. Explain the social, economic and/or environmental dimensions of the sustainability challenges of population growth, natural resource consumption, and market economies
Audience: Undergraduate

4. Analyze objects, ideas, and current events using an environment and society perspective
Audience: Undergraduate

5. Describe the social, economic, and environmental dimensions of issues like climate change and environmental justice and identify potential tradeoffs and interrelationships among these dimensions at a level appropriate to the course
Audience: Undergraduate

6. Demonstrate writing that shows mastery of evidence-based critical thinking
Audience: Undergraduate

ENVIR ST 113 – ENVIRONMENTAL STUDIES: ENVIRONMENTAL HUMANITIES
3 credits.

What do we really mean when we use the word, environment, in interdisciplinary Environmental Studies, and how important is it to have our environment be meaningful? Considers five popular understandings, while also offering a global perspective on environmental humanities. Introduction to key American texts (Carson, Kimmerer, Leopold, etc.) and key concepts (like sustainability and the Anthropocene), along with core skills from fields like philosophy, ethics, literature, fine arts, history, politics and anthropology. Cases in environmental experience and expression range from Wisconsin to Asia, and across biotic and abiotic environments. Through discussions and assignments, answer fundamental questions about science, nature, environmental problems and crisis, and how to relate to others in our world as human beings.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Master core concepts in Environmental Studies
Audience: Undergraduate

2. Understand human-environmental systems
Audience: Undergraduate

3. Demonstrate competence in humanistic study and disciplines
Audience: Undergraduate

4. Achieve excellent writing in Environmental Studies
Audience: Undergraduate

5. Develop oral/aural and collaborative academic skills
Audience: Undergraduate

ENVIR ST/GEOG 120 – INTRODUCTION TO THE EARTH SYSTEM
3 credits.

Introduction to how the Earth system works and what makes Earth livable. Gain appreciation for how the atmosphere, oceans, life, and earth's surface interact to shape our local, regional and global landscapes.
Requisites: Not open to students with credit for ENVIR ST/GEOG 127
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ENVIR ST/HIST SCI/HISTORY 125 — GREEN SCREEN: ENVIRONMENTAL PERSPECTIVES THROUGH FILM
3 credits.

From Teddy Roosevelt's 1909 African safari to the Hollywood blockbuster King Kong, from the world of Walt Disney to The March of the Penguins, cinema has been a powerful force in shaping public and scientific understanding of nature throughout the twentieth and twenty-first century. How can film shed light on changing environmental ideas and beliefs in American thought, politics, and culture? And how can we come to see and appreciate contested issues of race, class, and gender in nature on screen? Explore such questions and come to understand the role of film in helping to define the contours of past, present, and future environmental visions in the United States, and their impact on the real world struggles of people and wildlife throughout the world.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ENVIR ST/ILS 126 — PRINCIPLES OF ENVIRONMENTAL SCIENCE
4 credits.

Relates principles of environmental science to our daily activities, with an eye to sustainability, conservation, and systems thinking. Introduces science as a process of inquiry and discovery rather than just a pre-established set of facts. Topics relate to energy, water, and land use, and include food, electric power, materials, buildings, transportation, and waste.
Requisites: None
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply foundational principles of Environmental Science to practices such as sustainability, conservation, and systems thinking
Audience: Undergraduate

2. Practice science as a process of inquiry and discovery, using the UW-Madison campus as a living laboratory
Audience: Undergraduate

3. Connect campus systems to wider environmental issues relating to energy, water, land use, and waste
Audience: Undergraduate

4. Analyze sustainability issues and practices using a systems-based approach
Audience: Undergraduate

5. Explain the social, economic, and environmental dimensions of the sustainability challenges of operating a large public research institution
Audience: Undergraduate

ENVIR ST/GEOG 127 — PHYSICAL SYSTEMS OF THE ENVIRONMENT
4 credits.

An introduction to natural environmental systems, emphasizing the interconnections between the systems of the solid earth (minerals, rocks, soils), the hydrosphere (water in all its forms), the biosphere, and the atmosphere. Emphasizes connections between basic concepts and specific environmental issues through hands-on case studies, lab projects, and field trips to collect samples and observations for lab projects.
Requisites: Not open to students with credit for ENVIR ST/GEOG 120
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe at a basic level the most important processes of the Earth system, including formation and weathering of rocks and minerals, soil development and erosion, atmospheric circulation, and the global cycles of water and carbon.
Audience: Undergraduate

2. Apply concepts from this course to understand environmental issues such as global climate change and the sustainability of agriculture, and natural hazards such as earthquakes and floods, and make informed contributions to public debate and decision-making on how to address these issues and hazards.
Audience: Undergraduate

3. Identify important research methods, through case studies and labs, that are the basis of modern Earth system science.
Audience: Undergraduate

ENVIR ST/GEOG 139 – GLOBAL ENVIRONMENTAL ISSUES
3 credits.

Explores the global and local nature of environmental problems, including issues of climate change, food, energy, globalization, deforestation, biodiversity loss, resource access, environmental justice, and population. Considers how we should analyze and act on environmental problems as we confront the apparently daunting scale of such issues. What appear to be single global environmental issues are actually composed of many smaller, context-specific, and place-dependent problems or conflicts. Through an interdisciplinary and geographic perspective, these issues can be understood and addressed at the scale of our lived lives.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the scientific basis of climate change, population growth, desertification, deforestation, water quality and quantity impairments, and the environmental challenges of agriculture and energy production.
Audience: Undergraduate

2. Critically assess the causal factors and drivers associated with global environmental issues.
Audience: Undergraduate

3. Explain the political context in which environmental issues are framed as global problems.
Audience: Undergraduate

4. Identify potential solutions to global environmental issues, and obstacles to their implementation.
Audience: Undergraduate

5. Describe your own relationship to global environmental issues and how global environmental issues manifest locally.
Audience: Undergraduate

ENVIR ST/ENGL 153 – LITERATURE AND THE ENVIRONMENT
3 credits.

An introduction to literature in English about the natural world and humankind's relationship with it; specific topics will vary.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENVIR ST/ATM OCN 171 – GLOBAL CHANGE: ATMOSPHERIC ISSUES AND PROBLEMS
2-3 credits.

Atmospheric problems of global significance. Greenhouse warming, ozone layer, acid rain, climate change. Study based on elementary principles of atmospheric science. Systems approach applied to changing atmospheric composition. Interactions among geochemical cycles, anthropogenic inputs and other parts of the environment.
Requisites: None
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ENVIR ST 199 – DIRECTED STUDY
1-3 credits.

Independent work in environmental studies overseen by a qualified instructor.
Requisites: Consent of instructor
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Conduct and report on independent environmental studies research under the guidance of a qualified instructor
Audience: Undergraduate

2. Appropriately utilize online and library resources
Audience: Undergraduate

ENVIR ST/ENTOM 201 – INSECTS AND HUMAN CULTURE-A SURVEY COURSE IN ENTOMOLOGY
3 credits.

Importance of insects in the environment, emphasizing beneficial insects, disease carriers, and agricultural pests that interfere with the food supply. Environmental problems due to insect control agents.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ENVIR ST 202 – CAREERS IN THE ENVIRONMENT
2 credits.

Explores the varied career opportunities for environmental professionals. Features discussions with environmental professionals, supplemented with in-class training on job hunting and professional preparation.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Evaluate your own unique skills and strengths as they relate to professional development
Audience: Undergraduate

2. Compare and distinguish diverse career opportunities related to the environment and sustainability
Audience: Undergraduate

3. Identify the core concepts, courses, and areas of training that are required in differing environmental sectors and jobs
Audience: Undergraduate

4. Communicate and present your training and abilities in a professional manner
Audience: Undergraduate

ENVIR ST 203 – SPECIAL TOPICS IN ENVIRONMENTAL STUDIES
1-3 credits.

Specific topics will vary, within the scope of environmental studies.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Explain concepts fundamental to environmental studies
Audience: Undergraduate

2. Recognize interdisciplinary perspectives in environmental studies
Audience: Undergraduate

3. Demonstrate reading, writing, and communication skills
Audience: Undergraduate

ENVIR ST/ENTOM 205 – OUR PLANET, OUR HEALTH
3 credits.

An introduction to the multiple determinants of health, global disease burden and disparities, foundational global health principles, and the overlap between ecosystem stability, planetary boundaries, and human health. Explore the core fundamentals of global health scholarship, including but not limited to infectious disease, sanitation, and mental health, and also consider ecological perspectives on these issues through the lens of planetary boundaries. Attention is placed on how human-mediated global change (e.g. climate change, biodiversity loss, land-use patterns, geochemical cycling, agricultural practice) impacts human health and the ecosystem services we depend on. An overview of pertinent issues in sustainability science and planetary health discourse, including the 'Anthropocene' and resilience to understand and critically assess global trends.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use a local to global perspective to assess the historical, current and future trends in human health and well-being
Audience: Undergraduate

2. Describe the use of planetary boundaries to measure Earth system sustainability and the potential impacts of instability in these systems on global health and human well being
Audience: Undergraduate

3. Describe current primary global health challenges, their distribution, and prevention strategies
Audience: Undergraduate

4. Analyze global health disparities through a social justice and human rights lens
Audience: Undergraduate

5. Demonstrate a basic understanding of contemporary issues, problems, and controversies in global health through an interdisciplinary perspective that recognizes the complex relationships between social, economic, political, and environmental systems.
Audience: Undergraduate

6. Analyze ecological perspectives on the connections among human health and well being, animal health, and ecosystem health
Audience: Undergraduate

7. Assess and reflect on the successes and failures of global health interventions and become familiar with current events and current literature that describes these efforts
Audience: Undergraduate

8. Reflect on personal goals, objectives, and role as a global citizen and future professional or researcher
Audience: Undergraduate

ENVIR ST/GNS 210 – CULTURES OF SUSTAINABILITY: CENTRAL, EASTERN, AND NORTHERN EUROPE
3 credits.

Exploration of the ideals and realities of sustainability in Central, Northern and East European contexts. Cultural, historical, environmental and other perspectives on sustainability on a local and global scale.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the social, economic, and/or environmental dimensions of the sustainability challenge(s) of culture in Central, Eastern and North (CEN) European by demonstrating a humanistic understanding of sustainability.
Audience: Undergraduate

2. Apply sustainability principles and/or frameworks to addressing the challenge of working respectfully with stakeholders from different cultural, geographic, and political backgrounds to sustain culture in Central, Eastern and North (CEN) European contexts
Audience: Undergraduate

3. Analyze the causes of and solutions for the sustainability challenge of culture in Central, Eastern and North (CEN) European contexts.
Audience: Undergraduate

4. Analyze sustainability issues and/or practices using a systems-based approach.
Audience: Undergraduate

5. Describe the social, economic, and environmental dimensions of culture in Central, Eastern and North (CEN) European contexts using a humanistic approach and identify potential tradeoffs and interrelationships among these dimensions at a level appropriate to the course.
Audience: Undergraduate

6. Use sustainability principles for developing personal goals and professional values.
Audience: Undergraduate

ENVIR ST/HIST SCI 213 – GLOBAL ENVIRONMENTAL HEALTH: AN INTERDISCIPLINARY INTRODUCTION
3 credits.

Provides an introduction to the intersections of health and environment on a global scale. Exposes students to a range of problems in global environmental health, including climate change, disease ecology, and the globalization of disease.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize the utility of humanistic methods for the study of global environmental health
Audience: Undergraduate

2. Develop critical thinking skills through techniques of close reading and written analysis
Audience: Undergraduate

3. Understand essential developments in the evolving relationship between the environment and public health on a global scale.
Audience: Undergraduate

4. Explain the social, economic, and/or environmental dimensions of the sustainability challenge(s) of global health issues in developing and industrialized countries
Audience: Undergraduate

5. Describe the social, economic, and environmental dimensions of climate change, agriculture, and the built environment and identify potential tradeoffs and interrelationships among these dimensions at a level appropriate to the course.
Audience: Undergraduate

ENVIR ST 215 – SUSTAINABILITY
3 credits.

An introduction to the dynamic and emerging transdisciplinary field of sustainability. A broad survey of the global sustainability science challenges and their potential solutions using an integrated social-environmental systems approach. Applies a sustainability and systems thinking lens to various topics, such as complexity, resilience, ecological literacy, global climate change, economics, food systems, energy, sustainable development, and social equity. Facilitates the exploration of complex interrelationships among contemporary environmental, social, and economic problems and the solutions to support more sustainable systems. Focuses on the skills, knowledge, and attitudes to implement sustainable practices and to enact sustainable development through sustainability science and education.
Requisites: None
Course Designation: Breadth - Either Social Science or Natural Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define sustainability as it relates to science and education.
Audience: Undergraduate

2. Learn about the economic, social, and environmental aspects of sustainability and some frameworks for defining and measuring progress toward more sustainable systems.
Audience: Undergraduate

3. Be knowledgeable about the major sustainability challenges and opportunities in local and global systems.
Audience: Undergraduate

4. Gain an understanding of systems thinking and how we can use systems thinking to help solve sustainability problems.
Audience: Undergraduate

5. Review sustainable development goals and strategies to support best practices in sustainability initiatives.
Audience: Undergraduate

6. Identify and apply sustainability principles to assess natural, social, and physical systems.
Audience: Undergraduate

ENVIR ST/GEOG/SOIL SCI 230 – SOIL: ECOSYSTEM AND RESOURCE
3 credits.

Soils are fundamental to ecosystem science. A systems approach is used to investigate how soils look and function. Topics investigated include soil structure, biology, water, fertility, and taxonomy as well as the human impact on the soil environment.
Requisites: Not open to students with credit for SOIL SCI 301
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the significance of soil and its properties

Audience: Undergraduate

2. Identify and describe key components of soil solids and pores
Audience: Undergraduate

3. Explain and predict the interaction of water with soil
Audience: Undergraduate

4. Interpret basic nomenclature used in soil science
Audience: Undergraduate

5. Analyze that causes and solutions for sustainability of soil resources
Audience: Undergraduate

6. Quantify the interaction of clay surfaces with a soil solution
Audience: Undergraduate

7. Describe the role of soils in many different ecosystems
Audience: Undergraduate

8. Link soil orders with biomes and describe soil's edaphic character
Audience: Undergraduate

9. Analyze sustainability issues using a systems-based approach
Audience: Undergraduate

ENVIR ST/ART HIST/GEOG/HISTORY/LAND ARC 239 – MAKING THE AMERICAN LANDSCAPE
3-4 credits.

Traces the history and evolution of the American cultural landscape from precolonial times to present. Explores how class, ethnic, and racial inequality have shaped the appearance of the American landscape over time, and how that landscape in turn has affected relationships between people and groups through the present day. Examines extraordinary things (civic structures (like our State Capitol), National Parks, War Memorials) and more ordinary kinds of places (mining towns, cotton plantations, sites of recreation and leisure, and suburban tract housing) to stimulate critical thinking about how these places have served people and groups unequally and disproportionately over time and across space. Considers complex meanings of American spaces and places to different people and groups, stimulating empathy and encouraging participation in a multicultural society.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe and interpret the American landscape as a richly layered historical document mediated by complex relationships between people and groups
Audience: Undergraduate

2. Explain how the American cultural landscape has affected present day circumstances regarding ethnicity and race as well as racial and ethnic inequalities
Audience: Undergraduate

3. Articulate ways in which historical change manifest in buildings, enclosed spaces, and other elements of the American landscape reveal racial, ethnic, class and gender dynamics between and among people and groups over time
Audience: Undergraduate

4. Enlist forms of historical evidence – maps (current and historic), photographs (aerial and otherwise), historical newspapers, census records, deeds and land records – to interpret landscapes and landscape change
Audience: Undergraduate

5. Explain the American landscape as a product of competing interests, which will demonstrate self-awareness and empathy toward the cultural perspectives and worldviews of others
Audience: Undergraduate

ENVIR ST/A A E 244 – THE ENVIRONMENT AND THE GLOBAL ECONOMY
4 credits.

The "economic way of thinking" about global and regional environmental issues. Topics include climate change, biodiversity preservation, ocean fisheries, environmental impacts of international trade, poverty and the environment, and sustainability.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge of economic concepts to think critically about relationships between economic activity and global environmental challenges ranging from climate change to biodiversity loss.

Audience: Undergraduate

2. Use appropriate tools to analyze how governmental policies affect the use and conservation of natural resources.
Audience: Undergraduate

3. Explain the social, economic, and/or environmental dimensions of the sustainability challenges of balancing healthy global economies with environmental quality.
Audience: Undergraduate

4. Analyze the causes of and solutions for the sustainability challenges of maintaining environmental quality and healthy economies.
Audience: Undergraduate

ENVIR ST 251 – ECOLOGY AND THE GLOBAL ENVIRONMENT
3 credits.

Ecology is the study of relationships in the natural world, many of which are increasingly being altered by human activities. These disruptions modify the environment on a global scale, affecting populations and communities of plants, animals, and other organisms, and making Earth increasingly inhospitable for life, including for humans. Explore the natural world and humans' role within it, as both instigators and managers of global environmental change.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Articulate the fundamental ideas and concepts underlying the field of ecology
Audience: Undergraduate

2. Understand the causes, consequences, and outlook of the major global environmental issues in the context of ecological science
Audience: Undergraduate

3. Appreciate the role of science, politics, economics, and community engagement in the practice of environmental management and conservation
Audience: Undergraduate

4. Explain the environmental dimensions of the sustainability challenge of food production in the face of increasing habitat loss and degradation
Audience: Undergraduate

5. Analyze the causes of and solutions for the sustainability challenge of worldwide biodiversity declines
Audience: Undergraduate

ENVIR ST/ILS 255 – INTRODUCTION TO SUSTAINABILITY SCIENCE
4 credits.

Explore the foundations of sustainability using the UW-Madison campus as a living laboratory. Ground your feet on the UW-Madison campus and ask questions about the energy we use, the food we eat, the air we breathe, the land we occupy, the goods we purchase, and the waste we create. A blend of environmental sciences and studies. Use principles of chemistry, physics, and biology to understand the dynamics of our human and earth systems, but also explore societal issues like public health and social justice, all through the context of sustainability and the UW-Madison campus community.
Requisites: None
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify drivers of climate change and describe effects both locally and globally
Audience: Undergraduate

2. Explain sustainability as depicted in models of the Triple Bottom Line
Audience: Undergraduate

3. Explain the sustainability challenges of operating a large public research institution, making connections from local to national and global contexts
Audience: Undergraduate

4. Analyze top-down versus bottom-up approaches to addressing sustainability issues on our campus and in the wider world
Audience: Undergraduate

5. Describe the intersection of sustainability goals with issues relating to communities of color and First Nations communities, particularly in Dane County and Wisconsin
Audience: Undergraduate

6. Value the human and natural capital necessary to sustain our life support systems on this planet
Audience: Undergraduate

ENVIR ST/BOTANY/ZOOLOGY 260 – INTRODUCTORY ECOLOGY
3 credits.

The relationships of organisms and the environment. Population dynamics and community organization, human-environment relationships, action programs.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ENVIR ST/RELIG ST 270 – THE ENVIRONMENT: RELIGION & ETHICS
3-4 credits.

What are sources on which members of religious communities draw in order to understand and address environmental change? Explores how religious persons and communities confront global environmental questions and challenges today, with case studies drawn from culturally and religiously plural societies such as India and Indonesia. Introducing diverse varieties of Christianity, Islam, and Hindu and Buddhist systems, gives overview of some approaches in the environmental humanities related to philosophy, history, sociology and anthropology, and ethics.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025

ENVIR ST/ENGL 305 – RHETORIC, SCIENCE, AND PUBLIC ENGAGEMENT
3 credits.

Focuses on theoretical and practical aspects of public engagement with scientific research, policy, and management, with an emphasis on writing, rhetoric, and scientific discourse.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023

ENVIR ST/AMER IND 306 – INDIGENOUS PEOPLES AND THE ENVIRONMENT
3 credits.

Indigenous peoples often have very close relationships to ancestral homelands, species and natural resources. However, definitions of "indigenous" can be controversial and highly politicized. Diverse outlooks on identities, worldviews and environmental governance clarify the complex meanings of indigeneity in the US. Highlights American Indian perspectives, conservation practices, and policy environments through consideration of US and international case studies. American Indian experiences shed light on pressing issues of resource sustainability and sovereignty, and demonstrate linkages to global Indigenous environmental issues and strategies.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify diverse Indigenous experiences of and relationships to landscapes
Audience: Undergraduate

2. Recognize that American Indian and Global Indigenous identities are inextricably linked with the environment
Audience: Undergraduate

3. Analyze how American Indian and Global Indigenous histories and epistemologies have been marginalized
Audience: Undergraduate

4. Evaluate relationships between local Wisconsin and global Indigenous environmental issues
Audience: Undergraduate

5. Reflect on personal, family, and cultural identity
Audience: Undergraduate

6. Explore outside of cultural and academic comfort zones
Audience: Undergraduate

7. Practice global citizenry skills, i.e. cultural communications and protocols
Audience: Undergraduate

8. Critique American Indian stereotypes, exploring subtle versus overt racism
Audience: Undergraduate

9. Synthesize diverse approaches to addressing global environmental issues
Audience: Undergraduate

10. Demonstrate skills in articulating these concepts in multi-media formats
Audience: Undergraduate

11. Recognize contributions of indigenous perspectives and actions to environmental resource protection and management
Audience: Undergraduate

12. Articulate different perspectives on how indigenous identities are defined in academia and lived in indigenous communities

ENVIR ST 307 – LITERATURE OF THE ENVIRONMENT: SPEAKING FOR NATURE
3 credits.

19th and 20th century British and American literature.
Requisites: Sophomore, junior, or senior standing only
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025

ENVIR ST 308 – OUTDOORS FOR ALL: INEQUITIES IN ENVIRONMENTALISM
3 credits.

National parks, wilderness, and monuments that are set aside for recreational enjoyment are disproportionately underutilized by African Americans, Hispanics, Asians and Native Americans for reasons that are inextricably linked to past and present racial discrimination. Broadening access and participation in outdoor recreation requires a clear understanding of this history, as well as an appreciation of the continuing efforts by people of color to reassert their right to the outdoors. Gain a clear understanding of the sociocultural circumstances that have created disparities among the U.S. population in citizens' ability to access and enjoy public land and the efforts that aim to address them.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Recognize the racial divide between those who spend time in nature for their personal enjoyment and edification and those who do not
Audience: Undergraduate

2. Describe and explain the historic policies, legislation and customs that created an environment of systematic racial discrimination that prevented people of color in the United States of America from creating substantive relationships with the natural world equal to their white counterparts
Audience: Undergraduate

3. Describe and discuss the experiences of specific people of color over the past 100 years of American history who, despite the circumstances of racial discrimination at the time, excelled at creating adventurous experiences and lifestyles
Audience: Undergraduate

4. Recognize, summarize, and analyze the ways that institutions and organizations have prevented under represented members of our society from enjoying experiences in the outdoors and contributing to the long-term preservation of the natural world, as well as the ways they can be used to encourage and support broader access and participation
Audience: Undergraduate

5. Based on their understanding of past discriminatory practices, be able to analyze, formulate, and defend improved policies and social systems that will encourage diversity, equity and inclusion in the management of public land and the interpretation of our shared natural history
Audience: Undergraduate

ENVIR ST/GEOG 309 – PEOPLE, LAND AND FOOD: COMPARATIVE STUDY OF AGRICULTURE SYSTEMS
3 credits.

Introduction to how and why humans have transformed natural landscapes around the world, including tropical deforestation. Exploration of different agricultural systems, and topics such as food security, land scarcity, bioenergy and the impacts of food production on the environment.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ENVIR ST/ZOOLOGY 315 – LIMNOLOGY-CONSERVATION OF AQUATIC RESOURCES
2 credits.

General limnology. Physical, chemical and biological characteristics and processes of lakes. Environmental problems and rehabilitation of lakes.
Requisites: (ZOOLOGY/BIOLOGY 101 and 102), ZOOLOGY/BIOLOGY/BOTANY 152, or BIOCORE 381 or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ENVIR ST 317 – COMMUNITY ENVIRONMENTAL SCHOLARS PROGRAM SEMINAR
1 credit.

Provides opportunities for students in the Community Environmental Scholars Program to analyze the connections among environmental issues and community engagement. Requires work with community-based environmental and/or sustainability-related organizations. Student cohorts design and lead classes and projects and have opportunities to host guest speakers and environmental leaders. Emphasizes the professional skills needed to work effectively individually, in teams, in internships, and in professional positions.
Requisites: Junior or senior standing only
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply environmental knowledge from outside course work and assigned course reading to develop and lead in-class activities appropriate for classmates from interdisciplinary backgrounds.
Audience: Undergraduate

2. Utilize community engagement literature as a resource for current and future professional practice.
Audience: Undergraduate

3. Document, analyze and reflect on your personal contributions to environmental-related volunteer work, service learning project, and personal actions.
Audience: Undergraduate

4. Demonstrate professional communication skills useful in applying for employment or graduate school.
Audience: Undergraduate

5. Demonstrate interpersonal and professional skills in collaboration and organization while working in classroom teams and in service projects in the community.
Audience: Undergraduate

ENVIR ST/ATM OCN/GEOG 322 – POLAR REGIONS AND THEIR IMPORTANCE IN THE GLOBAL ENVIRONMENT
3 credits.

Reviews the past, present, and future of the Arctic and Antarctic regions. Covers the history, geography, atmospheric and ocean circulations, permafrost, ice sheets, glaciers, and future state of the Arctic and Antarctica as projected by earth system models. Also explores the role of the polar regions in the earth's system and associated global climatic feedbacks.
Requisites: Sophomore standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Describe the history, geography, atmospheric and ocean circulations, permafrost, ice sheets, glaciers, and the future state of the Arctic and Antarctic Regions.
Audience: Both Grad & Undergrad

2. Explain the major theories and concepts of the Arctic and Antarctic regions.
Audience: Both Grad & Undergrad

3. Identify how interactions occur between the major components of each polar region and their influence on global processes and climate.
Audience: Both Grad & Undergrad

4. Recognize the need for multi-disciplinary research to further our understanding of the polar regions and their role in the global system.
Audience: Both Grad & Undergrad

5. Integrate thesis or dissertation research directly or indirectly with polar processes research, thereby gaining better insight into Arctic and Antarctic regions.
Audience: Graduate

ENVIR ST/SOIL SCI 324 – SOILS AND ENVIRONMENTAL QUALITY
3 credits.

Interaction of soils with environmental contaminants and the role of soils in pollution control.
Requisites: CHEM 104, 109, 116, or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain and illustrate the functions of soil resources in food production
Audience: Both Grad & Undergrad

2. Identify, and summarize the connections between the soil resource and the water cycle, with special attention to its roles in water quality control, groundwater recharge, and flood buffering
Audience: Both Grad & Undergrad

3. Identify and summarize the role of soils in carbon sequestration and waste management
Audience: Both Grad & Undergrad

4. Integrate and analyze the effect of human activities on soil properties and its functions in the agricultural system, water cycling, carbon sequestration, and waste management
Audience: Both Grad & Undergrad

5. Identify, monitor and revise the policies, programs, projects, and other activities intended to protect and bolster the functions of the soil resource

Audience: Both Grad & Undergrad

6. Develop critical reading skills to understand environmental issues and design/plan effective management practices
Audience: Graduate

ENVIR ST 326 – SUSTAINABILITY TOOLS: SYSTEMS THINKING & LIFE CYCLE ASSESSMENT
3 credits.

Explores fundamentals of systems thinking and how to apply a systems-based approach to understanding and addressing sustainability issues ranging from climate change to environmental racism. Systems content is complemented with foundational skills in life cycle assessment (LCA), an inherently systems-based application of sustainability science that considers the full measure of resources used and waste created throughout the cradle-to-grave supply chain of a product or process. Life cycle and systems-based approaches are used to characterize both human and natural systems in local and global contexts. These approaches also will be integrated with sustainability concepts including the triple bottom line, industrial ecology, and the circular economy. Concepts include: life cycle stages, supply chains, stocks, flows, feedback loops, and unintended consequences.
Requisites: Sophomore standing
Course Designation: Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze sustainability issues and/or practices using a systems-based approach.
Audience: Undergraduate

2. Use sustainability principles for developing personal goals and professional values.
Audience: Undergraduate

3. Explain life cycle and systems thinking approaches to addressing sustainability issues while evaluating their utility compared with alternative or traditional approaches to problem solving.
Audience: Undergraduate

4. Apply systems thinking concepts such as stocks, flows, and feedback loops to specific contexts ranging from local campus systems to global systems.
Audience: Undergraduate

5. Characterize the life cycle stages for a product system or process and quantify the relevant inputs and outputs at each stage.
Audience: Undergraduate

6. Determine the goal, scope, and relevant functional unit for a life cycle assessment and evaluate the environmental sustainability of a system by interpreting a life cycle assessment on a product or process.
Audience: Undergraduate

7. Connect the sustainability-related aspects of campus-based systems to local, national, and global contexts.
Audience: Undergraduate

8. Evaluate the role that life cycle assessment and systems thinking can have in addressing sustainability concepts such as (1) the triple bottom line, (2) industrial ecology, and (3) the circular economy.
Audience: Undergraduate

ENVIR ST/HISTORY 328 – ENVIRONMENTAL HISTORY OF EUROPE
3 credits.

Explores a new approach to a part of the world with a very old history, but one that is now as 'modern' as any. The changing, complex relations between Europeans and their environments from antiquity to the twenty-first century offer instructive comparison with American and current global environmental concerns. Approaching Mediterranean and Western civilizations from an environmental viewpoint also offers fresh perspective on these enduring cultures.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

ENVIR ST/ATM OCN/GEOG 332 – GLOBAL WARMING: SCIENCE AND IMPACTS
3 credits.

Offers a fundamental understanding of how and why global warming is happening and what to expect in the future. Investigate and discuss the evidence for change, the science that explains these observations, predicted impacts on humans and ecosystems, and the societal debate over proposed solutions.
Requisites: Sophomore standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

ENVIR ST/GEOG 333 – GREEN URBANISM
3 credits.

Over half of the world's population now lives in urban areas, with an expected increase of 2.5 billion people in the next 30 years. As urbanization (broadly defined as the conversion of previously undeveloped lands into urbanized uses) continues and intensifies, we are faced with a number of environmental issues, for instance, fragmentation and destruction of habitats, and decreased air and water quality. Explore how urbanization impacts ecological processes and resulting environmental outcomes, strategies for "designing with nature," and behavioral, planning, and policy responses to urban environmental problems.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe ecological processes as they relate to urbanization
Audience: Undergraduate

2. Describe the social, economic, and environmental dimensions of sustainable communities and identify potential trade-offs and interrelationships among these dimensions
Audience: Undergraduate

3. Analyze the causes of and solutions for the sustainability challenge of sustainable cities and communities
Audience: Undergraduate

4. Analyze local plans for sustainability strategies
Audience: Undergraduate

5. Identify strategies that cities can employ in preparing for the effects of the changing climate
Audience: Undergraduate

ENVIR ST/ATM OCN/GEOG/GEOSCI 335 – CLIMATIC ENVIRONMENTS OF THE PAST
3 credits.

Climate change at timescales from the last several million years to the last 100 years, with emphasis on more recent timescales. Examines how climate variability arises from interplay between external forcings, feedbacks within the earth system, and (more recently) human activity.
Requisites: Sophomore standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the major climatic events and trends during the Quaternary, spanning timescales from the last 50,000,000 years to the last 100 years.
Audience: Undergraduate

2. Identify the physical processes controlling the behavior of the earth system and its components (atmosphere, oceans, cryosphere, biosphere, etc.).
Audience: Undergraduate

3. Discuss how climatic variability results from a combination of external forcings and internal dynamics within the earth system.
Audience: Undergraduate

4. Recognize how paleoclimatologists collect, date, and analyze a staggering variety of paleoclimatic records, including ocean and lake sediment cores, ice cores, tree rings, corals, and speleothems.
Audience: Undergraduate

5. Analyze and critically evaluate climate experiments that are simulated by earth system models.
Audience: Undergraduate

6. Think and write critically, with particular attention to critically reading the scientific literature and critically employing the climate proxies and models used by paleoclimatologists.
Audience: Undergraduate

ENVIR ST/GEOG 337 – NATURE, POWER AND SOCIETY
3 credits.

Explores the links between nature, power and society in today's world. Considers the complex relationships between humans and the earth's resources, including food, energy, physical materials, water, biota, and landscapes. Examines issues linked to population and scarcity, resource tenure, green consumerism, political economy, environmental ethics, risks and hazards, political ecology, and environmental justice.
Requisites: Sophomore standing. Not open to students with credit for ENVIR ST 112
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe key elements that link nature, power, and society.
Audience: Undergraduate

2. Explain the social, economic, and/or environmental dimensions of the sustainability challenges regarding a range of important policy issues with environmental and sustainability implications.
Audience: Undergraduate

3. Apply sustainability principles and/or frameworks to address the challenges associated with a range of development issues that have environmental implications.
Audience: Undergraduate

4. Analyze the causes of and solutions for sustainability challenges of various development policy decisions.
Audience: Undergraduate

ENVIR ST/GEOG 339 – ENVIRONMENTAL CONSERVATION
4 credits.

Examines major environmental conservation approaches in the U.S. and developing countries and how they are influenced by sociopolitical factors, cultural values and scientific understandings of nature. Historical and contemporary cases are explored with emphasis on biodiversity and climate change issues.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the role of values, ecology, and institutions in shaping environmental threats and conservation strategies.
Audience: Both Grad & Undergrad

2. Analyze the history of conservation thought and action in the United States.
Audience: Both Grad & Undergrad

3. Recognize the major categories of federal land in the U.S., their environmental importance, and controversies, as well as the roots of wildlife management in the U.S. and current factors associated with public support or opposition to hunting.
Audience: Both Grad & Undergrad

4. Examine the uneven distribution of environmental harms both globally and within the U.S. and how this is affected by race, class, and geography.
Audience: Both Grad & Undergrad

5. Explain the urgency of environmental justice.
Audience: Both Grad & Undergrad

6. Evaluate the strengths and limits of rule-based and incentive-based conservation programs.
Audience: Both Grad & Undergrad

7. Recognize the key challenges and opportunities for biodiversity conservation in the tropics.
Audience: Both Grad & Undergrad

8. Produce an actionable analysis of an environmental issue of interest to the graduate student that integrates the social and biophysical dimensions of the environmental issue.
Audience: Graduate

ENVIR ST/AMER IND 341 – INDIGENOUS ENVIRONMENTAL COMMUNICATORS
3 credits.

Native Nations show leadership globally in addressing major environmental issues. Indigenous languages describe deep relationships with the natural world, including information on environmental stewardship - harvesting, caretaking and reciprocity. Indigenous scholars contribute crucial perspectives to conversations about human relationships to the Earth - cultural relationships to wildlife and plants, and the ethical and practical roles of humans in socio-ecological systems. Focuses on indigenous environmental scholarship, including the ongoing legacy of oral traditions, developing research, writing, and public speaking skills.
Requisites: Satisfied Communications A requirement and sophomore standing, or graduate/professional standing
Course Designation: Gen Ed - Communication Part B
Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Engage in protocols for learning with Tribes, including Elder epistemology and active listening
Audience: Undergraduate

2. Identify styles of indigenous environmental writing and communications from throughout the US and the world
Audience: Undergraduate

3. Summarize major theories and research findings in the field of environmental writing
Audience: Undergraduate

4. Demonstrate skills in articulating Indigenous environmental concepts in multimedia formats
Audience: Undergraduate

5. Engage in critical reading and the use of evidence
Audience: Undergraduate

6. Apply appropriate style and disciplinary conventions in writing and speaking
Audience: Undergraduate

7. Use core library resources specific to indigenous studies, environmental studies, and environmental communications
Audience: Undergraduate

8. Hone writing, public speaking, and library research skills
Audience: Undergraduate

9. Analyze how Native American and Global Indigenous histories and epistemologies have been marginalized
Audience: Undergraduate

10. Critique Native American stereotypes, exploring subtle versus overt racism
Audience: Undergraduate

11. Articulate different perspectives on how indigenous identities are defined in academia and lived in indigenous communities
Audience: Undergraduate

12. Engage in effective and respectful thinking and expression
Audience: Undergraduate

ENVIR ST/A A E/ECON 343 – ENVIRONMENTAL ECONOMICS
3-4 credits.

Microeconomic principles underlying the use of natural resources such as air, water, forests, fisheries, minerals and energy. These principles are applied in the examination of pollution control, preservation vs. development, deforestation, and other environmental issues.
Requisites: A A E 101 (215 prior to Fall 2024), ECON 101, or 111
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Understand why environmental problems occur in a market-based economy.
Audience: Undergraduate

2. Identify market-based environmental policies to address market failures.
Audience: Undergraduate

3. Explain the social, economic, and/or environmental dimensions of the sustainability challenge(s) of pollution control.
Audience: Undergraduate

4. Apply sustainability principles and/or frameworks to addressing the challenge of optimizing the use of scarce resources over time.
Audience: Undergraduate

ENVIR ST/AMER IND/GEOG 345 – CARING FOR NATURE IN NATIVE NORTH AMERICA
3 credits.

Surveys the concepts, practices, and issues associated with caring for nature in American Indian communities.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Interpret the diverse arrangements for tribal sovereignty, indigenous landtenure, and claims to natural resources and the environment.
Audience: Undergraduate

2. Illustrate natural resource and environmental issues important to bothAmerican Indians and Wisconsin Indians.
Audience: Undergraduate

3. Identify similarities and differences between indigenous knowledge systemsand Western Science.
Audience: Undergraduate

4. Discuss the marked cultural and natural diversity across native NorthAmerica.
Audience: Undergraduate

5. Recall the many different conceptions of place, nature, and development innative North America.
Audience: Undergraduate

6. Describe the diversity of American Indian experiences and their variedresponses to assorted histories of exclusion and marginalization.
Audience: Undergraduate

7. Demonstrate an awareness of history's impact on the present.
Audience: Undergraduate

ENVIR ST 349 – CLIMATE CHANGE GOVERNANCE
3 credits.

Climate change is being felt, and addressed, at every level of society, from the individual to the global scale. Examine efforts to mitigate climate change. Learn about initiatives that are being implemented through international treaties; national, state, and municipal government policies; corporate programs; and individual behavior. Examine the advantages and disadvantages of each approach, their successes, and the obstacles they have faced. Evaluate various forms of climate activism as a means of pushing for meaningful action on climate change.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ENVIR ST/ATM OCN 355 – INTRODUCTION TO AIR QUALITY
3 credits.

Links chemistry and meteorology to engineering, law, policy, and public health. Presents key ideas in air quality, with focus on reactive pollutants in the outdoor environment, especially gas and particle phase chemicals that react with human tissue to cause sickness and death. Discusses environmental impacts of these pollutants and regulatory approaches for their control in the U.S. and around the world. Indoor air quality will be included. Non-reactive pollutants, especially carbon dioxide, will be compared and contrasted with reactive air pollutants.
Requisites: Sophomore standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Build basic understanding of atmospheric pollutants affecting health, visibility, ecosystems, climate, and the ozone hold.
Audience: Undergraduate

2. Develop skills in analyzing air pollution data and related information, with a focus on evaluating and presenting original research on an air pollution episode of choice.
Audience: Undergraduate

3. Consider a single issue – air quality – from multiple disciplinary perspectives, including atmospheric science, engineering, policy, economics, and chemistry.
Audience: Undergraduate

ENVIR ST/F&W ECOL/ZOOLOGY 360 – EXTINCTION OF SPECIES
3 credits.

A comprehensive treatment of the ecology, causes, and consequences of species extinction. Ecology and problems of individual species, habitat alteration and degradation, socio-economic pressures and conservation techniques and strategies.
Requisites: Sophomore standing and ZOOLOGY/BIOLOGY/ BOTANY 151, (ZOOLOGY/BIOLOGY 101 and 102), BIOLOGY/ BOTANY 130, or (BIOCORE 381 and 382)
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the ecological and evolutionary processes shaping the distribution of species diversity globally
Audience: Undergraduate

2. Explain how human activities can threaten species with extinction
Audience: Undergraduate

3. Identify genetic problems and management in small populations
Audience: Undergraduate

4. Discuss social and political dimensions to conservation problems and solutions
Audience: Undergraduate

5. Identify the basic components of the US Endangered Species Act (ESA) and how the ESA has been applied to the conservation of species
Audience: Undergraduate

6. Evaluate and create conservation strategies for at-risk species
Audience: Undergraduate

ENVIR ST/LAND ARC 361 – WETLANDS ECOLOGY
3 credits.

Types, origins, settings, and structure of wetlands. Physical, biological, and cultural values, uses and assessments. Physical and biological characteristics and dynamics. Protection, management and restoration.
Requisites: (ZOOLOGY/BIOLOGY 101 and 102), ZOOLOGY/BIOLOGY/ BOTANY 152, ZOOLOGY 153, (BIOCORE 381 and 382), BIOLOGY/ BOTANY 130, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain what a wetland is and describe the attributes (physical and biological) currently used to classify wetlands.
Audience: Both Grad & Undergrad

2. Explain why which attributes are included in a definition matters with regard to wetland conservation
Audience: Both Grad & Undergrad

3. Describe the global distribution of wetlands and explain how the geomorphological features of the earth, its orbit, as well as the properties of its atmosphere contribute to this distribution.
Audience: Both Grad & Undergrad

4. Identify and describe the physical characteristics and dynamics of water, how these influence biogeochemical cycles and how they all influence the morphology, physiology, and behavior of wetland organisms.
Audience: Both Grad & Undergrad

5. Describe the hydrology and soils, and the characteristic plants and animals of the major Wisconsin wetland types and their geographical locations.
Audience: Both Grad & Undergrad

6. Apply the contemporary theories, concepts, and understanding of wetland ecology to their own research projects, and/or to evaluating and suggesting solutions to a contemporary issue regarding the preservation, restoration, or management of wetlands.
Audience: Graduate

ENVIR ST 365 – SYSTEMS THINKING
3 credits.

Focuses on the concepts and practices used to define systems while providing opportunities to build competencies with systems thinking to describe, assess, understand, and manage complexity from local to global scales. Considers a range of topics, including systems science, complexity, behavior of adaptive systems, networks, emergence, and patterns of organization. Develops skills to analyze how the design and implementation of integrated systems can contribute to solutions for pressing societal challenges. Examines social, physical, and natural systems, the rise of complexity, and achieving resilience in social-ecological systems. Examines the components of systems and analyzes how different ecological and social contexts influence system behavior. Explores and analyzes how decisions ramify to influence processes and outcomes at different levels of complexity.
Requisites: Sophomore standing
Course Designation: Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define a system and explain the structure, behavior, and functionality of systems, including the characteristics and interconnections among environmental, social, and economic systems.
Audience: Undergraduate

2. Define and identify common patterns of systems.
Audience: Undergraduate

3. Use a variety of systems thinking tools to model various natural, physical, and social systems.
Audience: Undergraduate

4. Explain sustainability in terms of design and systems.
Audience: Undergraduate

5. Value the importance of understanding causality in problem solving and strategic thinking.
Audience: Undergraduate

6. Use a holistic approach and systems thinking tools to diagnose complex problems in natural and physical systems.
Audience: Undergraduate

7. Identify biotic and abiotic aspects of systems as stocks and flows of energy and matter within and between organizational levels.
Audience: Undergraduate

8. Explain and analyze how the management of natural and physical systems influences ecological and social processes.
Audience: Undergraduate

9. Solve systemic problems using logic and reasoning by identifying and differentiating the strength and value of information, evidence, and approaches related to the management and sustainability of social, physical, and natural systems.
Audience: Undergraduate

ENVIR ST/BSE 367 – RENEWABLE ENERGY SYSTEMS
3 credits.

Learn about the state-of-the-art in renewable energy applications including biomass for heat, electric power and liquid fuels as well as geo-energy sources such as wind, solar, and hydro power. Practice engineering calculations of power and energy availability of renewable energy sources and learn about requirements for integrating renewable energy sources into production, distribution and end-use systems.
Requisites: MATH 112, 114, 217, placement into MATH 221, or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Calculate energy and power production for renewable energy systems
Audience: Both Grad & Undergrad

2. Determine renewable resource availability and impact on energy infrastructure
Audience: Both Grad & Undergrad

3. Design and assess the technical and economic feasibility of renewable energy systems
Audience: Both Grad & Undergrad

4. Explain the social, economic, and/or environmental dimensions of the sustainability challenge(s) of renewable energy systems.
Audience: Both Grad & Undergrad

5. Produce comprehensive renewable energy project analysis.
Audience: Graduate

ENVIR ST/HISTORY 369 — THINKING THROUGH HISTORY WITH ANIMALS
3-4 credits.

Explores the history of human relationships with animals around the world with focus on agriculture and hunting, political economic development, human identity, and biological science and conservation.
Requisites: Sophomore standing or 3 credits in HISTORY, GEOG or ENVIR ST
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2019
Learning Outcomes: 1. Analyze the roles of animals in shaping human identity
Audience: Undergraduate

2. Describe and apply key concepts in animal and environmental history to analyze changing patterns of social organization
Audience: Undergraduate

3. Integrate humanities and natural science perspectives to understand the interplay of nature and society in shaping history
Audience: Undergraduate

4. Connect changing relationships among humans and animals to broader processes of economic and cultural development
Audience: Undergraduate

ENVIR ST/F&W ECOL/G L E/GEOG/GEOSCI/LAND ARC 371 — INTRODUCTION TO ENVIRONMENTAL REMOTE SENSING
3 credits.

Introduction to the Earth as viewed from above, focusing on use of aerial photography and satellite imagery to study the environment. Includes physical processes of electromagnetic radiation, data types and sensing capabilities, methods for interpretation, analysis and mapping, and applications.
Requisites: (Sophomore standing and MATH 113, 114, or 171), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025

ENVIR ST 375 — FIELD ECOLOGY WORKSHOP
3 credits.

Hands-on field study for intensive study of behavior of plants and animals and their relationship to environments and human impacts. Individual and group observations, measurements, interpretation, reports, typing personal experience with specifics to basic principles.
Requisites: Sophomore standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2023

ENVIR ST/CIV ENGR/GEOG 377 — AN INTRODUCTION TO GEOGRAPHIC INFORMATION SYSTEMS
4 credits.

Design, implementation and use of automated procedures for storage, analysis and display of spatial information. Covers data bases, information manipulation and display techniques, software systems and management issues. Case studies.
Requisites: Sophomore standing, member of Engineering Guest Students, or declared in Capstone Certificate in GIS Fundamentals
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the basic structures, concepts, and theories of GIS.
Audience: Both Grad & Undergrad

2. Conduct daily routines of GIS operations.
Audience: Both Grad & Undergrad

3. Make connections to the broader literature in GIS
Audience: Graduate

ENVIR ST 398 — INDEPENDENT STUDY: SUSTAINABILITY COMMUNITY ENGAGEMENT
1 credit.

Provides an opportunity to learn about community engagement and link sustainability concepts to working with a community organization. Declared in the Sustainability Certificate or Environmental Studies Major.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply knowledge of sustainability through volunteering within a local, national, or international community
Audience: Undergraduate

2. Understand the role of civic engagement in furthering sustainability
Audience: Undergraduate

ENVIR ST 399 – DIRECTED STUDY
1-3 credits.

Independent work in environmental studies overseen by a qualified instructor.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Conduct and report on independent environmental studies research under the guidance of a qualified instructor
Audience: Undergraduate

2. Develop researchable Environmental Studies questions
Audience: Undergraduate

3. Appropriately utilize online and library resources
Audience: Undergraduate

ENVIR ST 400 – SPECIAL TOPICS IN THE ENVIRONMENT: BIOLOGICAL ASPECTS OF ENVIR ST
1-4 credits.

Topics covered within the scope of the environmental biological sciences, such as conservation biology, environmental ecology, issues in ethnobotany and tropical ecology, environmental health, ecotoxicology, biodiversity, endangered resources, biological systems analysis, and field studies.
Requisites: Sophomore standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENVIR ST 401 – SPECIAL TOPICS: ENVIRONMENTAL PERSPECTIVES IN THE PHYSICAL SCIENCES
1-4 credits.

Topics covered within the scope of the physical environmental sciences, such as issues in energy resources, environmental measurement and analysis, modeling, remote sensing and GIS, environmental engineering and transportation, air and water resources, and global climate change.
Requisites: Sophomore standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENVIR ST 402 – SPECIAL TOPICS: SOCIAL PERSPECTIVES IN ENVIRONMENTAL STUDIES
1-4 credits.

Topics covered within the scope of environmental social sciences, such as issues in environmental policy, law, economics, land use, sustainability, food systems, energy policy, conflict resolution, environmental justice, and international development.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENVIR ST 403 – SPECIAL TOPICS IN ENVIRONMENTAL STUDIES
1-3 credits.

Specific topics will vary, within the scope of environmental studies.
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Explain concepts related to the environment.
Audience: Undergraduate

2. Apply interdisciplinary perspectives to the study of environmental issues.
Audience: Undergraduate

3. Demonstrate reading, writing, communication, and research skills.
Audience: Undergraduate

ENVIR ST 404 – SPECIAL TOPICS IN ENVIRONMENTAL HUMANITIES
1-3 credits.

Topics covered within the scope of environmental humanities, such as themes in environmental ethics, literature, art, film, aesthetics and design, history, and indigenous knowledge.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Explain social and historical processes that impact our current environments. Interpret the meanings, values, and aesthetics that are created, shaped, and revealed as humans interact with and modify the environments they inhabit.
Audience: Undergraduate

ENVIR ST/C&E SOC/CURRIC 405 – EDUCATION FOR SUSTAINABLE COMMUNITIES
3 credits.

How can education - for children and adults, in school and out - help to address crucial environmental and social sustainability challenges? What ideas and strategies have guided environmental and sustainability education over the years? What can individual people do to address environmental challenges, and what can only be accomplished by people working together? What does sustainability have to do with justice - and vice versa? Examine the principles behind behavior change and empowerment, community action and whole-scale social reform. Drawing on research and theory from across the social sciences, we will explore the uncertain relationship between education and advocacy, seeking the means by which education can have the greatest impact without compromising the core ideals of a democratic society.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain and apply the complicated and controversial idea of sustainability
Audience: Undergraduate

2. Articulate a clear definition of education that goes beyond schools and classrooms
Audience: Undergraduate

3. Analyze factors that influence individuals' decisions about sustainability-related action
Audience: Undergraduate

4. Describe how social structure and social context shapes sustainability-related action, and describe how some factors relevant to sustainability can only be seen and changed at the community level
Audience: Undergraduate

5. Identify educational strategies that can be used to make change at the individual and community level, and understand the advantages and limitations of different educational perspectives
Audience: Undergraduate

6. Explain how and why some environmental projects come at the expense of poor, minoritized and otherwise vulnerable groups of people
Audience: Undergraduate

ENVIR ST/GEOSCI 411 – ENERGY RESOURCES
3 credits.

A critical examination of the full spectrum of renewable and nonrenewable energy options, from the unifying perspective of the Earth systems that govern their use. Energy conversion and efficiency, consumption patterns and trends, and environmental consequences of energy production and use.
Requisites: Sophomore standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

ENVIR ST 413 – PRESERVING NATURE
3 credits.

Understand the theory and practice the skills of effective, scientific, ethical, and legitimate preservation of nature (biodiversity, the atmosphere, water, etc.). Learn from global lessons in how to intervene against threats to nature, and the roles of ethics, law, and research in preserving nature. Gain mastery of terminology and usage so as to communicate professionally about nature preservation.
Requisites: Sophomore standing or ZOOLOGY/BOTANY/ENVIR ST 260
Course Designation: Breadth - Either Biological Science or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Demonstrate understanding of the environmental provisions in national constitutions and U.S. co-sovereign federal-state-tribal governance as these relate to environmental protection.
Audience: Undergraduate

2. Display mastery of the fundamentals of biodiversity and the atmosphere, and what human activities threaten extinction, climate change, and water quality.
Audience: Undergraduate

3. Summarize the ethical and legal roles – of the public, civil society activist organizations, legislatures, executive branches, the judiciary, and public scholars – in preserving and impairing nature.
Audience: Undergraduate

4. Communicate professionally about effective conservation practice and scientific integrity.
Audience: Undergraduate

5. Explain the social, economic, and/or environmental dimensions of the sustainability challenge(s) of preserving nature for future generations.
Audience: Undergraduate

6. Analyze the causes of and solutions for the sustainability challenge of preserving nature for future generations.
Audience: Undergraduate

ENVIR ST 417 – SUSTAINABILITY SCIENCE, TECHNOLOGY AND POLICY
1 credit.

Analyze the concept of sustainability through current trends, including energy, air and water resources, agriculture, environmental measurement and analysis, modeling, remote sensing, Geographic Information Systems, the built environment, transportation, ecology, conservation and global climate change.
Requisites: Sophomore standing
Course Designation: Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply a simple physical model to evaluate sustainability claims from a wide range of sectors, including agriculture, energy, water, land use and conservation.
Audience: Undergraduate

2. Explain how economic, social and cultural factors that don't explicitly involve matter or energy can also affect environmental sustainability.
Audience: Undergraduate

3. Produce thoughtful written work that integrates guest lectures, readings, other texts and/or current events related to environmental sustainability.
Audience: Undergraduate

4. Analyze sustainability issues and/or practices using a systems-based approach.
Audience: Undergraduate

5. Explain the social, economic, and/or environmental dimensions of the sustainability challenges of climate change, water scarcity, land and water degradation, energy use and biodiversity loss.
Audience: Undergraduate

ENVIR ST/HISTORY/LEGAL ST 430 – LAW AND ENVIRONMENT: HISTORICAL AND CONTEMPORARY PERSPECTIVES
3 credits.

Explores environmental studies through a focus on law and legal history. Although its main concentration is on U.S. environmental law, the course will begin and end with broader historical and global perspectives. Topics include a survey of English, European, and early American legal approaches to land use, natural resources, and pollution through World War II as well as an examination of the development and practice of contemporary U.S. environmental law and consideration of the recent emergence of international environmental law.
Requisites: Sophomore standing
Course Designation: Gen Ed - Communication Part B
Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze and articulate their own arguments about how social, political, and cultural phenomena shape law and legal systems.
Audience: Both Grad & Undergrad

2. Analyze and articulate their own arguments about the social, political, and cultural impacts of law at the societal and individual levels.
Audience: Both Grad & Undergrad

3. Demonstrate knowledge about how legal ideas and ideologies have changed over time and have shaped law and legal systems.
Audience: Both Grad & Undergrad

4. Demonstrate their abilities to find, interpret, and utilize resources relevant to law and society.
Audience: Both Grad & Undergrad

5. Demonstrate their abilities to analyze information, to write clearly and persuasively, and to construct original arguments.
Audience: Both Grad & Undergrad

6. Analyze the causes of and solutions for the sustainability challenge of the conservation of natural resources, especially insofar as their governance involves and impacts local stakeholders.
Audience: Both Grad & Undergrad

7. Analyze the social, economic, legal, political, and environmental dimensions of the sustainability challenge of regulating and governing biodiversity, clean air and water, and other, larger earth systems (such as climate).
Audience: Both Grad & Undergrad

8. Demonstrate an advanced understanding of the historiography or other scholarly debates that have shaped the study of conservation and environmental law.
Audience: Graduate

ENVIR ST/C&E SOC/GEOG 434 – PEOPLE, WILDLIFE AND LANDSCAPES
3 credits.

Explores the relationship between humans and wildlife amid diverse landscapes, both historic and contemporary, tropical and temperate. Investigates how humans shape wild animal populations by modifying physical environments, and by hunting, domesticating and introducing species.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ENVIR ST/GEOG 439 – US ENVIRONMENTAL POLICY AND REGULATION
3-4 credits.

Covers a broad cross-section of American environmental policy by focusing on specific statutes and policy arenas. Surveys the basic elements of American environmental policy and regulation with a particular focus on the specific people, sites and scales at which environmental decision-making happens through primary-source case material. Maintains a dual focus on (a) the legal and regulatory aspects of environmental regulation and (b) the specific geographic and social features of actual cases in which regulations and policy are used. Understanding environmental outcomes in a complex society depends on observing both the structure of regulations and the geographic and social context in which such regulations emerge.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. dentify the spectrum of major U.S. environmental regulations, including the Clean Water Act, the Clean Air Act, the Endangered Species Act, CERCLA, and regulations involving environmental justice, climate change, and market environmentalism.
Audience: Both Grad & Undergrad

2. Discuss the specialized language of environmental policy and regulation.
Audience: Both Grad & Undergrad

3. Identify, through current case material, how these policies manifest in our daily interactions with the environment and government.
Audience: Both Grad & Undergrad

4. Describe the social and environmental background to each policy debate using critical and geographic viewpoints often adopted by social scientists.
Audience: Both Grad & Undergrad

5. Write long-form reports synthesizing regulatory issues with reportage on a major environmental policy issue.
Audience: Graduate

ENVIR ST/PHILOS 441 – ENVIRONMENTAL ETHICS
3-4 credits.

Adequacy of ethical theories in handling such wrongs as harm to the land, to posterity, to endangered species, and to the ecosystem itself. Exploration of the view that not all moral wrongs involve harm to humans. Inquiry into the notion of the quality of life and the ethics of the "lifeboat" situation.
Requisites: Junior standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ENVIR ST/CIV ENGR/G L E/GEOSCI 444 – PRACTICAL APPLICATIONS OF GPS SURVEYING
2 credits.

Global positioning system surveying for field applications. Signals. Coordinate systems. Datums. Cartographic projections. Satellite orbits. Choosing hardware. Strategies for data collection and analysis. Assessing uncertainty. Geocoding satellite images. Integrating data with Geographic Information Systems. Emerging technologies.
Requisites: MATH 211, 217, 221, or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ENVIR ST/SPANISH 445 – CULTURE AND THE ENVIRONMENT IN THE LUSO-HISPANIC WORLD
3 credits.

Investigates how economy and culture work together, consuming and/or restoring their environments in divergent scenarios of the Hispanic World.
Requisites: (CHICLA/SPANISH 222 or SPANISH 223) and SPANISH 224
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. State the interconnectedness of culture, environment, and economy in the Hispanic world.
Audience: Undergraduate

2. Recognize various socio-environmental conflicts in Latin America.
Audience: Undergraduate

3. Examine various new socio-economic visions emerging aimed at improving human relationships with the environment in the Hispanic World.

Audience: Undergraduate

4. Describe how Latin American indigenous knowledges and values could help us rethink our culture and economy.
Audience: Undergraduate

ENVIR ST/ECON/POLI SCI/URB R PL 449 – GOVERNMENT AND NATURAL RESOURCES
3-4 credits.

Problems of public policy and administration for development and use of natural resources.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

ENVIR ST/GEOG/HISTORY 460 – AMERICAN ENVIRONMENTAL HISTORY
4 credits.

Survey of interactions among people and natural environments from before European colonization to present. Equal attention to problems of ecological change, human ideas, and uses of nature and history of conservation and environmental public policy.
Requisites: Sophomore standing or 3 credits in HISTORY, GEOG or ENVIR ST
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ENVIR ST/HISTORY 465 – GLOBAL ENVIRONMENTAL HISTORY
3-4 credits.

Explores the history of human relationships with the environment on a global scale through analysis of long-term changes, from early civilizations, to the beginnings of global trade, the Industrial Revolution, urbanization, and 20th century technological developments. Offers first-hand historiographical research experience and training in writing for public web audiences.
Requisites: Sophomore standing or 3 credits in HISTORY, GEOG or ENVIR ST
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Define “the Anthropocene” and evaluate different approaches for dating and naming this new “human age”
Audience: Both Grad & Undergrad

2. Analyze the intersections of multiple historical socio-natural processes – such as extraction, colonialism, racism, capitalism, agriculture, industrialization, and modernization—to explain the production of uneven development and environmental crises
Audience: Both Grad & Undergrad

3. Document and analyze aspects of modern life that will be “modern fossils” in the distant future
Audience: Both Grad & Undergrad

4. Explain the importance of historical analysis for understanding contemporary environmental problems
Audience: Both Grad & Undergrad

5. Apply historical methods to analyze how a material object of their choice illustrates a particular interpretation of the Anthropocene
Audience: Both Grad & Undergrad

6. Assess significant works in the historiography of global environmental history and interdisciplinary Anthropocene studies
Audience: Graduate

ENVIR ST/POP HLTH 471 – INTRODUCTION TO ENVIRONMENTAL HEALTH
3 credits.

Impact of environmental problems on human health; biological hazards to human health from air and water pollution; radiation; pesticides; noise; problems related to food, occupation and environment of the work place; accidents. Physical and chemical factors involved.
Requisites: Junior standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the principles and practice of environmental health.
Audience: Undergraduate

2. Describe environmental health and its history as a crucial aspect of the history of public health
Audience: Undergraduate

3. Describe the U.S. and world health status and issues as background framework to environmental health.
Audience: Undergraduate

4. Describe a brief introduction to the public health research methodologies including epidemiology and toxicology.
Audience: Undergraduate

5. Describe crucial infectious and non-infectious disease principles as necessary to understand issues in environmental health.
Audience: Undergraduate

ENVIR ST/CLASSICS 488 – GREEKS, ROMANS AND THE NATURAL ENVIRONMENT
3 credits.

Examine ways in which the ancient Greeks and Romans interacted with their Mediterranean environments and the various conceptions of the natural world that they developed in poetry, prose and visual art. Explore a number of general topics that will underpin the course as a whole: the characteristics of the Mediterranean environment, the effect of nature on humankind, and the impact of humankind on nature. Study aspects of Greek and Roman engagements with nature, such as agriculture, hunting, sacrifice, the contested relationship between the natural and the civilized, and representations of human beings using terms drawn from the natural world ("bears" of Artemis, cannibalistic "wolves"). Consider how these aspects of the ancient world relate to modern treatments of such themes. (NB: All Greek and Latin texts will be read in English translation.)
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Demonstrate knowledge of Classical societies and cultures.
Audience: Both Grad & Undergrad

2. Examine, analyze, and interpret ancient texts in translation.
Audience: Both Grad & Undergrad

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Both Grad & Undergrad

4. Carry out and present the results of in-depth research into aspects of the modern and ancient worlds.
Audience: Graduate

5. Develop an extended scholarly argument in written form.
Audience: Graduate

6. Reflect on modern environmental issues in light of ancient experiences and thought.
Audience: Both Grad & Undergrad

7. Explain the social, economic, and/or environmental dimensions of the sustainability challenge of the over-exploitation of natural resources.
Audience: Both Grad & Undergrad

8. Analyze the causes of and solutions for the sustainability challenges of human-caused climate change, pollution and other forms of environmental harm.
Audience: Both Grad & Undergrad

ENVIR ST/POP HLTH 502 – AIR POLLUTION AND HUMAN HEALTH
3 credits.

Toxicologic, controlled and epidemiologic studies on major air pollutants. Overview of study methods, lung physiology and pathology; air pollution sources, types, meteorology, sampling methods, controls and regulations.
Requisites: Junior standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the health science of air pollution's effect on human health.
Audience: Both Grad & Undergrad

2. Describe air pollution and its history as a crucial aspect of the history of environmental health.
Audience: Both Grad & Undergrad

3. Describe the U.S. and world health status and issues from air pollution.
Audience: Both Grad & Undergrad

4. Describe a brief introduction to the public health research methodologies and science including epidemiology and toxicology, risk assessment and the lungs.
Audience: Both Grad & Undergrad

5. Describe the detailed scientific and policy information on indoor and outdoor air pollutants.
Audience: Both Grad & Undergrad

6. Describe the science and policy solutions for air pollution and human health issues.
Audience: Graduate

ENVIR ST 506 – MODELING AND ANALYSIS OF ENVIRONMENTAL SYSTEMS
3 credits.

Systems modeling; applications to environmental problems; systems methods.
Requisites: Senior standing
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019

ENVIR ST/ZOOLOGY 510 – ECOLOGY OF FISHES
3 credits.

Interactions of fishes with their physical, chemical, and biotic environment; physiological ecology, community ecology and fisheries sciences. Lake Mendota perch fishery and Shedd Aquarium field trips.
Requisites: (ZOOLOGY/BIOLOGY 101 and 102), ZOOLOGY/BIOLOGY/BOTANY 152, or BIOCORE 381
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Use facts to guide conceptual thinking and hypothesis tests about ecological systems.
Audience: Undergraduate

2. Draw upon aspects of fish evolution, ecology, and conservation to produce an integrated perspective.
Audience: Undergraduate

3. Summarize the diversity of fishes on Earth, including phylogenetic and geographic patterns.
Audience: Undergraduate

4. Analyze the relationship between form and function of individual fish.
Audience: Undergraduate

5. Place fish in the context of the broader food web and ecological community.
Audience: Undergraduate

6. Describe the management and use of fish by human society.
Audience: Undergraduate

7. Describe the conservation challenges faced by fish now and in the future.
Audience: Undergraduate

8. Write clear, concise scientific reports both individually and in teams.
Audience: Undergraduate

9. Present effective, informative, and persuasive arguments in writing and orally.
Audience: Undergraduate

ENVIR ST/ZOOLOGY 511 – ECOLOGY OF FISHES LAB
2 credits.

Anatomy and taxonomy of Wisconsin fishes and projects in fish ecology.
Requisites: ZOOLOGY/ENVIR ST 510 or concurrent enrollment
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ENVIR ST/F&W ECOL 515 – NATURAL RESOURCES POLICY
3 credits.

Examine natural resources policy and law in the United States relating to forests, wildlife, and other natural resources. Investigates the policy-making process and the role of science, values, property, economics, and justice in the development of federal and state resources policy. Practice professional written and oral communication and ethical engagement in resources policy and administration.
Requisites: Satisfied Communications A requirement or graduate/professional standing
Course Designation: Gen Ed - Communication Part B
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ENVIR ST/BOTANY/F&W ECOL/ZOOLOGY 516 – CONSERVATION BIOLOGY
3 credits.

Investigate the science behind the protection of nature and preservation of biodiversity by focusing on both the biological and socioeconomic factors that underlie the challenges to and the impacts of conservation efforts. Explore the theory, research, and application of biological conservation from an interdisciplinary, international, solutions-focused perspective. Learn about the many threats to Earth's biodiversity but also examine in-depth and apply approaches to overcome them.
Requisites: Satisfied Quantitative Reasoning (QR) A requirement and ZOOLOGY/BIOLOGY/BOTANY 152, BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY 101, BIOCORE 381, or graduate/professional standing
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Distinguish conservation biology from other scientific disciplines and describe its over-arching principles.
Audience: Both Grad & Undergrad

2. Articulate many reasons why the conservation of biological diversity (at many levels) is important.
Audience: Both Grad & Undergrad

3. Quantify biodiversity at the individual, population, and species level by applying various commonly used models and indices.
Audience: Both Grad & Undergrad

4. Explain orally and in writing the principal threats to biodiversity, to both scientific and layperson audiences (habitat loss and fragmentation; industrial agriculture; climate change; overexploitation; invasive species; pollution) and the specific biological effects of these threats.
Audience: Both Grad & Undergrad

5. Outline strategies to implement at the personal, local, and global scales for solving the biodiversity crisis.
Audience: Both Grad & Undergrad

6. Critically analyze, apply, and communicate recommendations for changing personal behaviors to mitigate the biodiversity and climate crises.
Audience: Both Grad & Undergrad

7. Assess the strengths and weaknesses of various conservation strategies or policy approaches.
Audience: Both Grad & Undergrad

8. Synthesize multiple investigations of conservation strategies to assess trade#offs and synergies among them.
Audience: Graduate

9. Make science#based recommendations for the appropriate conservation approach or strategy for a given situation.
Audience: Graduate

10. Manipulate quantitative data using multi-step arguments to evaluate, interpret, and express solutions to problems in biodiversity estimation, population monitoring, and genetics in the context of conservation.
Audience: Both Grad & Undergrad

ENVIR ST/ATM OCN 520 — BIOCLIMATOLOGY
3 credits.

How climate systems and biological organisms operate and interact at the global scale and the implications of this for climate change, ecosystem ecology and human land use.
Requisites: (ATM OCN 101, ENVIR ST/ATM OCN 171, or GEOG 323), (ZOOLOGY/BIOLOGY/BOTANY 152, BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY 102, BIOCORE 381, or 485), and junior standing, or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ENVIR ST/PHILOS 523 — PHILOSOPHICAL PROBLEMS OF THE BIOLOGICAL SCIENCES
3 credits.

Problems raised by genetics, evolutionary theory, and taxonomy: patterns of explanatory force and dispensability of teleology; objectivity of taxonomy.
Requisites: Junior standing or 3 Credits in PHILOS
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2021

ENVIR ST/GEOG/LAND ARC/URB R PL 532 — APPLICATIONS OF GEOGRAPHIC INFORMATION SYSTEMS IN PLANNING
3 credits.

Explores planning-related Geographic Information System (GIS) data, applications, analytical tools, and implementation issues.
Requisites: GEOG/CIV ENGR/ENVIR ST 377 or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Identify how planning agencies use GIS.
Audience: Both Grad & Undergrad

2. Explain the nature, characteristics, and possible ways of analyzing spatial data in a planning context.
Audience: Both Grad & Undergrad

3. Communicate geospatial data and analyses effectively.
Audience: Both Grad & Undergrad

4. Obtain and analyze geospatial data using a range of spatial analysis tools for a number of planning practices.
Audience: Both Grad & Undergrad

5. Conduct site-selection and land-suitability analysis.
Audience: Both Grad & Undergrad

6. Identify ethical issues surrounding access to and use of geospatial data.

Audience: Both Grad & Undergrad

7. Analyze and provide written feedback on undergraduate student presentations.
Audience: Graduate

8. Produce a memo on land-suitability analysis.
Audience: Graduate

ENVIR ST/ENGL 533 — TOPIC IN LITERATURE AND THE ENVIRONMENT
3 credits.

Explores the ways that literary texts represent, imagine, and re-imagine the environment.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENVIR ST/GEOG 534 – ENVIRONMENTAL GOVERNANCE: MARKETS, STATES AND NATURE
3 credits.

Covers real-world questions of how the environment is managed and governed through state policy, economics, and social institutions. Includes strategies within and outside of the formal institutions of government, and extends the discussion to the commodification of nature and the use of science to understand and govern the environment. Also includes case studies of environmental governance in water, carbon, species, and urban sustainability.
Requisites: Sophomore standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Explain the concepts of governance and the tools for its analysis.
Audience: Both Grad & Undergrad

2. Identify the tools, concepts, and controversies associated with market-based environmental governance and its origins in debates over the past century.
Audience: Both Grad & Undergrad

3. Discuss the variety of traditions in understanding the relationship between states, civil society, and the environment.
Audience: Both Grad & Undergrad

4. Describe and articulate connections and common themes in environmental governance as they are expressed in a variety of settings such as economic globalization, urban planning, water resource development, conservation, and climate change.
Audience: Both Grad & Undergrad

5. Discuss the scholarly literature around environmental governance, state theory, and neoliberalism.
Audience: Graduate

ENVIR ST/GEOG 537 – CULTURE AND ENVIRONMENT
4 credits.

Geographic approaches to culture-nature relationships, including human perception of, use of, and adaptation to the physical environment, with emphasis on traditional subsistence systems; selected topics from contemporary and historical sources.
Requisites: GEOG 359, ENVIR ST/GEOG 337, 339, 439, AMER IND/ENVIR ST/GEOG 345, or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop a cross-cultural perspective about environment-society relations.
Audience: Both Grad & Undergrad

2. Explain how certain conceptual frameworks for understanding culture-environmental relations developed in the social sciences and how these have affected conservation and development practice around the world.
Audience: Both Grad & Undergrad

3. Discuss the strengths and limitations of these frameworks for understanding the effect of human activities on the environment or in turn the effect of environmental change on human societies.
Audience: Both Grad & Undergrad

4. Identify the appropriate frameworks for analyzing particular culture-environment contexts and in so doing, be better placed to develop more effective conservation or development initiatives.
Audience: Both Grad & Undergrad

5. Apply an understanding of the strengths and weaknesses of different conceptual frameworks to develop a conceptual framing suitable for graduate research.
Audience: Graduate

ENVIR ST/C&E SOC/SOC 540 — SOCIOLOGY OF INTERNATIONAL DEVELOPMENT, ENVIRONMENT, AND SUSTAINABILITY
3 credits.

Sociological analysis of relationships among economic growth, environmental sustainability and social justice in the developing world. Considers frameworks for understanding poverty, hunger, educational and technological inequality, and the impact of globalization on prospects for socially and ecologically sustainable development.
Requisites: SOC 181, SOC/C&E SOC 140, 210, or 211
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Critically reflect on the complex meanings and basic histories of international development, globalization, and environment
Audience: Undergraduate

2. Critically reflect on the history of sustainability and how it mediates development, globalization, and environmental politics
Audience: Undergraduate

3. Demonstrate a deep understanding the sociology of international development, environment, and globalization
Audience: Undergraduate

4. Use social theoretical concepts for speaking about development, globalization, and environment
Audience: Undergraduate

ENVIR ST/CIV ENGR/LAND ARC 556 — REMOTE SENSING DIGITAL IMAGE PROCESSING
3 credits.

Techniques of enhancement and quantification of remote sensing imagery. Emphasis on processing and analyzing data gathered by airborne and satellite sensors. Techniques to quantitatively analyze data from photography, electro-optical scanners, satellite systems, and radar and passive microwave systems. Applications to: agriculture and forestry, geology and soils, water quality, and urban and regional planning.
Requisites: LAND ARC/ENVIR ST/F&W ECOL/G L E/GEOG/GEOSCI 371, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ENVIR ST/GEOG 557 — DEVELOPMENT AND ENVIRONMENT IN SOUTHEAST ASIA
3 credits.

Examines the political, socio-cultural, economic and ecological aspects of contemporary development and human-environment relations in mainland Southeast Asia, applying a critical and theoretically informed perspective, and focusing largely on rural issues.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Describe key elements that link development and environmental issues in Southeast Asia.
Audience: Both Grad & Undergrad

2. Explain the social, economic, and/or environmental dimensions of the sustainability challenges regarding a range of important policy issues with environmental and sustainability implications.
Audience: Both Grad & Undergrad

3. Apply sustainability principles and/or frameworks to addressing the challenges associated with a range of development issues that have environmental implications.
Audience: Both Grad & Undergrad

4. Analyze the causes of and solutions for sustainability challenges of various development policy decisions.
Audience: Both Grad & Undergrad

5. Apply knowledge of development and environmental issues in Southeast Asia when conducting research.
Audience: Graduate

ENVIR ST/A A E/CIV ENGR/URB R PL 561 — ENERGY MARKETS
3 credits.

Energy resources are an essential element of the world's business, political, technical and environmental landscape. Analytic tools provided by the discipline of economics expands our understanding of this critical issue. Energy supply markets reviewed include both fossil fuels and renewable resources. Energy demand sectors include residential, commercial, industrial and transportation. Electricity represents an intermediate energy market. The interactions among these markets participants indicate how scarce resources are allocated among competing needs in the world economy.
Requisites: A A E 101 (215 prior to Fall 2024), ECON 101, 111, or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ENVIR ST/SOIL SCI 575 — ASSESSMENT OF ENVIRONMENTAL IMPACT
3 credits.

Overview of methods for collecting and analyzing information about environmental impacts on agricultural and natural resources, including monitoring the physical environment and relating impacts to people and society.
Requisites: Junior standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe various methods used for environmental assessment, particularly in the context of land use, resource extraction, and environmental pollution
Audience: Both Grad & Undergrad

2. Measure and evaluate environmental impacts and the effects of human activities on physical and biological resources, including soil, water, air, and biota
Audience: Both Grad & Undergrad

3. Explain the role of environmental impact statement laws and regulations in decision-making processes
Audience: Both Grad & Undergrad

4. Organize, analyze, and visualize environmental data spatially
Audience: Both Grad & Undergrad

5. Use models to understand complex interactions between natural systems and human activities
Audience: Both Grad & Undergrad

6. Analyze how environmental changes affect communities, health, and well-being
Audience: Both Grad & Undergrad

7. Evaluate the role of environmental assessment in policy-making, enforcement, and information dissemination
Audience: Both Grad & Undergrad

8. Analyze environmental data for trends and patterns
Audience: Graduate

9. Integrate data from multiple databases
Audience: Graduate

10. Critically evaluate environmental impact assessment methodologies
Audience: Graduate

ENVIR ST/LAND ARC 581 — PRESCRIBED FIRE: ECOLOGY AND IMPLEMENTATION
3 credits.

Covers the use of live fire in land management and provides a background in fire ecology, fire behavior, fire effects, and the prediction of fire behavior for wetland, prairie and savanna fuels. Instruction includes field training with live fire exercises and the use of fire management equipment. Participate in prescribed burns outside of scheduled class times. Confers certificates of completion that qualify an individual to participate on prescribed fire crews with public and private sector organizations.
Requisites: Junior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand fire ecology, the role that fires play in shaping fire-adapted ecosystems, and the use of prescribed fire for land management.
Audience: Both Grad & Undergrad

2. Qualify for working on any prescribed burn or fire suppression crew located anywhere in the U.S., and become familiar with organizations providing experiences using prescribed fire.
Audience: Both Grad & Undergrad

3. Become familiar with the restoration history, including the role of fire, for the UW Arboretum.
Audience: Both Grad & Undergrad

4. Demonstrate safe and appropriate use of Protective Personal Equipment (PPE) for fire.
Audience: Both Grad & Undergrad

5. Demonstrate proficient knowledge of national standards for participating in prescribed burn or fire suppression crews anywhere in the U.S.
Audience: Both Grad & Undergrad

6. Explain the social, economic, and/or environmental dimensions of the sustainability challenge(s) of fire for land management.
Audience: Both Grad & Undergrad

7. Apply sustainability principles and/or frameworks to addressing the challenge and fundamental concepts related to fire ecology in the Upper Midwest.
Audience: Both Grad & Undergrad

8. Gain enhanced knowledge and skills for fire management leadership.
Audience: Graduate

9. Demonstrate applied knowledge of fire ecology and the effects of fire on plant, fungi or animal communities.
Audience: Graduate

ENVIR ST 600 – ENVIRONMENTAL STUDIES CAPSTONE
3 credits.

Interdisciplinary investigation with an emphasis on real world challenges. Examine environmental issues and apply, often in a team context, a variety of academic perspectives and methodologies, and cultivate academic and professional abilities such as establishing connections within the larger community, developing strategies for analyzing and addressing problems, developing field skills in ecosystems, and working with others trained in fields different from one's own.
Requisites: Junior or senior standing only
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Research environmental studies questions, both independently and in groups.
Audience: Undergraduate

2. Synthesize information across several environmental studies disciplines.

Audience: Undergraduate

3. Connect their research to broader aspects of environmental studies.
Audience: Undergraduate

ENVIR ST 613 – REPRODUCIBILITY CRISES AND OPEN SCIENCE IN ENVIRONMENTAL STUDIES
3 credits.

Why trust science? Examine critically the strengths and weaknesses of Western science in light of new efforts at overcoming the reproducibility crisis. Examine successes and failures in fostering open science focusing on ecological research in its broadest sense, although relevant to many fields of inquiry. In line with the mission of the Nelson Institute for Environmental Studies, take an interdisciplinary look at reproducibility and scientific integrity. Find out why and why not to rely on the scientific communications of individual researchers and interest groups that showcase their preferred evidence.
Requisites: Junior standing
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Master the principles of open science and reproducibility for biological and social sciences.
Audience: Both Grad & Undergrad

2. Practice the concepts of open science in preparation for a career in research or research administration.
Audience: Graduate

3. Gain and practice skills in critical thinking about research design and scientific communication.
Audience: Both Grad & Undergrad

4. Integrate methods and ways of knowing from two or more fields of inquiry in social sciences and ecology.
Audience: Both Grad & Undergrad

5. Communicate professionally about effective open science practices, reproducibility, and scientific integrity.
Audience: Both Grad & Undergrad

6. Gain familiarity with retraction processes in scientific publication.
Audience: Both Grad & Undergrad

7. Practice critical close reading of scientific methods for the identification of bias or irreproducible methods
Audience: Graduate

8. Disentangle value-based from evidence-based reasoning.
Audience: Both Grad & Undergrad

ENVIR ST/A A E/ECON/URB R PL 671 – ENERGY ECONOMICS
3 credits.

The method, application, and limitations of traditional economic approaches to the study of energy problems. Topics include microeconomic foundations of energy demand and supply; optimal pricing and allocation of energy resources; energy market structure, conduct, and performance; macro linkages of energy and the economy; and the economics of regulatory and other public policy approaches to the social control of energy.
Requisites: Graduate/professional standing or (senior standing and ECON 101, 111, A A E 101, or 215 prior to Fall 2024)
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020
Learning Outcomes: 1. Understand fundamentals of energy sources and technologies.
Audience: Both Grad & Undergrad

2. Be familiar with microeconomic theory with applications to energy industries and markets.
Audience: Both Grad & Undergrad

3. Build analytical skills in economic analysis and be able to apply the economic thinking to historical and contemporary energy-related issues.
Audience: Graduate

4. Analyze the causes of and solutions for the sustainability challenge of affordable and clean energy.
Audience: Both Grad & Undergrad

5. Apply sustainability principles and/or frameworks to addressing the challenge of affordable and clean energy.
Audience: Both Grad & Undergrad

ENVIR ST 681 – SENIOR HONORS THESIS
3 credits.

Independent study for undergraduate students completing an Honors thesis in Environmental Studies.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2022

ENVIR ST 682 – SENIOR HONORS THESIS
3 credits.

Independent study for undergraduate students completing an Honors thesis in Environmental Studies.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2023

ENVIR ST 691 – SENIOR THESIS
1-3 credits.

Independent study for undergraduate students completing a thesis in Environmental Studies.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2018

ENVIR ST 692 – SENIOR THESIS
1-3 credits.

Independent study for undergraduate students completing a thesis in Environmental Studies.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2019

ENVIR ST/LAND ARC/SOIL SCI 695 — APPLICATIONS OF GEOGRAPHIC INFORMATION SYSTEMS IN NATURAL RESOURCES
3 credits.

Modern GIS desktop and web-based workflows, analyses, and visualizations related to natural resource and environmental planning issues and communication. Guest lectures from agency and industry professionals.
Requisites: LAND ARC 311, ENVIR ST/CIV ENGR/GEOG 377, or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop and apply appropriate geospatial analysis workflows related to the study and conservation of natural resources.
Audience: Both Grad & Undergrad

2. Identify and evaluate sources of primary and secondary geospatial data.

Audience: Both Grad & Undergrad

3. Develop methods for collecting primary geospatial data
Audience: Both Grad & Undergrad

4. Communicate analytical results in visual and graphical forms.
Audience: Both Grad & Undergrad

5. Evaluate literature related to geospatial technologies in environmental science and natural resource issues.
Audience: Graduate

ENVIR ST 699 — DIRECTED STUDY
1-3 credits.

Independent work in environmental studies overseen by a qualified instructor.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENVIR ST/CIV ENGR/URB R PL 717 — WATER RESOURCES MANAGEMENT PRACTICUM PLANNING SEMINAR I
1 credit.

The first of two seminars for planning the activities of the practicum.
Requisites: Declared in Water Resources Management MS or Doctoral Minor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ENVIR ST/CIV ENGR/URB R PL 718 — WATER RESOURCES MANAGEMENT PRACTICUM PLANNING SEMINAR II
2 credits.

The second of two seminars for planning the field work, analysis, and reporting of the practicum.
Requisites: Declared in Water Resources Management MS or Doctoral Minor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ENVIR ST/CIV ENGR/URB R PL 719 — WATER RESOURCES MANAGEMENT SUMMER PRACTICUM
4 credits.

Interdisciplinary team of students and staff working with agency personnel, citizen groups, and/or private sector representatives on the analysis of a contemporary, problem-oriented water resource issue. Physical, biological, economic and social aspects of the issue analyzed. Comprehensive written report results, practicum's findings and management recommendations.
Requisites: URB R PL/CIV ENGR/ENVIR ST 718
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

ENVIR ST/AGROECOL 724 – AGROECOSYSTEMS AND GLOBAL CHANGE
3 credits.

Impacts of global change drivers (climate change, atmospheric chemistry, bioenergy, urbanization, policy) on agroecosystems and their associated goods and services; environmental impacts of agricultural land use and feedbacks to climate; modeling approaches; critical review of current scientific literature.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain key physical, biological, and social drivers of change to agroecosystems on planet Earth
Audience: Graduate

2. Apply important biophysical and biological concepts to describe how a changing climate and changes in atmospheric composition impact agricultural systems
Audience: Graduate

3. Describe how agricultural land management impacts the Earth's climate system through changing biogeochemical cycling
Audience: Graduate

4. Discuss how agricultural land management impacts Earth's climate system through biogeophysical processes that effect energy and water balance in the soil-plant-atmosphere system
Audience: Graduate

5. Identify and summarize ecosystem services that are impacted by agroecosystems and land management decision-making, and how this effects global environmental sustainability
Audience: Graduate

ENVIR ST/POP HLTH 739 – CLIMATE CHANGE, HUMAN AND PLANETARY HEALTH
2 credits.

Provide tools to identify and address real-world global environmental health issues, stemming from climate change, habitat destruction leading to disease spillover events, food insecurity, and urban design.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize unique environmental public health challenges posed by climate change.
Audience: Graduate

2. Define the planetary boundaries and describe their links to human health.
Audience: Graduate

3. Define and Understand the Planetary Health framework and principles for systems-based approaches to risk management and health promotion.
Audience: Graduate

4. Learn and apply a Health in All Policies strategy to demonstrate the value of more comprehensive, cross-sector disease prevention programs.
Audience: Graduate

5. Critically analyze the linkages between physical and ecological conditions with human health and well-being, as well as exposure pathways through which impacts occur.
Audience: Graduate

6. Develop and exhibit effective risk and/or science communication strategies related to environmental health.
Audience: Graduate

ENVIR ST/ATM OCN 745 – METEOROLOGICAL SATELLITE APPLICATIONS
2-3 credits.

Use of satellite imagery and measurements in meteorological research and operations; orbital characteristics; navigation; instrumentation.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ENVIR ST/ATM OCN/GEOSCI/ZOOLOGY 750 – PROBLEMS IN OCEANOGRAPHY
3 credits.

Introduction to techniques used in the study of the biology, chemistry, geology, and physics of the marine environment.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

ENVIR ST/PUB AFFR/URB R PL 809 – INTRODUCTION TO ENERGY ANALYSIS AND POLICY
3 credits.

Strategy and policy problems in energy policy, both national and international.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENVIR ST/PUB AFFR/URB R PL 810 – ENERGY ANALYSIS AND POLICY CAPSTONE
3 credits.

Interdisciplinary application of energy knowledge to an analysis project for a real-world client. Integrate and apply technical, economic, political, and social factors in energy decision-making.
Requisites: Declared in Energy Analysis and Policy Graduate/Professional Certificate or Doctoral Minor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Conduct an original analysis by collecting and interpreting data on an energy-related issue for areal-world client.
Audience: Graduate

2. Integrate and apply multiple disciplinary perspectives such as technical, economic, socio-political, and environmental factors in the context of complex energy problems.
Audience: Graduate

3. Prepare for energy-related careers by: planning and managing a project over multiple months; interacting professionally with client; working effectively in multidisciplinary teams; and producing professional-quality deliverables such as presentations and reports in accordance with scope of work.
Audience: Graduate

4. Analyze the causes and solutions for the sustainability challenge of affordable and clean energy.
Audience: Graduate

5. Analyze sustainability issues and/or practices using a systems-based approach.
Audience: Graduate

ENVIR ST/JOURN/LSC 823 – SCIENCE AND ENVIRONMENT COMMUNICATION
3 credits.

Tracks the evolution of mass media coverage of science and the environment. Emphasis on how journalists utilize evidence, the influence of scientific and journalistic norms on stories, and the effects of mass media on science and environment messages to the public.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Describe theoretical perspectives relating to science and environmental communication, including a sampling of recent findings and current theoretical model
Audience: Graduate

2. Combine theory and methods to develop and evaluation science and environmental communication efforts
Audience: Graduate

3. Apply research theories and findings to contemporary problems in environmental and science communication
Audience: Graduate

4. Communicate complex environmental and science concepts with scientific and general audiences in oral and written forms
Audience: Graduate

ENVIR ST/URB R PL 843 – LAND USE POLICY AND PLANNING
3 credits.

Critical evaluation and analysis of land use policies and programs in relation to comprehensive planning and growth management issues in the U.S. The role of legislative and judicial processes and emerging public land use social values and philosophies in the development, regulation, and effectuation of innovative land use policies. Alternative land policy and growth guidance systems of select European countries.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Analyze the historical, political, social, and economic dimensions of land use policy in the U.S. context.
Audience: Graduate

2. Analyze relationships between land use regulation and urban form
Audience: Graduate

3. Identify the various actors that participate in contemporary land use planning and policy in the U.S. context and the interests that motivate their involvement.
Audience: Graduate

4. Analyze the conflicts around land use and how planners participate in them.
Audience: Graduate

5. Evaluate the role of planning in the land development process.
Audience: Graduate

ENVIR ST/URB R PL 865 – WATER RESOURCES INSTITUTIONS AND POLICIES
3 credits.

Governmental processes and policies for water resources management: major substantive problems and issues; political processes of decision making; problems of governmental organization and intergovernmental arrangements.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Describe the historical and institutional dimensions of water resources planning, management, and policy.
Audience: Graduate

2. Summarize the overall U.S. water resources "institutional landscape"—the array of institutional arrangements that comprise our system for addressing water resource issues and problems—and relative strengths and weaknesses of various approaches and system components.
Audience: Graduate

3. Articulate the limitations of the existing water resources management framework, along with opportunities and strategies for reform, for addressing various substantive ecological water issues (e.g., watershed protection, restoration, and management; water allocation; groundwater; water quality and quantity; etc.).
Audience: Graduate

4. Identify and evaluate selected institutional and societal issues pertinent to water resources policy and management, including through an equity lens (e.g., integrated environmental collaborative watershed approaches, intergovernmental roles, program implementation, etc.).
Audience: Graduate

5. Evaluate institutional effectiveness in addressing and resolving water resource issues and problems management, collaborative watershed approaches, intergovernmental roles, program implementation, etc.).
Audience: Graduate

6. Apply sustainability principles and/or frameworks to addressing the challenges of water resource protection and restoration.
Audience: Graduate

7. Analyze sustainability issues and/or practices using a systems-based approach
Audience: Graduate

ENVIR ST/POLI SCI/PUB AFFR 866 – GLOBAL ENVIRONMENTAL GOVERNANCE
3 credits.

In-depth examination of the political and policy challenges posed by global environmental degradation. Analysis of international institutions for managing the global environment.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

ENVIR ST/A A E/POP HLTH/PUB AFFR 881 – BENEFIT-COST ANALYSIS
3 credits.

Presents the welfare economics underpinnings for evaluating the social benefits and costs of government activities. Issues such as uncertainty, the social discount rate, and welfare weights will be discussed; case studies from the environmental, social policy, and agricultural areas will be studied.
Requisites: Graduate/professional standing and (PUB AFFR 818 and 880), or POP HLTH/I SY E 875, or A A E 635
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the basic mechanics of performing a Cost Benefit Analysis, including methods for valuing costs and benefits, aggregating over time, and analyzing uncertainties.
Audience: Graduate

2. Evaluate the strengths and weaknesses of different CBAs and propose strategies to address any shortcomings.
Audience: Graduate

3. Debate the advantages and limitations of CBA for public policy and compare it to other approaches.
Audience: Graduate

4. Create a CBA for a real-world client from beginning to end, including scoping, background research, valuation of costs and benefits, uncertainty analysis, and interpretation.
Audience: Graduate

ENVIR ST 900 – SEMINAR
1-3 credits.

Special topics selected with each offering.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENVIR ST 901 – GRADUATE ORIENTATION SEMINAR
1 credit.

Introduction to the organizational structure, policies and practices of the Nelson Institute, with an emphasis on the opportunities and challenges of being a student in a cross-campus interdisciplinary program.
Requisites: Declared in the Environment and Resources or Water Resources Management graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ENVIR ST 909 – PROFESSIONAL SKILLS IN ENERGY ANALYSIS AND POLICY
1 credit.

Discussion of professional skills important to interdisciplinary professionals in energy analysis and policy. Exploration of diverse career pathways and personal career development goals. Includes presentations from practitioners in public, private, and non-profit sectors.
Requisites: Declared in the Energy Analysis and Policy graduate/professional certificate
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Build understanding of personal career path.
Audience: Graduate

2. Gain awareness of careers in a variety of disciplines within the energy sector.
Audience: Graduate

3. Develop professional skills applicable to energy and environmental careers.
Audience: Graduate

4. Practice professional networking through informational interviews and expert visits.
Audience: Graduate

ENVIR ST/ATM OCN/BOTANY/CIV ENGR/GEOSCI/ZOOLOGY 911 – LIMNOLOGY AND MARINE SCIENCE SEMINAR
1 credit.

Sections in various fields of zoological research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENVIR ST/URB R PL 917 – PUBLIC PARTICIPATION FOR PLANNING AND POLICY MAKING
3 credits.

Examines public participation for planning and policymaking in both urban and natural environments; considers different types of participation from agency consultation to negotiation; designing, conducting, and evaluating citizen participation are major features.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain what public participation is and its application to planning, policy-making, and related decision-making processes, including benefits and challenges, the interplay between professional and community-based or local knowledge, values and ethics, and responsibilities of those leading participatory processes.
Audience: Graduate

2. Involve people meaningfully in planning and decision-making processes and create public participation plans, including goals and objectives tailored to specific project needs, techniques suitable to the goals, objectives and circumstances, and assessing effectiveness through ongoing evaluation.
Audience: Graduate

3. Use public participation applications and skills recognizing effective communication principles, sources of outrage and deep emotion, empathy, listening skills, constructive practices, and aligned participatory and facilitation techniques.
Audience: Graduate

4. Recognize conflicts and anticipate conflict resolution options in participatory processes by demonstrating knowledge of conflict resolution concepts and approach, analyzing conflict situations, and understanding proven techniques for resolving conflicts.
Audience: Graduate

ENVIR ST 922 – HISTORICAL AND CULTURAL METHODS IN ENVIRONMENTAL RESEARCH
3 credits.

Introduction to other disciplinary and interdisciplinary methods studying past environmental change and the human cultural contexts within which such change occurs. Explore the disparate forms of evidence that can be used to reconstruct past environmental changes and their human meanings. Build a strong sense of community among graduate students and faculty members at UW-Madison who share an interest in past environmental change by creating a context within which students from different programs can work together.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ENVIR ST/ATM OCN 925 – SEMINAR-CLIMATOLOGY
1-2 credits.

Historical climatology with emphasis on the last few centuries.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2018

ENVIR ST 931 – REMOTE SENSING FOR INTERNATIONAL DEVELOPMENT
3 credits.

Explore the ways remote sensing data are being used within an international development context, broadly defined. Provides a unique focus on understanding how projects were completed with satellite data, what data sources were necessary, how expert local knowledge was incorporated, and how various challenges were faced and overcome. Discover how the application of remote sensing data helped change policy in different countries across the globe.
Requisites: LAND ARC/ENVIR ST/F&W ECOL/G L E/GEOG/GEOSCI 371 and graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ENVIR ST/CURRIC 932 – FOUNDATIONS OF ENVIRONMENTAL AND SUSTAINABILITY EDUCATION
3 credits.

Education is often portrayed as a critical part of the solution to the intertwined problems of environment and society. Examines environmental education and related traditions such as nature study, conservation education, and outdoor education, as well as more recent movements such as place-based education and education for sustainability. Grounds discussions in concrete examples of educational practice, considers historical and contemporary critiques of environmental education.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022

ENVIR ST 950 – ENVIRONMENTAL MONITORING SEMINAR
1-2 credits.

A discussion and exploration of the social, economic and legal interactions of geospatial and environmental information technologies with society.
Requisites: Declared in Environmental Conservation: Environmental Observation and Informatics MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Recognize the social, economic, and legal considerations of working with environmental monitoring data
Audience: Graduate

2. Implement the steps for effective project collaborations
Audience: Graduate

3. Gain hands on experience working with data that has relevance for a conservation issue
Audience: Graduate

ENVIR ST 951 – CONSERVATION OF BIODIVERSITY
3 credits.

Surveys the scientific knowledge, concepts, and models that are the basis for the applied practice for the conservation of biodiversity. Study interactions of humans with nature, and how conservation science is used to formulate policy and guide conservation actions.
Requisites: Declared in Environmental Conservation: Environmental Conservation MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

ENVIR ST/AGROECOL/ATM OCN/BOTANY/ENTOM/F&W ECOL/GEOG/ZOOLOGY 953 – INTRODUCTION TO ECOLOGY RESEARCH AT UW-MADISON
1-2 credits.

Introduction to diverse ecological research across the UW-Madison Campus. Discussions on adapting to graduate school and graduate-level ecological research, key topics in professional development, and research presentations by faculty members.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop an appreciation for the foundations and legacy of ecology research and conservation science at UW-Madison
Audience: Graduate

2. Recognize the diversity and strength of current research in ecology at UW-Madison
Audience: Graduate

3. Differentiate expectations between undergraduate education and those of independent research for graduate degrees in ecology
Audience: Graduate

4. Develop appropriate expectations for advisors and advisees
Audience: Graduate

5. Reason through hypothetical ethical challenges and identify potential solutions based on professional codes of ethics
Audience: Graduate

6. Develop an understanding of the suite of skills associated with success in graduate school and in science
Audience: Graduate

ENVIR ST 956 – ADVANCED ENVIRONMENTAL REMOTE SENSING
3 credits.

Focuses on the fundamental physical principles of terrestrial remote sensing, followed by an examination of advanced topics in earth observation and digital image processing. Topics include radiation interaction with the atmosphere and the surface; radiative transfer theory; land surface characteristics including energy balance; thermal sensing; atmospheric and radiometric correction of image data; automated cloud detection and removal. Applications of remote sensing data for environmental problems will be explored in depth, including biophysical remote sensing with 3D modeling of vegetation canopies, dense time series analysis, data mining techniques, data fusion, as well as object vs. per-pixel approaches to pattern recognition. Explores all major data types, including optical, RADAR, LiDAR, and hyperspectral data, and provide instruction in hands-on image processing using open source software.
Requisites: LAND ARC/ENVIR ST/F&W ECOL/G L E/GEOG/GEOSCI 371 and graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate understanding of major theories, approaches, concepts, and methods in remote sensing science.
Audience: Graduate

2. Apply knowledge of the nature and properties of electromagnetic radiation and how it is affected by interactions with the atmosphere and the Earth's surface, including transmission, absorption, reflectance, refraction, and scatter.
Audience: Graduate

3. Outline several historical models used to explain the nature of light (e.g. wave, particle), describe phenomena associated with each model, and discuss the principle of complementarity.
Audience: Graduate

4. Recall the basic physical principles of radiation laws derived from Planck, Wien, and Stefan-Boltzmann, and describe how these principles make remote sensing possible.
Audience: Graduate

5. Differentiate the effects of atmospheric scatter (Rayleigh, Mie, and non-selective scatter) on Earth observation imagery, and determine how to remove atmospheric effects (or differences) across images.
Audience: Graduate

6. Understand the fundamental laws of radiative transfer, such as heating and cooling of the surface and atmospheric layers, and its effects in both clear and cloudy conditions.
Audience: Graduate

7. Illustrate the inverse methodologies used to derive geophysical parameters from remote measurements.
Audience: Graduate

8. Use this knowledge to interpret complex multispectral radiance data sets to derive geophysical information for environmental applications.
Audience: Graduate

9. Describe the differences between heat, thermal energy, and emissivity, distinguish how the amount of energy stored determines the temperature, and determine how these properties affect thermal remote sensing image analysis.
Audience: Graduate

ENVIR ST 971 – ENVIRONMENTAL SENSING TECHNOLOGIES
3 credits.

Many diverse technologies for monitoring the environment have become available in recent years, including traditional remote sensing data sources: aerial photography and satellite imagery, hyper-spectral data, imagery on demand, RADAR and LiDAR. Other new data sources are quite unconventional, with many emerging relatively recently: unmanned aerial vehicles (UAVs or drones), social media, smartphones as sources of crowd-sourced data, and more. Sophisticated data management, analytics, and presentation technology are required to effectively leverage both the spatial (including 3D) and temporal dimensions of these often untapped data sources. Intended to survey and explore these newly developing technologies, and provide direct experience to the student to understand and interact with the data and methods (geocomputing, coding, cloud-based platforms), and to learn to plan, manage, and utilize them effectively.
Requisites: LAND ARC/ENVIR ST/F&W ECOL/G L E/GEOG/ GEOSCI 371 and graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate their understanding of major theories, approaches, concepts, and methods in remote sensing science.
Audience: Graduate

2. Apply knowledge of the nature and properties of electromagnetic radiation and how it is affected by interactions with the atmosphere and the Earth's surface.
Audience: Graduate

3. Identify the techniques, skills, and modern tools necessary for monitoring environmental phenomena with earth observation data.
Audience: Graduate

4. Identify and appropriately utilize data types from the optical, thermal, and microwave portions of the electromagnetic spectrum, and from a wide range of airborne, satellite and unmanned aerial platforms, including high (greater than 5 m), medium (10-30 m), and coarse (250-1000 m) spatial resolution imagery.
Audience: Graduate

5. Illustrate the utility of machine learning for big data applications in remote sensing, and apply machine learning theories and tools in practice.
Audience: Graduate

6. Apply traditional and new forms of data fusion using earth observation imagery and a wide range of geophysical, social, and economic sources.
Audience: Graduate

7. Identify real-world issues that could benefit from the application of hyper-spectral and hyper-temporal data, and illustrate effective ways to apply these data for each.
Audience: Graduate

8. Analyze and interpret LiDAR point data clouds and LiDAR data derivatives for applications ranging from forestry to urban sustainability.
Audience: Graduate

9. Integrate new sources of data from unmanned aerial vehicles (UAVs) for monitoring biodiversity and conservation, and illustrate ways to influence policy with these findings.
Audience: Graduate

10. Apply a wide range of image processing tools using cloud computing

ENVIR ST 972 – CONSERVATION PLANNING
4 credits.

Prepare to plan, monitor and evaluate the effectiveness of conservation projects and programs. Learn systematic and adaptive processes of conservation planning.
Requisites: Declared in Environmental Conservation: Environmental Conservation MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ENVIR ST 974 – ENVIRONMENTAL CONSERVATION COHORT SEMINAR
1 credit.

Introduction to professional development and important aspects of communication, collaboration, and professional practice as they relate to Environmental Conservation.
Requisites: Declared in Environmental Conservation MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

ENVIR ST 975 – ENVIRONMENTAL CONSERVATION LEADERSHIP SEMINAR
1 credit.

Introduction to important aspects of communication, negotiation, and cross-cultural professional practice as they relate to Environmental Conservation.
Requisites: Declared in Environmental Conservation: Environmental Conservation MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

ENVIR ST 976 – THE PRACTICE OF CONSERVATION BIOLOGY AND SUSTAINABLE DEVELOPMENT
1 credit.

A weekly series of presentations by persons who have direct experience in the practice of conservation biology and sustainable development. Presenters may be students, faculty staff or agency persons.
Requisites: Declared in Environmental Conservation MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENVIR ST 977 – SUSTAINABLE DEVELOPMENT - INTEGRAL PERSPECTIVE
3 credits.

Review core concepts and history of sustainable development. Introduction to innovative frameworks to sustainable development, including integral framework, institutional analysis, and the often overlooked cultural, philosophical and psychological underpinnings of environmental decision-making. Analyze case studies and examples through the lens of the frameworks presented. Serves as a forum to present your research interests and examples regarding sustainable development.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

ENVIR ST 978 – ENVIRONMENTAL CONSERVATION TOOLS MODULES
1 credit.

Modules provide training in specific tools and methods related to environmental conservation. Topics may include GIS, conservation finance, conservation governance institutions, biodiversity monitoring, and science communication environmental mediating.
Requisites: Declared in Environmental Conservation MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENVIR ST 979 – ENVIRONMENTAL CONSERVATION PROFESSIONAL PRACTICE
3 credits.

Provides an online environment for the development and practice of the skills needed to be an environmental conservation professional and leader. Analyze options and make good professional conservation judgments in complex and uncertain environmental, political, and economic settings. Provides the tools needed to assess and revise those judgments. Includes exercises on the politics of environmental decisions, internal and external communication strategies, and program development and assessment strategies.
Requisites: Declared in Environmental Conservation: Environmental Conservation MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ENVIR ST/ATM OCN/BOTANY/F&W ECOL/GEOG/GEOSCI/ZOOLOGY 980 – EARTH SYSTEM SCIENCE SEMINAR
1 credit.

Topics in earth system science. Emphasis on the coupling between atmospheric, oceanic and land surface systems, involving physical geochemical and biological processes, and including interactions with human systems.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

ENVIR ST 990 – RESEARCH
1-12 credits.

Independent research and writing towards thesis or dissertation requirement.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ENVIR ST 999 – ADVANCED INDEPENDENT STUDY
1-5 credits.

Independent work in environmental studies overseen by a qualified instructor.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Conduct and report on independent environmental studies research under the guidance of a qualified instructor
Audience: Graduate

2. Independently develop researchable Environmental Studies questions
Audience: Graduate

3. Appropriately utilize online and library resources
Audience: Graduate

4. Connect their research clearly to other research in their field of study
Audience: Graduate

FAMILY MEDICINE (FAM MED)

FAM MED 699 – DIRECTED STUDY
1-5 credits.

Directed study projects as arranged with faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Understand and synthesize scientific literature surrounding their scientific question.
Audience: Undergraduate

FAM MED 711 – THE HEALER'S ART
1 credit.

Explores relationship-centered care in the medical profession. Topics include the importance of holistic self-care, methods of sharing, processing and responding to grief and the concepts of service and calling in medicine.
Requisites: Declared in Medicine program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

FAM MED 712 – HEALLTH CARE IN DIVERSE COMMUNITIES
1 credit.

Introduction to issues in health care provided in diverse communities. Topics include cultural issues in medicine, health disparities, cross-cultural communication, culture and resiliency, historical background and ethics, civil rights in practice and minority health care professionals.
Requisites: Declared in Medicine program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

FAM MED 790 – RURAL PUBLIC HEALTH AND COMMUNITY PROJECTS FOR PHASE 3 WARM STUDENTS
2 credits.

Opportunity for students to continue or enhance work on their longitudinal community projects through a self-directed learning experience.
Requisites: MED SC-M 810, 811, 812, and 813 and declared in Medicine:Wisconsin Academy for Rural Medicine or Medicine:Wisconsin Academy for Rural Medicine excellence in Rural Residencies.
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 1 number of completions
Last Taught: Fall 2025

FAM MED 909 – FAMILY MEDICINE INTERNSHIP PREPARATION ELECTIVE
1 credit.

Review and reinforce baseline skills you will need for internship training in Family Medicine. Inpatient topics include hospital admission and discharge workflows, ICU basics, Chest pain, Acute respiratory symptoms, OB triage, Communication with patients and families. Outpatient topics include Common pediatric presentations, Common family medicine outpatient procedures, Telemedicine-based care. Additional topics include Common imaging and cardiopulmonary evaluations: Radiograph interpretation, Cardiac evaluations; Non-invasive respiratory support approaches; Shock management; Acute Coronary Syndrome management; Initial approach to and management of common, severe, infectious conditions; Procedural skills; Communication skills with health care providers; Written clinical documentation. Verbal communication with patients and families; Teaching skills.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate familiarity with the use and appropriate ordering criteria for various Radiology modalities including xrays, Magnetic Resonance Imaging (MRI) & Computerized Axial Tomography (CAT) Scans, and ultrasound
Audience: Graduate

2. Review electrocardiogram (EKG) interpretation and identify common clinical findings
Audience: Graduate

3. Identify and discuss treatment of clinically significant arrhythmias
Audience: Graduate

4. Determine appropriate cardiac stress testing
Audience: Graduate

5. Discuss appropriate use of laboratory studies and interpretation related to shock
Audience: Graduate

6. Review diagnosis and treatment of urgent/emergent and acute situations including hypotension, sinus tachycardia, deep vein thrombosis/pulmonary embolism (DVT/PE), chest pain, abdominal pain, fever, and dyspnea
Audience: Graduate

7. Describe appropriate antibiotics for common infectious diseases
Audience: Graduate

8. Identify approach to common procedures including: dermatologic procedures, suturing/knot tying, gynecologic procedures and contraceptive care, circumcision
Audience: Graduate

9. Appropriately approach difficult conversations including delivering bad news, medical errors, death/autopsy request, and other clinically challenging situations
Audience: Graduate

10. Identify appropriate communication strategies for dealing with conflict, appropriate communication with colleagues and patients, written and verbal communication, and teaching skills
Audience: Graduate

FAM MED 910 – RESEARCH AND INDEPENDENT STUDY ELECTIVE IN FAMILY MEDICINE

2-8 credits.

In-depth exposure to the principles of research in Family Medicine and primary care or to enable students who have already become involved in research in Family Medicine to complete or extend their work. Working with a faculty mentor, examine both the content and process of primary care research. Refine research questions, interview research participants, complete computer-based literature searches and complete critical literature reviews. Demonstrate understanding of research ethics, design, development, computer database management, statistical analysis and oral and written presentation.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Formulate a hypothesis or specific objective if study does not involve hypothesis generating research.
Audience: Graduate

2. Conduct a thorough literature review as it pertains to the specific scholarly project.
Audience: Graduate

3. Select and apply, and/or understand statistical methodologies as appropriate for the proposed scholarly project.
Audience: Graduate

4. Interpret results correctly and in context of previous findings from literature review.
Audience: Graduate

FAM MED 911 – EVIDENCE-BASED HERBAL MEDICINE SAFETY AND EFFICACY SELECTIVE IN FAMILY MEDICINE

2 credits.

Gain a basic understanding of the pharmacology, mechanism of action, phytochemistry and botany (plant identification) of common plants used for healing in the United States. Analyze herbalpharmaceutical interactions and liver detoxification systems, extremely important skills in the practice of clinical medicine for any specialty. Prepare simple herbal treatments in the Learning Kitchen at the American Center and discuss practical applications in the clinical setting.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the physiological effects of the top 20 commonly used herbal medicines in the United States.
Audience: Graduate

2. List characteristics of a high-quality herbal medicine.
Audience: Graduate

3. Describe how to prepare an infusion, decoction, tincture, and herbal salve.
Audience: Graduate

4. From a list of dietary supplements and pharmaceuticals, identify adverse interactions using validated sources.
Audience: Graduate

5. Explain, in detail, how to undertake a risk-benefit analysis when trying to decide about the appropriateness of using an herbal medicine for treatment in a clinical scenario.
Audience: Graduate

6. Critically evaluate the herbal medicine literature, explaining the characteristics of a high-quality herbal medicine journal article using the 15-point supplemental CONSORT approach.
Audience: Graduate

FAM MED 913 – FIREARM INJURY PREVENTION POPULATION HEALTH SELECTIVE
2 credits.

Overview of population health interventions to promote firearm injury prevention. Gain an understanding of the epidemiology of firearm injury and death in the US. Recognize the role of clinicians in catalyzing firearm injury prevention. Establish relationships with community partners working on firearm injury prevention. Develop model interventions in collaboration with a community partner to reduce firearm injury in the community. Clinical and community interventions discussed.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Describe scope of firearm injury and death in the US through use of multiple frameworks, including historical, legal, social-cultural, clinical, and public health.
Audience: Graduate

2. Interpret social context and history that inform the cultural roles of firearms in the US.
Audience: Graduate

3. Summarize the effects of US firearm laws and policies on firearm injury and death.
Audience: Graduate

4. Appraise ethical and cultural considerations affecting individual, community, and population level firearm injury reduction strategies.
Audience: Graduate

5. Describe ethical collaborations with community partners.
Audience: Graduate

6. Implement evidence-based interventions to promote firearm injury prevention.
Audience: Graduate

7. Appraise advocacy roles and methods, including clinician-specific opportunities.
Audience: Graduate

FAM MED 919 – INDIVIDUALIZED FAMILY MEDICINE ELECTIVE
2-8 credits.

In-depth exposure to the principles of Family Medicine, emphasizing continuing and comprehensive care. Under direct faculty supervision, share ongoing responsibility for the patient in both health maintenance and illness. Emphasis on commitment to the patient and understanding the problems in the total context of the patient's life. Development of awareness of student physician and the patient's attitudes and learn to use interactions as a therapeutic tool. In addition to the pathology of disease, covers the appropriate use of patient education, preventative medicine and the role of family and community resources in providing quality primary care.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a hypothesis driven history and complete a targeted exam.
Audience: Graduate

2. Develop and present a weighted differential diagnosis for medical conditions.
Audience: Graduate

3. Using clinical evidence, adapt and justify a working diagnosis.
Audience: Graduate

4. Present a treatment and diagnostic plan including laboratory and imaging modalities.
Audience: Graduate

5. Correctly interpret imaging and laboratory findings and communicate results to patients and team members.
Audience: Graduate

6. Develop and implement effective patient management plans.
Audience: Graduate

7. Complete written documentation in a comprehensive, concise, accurate and timely manner.
Audience: Graduate

8. Review, interpret and present current literature to support patient care.
Audience: Graduate

9. Develop clinically relevant questions to advance learning.
Audience: Graduate

10. Communicate effectively with patients, family, physicians and non-physician team members.
Audience: Graduate

11. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care.
Audience: Graduate

12. Engage patients in shared decision making regarding tests, orders and procedures.
Audience: Graduate

13. Avoid medical jargon when communicating with patients and families.
Audience: Graduate

14. Recognize limitations and seek assistance as appropriate.

FAM MED 920 – CLINICAL ELECTIVE IN FAMILY MEDICINE
2-8 credits.

In-depth exposure to the principles of Family Medicine, emphasizing continuing and comprehensive care. Under direct supervision by faculty, share ongoing responsibility for the patient in both health maintenance and illness. Emphasis on commitment to the patient and understanding the problems in the total context of the patient's life. Development of awareness of student physician and the patient's attitudes and learn to use interactions as a therapeutic tool. In addition to the pathology of disease, learn the appropriate use of patient education, preventative medicine and the role of family and community resources in providing quality primary care.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a hypothesis driven history and complete a targeted exam.
Audience: Graduate

2. Develop and present a weighted differential diagnosis for medical conditions.
Audience: Graduate

3. Using clinical evidence, adapt and justify a working diagnosis.
Audience: Graduate

4. Present a treatment and diagnostic plan including laboratory and imaging modalities.
Audience: Graduate

5. Correctly interpret imaging and laboratory findings and communicate results to patients and team members.
Audience: Graduate

6. Develop and implement effective patient management plans.
Audience: Graduate

7. Complete written documentation in a comprehensive, concise, accurate and timely manner.
Audience: Graduate

8. Review, interpret and present current literature to support patient care.
Audience: Graduate

9. Develop clinically relevant questions to advance learning
Audience: Graduate

10. Communicate effectively with patients, family, physicians and non-physician team members.
Audience: Graduate

11. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care.
Audience: Graduate

12. Engage patients in shared decision making regarding tests, orders and procedures.
Audience: Graduate

13. Avoid medical jargon when communicating with patients and families.
Audience: Graduate

14. Recognize limitations and seek assistance as appropriate.

FAM MED 924 – CORRECTIONAL SYSTEM HEALTHCARE ELECTIVE IN FAMILY MEDICINE
2-8 credits.

In-depth exposure to the principles of Family Medicine as it relates to the Correctional System Healthcare of the incarcerated, emphasizing continuing and comprehensive care. Under direct supervision by faculty, share ongoing responsibility for the patient in both health maintenance and illness. Emphasis will be placed on commitment to the patient and understanding the problems in the total context of the patient's life. Development of awareness of student physician and the patient's attitudes and learn to use interactions as a therapeutic tool. In addition to the pathology of disease, learn the appropriate use of patient education, preventative medicine and the role of family and community resources in providing quality primary care.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 2 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a hypothesis driven history and complete a targeted exam.
Audience: Graduate

2. Develop and present a weighted differential diagnosis for medical conditions.
Audience: Graduate

3. Using clinical evidence, adapt and justify a working diagnosis.
Audience: Graduate

4. Present a treatment and diagnostic plan including laboratory and imaging modalities.
Audience: Graduate

5. Correctly interpret imaging and laboratory findings and communicate results to patients and team members.
Audience: Graduate

6. Develop and implement effective patient management plans as related to the correctional system.
Audience: Graduate

7. Complete written documentation in a comprehensive, concise, accurate and timely manner.
Audience: Graduate

8. Review, interpret and present current literature to support patient care.
Audience: Graduate

9. Develop clinically relevant questions to advance learning.
Audience: Graduate

10. Communicate effectively with patients, family, physicians and non-physician team members.
Audience: Graduate

11. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care.
Audience: Graduate

12. Engage patients in shared decision making regarding tests, orders and procedures.
Audience: Graduate

13. Avoid medical jargon when communicating with patients and families.

FAM MED 926 – NATIVE AMERICAN CLINICAL ELECTIVE IN FAMILY MEDICINE
2-8 credits.

In-depth exposure to the principles of Family Medicine in the Native American community, emphasizing continuing and comprehensive care. Under direct supervision by faculty, share ongoing responsibility for the patient in both health maintenance and illness. Emphasis on commitment to the patient and understanding the problems in the total context of the patient's life. Development of awareness of student physician and the patient's attitudes and learn to use interactions as a therapeutic tool. In addition to the pathology of disease, learn the appropriate use of patient education, preventative medicine and the role of family and community resources in providing quality primary care.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a hypothesis driven history and complete a targeted exam.
Audience: Graduate

2. Develop and present a weighted differential diagnosis for medical conditions.
Audience: Graduate

3. Using clinical evidence, adapt and justify a working diagnosis.
Audience: Graduate

4. Present a treatment and diagnostic plan including laboratory and imaging modalities.
Audience: Graduate

5. Correctly interpret imaging and laboratory findings and communicate results to patients and team members.
Audience: Graduate

6. Develop and implement effective patient management plans.
Audience: Graduate

7. Complete written documentation in a comprehensive, concise, accurate and timely manner.
Audience: Graduate

8. Review, interpret and present current literature to support patient care.
Audience: Graduate

9. Develop clinically relevant questions to advance learning.
Audience: Graduate

10. Communicate effectively with patients, family, physicians and non-physician team members.
Audience: Graduate

11. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care.
Audience: Graduate

12. Engage patients in shared decision making regarding tests, orders and procedures.
Audience: Graduate

13. Avoid medical jargon when communicating with patients and families.
Audience: Graduate

FAM MED 927 – RURAL AND COMMUNITY CLINICAL ELECTIVE IN FAMILY MEDICINE
2-8 credits.

In-depth exposure to the principles of Family Medicine in the rural community, emphasizing continuing and comprehensive care. Under direct supervision by faculty, share ongoing responsibility for the patient in both health maintenance and illness. Emphasis on commitment to the patient and understanding the problems in the total context of the patient's life. Development of awareness of student physician and the patient's attitudes and learn to use interactions as a therapeutic tool. In addition to the pathology of disease, learn the appropriate use of patient education, preventative medicine and the role of family and community resources in providing quality primary care.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Perform a hypothesis driven history and complete a targeted exam.
Audience: Graduate

2. Develop and present a weighted differential diagnosis for medical conditions.
Audience: Graduate

3. Using clinical evidence, adapt and justify a working diagnosis.
Audience: Graduate

4. Present a treatment and diagnostic plan including laboratory and imaging modalities.
Audience: Graduate

5. Correctly interpret imaging and laboratory findings and communicate results to patients and team members.
Audience: Graduate

6. Develop and implement effective patient management plans.
Audience: Graduate

7. Complete written documentation in a comprehensive, concise, accurate and timely manner.
Audience: Graduate

8. Review, interpret and present current literature to support patient care.
Audience: Graduate

9. Develop clinically relevant questions to advance learning.
Audience: Graduate

10. Communicate effectively with patients, family, physicians and non-physician team members.
Audience: Graduate

11. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care.
Audience: Graduate

12. Engage patients in shared decision making regarding tests, orders and procedures.
Audience: Graduate

13. Avoid medical jargon when communicating with patients and families.
Audience: Graduate

FAM MED 930 – URBAN AND COMMUNITY CLINICAL ELECTIVE IN FAMILY MEDICINE
2-8 credits.

In-depth exposure to the principles of Family Medicine in a urban community, emphasizing continuing and comprehensive care. Under direct supervision by faculty, share ongoing responsibility for the patient in both health maintenance and illness. Emphasis on commitment to the patient and understanding the problems in the total context of the patient's life. Development of awareness of student physician and the patient's attitudes and learn to use interactions as a therapeutic tool. In addition to the pathology of disease, learn the appropriate use of patient education, preventative medicine and the role of family and community resources in providing quality primary care.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a hypothesis driven history and complete a targeted exam.
Audience: Graduate

2. Develop and present a weighted differential diagnosis for medical conditions.
Audience: Graduate

3. Using clinical evidence, adapt and justify a working diagnosis.
Audience: Graduate

4. Present a treatment and diagnostic plan including laboratory and imaging modalities.
Audience: Graduate

5. Correctly interpret imaging and laboratory findings and communicate results to patients and team members.
Audience: Graduate

6. Develop and implement effective patient management plans.
Audience: Graduate

7. Complete written documentation in a comprehensive, concise, accurate and timely manner.
Audience: Graduate

8. Review, interpret and present current literature to support patient care.
Audience: Graduate

9. Develop clinically relevant questions to advance learning.
Audience: Graduate

10. Communicate effectively with patients, family, physicians and non-physician team members.
Audience: Graduate

11. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care.
Audience: Graduate

12. Engage patients in shared decision making regarding tests, orders and procedures.
Audience: Graduate

13. Avoid medical jargon when communicating with patients and families.
Audience: Graduate

FAM MED 931 – ADDICTIVE DISORDERS MANAGEMENT IN FAMILY MEDICINE
2-8 credits.

In-depth exposure to the principles of Family Medicine approaches to Addictive Disorders, emphasizing continuing and comprehensive care. Under direct supervision by faculty, share ongoing responsibility for the patient in both health maintenance and illness. Emphasis on commitment to the patient and understanding the problems in the total context of the patient's life. Development of awareness of student physician and the patient's attitudes and learn to use interactions as a therapeutic tool. In addition to the pathology of disease, learn the appropriate use of patient education, preventative medicine and the role of family and community resources in providing quality primary care.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a hypothesis driven history and complete a targeted exam.
Audience: Graduate

2. Develop and present a weighted differential diagnosis for medical conditions.
Audience: Graduate

3. Using clinical evidence, adapt and justify a working diagnosis.
Audience: Graduate

4. Present a treatment and diagnostic plan including laboratory and imaging modalities.
Audience: Graduate

5. Correctly interpret imaging and laboratory findings and communicate results to patients and team members.
Audience: Graduate

6. Develop and implement effective patient management plans.
Audience: Graduate

7. Complete written documentation in a comprehensive, concise, accurate and timely manner.
Audience: Graduate

8. Review, interpret and present current literature to support patient care.
Audience: Graduate

9. Develop clinically relevant questions to advance learning.
Audience: Graduate

10. Communicate effectively with patients, family, physicians and non-physician team members.
Audience: Graduate

11. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care.
Audience: Graduate

12. Engage patients in shared decision making regarding tests, orders and procedures.
Audience: Graduate

13. Avoid medical jargon when communicating with patients and families.
Audience: Graduate

FAM MED 933 – SPORTS MEDICINE ELECTIVE IN FAMILY MEDICINE
2-8 credits.

In-depth exposure to the principles of Sport Medicine in Family Medicine, emphasizing continuing and comprehensive care. Under direct supervision by faculty, share ongoing responsibility for the patient in both health maintenance and illness. Emphasis on commitment to the patient and understanding the problems in the total context of the patient's life. Development of awareness of student physician and the patient's attitudes and learn to use interactions as a therapeutic tool. In addition to the pathology of disease, learn the appropriate use of patient education, preventative medicine and the role of family and community resources in providing quality primary care.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2021
Learning Outcomes: 1. Perform a hypothesis driven history and complete a targeted exam.
Audience: Graduate

2. Develop and present a weighted differential diagnosis for medical conditions.
Audience: Graduate

3. Using clinical evidence, adapt and justify a working diagnosis.
Audience: Graduate

4. Present a treatment and diagnostic plan including laboratory and imaging modalities.
Audience: Graduate

5. Correctly interpret imaging and laboratory findings and communicate results to patients and team members.
Audience: Graduate

6. Develop and implement effective patient management plans.
Audience: Graduate

7. Complete written documentation in a comprehensive, concise, accurate and timely manner.
Audience: Graduate

8. Review, interpret and present current literature to support patient care.
Audience: Graduate

9. Develop clinically relevant questions to advance learning.
Audience: Graduate

10. Communicate effectively with patients,family, physicians and non-physician team members.
Audience: Graduate

11. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care.
Audience: Graduate

12. Engage patients in shared decision making regarding tests, orders and procedures.
Audience: Graduate

13. Avoid medical jargon when communicating with patients and families.
Audience: Graduate

FAM MED 935 – INPATIENT ELECTIVE IN FAMILY MEDICINE
2-8 credits.

In-depth exposure to the principles of Family Medicine in an inpatient setting, emphasizing continuing and comprehensive care. Under direct supervision by faculty, share ongoing responsibility for the patient in both health maintenance and illness. Emphasis on commitment to the patient and understanding the problems in the total context of the patient's life. Development of awareness of student physician and the patient's attitudes and learn to use interactions as a therapeutic tool. In addition to the pathology of disease, learn the appropriate use of patient education, preventative medicine and the role of family and community resources in providing quality primary care.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 4 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a hypothesis driven history and complete a targeted exam.
Audience: Graduate

2. Develop and present a weighted differential diagnosis for medical conditions.
Audience: Graduate

3. Using clinical evidence, adapt and justify a working diagnosis.
Audience: Graduate

4. Present a treatment and diagnostic plan including laboratory and imaging modalities.
Audience: Graduate

5. Correctly interpret imaging and laboratory findings and communicate results to patients and team members.
Audience: Graduate

6. Develop and implement effective inpatient management plans.
Audience: Graduate

7. Complete written documentation in a comprehensive, concise, accurate and timely manner.
Audience: Graduate

8. Review, interpret and present current literature to support patient care.
Audience: Graduate

9. Develop inpatient and clinically relevant questions to advance learning.
Audience: Graduate

10. Communicate effectively with patients, family, physicians and non-physician team members.
Audience: Graduate

11. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care.
Audience: Graduate

12. Engage patients in shared decision making regarding tests, orders and procedures.
Audience: Graduate

13. Avoid medical jargon when communicating with patients and families.
Audience: Graduate

14. Recognize limitations and seek assistance as appropriate.

FAM MED 937 – FAMILY MEDICINE UW HOSPITAL SUB-INTERNSHIP
1-6 credits.

Introduction to the principles of Family Medicine, emphasizing continuing and comprehensive care. Share ongoing responsibility for the patient in both health maintenance and illness. Emphasis upon commitment to the person and understanding the problems in the total context of the patient's life.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

FAM MED 938 – HOSPICE & PALLIATIVE CARE ELECTIVE IN FAMILY MEDICINE
2-8 credits.

In-depth exposure to the principles of hospice and palliative care as it relates to Family Medicine, emphasizing continuing and comprehensive care. Under direct supervision by faculty, share ongoing responsibility for the patient in both health maintenance and illness. Emphasis will be placed on commitment to the patient and understanding the problems in the total context of the patient's life. Development of awareness of student physician and the patient's attitudes and learn to use interactions as a therapeutic tool. In addition to the pathology of disease, learn the appropriate use of patient education, preventative medicine and the role of family and community resources in providing quality primary care.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2020
Learning Outcomes: 1. Perform a hypothesis driven history and complete a targeted exam.
Audience: Graduate

2. Develop and present a weighted differential diagnosis for medical conditions.
Audience: Graduate

3. Using clinical evidence, adapt and justify a working diagnosis.
Audience: Graduate

4. Present a treatment and diagnostic plan including laboratory and imaging modalities.
Audience: Graduate

5. Correctly interpret imaging and laboratory findings and communicate results to patients and team members.
Audience: Graduate

6. Develop and implement effective patient management plans.
Audience: Graduate

7. Complete written documentation in a comprehensive, concise, accurate and timely manner.
Audience: Graduate

8. Review, interpret and present current literature to support patient care.
Audience: Graduate

9. Develop clinically relevant questions to advance learning.
Audience: Graduate

10. Communicate effectively with patients, family, physicians and non-physician team members.
Audience: Graduate

11. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care.
Audience: Graduate

12. Engage patients in shared decision making regarding tests, orders and procedures.
Audience: Graduate

13. Avoid medical jargon when communicating with patients and families.
Audience: Graduate

FAM MED 941 – INTEGRATIVE HEALTH ELECTIVE IN FAMILY MEDICINE
2-4 credits.

In-depth exposure to the principles of Integrative Health as it relates to Family Medicine, emphasizing continuing and comprehensive care. Under direct supervision by faculty, share ongoing responsibility for the patient in both health maintenance and illness. Emphasis on commitment to the patient and understanding the problems in the total context of the patient's life. Development of awareness of student physician and the patient's attitudes and learn to use interactions as a therapeutic tool. In addition to the pathology of disease, learn the appropriate use of patient education, preventative medicine and the role of family and community resources in providing quality primary care.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a hypothesis driven history and complete a targeted exam.
Audience: Graduate

2. Develop and present a weighted differential diagnosis for medical conditions.
Audience: Graduate

3. Using clinical evidence, adapt and justify a working diagnosis.
Audience: Graduate

4. Present a treatment and diagnostic plan including laboratory and imaging modalities.
Audience: Graduate

5. Correctly interpret imaging and laboratory findings and communicate results to patients and team members.
Audience: Graduate

6. Develop and implement effective patient management plans.
Audience: Graduate

7. Complete written documentation in a comprehensive, concise, accurate and timely manner.
Audience: Graduate

8. Review, interpret and present current literature to support patient care.
Audience: Graduate

9. Develop clinically relevant questions to advance learning.
Audience: Graduate

10. Communicate effectively with patients, family, physicians and non-physician team members.
Audience: Graduate

11. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care.
Audience: Graduate

12. Engage patients in shared decision making regarding tests, orders and procedures.
Audience: Graduate

13. Avoid medical jargon when communicating with patients and families.
Audience: Graduate

FAM MED 943 – INFECTIOUS DISEASE SURVEILLANCE
2 credits.

Basics of infectious disease, including the microbiologic, virology, and parasitology of human disease, the immune response to infection, pathologic changes related to infectious disease, and the pharmacology of anti-infectious agents. Understanding antimicrobial stewardship, importance of prevention, including vaccination, and an understanding of infectious disease surveillance on local, regional, national, and global systems. Appreciation of emerging infectious threats, threats from climate change on microbiota, and the epidemiology of an emerging infection.
Requisites: MED SC-M 810, 811, 812, and 813, and graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Identify and describe immunologic response to infectious diseases.
Audience: Graduate

2. Apply and adapt the pharmacology of antimicrobial, antiviral and antiparasitic therapies.
Audience: Graduate

3. Demonstrate knowledge of the microbiology, virology, and parasitology of significant human diseases.
Audience: Graduate

4. Identify and describe the pathologic response to infectious disease in the human host.
Audience: Graduate

5. Delineate the return on investment in preventative interventions to infectious diseases and understand the surveillance pathways and processes at all levels of reporting from local health departments to the World health Organization.
Audience: Graduate

6. Explain the surveillance pathways and processes at all levels of reporting from local health departments to the World Health Organization
Audience: Graduate

7. Identify the health effects of climate disruption on food-borne, water-borne, and other infectious disease threats.
Audience: Graduate

8. Research the epidemiology of various infectious diseases, including their distribution, prevalence, incidence, and determinants.
Audience: Graduate

9. Explain emerging infectious threats including threats from climate change.
Audience: Graduate

FAM MED 944 – OFFICE-BASED PROCEDURES IN FAMILY MEDICINE
2-8 credits.

In-depth exposure to principles of office-based procedures in Family Medicine, emphasizing continuing and comprehensive care. Under direct supervision by faculty, share ongoing responsibility for the patient in both health maintenance and illness. Develop self-awareness as student physician, recognition of patient attitudes, and learn to use interactions as a therapeutic tool. In addition to the pathology of disease, learn the appropriate use of patient education, preventative medicine and the role of family and community resources in providing quality primary care. Share ongoing responsibility for the patient in evaluation, diagnosis, procedure and follow-up. Small office procedures may include; vein treatments, skin lesion removal, prolotherapy, perineural injection therapy, no-scalpel vasectomy, thread carpal tunnel release, liposuction, hemorrhoid treatments, and frenotomy for tongue tie.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2020
Learning Outcomes: 1. Demonstrate the appropriate use of patient education.
Audience: Graduate

2. Demonstrate understanding of informed consent process.
Audience: Graduate

3. Share ongoing responsibility for the patient evaluation, diagnosis, procedure and follow-up.
Audience: Graduate

4. Demonstrate skill in addressing problems in the broader context of the patient's life.
Audience: Graduate

5. Use proper procedural techniques for office-based surgical procedures common to Family Medicine.
Audience: Graduate

6. Perform minor procedures with supervision.
Audience: Graduate

7. Develop self-awareness as student physician, and ability to recognize patient attitudes and use interactions as a therapeutic tool.
Audience: Graduate

8. Correctly interpret imaging and laboratory findings and communicate results to patients and team members.
Audience: Graduate

9. Complete written documentation in a comprehensive, concise, accurate and timely manner.
Audience: Graduate

10. Review, interpret and present current literature to support patient's planned procedure.
Audience: Graduate

11. Develop procedural and surgical relevant questions to advance learning.

Audience: Graduate

12. Communicate effectively with patients, family, physicians and non-physician team members.

FARM AND INDUSTRY SHORT COURSE (FISC)

FISC 20 – INTRODUCTION TO PLANT SCIENCE
2 credits.

Students will learn about growing crops and plants, the basics of plant growth, how plants have diversified based on environmental locations, classifications of plants, and general plant nutrition.
Requisites: Declared in the Farm & Industry Short Course program
Repeatable for Credit: No
Last Taught: Fall 2019

FISC 21 – AGRICULTURAL SALES
2 credits.

Students will learn the basic steps to the sales process in order to prepare for a career in agricultural sales and related sales applications found in daily life; develop sales-related skills, such as negotiation skills, body language, and time management skills; and reflect on and develop personal strengths and abilities that will enhance agricultural sales presentations and customer relationships.
Requisites: Declared in the Farm & Industry Short Course program
Repeatable for Credit: No
Last Taught: Spring 2022

FISC 23 – SAFE AND EFFECTIVE USES OF PESTICIDES IN AGRONOMIC CROPS
1 credit.

Students will learn about the multiple aspects of pesticides (herbicides, insecticides, and diseases) use in WI agronomic crops through learning about the patterns, application methods, resistance, regulation, and safe application. Emphasis will be placed on how to utilize existing resources to use pesticides safely, legally, and effectively while minimizing environmental impacts.
Requisites: Declared in the Farm & Industry Short Course program
Repeatable for Credit: No
Last Taught: Spring 2020

FISC 49 – AGRICULTURAL WEATHER AND CLIMATE
1 credit.

Introduces the concepts of weather and climate, and discusses the importance of weather and climate for agricultural production. Covers the methods of collecting, accessing, and using weather information for agricultural management and planning. In addition, covers the underlying physical principles associated with anthropogenic climate change.
Requisites: Declared in the Farm Industry Short Course program
Repeatable for Credit: No
Last Taught: Spring 2020
Learning Outcomes: 1. Articulate the differences between weather and climate
Audience: Undergraduate

2. Identify weather data important for agricultural production and how to best obtain those data
Audience: Undergraduate

3. Use weather and environmental data to plan agricultural management activities
Audience: Undergraduate

4. Explore how agriculture contributes to greenhouse gas emissions and climate change
Audience: Undergraduate

FISC 50 – THE BUSINESS OF AGRICULTURE
1 credit.

Examines the five areas of risk management of an agricultural business: production risk, human risk, financial risk, market risk, and institutional risk. Discusses the internal and external contexts affecting the management of an agricultural business. Investigates the changing structures of agriculture, creating a unique landscape for today's agricultural businesses. Students are encouraged throughout the course to reflect on and discuss examples from their own experiences, and think critically about how these factors may impact their strategy for managing a business.
Requisites: Declared in the Farm Industry Short Course program
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Articulate the five areas of risk management and how they affect an agricultural business.
Audience: Undergraduate

2. Identify internal and external contexts impacting your agricultural business.
Audience: Undergraduate

3. Develop your skills in business relationship management.
Audience: Undergraduate

4. Explore management strategies to maintain a competitive and smart agricultural business.
Audience: Undergraduate

5. Consider tools to manage risk through diversification, marketing strategies, and distinguishing your business from the competition.
Audience: Undergraduate

FISC 51 – BUSINESS PRINCIPLES OF AGRICULTURAL MANAGEMENT
1 credit.

An introduction to the working of a market economy and decision-making concepts; the role of prices and preferences in making production and consumption decisions; U.S. agricultural system and various economic policies that may be employed by government; Taxation, regulation, trade, and employment policies.
Requisites: Declared in Foundations of Farm Management certificate program
Repeatable for Credit: No
Last Taught: Fall 2021

FISC 52 – AGRICULTURAL SAFETY AND HEALTH
1 credit.

Causes and prevention of common farm injuries and illnesses; control of hazards; types of fatal and non-fatal injuries; tractor and machinery-related injuries and operating practices; hazards to children; animal-related injuries; confined spaces; respiratory hazards; chemical exposure; personal protective equipment; OSHA, DOL, and EPA worker-related regulations; causes and prevention of injuries including inspections and hazard control, and safety management strategies and activities.
Requisites: Declared in Foundations of Farm Management certificate program
Repeatable for Credit: No
Last Taught: Spring 2020

FISC 53 – AGRICULTURE HUMAN RESOURCES MANAGEMENT
1 credit.

Understanding roles of manager, leader, and communicator; developing a human resource management philosophy; finding and retaining employees; legal considerations.
Requisites: Declared in Foundations of Farm Management certificate program
Repeatable for Credit: No
Last Taught: Fall 2021

FISC 54 – AGRIBUSINESS COMMUNICATIONS
2 credits.

Introduction to interpersonal communication skills for use in a variety of agribusiness settings. Topics include verbal, non-verbal, and written communication methods; negotiation skills; promotion techniques; and the application of these in agribusiness.
Requisites: Declared in Foundations of Farm Management certificate program
Repeatable for Credit: No
Last Taught: Spring 2020

FISC 55 – FARM AND INDUSTRY SHORT COURSE FIRST-YEAR SEMINAR
1 credit.

Provides first-year Farm Industry Short Course students with an academic orientation to the FISC program. Topics include current agricultural- and consumer-related issues (e.g., food systems, agriculture advocacy, climate change, etc.), academic and career development, and an introduction to the academic resources and opportunities of the college and university.
Requisites: Declared in Foundations of Farm Management certificate program
Repeatable for Credit: No
Last Taught: Fall 2019

FISC 57 – INTRODUCTION TO SOILS
2 credits.

Soil formation; important physical and chemical properties; soil moisture; introduction to soil fertility; soil mapping and classification.
Requisites: Declared in Foundations of Farm Management certificate program
Repeatable for Credit: No
Last Taught: Fall 2021

FISC 61 – DAIRY HERD HEALTH
1 credit.

In this course, students will learn the basic veterinary medical terminology and goals of a veterinarian as it pertains to the dairy cow and dairy young stock. Students will understand how to prevent herd health problems and will begin to recognize signs when they arise. Students will also be able to discuss health problems with the herd veterinarian. Specific topics will include: cattle disease problems; how the animal body works; digestive disorders, noninfectious diseases, principles of infection and sanitation; state regulations against disease.
Requisites: Declared in the Farm & Industry Short Course program
Repeatable for Credit: No
Last Taught: Spring 2020

FISC 63 – DAIRY HERD MANAGEMENT
2 credits.

In this comprehensive course, students will learn how to care for their herd to increase production and profits. Use of business, feeding, and herd management tools in dairy farm operation will be covered in depth. Case studies of individual farms used for analysis and planning. Specific topics covered will include: cattle movement and behavior, calf care, heifer care, nutrition, reproduction, fresh cows and diseases, parlor management, milk harvest, mammary anatomy, mastitis and milk quality control, cattle comfort and housing options, herd culling decisions, and interacting with the consumer.
Requisites: Declared in the Farm & Industry Short Course program
Repeatable for Credit: No
Last Taught: Fall 2021

FISC 71 – PASTURE MANAGEMENT
1 credit.

This course covers pasture establishment, pasture improvement and pasture plant growth. Students will also learn about the in- depth topics of pasture layouts, fencing and water systems, animal behavior on pastures, general pasture utilization and animal nutrient needs on pasture, including supplemental feeding.
Requisites: Declared in the Farm & Industry Short Course program
Repeatable for Credit: No
Last Taught: Spring 2020

FISC 72 – PASTURE BASED DAIRY/LIVESTOCK - BUSINESS START-UP AND MARKETING
1 credit.

Students will learn production and management strategies emphasizing pasture-based dairy or livestock farm start-up. Students will begin a business plan in this introductory course as the first of the two-course series. There will be one full-day required field trip. This course is held in conjunction with, and serves as the core of, the Wisconsin School for Beginning Dairy and Livestock Farmers (WSBDF).
Requisites: Declared in the Farm & Industry Short Course program
Repeatable for Credit: No
Last Taught: Fall 2019

FISC 73 – PASTURE BASED DAIRY/LIVESTOCK - MANAGING THE BUSINESS
1 credit.

Course covers grass-fed production and marketing, risk management (specifically of pasture-based farms), pasture soil nutrient management, grazing and natural resource management, and ecological restoration through livestock. Students will present their business plans to a panel of lenders. Students will be required to attend four evening Business Plan Writing Workshops. This is the final course in the two-course series of the Wisconsin School for Beginning Dairy/Livestock Farmers (WSBDF) program.
Requisites: FISC 72
Repeatable for Credit: No
Last Taught: Spring 2020

FISC 75 – SPECIAL TOPICS IN FISC
1-3 credits.

Specialized subject matter of current interest to FISC students.
Requisites: Declared in Foundations of Farm Management certificate program
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022

FISC 101 – MEAT ANIMAL PRODUCTION I
2 credits.

In this course, students will be focusing on the ruminant livestock production systems. Students will evaluate and design the implementation of foundational principles in beef cattle, sheep and goat production. Through the connecting of production system to market costs and revenues, students will gain an in-depth understanding of meat animal livestock production. Students will have hands-on experiences in beef cattle, sheep and goat management.
Requisites: Declared in the Farm & Industry Short Course program
Repeatable for Credit: No
Last Taught: Fall 2019

FISC 105 – DAIRY CATTLE SELECTION AND EVALUATION
2 credits.

In this course, students will learn the basics of genetic selection programs and the effectiveness of appropriate selection strategies specific to the dairy farm. Genomic testing research and advanced reproductive techniques will be discussed and students will learn about the correct application of these techniques on their farm. Basic anatomy of a dairy cow and linear scoring systems. After establishing dairy cow conformation and functionality and appraisal systems, students will evaluate cattle using type scorecards to improve the appearance, performance and longevity of dairy cattle. Following the understanding of the factors that impact the value of cattle, students will also learn how to apply corrective mating programs to improve perceived defects or nonexistent features in their herd(s).
Requisites: Declared in the Farm & Industry Short Course program
Repeatable for Credit: No
Last Taught: Spring 2022

FISC 114 – RUMINANT NUTRITION
2 credits.

Students will learn practical nutrition for lactating dairy cows, dairy heifers, and dairy beef. This course covers digestion and nutrient metabolism, milk synthesis and ration formulation guidelines and stresses importance of quality forage in the feeding program. Students will learn the basic anatomy and physiology of the digestive system of ruminant animals and how feeding and management are geared toward optimizing rumen function. This course will introduce the basic concepts of nutrition and how feeds provide nutrients and basic skills necessary for feeding dairy cattle. Students will learn how to assess animal performance and adequacy of the feeding program through evaluating intake, body condition, and transition cow health and learn how to feed and manage growing ruminants.
Requisites: Declared in the Farm & Industry Short Course program
Repeatable for Credit: No
Last Taught: Spring 2022

FISC 115 – AGRIBUSINESS FEASIBILITY PLANNING
1 credit.

Accounting, budgeting and communication skills are necessary to develop and evaluate farm business plans. Students are introduced to computerized farm accounting and will develop skills with modern electronic spreadsheets and FINPACK while developing a case farm feasibility assignment.
Requisites: FISC 51
Repeatable for Credit: No
Last Taught: Spring 2022

FISC 119 – INTRODUCTION TO TURFGRASS MANAGEMENT
2 credits.

Use and management of turfgrass landscapes in urban and suburban environments, including home lawns, golf courses, and sports fields. Focus is on creating sustainable and attractive turfgrass landscapes through proper species selection, use of slow-release or organic fertilizer practices, and minimizing the use of pesticides and supplemental irrigation.
Requisites: Declared in the Farm Industry Short Course program
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Describe how turf is used in urban and suburban communities.
Audience: Undergraduate

2. Identify the positive environmental impacts of using turfgrass.
Audience: Undergraduate

3. Identify the negative environmental impacts of using turfgrass.
Audience: Undergraduate

4. List common turf species used in Wisconsin and discuss the attributes of each.
Audience: Undergraduate

5. Identify the three major pest groups in turfgrass and describe sustainable management strategies for each.
Audience: Undergraduate

6. Identify positive and negative attributes of artificial turf.
Audience: Undergraduate

FISC 120 – MEAT ANIMAL EVALUATION & MARKETING
2 credits.

This course demonstrates how meat animals within a species differ in value, grade and yield. This course will also cover price determination and marketing systems for each species. The students will receive hands-on experience in evaluating, slaughtering, and cutting beef and pork. Lamb processing and manufacturing of processed meat items will be demonstrated.
Requisites: Declared in the Farm & Industry Short Course program
Repeatable for Credit: No
Last Taught: Fall 2019

FISC 121 – AGRICULTURAL COMMODITIES MARKETING
2 credits.

This course focuses on the farm and its marketing environment and provides an overview of the economics of grain and milk markets. The course concentrates on developing skills for effective grain and dairy marketing analysis and strategies. It examines forward contracting, hedging on futures markets, delayed pricing and options trading. It will also examine farm policies and the impact on farms. Students will gain an understanding and appreciation of the commodity and futures markets, major trends and causes of trends in dairy and grain industries, market factors that influence farm commodities, risk tools and cooperatives.
Requisites: Declared in the Farm & Industry Short Course program
Repeatable for Credit: No
Last Taught: Fall 2021

FISC 122 – TURFGRASS NUTRIENT MANAGEMENT
2 credits.

Nutrient requirements of turfgrasses; nature of turfgrass response to fertilization; soil and tissue testing methodology and interpretation; writing effective nutrient management plans.
Requisites: FISC 20 and 119
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Carry out common calculations necessary for a career in turfgrass management
Audience: Undergraduate

2. Develop a detailed fertility plan for a turf area of your choice based on principles of turfgrass nutrition and soil science
Audience: Undergraduate

3. Interpret a variety of soil test reports
Audience: Undergraduate

4. Integrate your knowledge of fertility, irrigation management, water quality, and the environment to develop a nutrient management plan for a golf course
Audience: Undergraduate

FISC 123 – TURFGRASS INTEGRATED PEST MANAGEMENT
2 credits.

Using tools to effectively manage the most common weed, insect, and disease pests seen on turfgrass in the Midwest; including proper identification of each pest, the biology of each pest, and cultural and chemical control strategies for each pest.
Requisites: FISC 119
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Describe methods for reducing non-target effects of turfgrass pesticide applications
Audience: Undergraduate

2. Demonstrate effective calibration and application of both liquid and dry formulated pesticides
Audience: Undergraduate

3. Identify the most common weed pests of Wisconsin turfgrass, describe their biology, and list effective cultural and chemical weed control strategies
Audience: Undergraduate

4. Identify the most common insect pests of Wisconsin turfgrass, describe their biology, and list effective cultural and chemical insect control strategies
Audience: Undergraduate

5. Identify the most common disease pests of Wisconsin turfgrass, describe their biology, and list effective cultural and chemical disease control strategies
Audience: Undergraduate

FISC 124 – TURFGRASS IRRIGATION AND DRAINAGE
1 credit.

Water and irrigation requirements of turfgrasses; irrigation budgeting and scheduling; water conservation strategies; soil water flow and drainage; evaluation of irrigation water quality.
Requisites: FISC 119
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Carry out common calculations necessary for creating a water budget for turfgrass areas
Audience: Undergraduate

2. Develop a detailed, site-specific water conservation plan for a turfgrass area based on principles of turfgrass management and soil science
Audience: Undergraduate

3. Interpret a variety of water test reports, and develop a management plan for dealing with poor quality water
Audience: Undergraduate

4. Make decisions about root zone construction for turfgrass areas, including drainage options to achieve agronomic goals while minimizing water use
Audience: Undergraduate

FISC 133 – SOIL AND CROP NUTRIENT MANAGEMENT
2 credits.

Students will understand how to sample and analyze soil to determine nutrient composition and deficiencies, apply knowledge of crop needs to develop nutrient management plans for various crops across a spectrum of Wisconsin soil types, and understand how other properties of soil, including drainage and erosion, can impact nutrient levels and crop productivity.
Requisites: FISC 57
Repeatable for Credit: No
Last Taught: Spring 2020

FISC 134 – REPRODUCTION OF FARM ANIMALS
2 credits.

Students will learn the basic comparative physiology of reproduction of farm animals and apply those physiological principles to understand successful heat detection, artificial insemination, estrous synchronization, embryo transfer, pregnancy diagnosis, and improvement of reproductive efficiency through good reproductive management.
Requisites: Declared in the Farm & Industry Short Course program
Repeatable for Credit: No
Last Taught: Spring 2022

FISC 140 – FARM MACHINERY
2 credits.

Principles of operation, construction, maintenance, and management of machines for the production of agricultural crops. Laboratory sessions include working with machine components and actual field machines. Previous experience with farm machinery is not required.
Requisites: Declared in Foundations of Farm Management or Farm and Equipment Operations certificate program
Repeatable for Credit: No
Last Taught: Fall 2021

FISC 142 – IDENTIFICATION AND MANAGEMENT OF AGRONOMIC PESTS
3 credits.

Introduces students to principles in Integrated Pest Management with an emphasis on pest biology and management in agronomic settings.
Requisites: Declared in Crops and Soils Management or Diversified Ag Operations certificate program
Repeatable for Credit: No
Last Taught: Spring 2022

FISC 143 – FARM POWER
2 credits.

Principles of operation, construction, maintenance, and management of agricultural tractors and engine power systems. Covers two- and four-stroke diesel and spark-ignition engines, lubrication, cooling, fuel systems, power measurement, electrical systems, and transmissions. Labs focus on understanding the tractor and engine but do not include tractor or engine overhauls. Course assumes no previous experience with tractors or engines.
Requisites: Declared in Foundations of Farm Management or Farm and Equipment Operations certificate program
Repeatable for Credit: No
Last Taught: Spring 2022

FISC 145 – PRECISION AGRICULTURAL TECHNOLOGIES
2 credits.

Precision agriculture can aid in reducing inputs for crop production. Course provides an overview of precision agriculture technologies and will cover Global Positioning Systems, Geographic Information Systems, variable rate technology, section/flow control, soil and yield mapping, and guidance systems. Economics of the different technologies will be discussed. Previous experience with precision agriculture systems is not required.
Requisites: Declared in Foundations of Farm Management or Farm and Equipment Operations certificate program
Repeatable for Credit: No
Last Taught: Fall 2019

FINANCE, INVESTMENT AND BANKING (FINANCE)

FINANCE 200 – FINANCE INDUSTRY FUNDAMENTALS
1 credit.

Comprehensive introduction to the finance industry ecosystem, examining a variety of industry sectors, or "Pathways," within the finance world, providing a nuanced exploration of both macro and micro-level dynamics. Explores the inner workings of firms in each sector, topical events, and latest developments. Deep dive into roles and responsibilities, in preparation for diverse career opportunities.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Obtain a basic understanding of the UW finance industry ecosystem
Audience: Undergraduate

2. Develop a detailed knowledge of the seven finance industry pathways
Audience: Undergraduate

3. Recognize the distinction between corporate finance, the buy-side, and the sell-side finance industry sectors
Audience: Undergraduate

4. Explain the interactions between individuals, corporations, the sell-side, and the buy-side
Audience: Undergraduate

5. Identify the career pathways available within the finance industry
Audience: Undergraduate

6. Identify the WSB resources available to assist in pathway career exploration, exposure, and preparation (including experiential and extra/co-curricular opportunities, and internal academic and advising resources)
Audience: Undergraduate

FINANCE 205 – FINANCIAL MODELING IN EXCEL
1 credit.

A technical skills course in which you will learn how to construct an error-free, well-structured and user-friendly integrated three-statement company model. Constructing a financial model in Excel is a key skill for success as a financial analyst.
Requisites: ACCT I S 100 or 300
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Navigate and utilize the Excel interface, including optimal settings for financial modeling
Audience: Undergraduate

2. Utilize Excel keyboard shortcuts most common to financial modeling
Audience: Undergraduate

3. Understand and utilize best practices to build a financial model that is error-free, well-structured and user-friendly
Audience: Undergraduate

4. Understand and utilize best practices related to error prevention while modeling
Audience: Undergraduate

5. Construct an integrated income statement, balance sheet and cash flow statement
Audience: Undergraduate

6. Incorporate circular references via interest expense and interest income, and manage them with a "circuit breaker"
Audience: Undergraduate

7. Construct a three-statement integrated financial model with a cash sweep and waterfall debt schedule
Audience: Undergraduate

8. Build a model from scratch using corporate historical financial statements as a starting point
Audience: Undergraduate

9. Understand various approaches to developing a top-line forecast
Audience: Undergraduate

10. Apply error checking and correction techniques to completed model to ensure accuracy
Audience: Undergraduate

FINANCE/ECON 300 – INTRODUCTION TO FINANCE
3 credits.

Concepts and techniques in corporate finance and investments. Topics include the financial environment, securities markets, financial markets, financial statements and analysis, working capital management, capital budgeting, cost of capital, dividend policy, asset valuation, investments, decision-making under uncertainty, mergers, options, and futures.
Requisites: (ECON 101, 111 or A A E 101) and (ACCT I S 100 or 300 or concurrent enrollment) and (GEN BUS 206, 306, ECON 310, MATH 331, STAT/MATH 309, 431, STAT 224, 301, 302, 311, 324, 371 or PSYCH 210 or concur enrollment) or declared undergrad Bus Exchange Program
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply discounted cash flow analysis in various contexts and determine the appropriate discount rate for these calculations.
Audience: Undergraduate

2. Calculate and interpret the effect of leverage on firms' cost of debt, cost of equity, and a company's cost of capital under different assumptions.
Audience: Undergraduate

3. Characterize an efficient market and explain the implications of market efficiency for investors and corporations.
Audience: Undergraduate

4. Characterize different types of securities (including stocks, bonds, and derivatives) and identify the key features of each.
Audience: Undergraduate

5. Compute present and future values under different compounding assumptions.
Audience: Undergraduate

6. Demonstrate a command of the Capital Asset Pricing Model, including its strengths and weaknesses and its use in computing expected returns.
Audience: Undergraduate

7. Demonstrate the power of diversification and the risk-return tradeoff quantitatively.
Audience: Undergraduate

8. Solve capital budgeting problems using appropriate decision rules, taking into account the strengths and weaknesses of the available approaches.
Audience: Undergraduate

FINANCE 305 – FINANCIAL MARKETS, INSTITUTIONS AND ECONOMIC ACTIVITY
3 credits.

An analysis of the U.S. financial system, its responsiveness to and impact on economic activity and policy, its procedures for assessing and pricing risks on various financial instruments, and its role in the allocation of funds to different sectors in the economy.
Requisites: (ECON/FINANCE 300 or concurrent enrollment), or declared in undergraduate Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand the sources and uses of funds for the main financial institutions in the U.S.
Audience: Undergraduate

2. Explain how deposit money is created in the banking system.
Audience: Undergraduate

3. Summarize how government budget deficits affect the money supply.
Audience: Undergraduate

4. Classify the various instruments the Federal Reserve uses to influence interest rates and the money supply.
Audience: Undergraduate

5. Understand how monetary and fiscal policies can affect the economy.
Audience: Undergraduate

6. Explain how monetary policy can affect the aggregate supply schedule in the economy.
Audience: Undergraduate

7. Infer how financing decisions of firms change over the business cycle.
Audience: Undergraduate

8. Interpret how Basle 3 and the Dodd-Frank affect the business model of financial institutions.
Audience: Undergraduate

9. Conclude how the Consumer Financial Protection Bureau affects the business model of financial institutions.
Audience: Undergraduate

FINANCE 310 – DATA ANALYTICS FOR FINANCE
3 credits.

With a hands-on approach, covers advanced analytics methods for forecasting, predicting, reporting, and analyzing. Relies on Python as its primary coding language. Begins with a review of coding fundamentals and progressively delves into increasingly realistic and complex finance applications.
Requisites: ECON/FINANCE 300
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Understand the fundamentals of programming and how those fundamentals are implemented in Python
Audience: Undergraduate

2. Download, organize, and manipulate data to prepare them for Finance applications
Audience: Undergraduate

3. Visualize and organize Financial Data for the purpose of creating effective presentations
Audience: Undergraduate

4. Apply these programming skills in the context of standard financial applications such as asset pricing model estimation, Monte Carlo simulations for capital budgeting purposes, portfolio optimization, and financial analysis and forecasting
Audience: Undergraduate

FINANCE/ECON 320 – INVESTMENT THEORY
3 credits.

Structure and functioning of securities markets; principles of portfolio construction; models of the tradeoff between risk and expected return.
Requisites: FINANCE/ECON 300, (MATH 213 or 222) and (GEN BUS 307, 317, 656, ACT SCI 654, 655, ECON 400, 410, STAT/MATH 310, STAT 312, or 333 or concurrent enrollment) or declared in undergraduate Business Exchange program
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Solve real-world investment problems
Audience: Undergraduate

2. Formulate the trade-off between risk and return
Audience: Undergraduate

3. Describe the distribution of returns on broad asset classes
Audience: Undergraduate

4. Identify investors' risk preferences
Audience: Undergraduate

5. Use portfolio optimization techniques to develop an asset allocation for an investor
Audience: Undergraduate

6. Examine factor models of returns
Audience: Undergraduate

7. Compare different equilibrium security pricing models
Audience: Undergraduate

8. Debate market efficiency
Audience: Undergraduate

FINANCE 325 – CORPORATION FINANCE
3 credits.

Development of the theory, method and analytical techniques of financial management. Techniques of capital budgeting; valuation of projects and firms; theory of capital structure; dividend policy; cost of capital; mergers and acquisitions.
Requisites: FINANCE/ECON 300, ACCT I S 301, (MATH 213 or 222) and (GEN BUS 307, 317, ACT SCI 654, ECON 400, 410, STAT/MATH 310, STAT 312, 333 or concurrent enrollment), or declared in undergraduate Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Set a capital budget
Audience: Undergraduate

2. Evaluate projects with discount cash flow valuation
Audience: Undergraduate

3. Compute the appropriate cost of capital
Audience: Undergraduate

4. Value whole firms with discount cash flow valuation
Audience: Undergraduate

5. Identify factors that determine an optimal capital structure of a firm and how debt impacts financial decisions
Audience: Undergraduate

6. Explain the basics of mergers and acquisitions
Audience: Undergraduate

FINANCE 330 – DERIVATIVE SECURITIES
3 credits.

Pricing and uses of the most common derivatives including options, forward contracts, futures contracts, and swaps.
Requisites: FINANCE/ECON 300, (MATH 213 or 222), and (GEN BUS 307, 317, 656, ACT SCI 654, 655, ECON 400, 410, STAT/MATH 310, STAT 312, 333 or concurrent enrollment), or declared in undergraduate Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the differences between various derivative contracts including forwards, futures, options, swaps and credit derivatives.
Audience: Undergraduate

2. Derive the no-arbitrage forward/futures prices.
Audience: Undergraduate

3. Demonstrate the technical skills of applying various option pricing methods.
Audience: Undergraduate

4. Implement various derivative trading strategies to generate profit.
Audience: Undergraduate

5. Use derivatives to hedge financial and business risks.
Audience: Undergraduate

FINANCE 340 – FIXED INCOME SECURITIES
3 credits.

Analysis of fixed income, bond markets. Introduce tools for evaluating bonds and making decisions about trading and hedging portfolios of fixed income securities. Focus on government bonds and derivative securities. Consider basic ways to price bonds using techniques that are well established on Wall St. Introduces basic trading strategies based on exploiting mis-priced securities. Strategize ways to measure and minimize risk. Other topics include repo financing, mortgage markets, and basic issues involving default risk of corporate bonds.
Requisites: FINANCE 305, 325, 330, and ECON/FINANCE 320
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply the mathematics of fixed income markets.
Audience: Undergraduate

2. Utilize appropriate tools and techniques, including various measures of duration and convexity, to make decisions about trading and hedging portfolios of fixed income securities.
Audience: Undergraduate

3. Explain the structure and uses of fixed income derivative instruments, including options, forwards and swaps.
Audience: Undergraduate

FINANCE 365 – CONTEMPORARY TOPICS
1-3 credits.

Exploration of subject areas possibly to be introduced into the business curriculum.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

FINANCE 399 – READING AND RESEARCH-FINANCE
1-6 credits.

Individual work suited to the needs of undergraduate students may be arranged with faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

FINANCE 410 – BANK MANAGEMENT
3 credits.

Management of depository financial intermediaries with primary emphasis on commercial banks. Topics include bank regulation, liquidity and reserve position management, loan pricing and analysis, investment portfolio problems and overall asset liability management.
Requisites: (FINANCE 305, 325, 330, and ECON/FINANCE 320) or declared in undergraduate Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain how bank operations and strategy are impacted by regulatory constraints, competition, and many risks inherent in banking.
Audience: Undergraduate

2. Identify the major components of a bank balance sheet and income statement.
Audience: Undergraduate

3. Analyze bank performance using industry standard bank profitability and capital planning models and the bank regulator CAMELS methodology.
Audience: Undergraduate

4. Manage interest risk in banks.
Audience: Undergraduate

5. Articulate the basics of both commercial and consumer lending including customer profitability analysis.
Audience: Undergraduate

FINANCE 420 – INVESTMENT BANKING AND CAPITAL MARKETS
3 credits.

Broad overview of investment banking. Topics covered include valuation, cash flow, initial public offerings, leveraged buyouts, acquisitions, and related corporate governance issues.
Requisites: (FINANCE 305, 325, 330, and ECON/FINANCE 320) or declared in undergraduate Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Locate relevant information in financial statements and the footnotes to financial statementsand acquisitions, initial public offerings and investment banking
Audience: Undergraduate

2. Utilize appropriate financial tools and databases (e.g., Excel, Capital IQ, Bloomberg) to access and effectively present financial information
Audience: Undergraduate

3. Demonstrate the fluency required to understand conceptually how valuation methodologies work and how changes in assumptions impact valuation
Audience: Undergraduate

4. Build and interpret financial models utilizing the fundamental valuation techniques that investment bankers use including discounted cash flow analysis, comparable companies, precedent transactions and leveraged buyout analysis
Audience: Undergraduate

5. Demonstrate an understanding of capital markets transactions where securities are issued to investors
Audience: Undergraduate

FINANCE/INTL BUS 445 – MULTINATIONAL BUSINESS FINANCE
3 credits.

Application of financial theory to the operations of multinational firms; survey of the international financial environment; determinants of international portfolio and direct investment capital flows; management of foreign exchange position and hedging strategies; evaluation of foreign investment projects (multinational capital budgeting); international financial structure decisions; multinational credit institutions and capital markets; taxation of international business.
Requisites: (FINANCE 305, 325, 330, and ECON/FINANCE 320), or declared in undergraduate Business Exchange program
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate the knowledge and technical skills needed to be the treasurer of an international firm
Audience: Undergraduate

2. Apply methods to measure, manage and analyze the effects posed by exchange rate risk to the income statement and balance sheet of a firm
Audience: Undergraduate

3. Evaluate foreign investment decisions
Audience: Undergraduate

4. Articulate the choices and challenges faced by managers when sourcing funds in the global capital markets, and in making complex foreign investment decisions
Audience: Undergraduate

FINANCE 457 – ENTREPRENEURIAL FINANCE
3 credits.

Discusses the tools helpful for financing new ventures, with emphasis on their applications. The course also helps students understand the institutional setting that has an impact on the financing conditions of new ventures.
Requisites: FINANCE/ECON 300, ACCT I S 301, and (MATH 213 or 222)
Repeatable for Credit: No
Last Taught: Spring 2025

FINANCE/ECON 503 – MARKETS WITH FRICTIONS
3 credits.

Search theory provides framework for understanding markets and is used to study questions in monetary, public, financial economics. Develop theoretical tools used to introduce frictions in formal models and address the role of frictions in several applied scenarios.
Requisites: (FINANCE 305, 325, 330, and ECON/FINANCE 320), (ECON 301, 302, 311, or 312), or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Examine new issues related to frictional markets by looking at old issues in new ways.
Audience: Both Grad & Undergrad

2. Demonstrate economic reasoning about the economy at a micro and macro level by applying the foundations of mainstream economics.
Audience: Both Grad & Undergrad

3. Explain credit market rationing and its impact on markets for housing, small business loans and other investments.
Audience: Both Grad & Undergrad

4. Articulate the contributing factors of bubbles and crashes in asset prices.
Audience: Both Grad & Undergrad

5. Articulate the role of money and banking in the inter-temporal allocation of resources.
Audience: Both Grad & Undergrad

6. Articulate your perspectives on fundamental questions like: Why we use money? What is a bank? How do organizations (like firms or families) form?

Audience: Both Grad & Undergrad

7. Construct and analyze the three generations of money search models and apply this framework appropriately to real-world economic and financial issues.
Audience: Graduate

FINANCE 535 – APPLIED EQUITY MARKETS RESEARCH 1
3 credits.

A capstone experience focused on investments, research, sales and trading which is designed to provide the opportunity to learn and perform many of the practical skills necessary to research, analyze and pitch equity securities as long investments and/or short sales. Application required.
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Assess business models so as to understand the future performance and intrinsic value of a particular business
Audience: Undergraduate

2. Develop a framework to assess business quality and how it might change over time
Audience: Undergraduate

3. Identify key drivers of an industry and company
Audience: Undergraduate

4. Analyze the financial information that comes to market from the companies as a means to extrapolate future information
Audience: Undergraduate

5. Develop a view (a preliminary investment thesis) utilizing a methodology to develop forecasts and projected financial model for a company
Audience: Undergraduate

6. Write a short investment thesis and recommendation for a company's stock
Audience: Undergraduate

FINANCE 536 – APPLIED EQUITY MARKETS RESEARCH 2
3 credits.

A second capstone experience involving self-directed research and analysis in the areas of investments, research, sales and trading designed to provide the opportunity to apply concepts learned in FINANCE 535.
FINANCE 535
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Analyze two specific companies and their business models to estimate likely future performance and intrinsic value.
Audience: Undergraduate

2. Describe the competitive dynamics in the related industries
Audience: Undergraduate

3. Explain how key drivers affect a company's financials
Audience: Undergraduate

4. Conduct field research to assess the business models and validate key drivers
Audience: Undergraduate

5. Create a survey to views (preliminary investment theses) with evidence from field research
Audience: Undergraduate

6. Create a pitch report for each stock summarizing conclusions with supporting analysis
Audience: Undergraduate

7. Develop presentation techniques through in-class stock pitch presentations
Audience: Undergraduate

FINANCE 601 – STRATEGIC PLANNING FOR ESTATES AND BUSINESS TRANSITIONS
3 credits.

Introduces and broadens understanding of the intricacies surrounding wealth preservation, intergenerational wealth transfer, and trust financial services. Delves into the legal, tax, and financial aspects of estate planning, business succession strategies, and efficient wealth transfer techniques. Explore cutting-edge approaches for mitigating tax liabilities, navigating complex family dynamics, and structuring customized solutions for diverse client needs while highlighting career opportunities within the trust financial services industry and preparing for a range of professional paths. Gain the expertise needed to effectively advise clients and guide them through the process of safeguarding and transferring their wealth, ensuring a lasting financial legacy.
Requisites: (FINANCE 305, 325, 330, and ECON/FINANCE 320) or FINANCE 700, or declared in the Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply Estate Planning terminology, planning process, strategies and illustrate tax and non-tax outcomes.
Audience: Both Grad & Undergrad

2. Procure and analyze select qualitative and quantitative data to prioritize goals, articulate current plan weaknesses and formulate alternative options.
Audience: Both Grad & Undergrad

3. Demonstrate how various Trust arrangements might maximize the benefits or improve the efficiency of an estate plan.
Audience: Both Grad & Undergrad

4. Collaborate with other professionals, on the development of an Estate Plan by experiencing the Multi-Disciplinary Team Approach to Estate Planning.
Audience: Both Grad & Undergrad

5. Apply the CFP Board Financial Planning Practice Standards and Code of Ethics to the practice of Estate Planning.
Audience: Both Grad & Undergrad

6. Describe the various methods, benefits and tax treatment of disposing a closely-held business during life and at death.
Audience: Graduate

FINANCE 602 – WEALTH MANAGEMENT & FINANCIAL PLANNING
3 credits.

Capstone bridging prior academic coursework with professional practice and standards. Employ skills and tools needed to acquire the relevant information and develop a comprehensive financial plan for a client. Provides a complete review of the financial planning CFP Board topics, including ethics and principles of communication and counseling.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate a comprehensive understanding of the content found within the Financial Planning curriculum and effectively apply and integrate thisinformation in the formulation of a financial plan.
Audience: Both Grad & Undergrad

2. Effectively communicate the financial plan, both orally and in writing,including information based on research, peer, colleague or simulated client interaction and/or results emanating from synthesis of material.
Audience: Both Grad & Undergrad

3. Collect all necessary and relevant qualitative and quantitative informationrequired to develop a financial plan.
Audience: Both Grad & Undergrad

4. Analyze personal financial situations, evaluating clients' objectives, needs,and values to develop an appropriate strategy within the financial plan.
Audience: Both Grad & Undergrad

5. Demonstrate logic and reasoning to identify the strengths and weaknesses of various approaches to a specific problem.
Audience: Both Grad & Undergrad

6. Evaluate the impact of economic, political, and regulatory issues with regard to the financial plan.
Audience: Graduate

7. Apply the CFP Board Financial Planning Practice Standards to the financialplanning process (including applying the regulations and ethical behavior that governs the relationship between the planner and the client).
Audience: Both Grad & Undergrad

FINANCE 610 – BANK SIMULATION AND STRATEGY
3 credits.

Covers advanced asset-liability, hedging, tax minimization, merger/acquisitions and economic value added strategies for depository financial institutions. Students practice these strategies by managing their own bank in a computer simulation model, merging with or acquiring other student's banks using MA software, and by playing a foreign exchange trading simulation.
Requisites: FINANCE 410
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020

FINANCE 635 – BUSINESS VALUATION
3 credits.

Theory and practice of business valuation: using financial statements, modeling cash flows, present value, using multiples.
Requisites: (FINANCE 305, 325, 330, and ECON/FINANCE 320) or FINANCE 700, or declared in the Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate a fundamental knowledge of the terminology, foundational concepts and tools necessary to value companies
Audience: Both Grad & Undergrad

2. Demonstrate the ability to forecast and use appropriate financial statements to determine the value of companies
Audience: Both Grad & Undergrad

3. Utilize financial data sources for valuation
Audience: Both Grad & Undergrad

4. Build valuation models using spreadsheets
Audience: Both Grad & Undergrad

5. Articulate the differences as well as the common elements among the various valuation models
Audience: Both Grad & Undergrad

6. Apply common valuation methods
Audience: Both Grad & Undergrad

7. Incorporate environmental, social, and governance (ESG) into company valuation
Audience: Graduate

FINANCE 640 – INTRODUCTION TO CREDIT ANALYSIS & TRADING
3 credits.

Thorough grounding in credit instruments. Topics include loans, bonds, credit default swaps, and trading strategies.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Forecast a company's financial capital structure, liquidity and credit metrics, which will indicate whether the credit profile will improve or deteriorate.
Audience: Both Grad & Undergrad

2. Identify the qualitative and quantitative factors that go into evaluating a company's current and future credit profile and assigning credit ratings.
Audience: Both Grad & Undergrad

3. Develop a Bloomberg Launchpad to monitor news and markets and use Bloomberg to evaluate relative value of bonds, loans and credit default swaps.
Audience: Both Grad & Undergrad

4. Explain the similarities and differences in evaluating industrials, financial institutions, municipals and developed and emerging market sovereign debt.
Audience: Both Grad & Undergrad

5. Read and evaluate corporate credit documentation including bank credit agreements and bond prospectuses.
Audience: Both Grad & Undergrad

6. Describe the hierarchy of decisions and different strategies for managing fixed income portfolios and how to evaluate performance vs a benchmark.
Audience: Both Grad & Undergrad

7. Prepare comparable (comps) sheet analysis for financial and sovereign issuers and identify trading opportunities.
Audience: Graduate

FINANCE 645 – INTRODUCTION TO APPLIED SECURITY ANALYSIS
3 credits.

Focuses on industry analysis and security selection, with particular emphasis on identification of value drivers and on communicating the idea to a portfolio manager.
Requisites: Declared in Finance, Investment and Banking: Applied Security Analysis, MBA or Finance, Investment and Banking: M.S.
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply an analytical framework to a security selection process, including identifying and forecasting key drivers of company performance.
Audience: Both Grad & Undergrad

2. Produce a three-statement financial model with relevant ratios and forward-looking forecasts.
Audience: Both Grad & Undergrad

3. Apply absolute and relative valuation approaches to companies to assist with making investment decisions.
Audience: Both Grad & Undergrad

4. Articulate how analysts conduct field research, including sources frequently used in researching companies, management teams and industries.
Audience: Both Grad & Undergrad

5. Formulate an investment thesis statement and persuasively communicate the recommendation to others.
Audience: Both Grad & Undergrad

6. Establish a network of contacts and relationships in the investment community through the interview process and by participating in alumni and industry events.
Audience: Graduate

FINANCE 646 – INTRODUCTION TO APPLIED PORTFOLIO MANAGEMENT
3 credits.

Focuses on portfolio management, including development and implementation of the decision making process.
Requisites: FINANCE 645
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Produce an economic forecast to be used in developing equity and fixed income market return forecasts and in managing individual equity and fixed income portfolios.
Audience: Both Grad & Undergrad

2. Recommend a tactical asset allocation utilizing equity and fixed income return and risk forecasts.
Audience: Both Grad & Undergrad

3. Develop methodology for allocating assets between the equity and fixed income alternatives that maximizes expected return subject to risk within specified guidelines.
Audience: Both Grad & Undergrad

4. Create an investment philosophy and related portfolio decision making process for its implementation.
Audience: Both Grad & Undergrad

5. Develop a process to identify and critique new investment opportunities.
Audience: Both Grad & Undergrad

6. Monitor and control the risk of an investment portfolio.
Audience: Both Grad & Undergrad

7. Enhance existing network of contacts and relationships in the investment community for job placement, and industry events.
Audience: Graduate

FINANCE 650 – MERGERS AND ACQUISITIONS
2-3 credits.

Study of the market for corporate control including mergers and tender offers. Motives for business combinations; impacts on security holders, managers, labor, economic efficiency; federal and state laws; offensive and defensive strategies.
Requisites: (FINANCE 305, 325, 330, and ECON/FINANCE 320), (FINANCE 700 and 635), or (FINANCE 700 and 725)
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the motives for acquisition and how to value an acquisition target both independently and as part of the integrated firm.
Audience: Both Grad & Undergrad

2. Utilize financial statements to calculate earnings, leverage, and cash flow projections resulting from an acquisition or leveraged buyout
Audience: Both Grad & Undergrad

3. Demonstrate a basic understanding of the legal framework underlying the merger transaction, including negotiation, announcement, antitakeover defenses, the fiduciary duties of the board of directors and management, and antitrust regulation
Audience: Both Grad & Undergrad

4. Explain the mechanics of takeover defense strategies, their use and misuse by incumbent management, and the concept of managerial entrenchment
Audience: Both Grad & Undergrad

5. Parse the details of a merger from the disclosed agreement and to understand the incentives of the various parties involved, including target and acquirer management and the facilitating investment bank
Audience: Both Grad & Undergrad

6. Develop a broad theoretical framework that connects the theories of capital structure, managerial entrenchment, corporate governance and diversification to the decision to merge and the financing of the transaction.
Audience: Graduate

FINANCE 676 – APPLIED SECURITY ANALYSIS AND INVESTMENT MANAGEMENT II
4 credits.

Management of an actual portfolio of investments. Engage in security analysis, implement a portfolio strategy, and report portfolio performance and diagnostic analytics to the trustees of the portfolio.
Requisites: FINANCE 675
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Assess the value of publicly traded equity and fixed income securities.
Audience: Both Grad & Undergrad

2. Demonstrate an understanding of the causes of mispriced securities: how to identify mispriced securities and how to evaluate the success of an evaluation process and decisions through the active management of a portfolio.
Audience: Both Grad & Undergrad

3. Develop portfolios designed to produce consistent positive returns and/or outperform benchmarks without taking on significant absolute or incremental risk.
Audience: Both Grad & Undergrad

4. Assess portfolio level risk using traditional measures of volatility and projected risk on both an absolute and relative basis using factor risk models.
Audience: Both Grad & Undergrad

5. Recognize and apply the importance of ethical behavior within the investment industry and practice the application of a framework to work through ethical dilemmas.
Audience: Both Grad & Undergrad

6. Utilize a team structure to sharpen communication and collaboration skills in an effort to successfully execute an active management strategy, and obtain an investment industry job upon graduation.
Audience: Both Grad & Undergrad

7. Apply contemporary research to enhance portfolio management strategies.
Audience: Graduate

FINANCE 700 – INTRODUCTION TO FINANCIAL MANAGEMENT
2-3 credits.

Introduction to financial management of firms and investment decision making; both theory and practice are emphasized. Topics covered include the financial environment and securities markets, financial statements and analysis, working capital management and capital budgeting, cost of capital, dividend policy, asset valuation, investments, decision making under uncertainty and selected topics such as mergers, options, futures.
Requisites: Declared in a Master of Business Administration degree program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. compute present values, future values, and returns under different compounding assumptions
Audience: Graduate

2. apply discounted cash flow analysis in a variety of contexts and determine the appropriate discount rate for these calculations
Audience: Graduate

3. outline the key considerations in potentially complex capital budgeting problems and employ appropriate decision rules to evaluate projects
Audience: Graduate

4. explain verbally and demonstrate quantitatively the power of diversification and the risk-return tradeoff
Audience: Graduate

5. characterize an efficient market and explain the implications of market efficiency for investors and corporations
Audience: Graduate

6. engage in the study of finance topics with classmates from a variety of personal, professional, and educational backgrounds so as to understand themselves better and how they can positively contribute to both their own and others' success
Audience: Graduate

FINANCE 720 – INVESTMENT THEORY AND PRACTICE
3 credits.

Development of the theory, instruments, techniques and practice of modern investment management. Topics include asset pricing and valuation under certainty and uncertainty, portfolio management, determination of interest rates, immunization strategies and derivative securities.
Requisites: (FINANCE 700 and GEN BUS 704), declared in graduate Business Exchange program, or Financial Economics MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Formulate the trade-off between risk and return for real-world investment problems
Audience: Graduate

2. Describe the distribution of returns on broad asset classes
Audience: Graduate

3. Use portfolio optimization techniques to develop an asset allocation for an investor
Audience: Graduate

4. Examine factor models of returns
Audience: Graduate

5. Compare different equilibrium security pricing models
Audience: Graduate

6. Debate market efficiency
Audience: Graduate

7. Compute bond prices and relate them to term structure theory
Audience: Graduate

8. Apply interest rate risk management to solve real-world problems
Audience: Graduate

FINANCE 725 – CORPORATION FINANCE THEORY AND PRACTICE
2-3 credits.

Theory and practice of financial management of firms. Techniques of capital budgeting under certainty and uncertainty; valuation of projects and firms; theory of capital structure; dividend policy; cost of capital; mergers and acquisitions.
Requisites: FINANCE 700
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain why, when and how companies raise debt and equity and decide on the mix of both sources of finance.
Audience: Graduate

2. Recognize the effect of agency costs – adverse selection and moral hazard - on the capital structure of the firm.
Audience: Graduate

3. Explain how firms choose to structure hybrid securities to reduce market frictions.
Audience: Graduate

4. Differentiate how firms manage risks both internally as well as with derivative contracts.
Audience: Graduate

5. Summarize the different ways firms return money to investors and the logic behind different payout policies.
Audience: Graduate

FINANCE 730 – DERIVATIVE SECURITIES - THEORY AND PRACTICE
3 credits.

Covers the pricing and uses of the most common derivative contracts including options, forward contracts, futures contracts, and exchange-traded funds (ETFs). Also emphasizes a practical understanding of trading and management of portfolios of these contracts, and makes use of an online trading platform. Mathematical and statistical analyses are used throughout.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Compare and contrast the risk and theoretical valuation of derivative securities in competitive markets.
Audience: Graduate

2. Execute "real" trades through Interactive Brokers to connect the theories of hedging and trading derivatives to real-life applications.
Audience: Graduate

3. Summarize research that identifies derivative trading strategies.
Audience: Graduate

FINANCE 740 – ANALYSIS OF FIXED INCOME SECURITIES
3 credits.

Detailed coverage of fixed income securities and their derivatives; asset backed/mortgage backed securities; pricing and portfolio strategies; term structures models and other analytical tools.
Requisites: (FINANCE 700 and GEN BUS 704) or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Utilize and be comfortable with the mathematics of fixed income markets.
Audience: Graduate

2. Utilize appropriate tools and techniques, including various measures of duration and convexity, to make decisions about trading and hedging portfolios of fixed income securities.
Audience: Graduate

3. Explain the structure and uses of fixed income derivative instruments, including options, forwards, and swaps.
Audience: Graduate

FINANCE/INTL BUS 745 – MULTINATIONAL BUSINESS FINANCE
2-3 credits.

Theory of business finance as applied to the operations of multinational firms; financial analysis and control of foreign investment decisions; working capital management; multinational credit institutions and capital markets; special accounting problems and trends in international monetary affairs.
Requisites: FINANCE 700
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate the knowledge and skills needed as a senior financial officer of an international firm.
Audience: Graduate

2. Understand how the international economic and financial environment and the exchange rates affect financial decisions by firms.
Audience: Graduate

3. Apply the methods used to measure, manage and analyze the effects posed by exchange rate uncertainty to the income statement and balance sheet of a firm.
Audience: Graduate

4. Articulate the choices and challenges faced by managers when sourcing funds in the global capital markets, and in making complex foreign investment decisions
Audience: Graduate

FINANCE 757 – ENTREPRENEURIAL FINANCE
2-3 credits.

About a half of all new businesses fail in the first five years. Learn about the tools, state-of-the-art valuation methods, and practical knowledge that are needed to make appropriate financing decisions in such highly uncertain environments.
Requisites: (FINANCE 700 and GEN BUS 704) or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand the different valuation methods, financing alternatives and the ways in which strategic choices interact with valuation and fundraising
Audience: Graduate

2. Integrate the critical roles and processes of the venture capital (VC) industry, the financial instruments they typically use and details of VC contracts
Audience: Graduate

3. Use the necessary theoretical and practical tools to contextualize which valuation method and assumptions are most appropriate in different circumstances
Audience: Graduate

FINANCE 760 – CURRENT TOPICS AND APPLIED LEARNING IN FINANCE
1 credit.

Examination and reflection of finance career pathways and current finance skills, applications and practices. Career development techniques and tools, communication and professional skills.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 2 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Expand professional network and reflect on interactions with industry professionals
Audience: Graduate

2. Articulate various career pathways and roles within finance
Audience: Graduate

3. Demonstrate developed professional skills, both written and verbal
Audience: Graduate

FINANCE 765 – CONTEMPORARY TOPICS
1-4 credits.

Exploration of advanced subject areas possibly to be introduced into the business curriculum.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

FINANCE 799 – READING AND RESEARCH-FINANCE
1-6 credits.

Individual work suited to the needs of graduate students may be arranged both during regular sessions and the intersession periods.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

FINANCE 830 – ADVANCED DERIVATIVE SECURITIES
3 credits.

Introduces continuous-time financial models essential for the advanced analysis of derivative securities. Discuss the fundamental mathematical concepts and tools from continuous-time stochastic processes including Brownian motion, Poisson processes, stochastic calculus, and change of measure. This provides a framework for analyzing derivative securities including their pricing, hedging, and risk management. In particular, covers the Black-Scholes and stochastic volatility models for equity options; basic term-structure modeling for interest rate derivatives; and reduced-form credit-risk models. Emphasis is put on applications and economic interpretation rather than mathematical rigor.
Requisites: Declared in Financial Economics MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Build models for pricing and risk-managing equity, interest rate, and credit derivatives.
Audience: Graduate

2. Explain the relationship between martingales and stochastic discount factors.
Audience: Graduate

3. Apply the rules of stochastic calculus to derive valuation equations for contingent claims relying on the concepts of no-arbitrage and replication.
Audience: Graduate

4. Price derivatives using analytical methods, including log-normal and exponential-affine models.
Audience: Graduate

5. Price derivatives using numerical methods, including Monte Carlo simulations and numerical solutions to dynamic valuation equations.
Audience: Graduate

FINANCE 835 – APPLIED SECURITY ANALYSIS AND INVESTMENT MANAGEMENT I
5 credits.

The management of an actual portfolio of investments. Engage in security analysis, develop a portfolio policy, and participate in field research such as trips to interview the management of potential portfolio acquisitions.
Requisites: Declared in Finance, Investment and Banking: Applied Security Analysis graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify a company's key sources of competitive advantage and determine the sustainability of that advantage.
Audience: Graduate

2. Build financial statement models that help determine likely company outcomes and identify key drivers and risks.
Audience: Graduate

3. Develop a macroeconomic outlook and an interest rate forecast that is consistent with that outlook.
Audience: Graduate

4. Demonstrate skills to differentiate between analytical mistakes and natural volatility.
Audience: Graduate

5. Assess portfolio level risk using traditional measures of volatility and projected risk on both an absolute and relative basis using factor risk models.
Audience: Graduate

6. Cultivate high-level interviewing skills designed to differentiate knowledge and experience from other MS/MBA student applicants.
Audience: Graduate

7. Articulate how ethical behavior, particularly as described in the CFA Institute's Code of Ethics and Professional Conduct, serves the best interests of both clients and investment professionals.
Audience: Graduate

FINANCE 850 – APPLIED CORPORATE FINANCE I
4 credits.

Advanced corporate finance course that provides graduate students practical experience by working on consulting projects. Students work on applied projects in the areas of capital budgeting, capital structure and cash distribution policies. Emphasis on application of theoretical corporate finance concepts.
Requisites: Declared in Finance, Investment and Banking: Corporate Finance and Investment Banking graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

FINANCE 920 – THEORY OF FINANCE
3 credits.

Intensive review of modern theories of corporate finance and investments.
Requisites: Declared in Business PHD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

FINANCE 970 – SEMINAR- INVESTMENTS (PH.D.)
3 credits.

Intensive study and critical examination of recent empirical and theoretical literature investments.
Requisites: Declared in Business PHD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

FINANCE 971 – SEMINAR-CORPORATE FINANCE (PH.D.)
1-3 credits.

Intensive study and critical examination of recent empirical and theoretical literature in corporate finance.
Requisites: Declared in Business or Economics PhD programs
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate the theoretical body of work that comprises corporate finance, including its fundamental theorems
Audience: Graduate

2. Examine the big open questions in theoretical research in corporate finance
Audience: Graduate

3. Apply the quantitative methods used in corporate finance research
Audience: Graduate

4. Utilize statistical software and financial databases to perform econometric analyses commonly used in academic corporate finance research.
Audience: Graduate

5. Use standard reduced-form and structural approaches to address problems of endogeneity in answering questions of causality.
Audience: Graduate

6. Identify, describe, and produce questions at the frontier of research in academic corporate finance.
Audience: Graduate

FINANCE 972 – TOPICS SEMINAR-FINANCE PHD
3 credits.

Special topics of current or emerging interest in financial economics.
Requisites: Declared in Business PHD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

FINANCE 973 – SEMINAR-WORKSHOP IN FINANCE
2 credits.

Seminar primarily devoted to the generation of original research in the field of finance for the PhD dissertation and subsequent publication in the academic literature.
Requisites: Declared in Business PHD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze others' research critically, as well as their own
Audience: Graduate

2. Communicate research findings accurately and effectively
Audience: Graduate

3. Access current top-tier research in Finance
Audience: Graduate

FINANCE 974 – ADVANCED TOPICS SEMINAR-FINANCE PHD
3 credits.

Discuss topics of current and emerging interests in financial economics; analyze open questions and new methodologies that are being applied to address these questions. Build on knowledge in financial economics and further previous exposure to both continuous-time and discrete-time dynamic models. Topics will evolve over time as new papers will be added and addressed.
Requisites: Declared in Business or Economics PhD programs
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024
Learning Outcomes: 1. Evaluate frontier research papers in financial economics.
Audience: Graduate

2. Formulate a new research question based on surveyed literature.
Audience: Graduate

3. Effectively present research findings in an academic setting.
Audience: Graduate

FINANCE 990 – FINANCE INDEPENDENT RESEARCH PHD THESIS
1-12 credits.

Individual work to complete dissertation requirement of Ph.D. program.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

FINANCE 999 – READING AND RESEARCH-FINANCE PHD
1-6 credits.

Individual work suited to the needs of Ph.D. students may be arranged both during regular sessions and during the intersession periods.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

FOLKLORE PROGRAM (FOLKLORE)

FOLKLORE 100 – INTRODUCTION TO FOLKLORE
3 credits.

Surveys folklore in the United States and around the world, with a comparative emphasis on ways in which individuals and groups use beliefs, songs, stories, sayings, dances, festivals, and artifacts to address issues of identity, authenticity, and authority, in complex societies.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

FOLKLORE/AFROAMER/AMER IND/ASIAN AM/CHICLA 102 – INTRODUCTION TO COMPARATIVE US ETHNIC AND AMERICAN INDIAN STUDIES
3 credits.

Introduction to comparative ethnic studies, examining race, ethnicity, and indigeneity within the United States. Includes perspectives from African American, American Indian, Asian American, and Chican@ and Latin@ studies.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize the multicultural history of the United States of America and the essential role of Indigenous, African, Asian and Chicanx/e & Latinx/e peoples in the American story.
Audience: Undergraduate

2. Identify the creation, development and legacies of race-based discrimination in the United States.
Audience: Undergraduate

3. Explain the role of race in the creation of value systems in American society.
Audience: Undergraduate

4. Explore the heterogeneity and complexity within persistently marginalized groups as well as their relations to each other.
Audience: Undergraduate

5. Reflect on their learning experience so that they may develop as well-rounded, informed, and educated members of society who can effectively and successfully participate in a multicultural society.
Audience: Undergraduate

FOLKLORE/MUSIC 103 – INTRODUCTION TO MUSIC CULTURES OF THE WORLD
3 credits.

An introductory ethnomusicology course providing a variety of ways to approach musics typically not covered in music history courses. Active engagement with these musics within their larger world contexts.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Engage with various musics on students' own terms
Audience: Undergraduate

2. Speak and write clearly about what is heard.
Audience: Undergraduate

3. Recognize and contextualize the several genres of music that represent each cultural area selected for study in the course
Audience: Undergraduate

4. Think rigorously about how positionality, including your own, affects listening and knowledge practices
Audience: Undergraduate

5. Have learned something about yourself -- strengths, weaknesses, biases, desires, tendencies, curiosities
Audience: Undergraduate

FOLKLORE/RELIG ST 104 — SACRED PLACES AND JOURNEYS
3 credits.

An introduction to the study of religion through the lens of sacred places and journeys, including pilgrimage.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2021
Learning Outcomes: 1. Apply key theories in the study of religion to varied religious phenomena in research and essay writing
Audience: Undergraduate

2. Articulate the influence of positionality in the study of religion
Audience: Undergraduate

3. Articulate how places become perceived, constructed and used as sites of sacrality in different religious, spiritual and secular contexts
Audience: Undergraduate

4. Articulate the complex ways that migration and politics affect the perception and use of sacred sites
Audience: Undergraduate

5. Discuss religious matters in a respectful but detached (non-proselytizing) manner
Audience: Undergraduate

FOLKLORE/GNS 200 — FOLKLORE OF CENTRAL, EASTERN AND NORTHERN EUROPE
3 credits.

Folklore of Central, Eastern and Northern Europe and among emigrants from these regions in North America. A survey of genres of folklore, history of research, and modes of interpretation, past and present.
Requisites: None
Course Designation: Gen Ed - Communication Part B
Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Recognize and understand key concepts important to the study of folklore as related to the cultures of people in and from the countries of Central, Eastern and Northern Europe.
Audience: Undergraduate

2. Articulate and apply methods folklorists use to document, describe, and discuss culture.
Audience: Undergraduate

3. Produce folkloristic products in the form of essays, oral presentations, and digital products.
Audience: Undergraduate

FOLKLORE/AFRICAN 210 — THE AFRICAN STORYTELLER
3 credits.

The oral tradition and the written word; the composition of stories, relationship between performer and audience, and transmission of tradition in various African societies.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

FOLKLORE/ANTHRO/INTL ST/LINGUIS 211 — GLOBAL LANGUAGE ISSUES
3 credits.

Focuses on language and its culture, example topics include: extinction and revival, language and nationhood, how widely and deeply languages differ, language and worldview, writing systems and literacy, language discrimination and inequality.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Identify ways that geographic, social, and political events, movements, and trends shape the sociolinguistic context of the world's languages
Audience: Undergraduate

2. Demonstrate an understanding of subfields of global sociolinguistic inquiry, including language contact, variation, change, and death; language revitalization; the intersections of language, race, and ethnicity; the intersections of language and gender, and sexuality
Audience: Undergraduate

3. Critically evaluate specific examples of language use in a variety of linguistic and cultural contexts
Audience: Undergraduate

4. Design and conduct a sociocultural linguistic research project, including: identify a research question; collect appropriate resources and data; conduct data analysis and interpretation; draw conclusions, and summarize results
Audience: Undergraduate

FOLKLORE 215 – ELEMENTARY TOPICS IN FOLKLORE
1-3 credits.

Exploration of various topics in the study of folklore, folklife, myth, foodways, or music.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate an understanding of general themes and concepts in the folklore topic being covered.
Audience: Undergraduate

2. Articulate the ways folklore affects and is affected by the society in which it functions.
Audience: Undergraduate

3. Communicate effectively through written essays, oral presentations and discussion.
Audience: Undergraduate

FOLKLORE 220 – THE FOLK TALE
3 credits.

Types of heroes, social functions, and tellers; tales from four cultures.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

FOLKLORE 225 – HORROR AS EXPRESSIONS OF NATIONAL ANGST
3 credits.

Explore horror as cultural phenomenon and how it represents various forms of cultural/national angst.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize, describe and analyze cultural phenomena; specifically horror narrative and the communities that watch them, and put it into context
Audience: Undergraduate

2. Communicate effectively through written essays, oral presentations and discussion
Audience: Undergraduate

3. Analyze the connections between horror narrative and the wider workings of culture
Audience: Undergraduate

FOLKLORE 230 – INTRODUCTION TO AMERICAN FOLKLORE
3 credits.

Folklore of ethnic, regional, religious, and occupational cultures, emphasizing how diverse peoples (African Americans, American Indians, Appalachians, Chicanos, Germans, Irish, Jews, Mormons, miners, service workers, etc.) use traditional festivals, artifacts, songs and stories to express their experiences within American life.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2019

FOLKLORE/MEDIEVAL/SCAND ST 235 – THE WORLD OF SAGAS
3 credits.

The Icelandic sagas viewed in their social, cultural, and literary contexts. An introduction to one of the greatest bodies of vernacular literature of the early Middle Ages.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize, describe and analyze shifting geographic, cultural, and ethnic/racial factors in the Northern European region during the Viking Age, and put it into context
Audience: Undergraduate

2. Identify and distinguish between different types of sources used in the study of the Nordic region during the Viking Age
Audience: Undergraduate

3. Demonstrate a general understanding of major scholarly approaches, concepts and current research findings concerning the Nordic region during the Viking Age
Audience: Undergraduate

4. Synthesize information, engage in discussion and research, and argue persuasively about key topics in the Nordic region during the Viking Age
Audience: Undergraduate

5. Analyze the connections between images of the Vikings Age and the wider workings of modern culture
Audience: Undergraduate

6. Guide, mentor and support peers to achieve excellence in practice of the discipline
Audience: Undergraduate

7. Work in multi-disciplinary teams to analyze the cultural material from various disciplinary points of view
Audience: Undergraduate

FOLKLORE 315 – INTERMEDIATE TOPICS IN FOLKLORE
1-3 credits.

Exploration of various topics in the study of folklore, folklife, myth, foodways, or music.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024
Learning Outcomes: 1. Synthesize the written and material information to demonstrate an understanding of the knowledge from the course
Audience: Undergraduate

2. Communicate effectively through written essays, oral presentations and discussion.
Audience: Undergraduate

3. Recognize, describe, and analyze cultural concepts, putting them into context.
Audience: Undergraduate

FOLKLORE 317 – THE IRISH TRADITION
3 credits.

Survey of Irish folklore and folklife, including narrative, music, dance, customs, material culture, and foodways, in both Ireland and beyond.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Identify and characterize major genres of folklore and folklife in the lives of Irish people inside and outside Ireland, past and present.
Audience: Undergraduate

2. Apply folkloristic scholarship to specific ethnographic field data or archival materials through preparation of interpretative essays and other products.
Audience: Undergraduate

3. Recognize and articulate the ways in which Irish history reflects or illustrates wider processes of colonization, disenfranchisement, migration, nation-building, and cultural diversity at work in other parts of the world today.
Audience: Undergraduate

4. Engage with contemporary scholarship on Irish folklore and gain skills in academic research on the topic.
Audience: Graduate

FOLKLORE/AFROAMER/ASIAN AM/DANCE 319 – AFRO ASIAN IMPROV: FROM HIP HOP TO MARTIAL ARTS FUSION
3 credits.

An Afro Asian perspective provides a lens through which intersections between Asian American and African American dance and martial arts are studied and practiced. Asian American and African American movement genres provide tools to explore dance fusion, choreography, and improvisation, to create dances informed by African American and Asian American legacies of struggle, innovation and transformation, while cognizant of historical forces of oppression and racism. Building connections through respectful communication with others are learned through dance practice, discussion and writing about concepts learned through readings, videos, and guest artist visits. Engagement with dance as a cultural vehicle for creative problem-solving and risk-taking occurs through guided class or smaller group activities.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Articulate perspectives on the diversity of the human condition through critical andinterpretive skills to analyze the past, present, and future of human movement in a complex world
Audience: Undergraduate

2. Prepare for participation in a multicultural society through developing a consciousness of self and other and building empathy towards others' perspective, thinking critically and questioning assumptions of certain valued or devalued histories, and analyzing how these differences have promulgated disparities in contemporary American society
Audience: Undergraduate

3. Demonstrate skills in writing and speaking about dance in its historical, contemporary and cultural contexts
Audience: Undergraduate

4. Articulate Afro Asian perspectives on the intersections of Asian American and African American cultural, social and historical knowledge, and communicate important ideas through dance and story-telling performance
Audience: Undergraduate

5. Practice Asian American and African American foundational movement toolboxes as a basis for improvisation and dance choreography supported by concepts of theater and culturally-based learning traditions
Audience: Undergraduate

6. Engage in imagination-led and creative problem-solving movement activities
Audience: Undergraduate

7. Build connections with others through class practice, discussions, working groups within and outside of class
Audience: Undergraduate

8. Use the skills you learn to lead a calmer, more focused, responsible and productive life
Audience: Undergraduate

FOLKLORE 320 – FOLKLORE OF WISCONSIN
3 credits.

Introduction to folk cultural groups and folklore forms of Wisconsin.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

FOLKLORE/RELIG ST 326 – THE SUPERNATURAL IN THE MODERN WORLD
3 credits.

Explores evidence of belief in the supernatural in the modern world as it appears in the context of folk religion, folk medicine, legends, folk drama, ritual and custom, and media accounts and presentations. Surveys scholarly approaches to the topic. Course not available to students with credits for Folklore 415 before Fall 2023.
Requisites: Satisfied Communications A requirement or graduate/professional standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize and explore different types of supernatural narratives, practices, and beliefs from around the world and throughout history.
Audience: Undergraduate

2. Analyze the roles that supernatural narratives, practices, and beliefs play in human societies, and in the lives of individuals.
Audience: Undergraduate

3. Analyze "the supernatural" in relationship to historical memories, cultural anxieties, folk traditions, spiritual beliefs, physiological sensations, political conflicts, environmental disasters, and existential imperatives.
Audience: Undergraduate

4. Engage with the course themes via analytical and creative written responses, experiential learning experiments, and the active documentation of folklore.
Audience: Undergraduate

FOLKLORE/LITTRANS 327 – VAMPIRES
3 credits.

Explores the development of the vampire legend in folklore, rumor, literature, cinema, television, and popular culture and in relation to topics such as colonization, race, gender, sexuality, and class.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Describe the evolving characteristics of vampire traditions from early nineteenth-century European folklore through European and American literature, film, and other media.
Audience: Undergraduate

2. Describe the interplay between folklore and authored cultural works over time, with examples drawn from the circulation of vampire concepts between informal and authored products.
Audience: Undergraduate

3. Interpret representations of the vampire in relation to historical and cultural situations, with particular reference to colonization, race, gender, sexuality, and class.
Audience: Undergraduate

FOLKLORE/MEDIEVAL/RELIG ST/SCAND ST 342 – NORDIC MYTHOLOGY
3 credits.

Mythology, literature, ritual, traditions, medieval folklore, and religion from Nordic areas and Scandinavia.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize, describe and analyze cultural phenomena, specifically pre-Christian Nordic Religion, and put it into context.
Audience: Undergraduate

2. Demonstrate an understanding of the major theories, approaches, concepts and current research findings concerning medieval Nordic mythology and religion.
Audience: Undergraduate

3. Synthesize the written and material information and use insight and creativity to demonstrate an understanding of the knowledge base from the field.
Audience: Undergraduate

4. Communicate effectively through written essays, oral presentations and discussion.
Audience: Undergraduate

5. Retrieve, analyze, and interpret the professional and lay literature providing information to both professionals and public.
Audience: Undergraduate

6. Guide, mentor and support peers to achieve excellence in practice of the discipline.
Audience: Undergraduate

7. Work in multi-disciplinary teams to analyze the cultural material from various disciplinary points of view
Audience: Undergraduate

FOLKLORE/LITTRANS/MEDIEVAL/SCAND ST 345 — THE NORDIC STORYTELLER
3 credits.

Exploring the oral nature and performance traditions of folklore, ethnography, tales and ballads, literature and culture from Nordic areas and Scandinavia.
Requisites: Satisfied Communications A requirement
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize, describe and analyze cultural phenomena, specifically Nordic Narrative, and put it into context.
Audience: Undergraduate

2. Demonstrate an understanding of the major theories, approaches, concepts and current research findings concerning Nordic Narrative and folklore studies.
Audience: Undergraduate

3. Synthesize the written and material information and use insight and creativity to demonstrate an understanding of the knowledge base from the field.
Audience: Undergraduate

4. Communicate effectively through written essays, oral presentations and discussion.
Audience: Undergraduate

5. Retrieve, analyze, and interpret the professional and lay literature providing information to both professionals and public.
Audience: Undergraduate

6. Work in multi-disciplinary teams to analyze the cultural material from various disciplinary points of view.
Audience: Undergraduate

FOLKLORE/LITTRANS 347 — IN TRANSLATION: KALEVALA AND FINNISH FOLK-LORE
3-4 credits.

A look at the Kalevala, the Finnish creation myth and national epic of Finland, and how it affected Finnish national identity and the eventual Finnish independence from Russia.
Requisites: Junior standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2022

FOLKLORE/RELIG ST 352 — SHAMANISM
3 credits.

Survey of shamanism as a religious tradition and sociocultural force in Siberian, Asian, and Native American societies. Exploration of shamanic rituals, roles, cosmology. Cultural and political uses of shamanism in traditional and modern contexts.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022

FOLKLORE 399 — DIRECTED STUDY IN FOLKLORE FOR UNDERGRADUATES
1-3 credits.

Directed study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2020

FOLKLORE 415 — ADVANCED TOPICS IN FOLKLORE
1-3 credits.

Exploration of various topics in the study of folklore, folklife, myth, foodways, or music.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024
Learning Outcomes: 1. Communicate effectively through written essays, oral presentations and discussion.
Audience: Undergraduate

2. Demonstrate advanced knowledge of the methods and practices of the folklore field and practices.
Audience: Undergraduate

3. Produce writing that applies concepts learned in the course to analyze knowledge discussed in the course and articulate theories in a critical setting.
Audience: Undergraduate

FOLKLORE/GEN&WS 428 – GENDER AND EXPRESSIVE CULTURE
3 credits.

Examines the relationship between dominant images of gender representation as they emerge in expressive culture in various societies.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2019

FOLKLORE 430 – TOPICS IN AMERICAN FOLKLORE: ETHNIC STUDIES
3-6 credits.

Topics in historical or contemporary folklore and folklife pertaining to persistently marginalized racial or ethnic groups in the United States.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

FOLKLORE/AMER IND/ANTHRO/GEN&WS 437 – AMERICAN INDIAN WOMEN
3 credits.

Examines and interprets the roles of American Indian women in traditional societies, and in contemporary North America.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

FOLKLORE 439 – FOODWAYS
3 credits.

Explores artistic, social, sensory, and spiritual expressions through food that convey personal, group, and place-based identities, ethnicity, gender, and class in work and play. Reviews range of food writing and scholarly perspectives including culinary historical, structural-functional, and performance.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

FOLKLORE/SCAND ST 440 – SCANDINAVIAN AMERICAN FOLKLORE
3 credits.

Examines the verbal, musical, customary, and material folklore of Scandinavian Americans, with emphasis on the upper Midwest.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022

FOLKLORE 442 – IMMIGRATION AND INDIGENEITY IN THE UPPER MIDWEST
3 credits.

Examines the folklore of the Upper Midwest through the complicated intersections of immigration and indigeneity, in order to better understand the history and vernacular expressions of the people who call the Upper Midwest home.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No

FOLKLORE/SCAND ST 443 – SAMI CULTURE, YESTERDAY AND TODAY
4 credits.

Interdisciplinary study of Sami (Lapp) people of Scandinavia past and present. Indigenous modes of expression and worldview, contemporary cultural and political activism. Extensive discussion of connections to Native American and Inuit experiences; rise of U.S. and other indigenous peoples' movements.
Requisites: Junior standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

FOLKLORE/SLAVIC 444 – SLAVIC AND EAST EUROPEAN FOLKLORE
3 credits.

Oral traditional literature of Eastern Europe: ritual and lyric poetry, epic, and folktale.
Requisites: Junior standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2019

FOLKLORE/MEDIEVAL/SCAND ST 446 – CELTIC-SCANDINAVIAN CULTURAL INTERRELATIONS
3 credits.

Examination of shared traditions and historical connections between the North and Northwest of Europe. Readings of medieval and pre-modern Scandinavian, Scottish, Welsh and Irish sagas, histories, talkes. Discussion of the role of folklore in modern Celtic and Scandinavian societies.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022

FOLKLORE 460 – FOLK EPICS
3 credits.

Oral nature, structure, performance traditions, and epic ideology, from various world areas.
Requisites: Junior standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

FOLKLORE/L I S 490 – FIELD METHODS AND THE PUBLIC PRESENTATION OF FOLKLORE
3 credits.

Combines a fieldwork practicum with scrutiny of the cultural, political, and ethical dimensions underlying the documentation and public presentation of folklore through festivals, exhibitions, publications, audio-visual productions, and digital archival collections.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand how to employ folkloristic fieldwork, archival methodologies, and community engagement in documenting and presenting local communities.
Audience: Both Grad & Undergrad

2. Explain key concepts of folklore studies in the context of wider public humanistic research.
Audience: Both Grad & Undergrad

3. Create a final project demonstrating critical thinking, civic knowledge, and collaboration with coordinating communities.
Audience: Both Grad & Undergrad

4. Understand how to coordinate effectively with community organizations to undertake multidisciplinary arts and humanities grant-funded project planning with public programming goals such as festivals, exhibitions, publications, audio-visual productions, and digital archival collections.
Audience: Graduate

FOLKLORE 491 – PRACTICUM IN PUBLIC FOLKLORE
1-3 credits.

Work as an intern with a public agency or a private non-profit organization involved in public folklore projects.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2019

FOLKLORE/MUSIC 515 – PROSEMINAR IN ETHNOMUSICOLOGY
3 credits.

Introduction to ethnomusicology, including historical survey of major works in the field, classification of musical instruments, measurement of tuning systems and concepts of scale, mode and rhythm in non-Western music.
Requisites: Graduate/professional standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

FOLKLORE/MUSIC 516 – ETHNOGRAPHIC METHODS FOR MUSIC AND SOUND
3 credits.

Focuses on the tools (material, methodological, and ethical) for doing ethnographic fieldwork in musical contexts.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Demonstrate familiarity with a body of (ethno)musicological and anthropological literature on ethnographic methods.
Audience: Graduate

2. Decipher and explicate difficult texts with increased confidence.
Audience: Graduate

3. Design and carry out ethnographic research projects.
Audience: Graduate

4. Demonstrate an awareness of power dynamics and your own position as researcher.
Audience: Graduate

5. Facilitate discussions effectively.
Audience: Graduate

6. Track key terms across (ethno)musicological and anthropological literature, describing how ethnographers' relationships with these have changed over time.
Audience: Graduate

FOLKLORE/COM ARTS 522 – DIGITAL STORYTELLING FOR SOCIAL MEDIA
3 credits.

Explore everyday communication in social media. Learn digital recording technologies for documenting everyday communication and the use of digital content in social media.
Requisites: Junior standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Evaluate the reasons we value everyday artistic and expressive communication
Audience: Both Grad & Undergrad

2. Analyze the affordances of different social media platforms
Audience: Both Grad & Undergrad

3. Evaluate the formal elements best suited to the affordances of different media platforms
Audience: Both Grad & Undergrad

4. Apply that understanding in the design and production of digital text, photo, sound, and video communications that document everyday artistic and expressive communication
Audience: Both Grad & Undergrad

5. Analyze ethical implications of documenting human behavior
Audience: Both Grad & Undergrad

6. Apply scholarly theories on digital media to digital platforms and digital platform content
Audience: Graduate

FOLKLORE 530 – TOPICS IN FOLKLORE
1-3 credits.

Topics in Folklore in various cultures and time periods.
Requisites: Junior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

FOLKLORE 540 — LOCAL CULTURE AND IDENTITY IN THE UPPER MIDWEST
3 credits.

Addresses different aspects of community life and culture in the Upper Midwest; topics include ethnic groups, religious life, cultural landscapes, oral narrative, music, and material culture.
Requisites: Junior standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

FOLKLORE 699 — INDEPENDENT STUDY IN FOLKLORE (GRADUATE)
1-3 credits.

Advanced directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

FOLKLORE/MUSIC 915 — SEMINAR IN ETHNOMUSICOLOGY
3 credits.

Topics in ethnomusicology within a cross-cultural framework; melodic typology, scale and tuning systems, mode, rhythm, ornamentation, improvisation techniques, oral and written traditions of composition, notation systems, and function of music society.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

FOOD SCIENCE (FOOD SCI)

FOOD SCI 120 — SCIENCE OF FOOD
3 credits.

Relationship between food, additives, processing and health. How foods are processed. Current food controversies.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Describe the basic scientific concepts regarding food composition, processing, additives, regulations, and safety
Audience: Undergraduate

2. Explain how the functionality of food can influence food processing and quality
Audience: Undergraduate

3. Identify and analyze current issues and their implications for food processing additional learning objectives provided for each module
Audience: Undergraduate

FOOD SCI 140 – THE CHOCOLATE EXPERIENCE: SCIENCE, SOCIETY, AND SUSTAINABILITY
3 credits.

Learn about the history of cocoa and chocolate production, the cultivation of cocoa and processing of cocoa beans to the production of chocolate from cocoa beans. Other topics covered include nutrition and health aspects of cocoa and chocolate consumption and socioeconomic and sustainability issues in cocoa production.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Explore the history of cocoa and chocolate, and worldwide cultivation practices.
Audience: Undergraduate

2. Describe the cocoa production process, including microbiological and biochemical aspects of cocoa fermentation.
Audience: Undergraduate

3. Outline and analyze the production of chocolate from the cleaning of cocoa beans to final chocolate products (from bean to bar).
Audience: Undergraduate

4. Examine the nutritional and health impact of chocolate consumption.
Audience: Undergraduate

5. Scrutinize and critique the socioeconomic impact of cocoa and chocolate production in fair trade, international politics, social justice, and sustainability.
Audience: Undergraduate

FOOD SCI 150 – FERMENTED FOOD AND BEVERAGES: SCIENCE, ART AND HEALTH
3 credits.

Explores the science behind fermented food and beverages, popularized by brewing, winemaking and breadmaking at home and in retail. Introduces the scientific principles that underlie food and beverage processing through fermentation. Covers how basic sciences such as chemistry, biochemistry and microbiology influence the process and desired outcomes when fermenting vegetables, milk, fruit, and grains.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define fermentations in the context of foods and beverages
Audience: Undergraduate

2. Identify and apply basic principles of chemistry, processing and microbiology to the manufacturing of fermented foods and beverages.
Audience: Undergraduate

3. Identify and describe the human health implications resulting from the consumption of fermented foods and beverages.
Audience: Undergraduate

4. Describe the social, economic, and environmental dimensions of agricultural inputs and production of fermented food and beverages and identify potential tradeoffs and interrelationships among these dimensions at a level appropriate to the course.
Audience: Undergraduate

5. Analyze the causes of and solutions for the sustainability challenge of producing fermented foods and beverages
Audience: Undergraduate

FOOD SCI 180 – SUSTAINABLE FOOD SECURITY: HEALTH FOR OUR COMMUNITIES
3 credits.

Explores diet-related diseases in the United States and their disproportionate effect on Black Indigenous and People of Color (BIPOC) and other underserved or vulnerable populations. Integrates the principles of food science, nutrition, and public health to understand food systems, food disparities, and health disparities. Examines emerging solutions to improve health outcomes in the United States through more just, inclusive, and sustainable food systems.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the food system framework and its relationship to food (in)security, nutrition (in)security, and health
Audience: Undergraduate

2. Examine food waste and food safety and their relationship to food (in)security
Audience: Undergraduate

3. Discuss the intricate relationship between food (in)security, nutrition (in)security, food bioactive compounds, and chronic diseases
Audience: Undergraduate

4. Examine the biological, social, and environmental determinants of health, health systems, and the interactions between them
Audience: Undergraduate

5. Compare the association between food, nutrition, and health literacies, and health outcomes
Audience: Undergraduate

6. Interpret how the past has affected present-day circumstances regarding race and racial inequities in diet-related diseases in the U.S.
Audience: Undergraduate

7. Describe different cultural perspectives on food, nutrition, and health and the relationship between these perspectives and your own views and practices
Audience: Undergraduate

8. Reflect on how to engage in effective, respectful dialogue around food, health, and sustainability concepts in our multicultural society
Audience: Undergraduate

FOOD SCI 201 – DISCOVERING FOOD SCIENCE
1 credit.

Provides a brief introduction to the different areas of study and career opportunities within the food industry.
Requisites: None
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the depth and scope of food science as a profession
Audience: Undergraduate

2. Explain and discuss career options for food science graduates
Audience: Undergraduate

3. Recommend personal initiatives that will enhance career success
Audience: Undergraduate

4. Relate courses in food science curricula to job responsibilities of food scientist
Audience: Undergraduate

FOOD SCI 289 – HONORS INDEPENDENT STUDY
1-2 credits.

Research work for honors students under direct guidance of a faculty member in an area encompassing Food Science. Students are responsible for arranging the work and credits with the supervising instructor.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Develop critical, analytical, and independent thinking skills
Audience: Undergraduate

2. Apply the scientific method and engage in constructive problem solving

Audience: Undergraduate

3. Demonstrate application of research skills and methodologies
Audience: Undergraduate

4. Effectively communicate findings
Audience: Undergraduate

FOOD SCI 299 – INDEPENDENT STUDY
1-3 credits.

Research work for students under direct guidance of a faculty member in an area encompassing Food Science. Students are responsible for arranging the work and credits with the supervising instructor.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Develop critical, analytical, and independent thinking skills
Audience: Undergraduate

2. Apply the scientific method and engage in constructive problem solving

Audience: Undergraduate

3. Demonstrate application of research skills and methodologies
Audience: Undergraduate

4. Effectively communicate findings
Audience: Undergraduate

FOOD SCI 301 – INTRODUCTION TO THE SCIENCE AND TECHNOLOGY OF FOOD
3 credits.

Introduction to the science and the technology of food manufacture. Covers the basic chemical, physical and microbiological properties of food and manipulation of these properties in the manufacture of food products.
Requisites: (MATH 112, 114 or 217) and (CHEM 103, 109 or 115) and (ZOOLOGY/BIOLOGY 101, 102, BOTANY/BIOLOGY 130, or ZOOLOGY/BIOLOGY/BOTANY 151) or (BSE 349 or concurrent enrollment)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply core knowledge in chemistry, physics, mathematics and biology to the understanding of food systems including quantitative problem-solving skills
Audience: Undergraduate

2. Identify the chemical composition of the main components in foods and describe how the composition influences functionality and material properties
Audience: Undergraduate

3. Explain relationships of mass-balance in food processing and be able to do simple mass-balance calculations
Audience: Undergraduate

4. Apply the basic principles of microbiology in relation to food safety and food processing/preservation
Audience: Undergraduate

5. Outline key technical information/terminology related to food science
Audience: Undergraduate

6. Describe the way in which food handling and processing operations impact food composition and human health
Audience: Undergraduate

7. Discuss regulations and market forces that govern our food supply
Audience: Undergraduate

8. Outline emerging trends in food production, processing, and handling
Audience: Undergraduate

FOOD SCI/AN SCI 305 – INTRODUCTION TO MEAT SCIENCE AND TECHNOLOGY
4 credits.

Application of biological, technological, and economical principles to muscle and related tissue utilized for food.
Requisites: (ZOOLOGY/BIOLOGY/BOTANY 152 or ZOOLOGY/BIOLOGY 101 and 102) and (CHEM 103, 109, or 115) or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss the nutritional value of fresh and processed meats in addition to addressing diet/health issues and food safety of these products
Audience: Both Grad & Undergrad

2. Describe the processes associated with animal harvest and explain the differences among different livestock species
Audience: Both Grad & Undergrad

3. Demonstrate where carcass fabrication cuts are made to produce the major carcass primal cuts and the ability to separate out and identify major muscles of economic importance
Audience: Both Grad & Undergrad

4. Describe how the biochemical properties of meat proteins relate to muscle function
Audience: Both Grad & Undergrad

5. Explain of the chemical and physical properties of fresh meat and how these properties can be evaluated and analyzed
Audience: Both Grad & Undergrad

6. Collect carcass data and determine USDA quality and yield grades
Audience: Both Grad & Undergrad

7. Calculate the appropriate amounts of non-meat ingredients and explain the applicable manufacturing procedures to produce various types of processed meats including whole muscle products and finely comminuted sausages
Audience: Both Grad & Undergrad

8. Explain how an understanding of muscle microstructure ultrastructure, and changes in postmortem biochemistry can be used to predict ultimate meat quality characteristics
Audience: Graduate

FOOD SCI/AN SCI 321 – FOOD LAWS AND REGULATIONS
1 credit.

Food laws and regulations, regulatory and commerical grading standards used in the food industry.
Requisites: Junior standing
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify major food laws, their authoritative departments and enforcement agencies (regulatory framework)
Audience: Undergraduate

2. Identify, examine and analyze the implications of laws and regulations required for the manufacture and sale of food products
Audience: Undergraduate

3. Discuss current topics of importance to the food industry that have the potential to generate new or refine existing regulations on food laws and regulations that apply to specific segments of the food industry
Audience: Undergraduate

4. Find pertinent information on food laws and regulations that apply to specific segments of the food industry
Audience: Undergraduate

FOOD SCI/MICROBIO 324 – FOOD MICROBIOLOGY LABORATORY
2 credits.

Lab exercises dealing with food preservation, spoilage, and food poisoning. Isolation, identification and quantification of specific microbes occurring in foods, and food fermentations by bacteria and yeast.
Requisites: (MICROBIO 102 or MICROBIO 304) and FOOD SCI/MICROBIO 325 or concurrent enrollment
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Utilize laboratory techniques to identify microorganisms in food.
Audience: Undergraduate

2. Describe the principles involving food preservation via fermentation processes.
Audience: Undergraduate

3. Demonstrate understanding of the role and significance of microbial inactivation, adaptation, and environmental factors (i.e., water activity, pH, temperature) on growth and response of microorganisms in various environments.
Audience: Undergraduate

4. Identify the conditions, including sanitation practices, under which important pathogens and spoilage microorganisms are commonly inactivated, killed, or made harmless in foods.
Audience: Undergraduate

FOOD SCI/MICROBIO 325 – FOOD MICROBIOLOGY
3 credits.

Principles of food preservation, epidemiology of foodborne illness, agents of foodborne illness, food fermentations and biotechnology.
Requisites: MICROBIO 101, 303, or M M & I 301 or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and summarize the impacts of intrinsic and extrinsic factors on microorganisms.
Audience: Undergraduate

2. Calculate and apply thermal processing parameters to reductions in microbial numbers.
Audience: Undergraduate

3. Apply Hazard Analysis Critical Control Point (HACCP) concepts and principles to food production processes.
Audience: Undergraduate

4. Demonstrate knowledge of foodborne microbial pathogens.
Audience: Undergraduate

5. Describe methods and principles of sampling and testing food for microorganisms.
Audience: Undergraduate

6. Compare and contrast the principles, practices, and pathways of food fermentations.
Audience: Undergraduate

7. Analyze and use microbiological data sets.
Audience: Undergraduate

8. Evaluate the benefits and hazards of modern food production, organic foods, and genetically-engineered foods.
Audience: Undergraduate

FOOD SCI 330 – DAIRY PRODUCTS EVALUATION
1 credit.

Introduction to sensory analysis of dairy and dairy-alternative products. Individual skill building to evaluate products such as vanilla ice cream, cheddar cheese, cottage cheese, yogurt, milk, and butter by providing mentored sensory training.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall key vocabulary terms and facts relevant to introductory sensory science, dairy product evaluation, and the US dairy industry
Audience: Undergraduate

2. Evaluate, compare and rank products depending on multiple quality characteristics
Audience: Undergraduate

3. Compare similar nondairy products
Audience: Undergraduate

4. Communicate results of product analysis and evaluation in a professional setting
Audience: Undergraduate

FOOD SCI 375 – SPECIAL TOPICS
1-3 credits.

Subjects of current interest to undergraduates.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024
Learning Outcomes: 1. Explain concepts relating to a special topic outlined in the title
Audience: Undergraduate

FOOD SCI 378 – PRECISION FERMENTATION FOR SUSTAINABLE FOODS AND PRODUCTS
2 credits.

Introduction to principles of precision fermentation, genetic tools used to manipulate the organisms involved in precision fermentation, food and non-food applications of precision fermentation. Topics such as: sustainable manufacturing of alternative proteins, food colorants, artificial sweeteners, amino acids, vitamins, flavoring and blending agents in alternative protein formulations, fatty acids, non-food chemicals of industrial importance, and sustainable feedstocks. Comparison of precision fermentation to traditional fermentations including whiskey, rum and bourbon.
Requisites: None
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the concept of precision fermentation.
Audience: Undergraduate

2. List and explain examples of precision fermentation.
Audience: Undergraduate

3. Outline and analyze the tools used to manipulate the microorganisms used in precision fermentation.
Audience: Undergraduate

4. Describe the processes deployed to produce foods and non-food products derived by precision fermentation.
Audience: Undergraduate

5. Outline the sustainability aspects of precision fermentation and the feedstocks used.
Audience: Undergraduate

6. Compare and contrast traditional and precision fermentations.
Audience: Undergraduate

FOOD SCI 399 – COORDINATIVE INTERNSHIP/COOPERATIVE EDUCATION
1-8 credits.

An internship under guidance of a faculty or instructional academic staff member in the Food Science department and a internship site supervisor. Students are responsible for arranging the work and credits with the faculty or instructional academic staff member and the internship site supervisor.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Workplace - Workplace Experience Course
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply concepts learned in coursework to authentic professional situations
Audience: Undergraduate

2. Demonstrate professional skills appropriate for the industry
Audience: Undergraduate

3. Identify and reflect on how concepts learned in coursework apply to specific work settings and situations
Audience: Undergraduate

FOOD SCI 400 – STUDY ABROAD IN FOOD SCIENCE
1-6 credits.

Provides an area equivalency for courses taken on Madison Study Abroad Programs that do not equate to existing UW courses.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions

FOOD SCI 410 – FOOD CHEMISTRY
3 credits.

Nature and chemical behavior of food constituents including proteins, lipids, carbohydrates, water, and enzymes.
Requisites: FOOD SCI 301, CHEM 343, and (BIOCHEM 501 or concurrent enrollment)
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Clarify the physical and chemical principles of water, proteins, carbohydrates, and lipids in foods
Audience: Undergraduate

2. Use the principles of food chemistry to describe and alter the behavior of foods
Audience: Undergraduate

3. Hypothesize how chemical reactivity affects food properties
Audience: Undergraduate

FOOD SCI 412 – FOOD ANALYSIS
4 credits.

Application of quantitative techniques to the determination of composition and quality of food products.
Requisites: (STAT 301 or 371) and FOOD SCI 410
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Choose appropriate analytical techniques to determine the composition of foods
Audience: Undergraduate

2. Clarify the underlying principles of food analytical methods
Audience: Undergraduate

3. Integrate basic statistical methods into experimental data analysis
Audience: Undergraduate

4. Assemble effective written and oral communications regarding composition of food
Audience: Undergraduate

FOOD SCI 432 – PRINCIPLES OF FOOD PRESERVATION
3 credits.

Fundamentals of food preservation methods: post-harvest, thermal processing, refrigeration and freezing, control of water activity, chemical preservation, nonthermal methods and control of food packaging.
Requisites: MICROBIO/FOOD SCI 325, FOOD SCI 410, and 440
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Clarify the mechanisms of food spoilage and how to inhibit them
Audience: Undergraduate

2. Predict how food quality is affected throughout product lifecycle
Audience: Undergraduate

3. Differentiate preservation methods appropriate for foods, including "natural" foods
Audience: Undergraduate

4. Critique relevant scientific literature to explain food preservation principles
Audience: Undergraduate

5. Assemble effective written and oral communications regarding food preservation
Audience: Undergraduate

FOOD SCI 437 – FOOD SERVICE OPERATIONS
4 credits.

Fundamentals, principles, and practices of the United States Food Systems, Food Service, and Food Service Management. Introduction to the food service industry as applied in diverse settings, including but not limited to schools, hospitals and restaurants.
Requisites: FOOD SCI 301 and declared in Nutritional Sciences BS or BS-Nutrition and Dietetics
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Assess the impact of a public policy position on the nutrition and dietetics profession
Audience: Undergraduate

2. Explain the process involved in delivering quality food and nutrition services
Audience: Undergraduate

3. Apply management theories to the development of programs or services
Audience: Undergraduate

4. Evaluate a budget/financial management plan and interpret financial data
Audience: Undergraduate

5. Apply principles of human resource management to different situations
Audience: Undergraduate

6. Apply safety and sanitation principles related to food, personnel and consumers
Audience: Undergraduate

FOOD SCI 440 – PRINCIPLES OF FOOD ENGINEERING
3 credits.

Application of engineering principles in the analysis of food process operations: properties of gases and vapors, psychrometrics, material and energy balances, fluid flow, heat transfer, microwave heating, mass transfer, packaging film permeability, dehydration.
Requisites: FOOD SCI 301, (MATH 217 or 221), and (PHYSICS 103, 201, or 207)
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply the conservation equations (mass, energy, momentum) to food processes including those with reactions and unsteady state operation
Audience: Undergraduate

2. Apply the transport equations (mass, energy, and momentum, including food rheology) to food processes
Audience: Undergraduate

3. Apply concepts of thermodynamics to food systems: 1st law, 2nd law, gas laws, and psychometrics
Audience: Undergraduate

4. Explain the theoretical basis for rheology and use rheological approaches to solve problems in food processing and product quality evaluation
Audience: Undergraduate

FOOD SCI/AN SCI/DY SCI/SOIL SCI 472 – ANIMAL AGRICULTURE AND GLOBAL SUSTAINABLE DEVELOPMENT
1 credit.

Examines issues related to global agriculture and healthy sustainable development. Using a regional approach and focusing on crops and livestock case studies, students will learn the interdependence between US agriculture and agriculture in emerging economies. Some topics covered include population and food, immigration, the environment; crop and livestock agriculture; global trade; sustainability; food security, the role of women in agriculture, and the role of dairy products in a healthy diet.
Requisites: None
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Apply sustainability principles and/or framework to addressing the challenge of feeding an increasing world population sustainably.
Audience: Undergraduate

2. Define and characterize sustainability, sustainable agriculture and Sustainable Development
Audience: Undergraduate

3. Analyze the contributions of animal agriculture to the Sustainable Development Goals both in developing and developed countries.
Audience: Undergraduate

4. Explain the social, economic, and/or environmental dimensions of the sustainability challenges of diverse animal agricultural systems both in developing and developed countries.
Audience: Undergraduate

5. Evaluate the role of livestock in communities where poverty, hunger and marginalization are embedded as a way of life.
Audience: Undergraduate

6. Critically evaluate the causes of —and ways to break— the chains of hunger and poverty among the poorest of the poor.
Audience: Undergraduate

FOOD SCI/AN SCI/DY SCI/SOIL SCI 473 – INTERNATIONAL FIELD STUDY IN ANIMAL AGRICULTURE AND SUSTAINABLE DEVELOPMENT
2 credits.

Examines issues related to global agriculture and healthy sustainable development. Using a regional approach and focusing on crops and livestock case studies, students will learn the interdependence between US agriculture and agriculture in emerging economies. Some topics covered include population and food, immigration, the environment; crop and livestock agriculture; global trade; sustainability; and the role of women in agriculture and the role of dairy products in a healthy diet.
Requisites: DY SCI/AN SCI/FOOD SCI/SOIL SCI 472
Repeatable for Credit: No
Learning Outcomes: 1. Improve communication and interpersonal skills associated with participating in team-based intercultural experiences
Audience: Undergraduate

2. Be better prepared for professional success in an interconnected world by navigating unfamiliar cultural norms and societal differences
Audience: Undergraduate

3. Reflect on US-centric personal and cultural values while building an appreciation and respect for the Latin America culture.
Audience: Undergraduate

4. Explain the social, economic, and/or environmental dimensions of the sustainability challenge of alleviating poverty and malnutrition in Mexico
Audience: Undergraduate

5. Apply sustainability principles and/or framework to addressing the challenge of fostering prosperity in marginalized indigenous communities
Audience: Undergraduate

6. Analyze both from their own disciplinary lens and from an interdisciplinary lens the contributions of dairy farming to the Sustainable Development Goals
Audience: Undergraduate

7. Evaluate the sustainability of subsistence, market-oriented, and industrial-scale farming systems
Audience: Undergraduate

FOOD SCI 511 – CHEMISTRY AND TECHNOLOGY OF DAIRY PRODUCTS
3 credits.

Chemistry of milk components (i.e. protein, lipids, carbohydrate, salts, enzymes) with an emphasis on chemical and physical changes that occur during the manufacture of a range of milk products (i.e. ice cream, butter, cheese). Dairy technology and microbiological quality.
Requisites: FOOD SCI 410
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the composition of milk and identify the approximate content, individual types present and main features of the main components
Audience: Undergraduate

2. Integrate their knowledge of food chemistry, physical properties and microbiology to understand the processing of dairy products
Audience: Undergraduate

3. Use knowledge of the chemistry of dairy components (proteins, fats, lactose, salts) to evaluate the impact of processing conditions (e.g. heat, pH) on milk and dairy products
Audience: Undergraduate

4. Describe the contribution of dairy foods to the diet including milk constituents with possible physiological roles
Audience: Undergraduate

5. Explain how dairy products (such as fluid milk, yogurt, butter, powder, cheese) are made and the key functions of the processing steps involved
Audience: Undergraduate

FOOD SCI 514 – INTEGRATED FOOD FUNCTIONALITY
4 credits.

Molecular basis of food functional properties; impact of ingredients and processing on functional properties (texture, flavor, nutrition and structure); design of new or reformulating foods to meet specific quality expectations.
Requisites: FOOD SCI 602
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain the chemical and physical basis for interactions taking place between food components and how these influence the properties of food structures
Audience: Undergraduate

2. Relate the quality of foods to the chemical composition, processing and potential for changes or reactions to occur during storage (includes physical, chemical, biochemical, and microbial reactions/changes)
Audience: Undergraduate

3. Select food ingredients that give specific functional benefits for use in product development, product reformulation, or problem-solving situations
Audience: Undergraduate

4. Apply sensory and rheological methods of evaluation in analysis of foods (e.g., Quality Control), product development, or reformulation of existing products
Audience: Undergraduate

5. Design and perform a shelf-life test (including normal storage conditions and accelerated tests) and be able to apply statistical approaches to determine acceptable shelf-life of products made with different ingredients/processing conditions/storage situations
Audience: Undergraduate

6. Assemble effective written and oral communications regarding food structure and functionality
Audience: Undergraduate

FOOD SCI/AN SCI 515 – COMMERCIAL MEAT PROCESSING
2 credits.

Principles and procedures in the commercial manufacture of processed meat products; sausage manufacturing, curing, smoking, freezing and packaging.
Requisites: AN SCI/FOOD SCI 305, FOOD SCI 410, or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Summarize the various chemical and physical properties of meat and non-meat ingredients used to manufacture processed meats
Audience: Both Grad & Undergrad

2. Formulate various processed meats in compliance with governmental regulations
Audience: Both Grad & Undergrad

3. Identify basic meat processing principles
Audience: Both Grad & Undergrad

4. Demonstrate the ability to determine if a thermal processing procedure will produce a safe product
Audience: Graduate

5. Recognize how various types of meat processing equipment operate
Audience: Both Grad & Undergrad

6. Summarize proper cleaning and sanitation procedures
Audience: Both Grad & Undergrad

FOOD SCI 532 – INTEGRATED FOOD MANUFACTURING
4 credits.

Procedures used to process and preserve foods on a commercial basis, with emphasis on concentration, dehydration and fractionation process, plant sanitation/GMP, statistical process control, and environmental impacts..
Requisites: FOOD SCI 432 or (BSE 461 or concurrent enrollment)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the unit operations of food processing technologies (concentration, dehydration, extrusion, etc.) and various ancillary food equipment (pumps, heat exchangers, etc.), including performing engineering calculations as appropriate
Audience: Undergraduate

2. Apply the key elements of food quality assurance, including analyzing and, writing and implementing Hazard Analysis and Critical Control Points plans in a food processing situation (includes prerequisite programs like Good Manufacturing Practice and Sanitation Standard Operating Procedure)
Audience: Undergraduate

3. Set up and maintain a process control chart, design an effective sampling plan for a food processing/distribution environment, and effectively evaluate whether a process is in control
Audience: Undergraduate

4. Identify weaknesses (and solutions) in existing Sanitation Standard Operating Procedure plans and design defensible new plans for cleaning and sanitation protocols in food processing operation, analyze existing plans and design new plans for cleaning and sanitation protocols in food processing operations
Audience: Undergraduate

5. Explain the effects of processing operations on shelf stability and be able to calculate shelf life of foods based on kinetics of microbial, chemical and physical changes during storage
Audience: Undergraduate

6. Explain the main steps in water and waste treatment as important to food processing operations
Audience: Undergraduate

7. Apply basic concepts of reaction engineering and reaction kinetics to food processing systems
Audience: Undergraduate

FOOD SCI 535 – CONFECTIONERY SCIENCE AND TECHNOLOGY
3 credits.

Through a combination of on-line lectures, classroom activities, evaluation of commercial samples and discovery-based labs, the science and technology of confections from hard candy to chocolate will be covered.
Requisites: FOOD SCI 410 and FOOD SCI 432
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe processing methods for confectionery production
Audience: Undergraduate

2. Describe the typical ingredients used in confections
Audience: Undergraduate

3. Explain how ingredients and processing conditions interact to create quality confections with adequate shelf stability
Audience: Undergraduate

4. Apply scientific principles to confectionery production and storage
Audience: Undergraduate

5. Explain effects of processing and storage conditions on shelf life of confections
Audience: Undergraduate

6. Analyze, diagnose, and propose solutions for problems in production and shelf life of confections based on the appropriate scientific principles
Audience: Undergraduate

7. Communicate scientific results clearly and concisely
Audience: Undergraduate

FOOD SCI 550 – FERMENTED FOODS AND BEVERAGES
2 credits.

Chemistry, microbiology, and technology of foods and beverages in which fermentations are important (e.g. cheese, bread, pickles, beer). Fermentation techniques in developing new foods and food additives. Instrumentation and mechanization of food fermentations.
Requisites: FOOD SCI 150
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify important biochemical pathways in the production of fermented foods and beverages
Audience: Undergraduate

2. Identify factors contributing to sensory qualities of fermented foods and beverages
Audience: Undergraduate

3. Evaluate the importance of chemical constituents for fermentation substrates and ingredients in fermentation
Audience: Undergraduate

4. Explain how starting ingredients are processed and how processing impacts fermentation and the final product
Audience: Undergraduate

5. Describe the production process of fermented vegetables, cheese, beer and wine
Audience: Undergraduate

6. Demonstrate knowledge about microbial species, biochemical pathways, and fermentation factors in the production of fermented foods and beverages by reviewing current research
Audience: Undergraduate

7. Discuss and explain how a wide variety of fermented foods and beverages are produced from a few basic ingredients
Audience: Undergraduate

FOOD SCI 551 – FOOD FERMENTATION LABORATORY
1 credit.

Offers the opportunity to learn to produce fermented beverages and dairy products in laboratory and scalable production facilities. Designed to introduce the chemical and physical basis for development of specific characteristics associated with individual styles of products as well as analytical methods to qualify those characteristics. Enrollment limited to students 21 years of age or older
Requisites: FOOD SCI 550 or concurrent enrollment
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Utilize laboratory tools to evaluate chemical constituents of fermented foods and beverages
Audience: Undergraduate

2. Apply knowledge of yeast and bacteria fermentations to the production of foods and beverages
Audience: Undergraduate

3. Communicate research results and knowledge of fermented foods to a scientific audience
Audience: Undergraduate

FOOD SCI 602 – SENIOR PROJECT
2 credits.

Part one of senior capstone requirement. Working as teams, students conduct research around a problem pertinent to the food industry. Weekly discussions plus laboratory. Data collection and analysis and report writing are critical components of this course.
Requisites: FOOD SCI 412 and 432
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define a hypothesis or project objective(s); identify appropriate testing and analysis methodology, generate or collect original data, critically analyze results, provide a thorough explanation of results and a clear and concise research paper
Audience: Undergraduate

2. Communicate project work in written format
Audience: Undergraduate

3. Provide effective feedback of project progress
Audience: Undergraduate

4. Conduct independent projects with guidance
Audience: Undergraduate

FOOD SCI 603 – SENIOR SEMINAR
1 credit.

Part two of senior capstone requirement. Students will present data gathered and analyzed as part of the senior project.
Requisites: FOOD SCI 602
Course Designation: Gen Ed - Communication Part B
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Communicate project work in oral and written format
Audience: Undergraduate

2. Communicate project results effectively
Audience: Undergraduate

3. Provide effective assessment of project results
Audience: Undergraduate

FOOD SCI 611 – CHEMISTRY AND TECHNOLOGY OF DAIRY PRODUCTS
3 credits.

Chemistry of milk components (i.e. protein, lipids, carbohydrate, salts, enzymes) with an emhasis on chemical and physical changes that occur during the manufacture of a range of milk products (i.e. ice cream, butter, cheese). Dairy technology and microbiological quality.
Requisites: FOOD SCI 410 or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the composition of milk and identify the approx. content, individual types present and main features of the main components
Audience: Both Grad & Undergrad

2. Integrate knowledge of food chemistry, physical properties. and microbiology to describe the processing of dairy products
Audience: Both Grad & Undergrad

3. Use knowledge of the chemistry of dairy components (proteins, fats, lactose, salts) to evaluate the impact of processing conditions (e.g. heat, pH) on milk and dairy products
Audience: Both Grad & Undergrad

4. Describe the contribution of dairy foods to the diet including milk constituents with possible physiological roles
Audience: Both Grad & Undergrad

5. Explain how dairy products (such as fluid milk, yogurt, butter, powder, cheese) are made and the key functions of the processing steps involved
Audience: Both Grad & Undergrad

6. Discuss hot topics related to dairy foods
Audience: Graduate

7. Evaluate the scientific status of dairy's role or contribution to nutrition, sustainability, and functionality with reference to current scientific literature on these topics
Audience: Graduate

FOOD SCI 681 – SENIOR HONORS THESIS
2-4 credits.

Individual study for majors completing theses for Honors degrees as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Review and analyze scientific literature
Audience: Undergraduate

2. Identify and use appropriate research methodologies to address a research question
Audience: Undergraduate

3. Begin structuring and writing a thesis based on original research
Audience: Undergraduate

FOOD SCI 682 – SENIOR HONORS THESIS
2-4 credits.

Second semester of individual study for majors completing theses for Honors degrees as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2014
Learning Outcomes: 1. Review and analyze scientific literature
Audience: Undergraduate

2. Identify and use appropriate research methodologies to address a research question
Audience: Undergraduate

3. Write a thesis based on original research
Audience: Undergraduate

FOOD SCI 699 – SPECIAL PROBLEMS
1-3 credits.

Individual advanced work in an area of Food Science under the direct guidance of a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Develop critical, analytical, and independent thinking skills
Audience: Undergraduate

2. Apply the scientific method and engage in constructive problem solving

Audience: Undergraduate

3. Demonstrate application of research skills and methodologies
Audience: Undergraduate

4. Effectively communicate findings
Audience: Undergraduate

FOOD SCI/AN SCI 710 – CHEMISTRY OF THE FOOD LIPIDS
2 credits.

Chemical constitution, structures, reactions, stereochemistry of fats, phospholipids, related compounds; methods of isolation, characterization; synthesis; relation of structure to physical properties.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Write a clear and concise research paper
Audience: Graduate

2. Improve oral communication by presenting major points of the research paper
Audience: Graduate

3. Utilize software to illustrate a protein containing a bound lipid at atomic resolution.
Audience: Graduate

4. Explain lipid functions in relation to varying environmental conditions and electron transfer reactions
Audience: Graduate

5. Develop a detailed understanding of lipid analysis, lipid synthesis as well as digestion and transport of dietary lipids in different vertebrates.
Audience: Graduate

6. Derive the likely volatiles to be generated during storage of any unsaturated fatty acid using the beta-scission of a linoleic acid hydro peroxide as a template
Audience: Graduate

7. Determine if a given reaction is thermodynamically favorable based on standard one-electron reduction potentials and concentrations of reactants (oxidized/reduced couples)
Audience: Graduate

FOOD SCI/AN SCI 711 – FOOD BIOCHEMISTRY
3 credits.

Explores methods for interrogating structure-function relationships, molecular profiles, and microstructure of foods. Provides hands-on experience using computational approaches to model protein-small molecule interactions, analysis of small molecules using high-resolution MS, and protein composition and morphology with fluorescence spectroscopy and microscopy. Knowledge of food chemistry or organic chemistry (such as FOOD SCI 410, CHEM 341, 343, or 345) required.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Critically evaluate recent literature in the field of food chemistry
Audience: Graduate

2. Illustrate the interactions between food molecules (lipids, protein, carbohydrates, bioactive) at atomic resolution using software.
Audience: Graduate

3. Analyze and differentiate the molecular composition of a food or ingredient using HPLC-MS/MS data; fluorescence spectroscopy; and microscopy
Audience: Graduate

4. Propose and analyze how reactions and physical changes affect food microstructure and composition
Audience: Graduate

FOOD SCI 725 – ADVANCED FOOD MICROBIOLOGY
3 credits.

Principles and problems covering fundamental concepts in Food Microbiology; application of concepts in fermentation, pathogenesis, and gut health; development and control of a sustainable and safe food and fiber system.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Analyze common mechanisms of foodborne microbial pathogenesis and immune responses to foodborne infections
Audience: Graduate

2. Critically evaluate treatment, control, and detection strategies for foodborne pathogens
Audience: Graduate

3. Evaluate primary research articles, identify problems related to the experimental approach, (interpretation of) data and/or discussion, and develop solutions to the identified problems
Audience: Graduate

4. Describe emerging trends, drivers and impacts of sustainable food systems
Audience: Graduate

5. Explain the process of fermentation and probiotic mechanism of action
Audience: Graduate

FOOD SCI 799 – PRACTICUM IN FOOD SCIENCE TEACHING
1-3 credits.

Teaching experience for PhD candidates.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain current manufacturing practices through experiential learning
Audience: Graduate

FOOD SCI 875 – SPECIAL TOPICS
1-3 credits.

New graduate and courses of current interest.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023
Learning Outcomes: 1. Explain concepts relating to a special advanced topic outlined in the title
Audience: Graduate

FOOD SCI 900 – SEMINAR ADVANCED
1 credit.

Research literature and current departmental research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and summarize key aspects of scientific rigor and reproducibility, including determination of sample size, statistical significance, measures of outliers, and experimental replicates
Audience: Graduate

2. Describe the features of high-quality presentations and best practices in scientific data/information interpretation
Audience: Graduate

3. Apply and demonstrate best practices in the effective presentation of complex data/information to diverse scientific audience
Audience: Graduate

FOOD SCI 990 – RESEARCH
1-12 credits.

Full lab and literature review of a problem in food science. Leads to preparation of thesis and publication.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Devise an engaging overview of a research area
Audience: Graduate

2. Explain background, methods, results, and a discussion of experimental data
Audience: Graduate

3. Design charts/tables that effectively communicate data
Audience: Graduate

4. Assess peers on the effectiveness of a scientific presentation
Audience: Graduate

5. Generate goals to improve presentation skills
Audience: Graduate

FOREST AND WILDLIFE ECOLOGY (F&W ECOL)

F&W ECOL 1 – COOPERATIVE EDUCATION/CO-OP IN FOREST & WILDLIFE ECOLOGY
1 credit.

Full-time off-campus work experience which combines classroom theory with practical knowledge of operations to provide students with a background upon which to base a professional career. Students receive credit only for the term in which they are actively enrolled and working. The same work experience may not count towards credit in F&W ECOL 399.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2018
Learning Outcomes: 1. Apply concepts learned in coursework to authentic professional situations#
Audience: Undergraduate

2. Demonstrate professional skills appropriate for the industry#
Audience: Undergraduate

3. Identify and reflect on how concepts learned in coursework apply to specific work settings and situations
Audience: Undergraduate

F&W ECOL/ENVIR ST 100 – FORESTS OF THE WORLD
3 credits.

Ecology and conservation of a wide range of forests, from tropical rain and dry forests, boreal forests, to temperate forests, outside of the USA. The main threats to forests, and different strategies to solve conservation and sustainable management issues in international forestry. Trade-offs in forest conservation and management, resulting from different values that people place on forests, issues in equity and equality in access to forest resources. The role of forests in climate change and extinction of species.
Requisites: None
Course Designation: Breadth - Either Biological Science or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify relevant stakeholders in forest landscapes across the world
Audience: Undergraduate

2. Give examples of conservation threats to forests in countries other than the USA and relevant solutions
Audience: Undergraduate

3. Communicate about evidence on forest conservation and threats rigorously, correctly, and under different formats
Audience: Undergraduate

4. Demonstrate, on specific examples, how trade-offs in forest conservation originate and work
Audience: Undergraduate

5. Explain the role of forests in solutions to climate change and species extinctions
Audience: Undergraduate

F&W ECOL 101 – ORIENTATION TO WILDLIFE ECOLOGY
1 credit.

Introduction to Wildlife Ecology and the profession of wildlife management/conservation. Emphasis on preparing for a successful career.
Requisites: Declared in Wildlife Ecology
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe opportunities to engage with faculty, staff, and students in the Department of Forest & Wildlife Ecology#
Audience: Undergraduate

2. Describe the skills of a successful college student and develop a plan for completing the wildlife ecology major
Audience: Undergraduate

3. Identify opportunities to gain additional skills and experience beyond the classroom
Audience: Undergraduate

4. Examine various career options and identify skills and attributes desired by employers#
Audience: Undergraduate

5. Identify resources and services available within the Department of Forest & Wildlife Ecology, CALS, and on the UW-Madison campus to help you achieve your academic and career goals
Audience: Undergraduate

6. Discuss complex issues in the field of wildlife ecology with peers and instructors
Audience: Undergraduate

7. Identify the value of multiple evidence-based perspectives in the field of forest and wildlife ecology#
Audience: Undergraduate

F&W ECOL 110 – LIVING WITH WILDLIFE - ANIMALS, HABITATS, AND HUMAN INTERACTIONS
3 credits.

A general survey of wildlife and wildlife conservation. Basic characteristics and management of wildlife populations and habitats. Human perceptions and interactions with wildlife. Current issues in wildlife management and conservation.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss the ways in which humans interact with wildlife and how they influence our values and attitudes towards wildlife#
Audience: Undergraduate

2. List and describe the most significant events in the history of wildlife conservation in North America
Audience: Undergraduate

3. Explain the North American model for wildlife conservation and contrast it with wildlife conservation in other parts of the world
Audience: Undergraduate

4. Discuss the role that Aldo Leopold played in the development of the wildlife profession and the influence of his writings, including A Sand County Almanac
Audience: Undergraduate

5. Describe basic characteristics of animal populations and communities, and explain how populations increase or decrease#
Audience: Undergraduate

6. Describe the different types of terrestrial habitats and discuss ways in which they can be managed to enhance wildlife
Audience: Undergraduate

7. Discuss the most important and contentious issues relating to wildlife conservation#
Audience: Undergraduate

8. Describe the duties and responsibilities of wildlife professionals and the agencies and organizations that employ them
Audience: Undergraduate

9. Discuss the importance and impact of wildlife on human society
Audience: Undergraduate

F&W ECOL/C&E SOC/SOC 248 – ENVIRONMENT, NATURAL RESOURCES, AND SOCIETY
3 credits.

Introduces the concerns and principles of sociology through examination of human interaction with the natural environment. Places environmental issues such as resource depletion, population growth, food production, environmental regulation, and sustainability in national and global perspectives.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe and critique the role of social conditions and social change in shaping equities and disparities in environment, health, and community
Audience: Undergraduate

2. Place an understanding of local social conditions and change in the global context of rural and urban life, including political, ecological, economic, geographic, historical, and cultural dimensions
Audience: Undergraduate

3. Frame and conduct social science research
Audience: Undergraduate

4. Ethically apply research methods, such as qualitative, quantitative, historical, interdisciplinary, participatory, and action approaches, and evaluate findings
Audience: Undergraduate

5. Demonstrate leadership and collaboration skills for working with people from a diversity of backgrounds in professional and ethical ways that enable beneficial and regenerative relationships
Audience: Undergraduate

6. Demonstrate advanced verbal and written communication skills that are applicable in a professional setting
Audience: Undergraduate

7. Articulate the complex and intricate relationships between people and the planet by exploring the many stories that bind these two together in the US
Audience: Undergraduate

8. Describe how these social ecological relationships produce unequal health outcomes, life chances, and opportunities
Audience: Undergraduate

9. Identify the values and principles of environmental movements
Audience: Undergraduate

10. Evaluate how the climate change crisis exacerbates urgent and contemporary social problems
Audience: Undergraduate

11. Apply analytical skills in spatial, political economic, culture, and critical environmental analysis
Audience: Undergraduate

F&W ECOL 289 – HONORS INDEPENDENT STUDY
1-2 credits.

Research work for Honors students under direct guidance of a faculty member in an area of Forest and Wildlife Ecology. Students are responsible for arranging the work and credits with the supervising instructor.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2001
Learning Outcomes: 1. Develop critical, analytical, and independent thinking skills#
Audience: Undergraduate

2. Apply the scientific method and engage in constructive problem solving

Audience: Undergraduate

3. Demonstrate application of research skills and methodologies
Audience: Undergraduate

4. Effectively communicate findings
Audience: Undergraduate

F&W ECOL 299 – INDEPENDENT STUDY
1-3 credits.

Research work for students under direct guidance of a faculty member in an area of Forest and Wildlife Ecology. Students are responsible for arranging the work and credits with the supervising instructor.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Develop critical, analytical, and independent thinking skills##
Audience: Undergraduate

2. Apply the scientific method and engage in constructive problem solving

Audience: Undergraduate

3. Demonstrate application of research skills and methodologies
Audience: Undergraduate

4. Effectively communicate findings#
Audience: Undergraduate

F&W ECOL 300 – FOREST MEASUREMENTS
4 credits.

Field measurements of trees and forests. Basic concepts of statistics and sampling as applied to forestry. Use of aerial photographs, GIS, and satellite imagery.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate basic competency in the use of forest measurement equipment and technology#
Audience: Undergraduate

2. Calculate individual tree and stand parameters
Audience: Undergraduate

3. Estimate timber volume
Audience: Undergraduate

4. Apply basic statistics in forestry#
Audience: Undergraduate

5. Produce a simple forest inventory using a variety of sampling techniques
Audience: Undergraduate

6. Communicate the results of data collected in written form
Audience: Undergraduate

F&W ECOL 305 – FOREST OPERATIONS
2 credits.

Introduction to forestry operations in the implementation of forest plans, including site preparation, stand establishment, and harvesting systems. Analysis of costs and productivity, including system balance, marketing, timber procurement, and contractual services.
Requisites: F&W ECOL 300 or 410
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify the industrial products that come from our forests#
Audience: Undergraduate

2. Implement timber sale establishment and administration
Audience: Undergraduate

3. Describe the vast array of harvesting systems and their applications#
Audience: Undergraduate

4. Explain the importance of contract payment systems for the forest industry#
Audience: Undergraduate

5. Analyze transportation systems in the forest industry
Audience: Undergraduate

6. Discuss the application of ethics in forest management
Audience: Undergraduate

F&W ECOL 306 – TERRESTRIAL VERTEBRATES: LIFE HISTORY AND ECOLOGY
4 credits.

Life history, ecology, distribution, and taxonomy of reptiles, amphibians, birds, and mammals. Birds will receive less emphasis. Primary focus is on Wisconsin species, including conservation threats, but covers all major North American families, and surveys major groups of the world. Designed as a foundation for detailed study of vertebrates or to satisfy the need for a scientific introduction to Wisconsin vertebrates.
Requisites: ZOOLOGY/BIOLOGY/BOTANY 151, (ZOOLOGY/BIOLOGY 101 and 102), (BIOCORE 381 and 382), or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Provide examples of species for each major terrestrial vertebrate order, including basic life history information associated with each example
Audience: Undergraduate

2. Identify the geographic area where major terrestrial vertebrate orders reach their greatest abundance and the approximate number of extant species in each major order
Audience: Undergraduate

3. Compare and contrast key morphological, physiological, and behavioral differences that contribute to broad life history strategies among terrestrial vertebrate classes and that contribute to distinctions among selected finer scale taxa
Audience: Undergraduate

4. Compare and contrast the body plan, behavioral and physiological adaptations, geographic distribution, and traits contributing to abundance or rarity for terrestrial vertebrate species found in Wisconsin
Audience: Undergraduate

5. Identify and provide the scientific name of all mammals, reptiles, and amphibians in Wisconsin and identify and provide the common name of a subset of Wisconsin birds
Audience: Undergraduate

6. Identify, by sound, all Wisconsin anurans (frogs and toads) and a selection of birds
Audience: Undergraduate

7. Identify the majority of Wisconsin mammal species from the skull alone, or from a combination of skull plus skin
Audience: Undergraduate

F&W ECOL 318 – PRINCIPLES OF WILDLIFE ECOLOGY
3 credits.

Major environmental factors affecting wildlife; structure and behavior of wildlife populations; regional wildlife communities and their conservation.
Requisites: Declared in Wildlife Ecology
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply the scientific method to test ecological hypotheses and resolve wildlife management issues
Audience: Undergraduate

2. Describe and distinguish among the important properties of each ecological level of organization, including individual organisms, populations, communities, and ecosystems#
Audience: Undergraduate

3. Explain how animals balance between inputs and outputs of water, heat, energy, and nutrients to maintain homeostasis
Audience: Undergraduate

4. Explain how animals select habitats and food and adapt to seasonal changes#
Audience: Undergraduate

5. Use cost-benefit analysis to determine the environmental conditions under which animals are likely to defend territories or join social groups
Audience: Undergraduate

6. Define life history parameters that influence population growth and regulation and distinguish between exponential and logistic population growth
Audience: Undergraduate

7. Describe and distinguish among the different types of interspecific interactions and model how interspecific
Audience: Undergraduate

8. Describe the major types of ecological communities and how they vary in space and time
Audience: Undergraduate

F&W ECOL/ENVIR ST/ZOOLOGY 360 — EXTINCTION OF SPECIES
3 credits.

A comprehensive treatment of the ecology, causes, and consequences of species extinction. Ecology and problems of individual species, habitat alteration and degradation, socio-economic pressures and conservation techniques and strategies.
Requisites: Sophomore standing and ZOOLOGY/BIOLOGY/BOTANY 151, (ZOOLOGY/BIOLOGY 101 and 102), BIOLOGY/BOTANY 130, or (BIOCORE 381 and 382)
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the ecological and evolutionary processes shaping the distribution of species diversity globally
Audience: Undergraduate

2. Explain how human activities can threaten species with extinction
Audience: Undergraduate

3. Identify genetic problems and management in small populations
Audience: Undergraduate

4. Discuss social and political dimensions to conservation problems and solutions
Audience: Undergraduate

5. Identify the basic components of the US Endangered Species Act (ESA) and how the ESA has been applied to the conservation of species
Audience: Undergraduate

6. Evaluate and create conservation strategies for at-risk species
Audience: Undergraduate

F&W ECOL/ENVIR ST/G L E/GEOG/GEOSCI/LAND ARC 371 — INTRODUCTION TO ENVIRONMENTAL REMOTE SENSING
3 credits.

Introduction to the Earth as viewed from above, focusing on use of aerial photography and satellite imagery to study the environment. Includes physical processes of electromagnetic radiation, data types and sensing capabilities, methods for interpretation, analysis and mapping, and applications.
Requisites: (Sophomore standing and MATH 113, 114, or 171), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025

F&W ECOL 375 — SPECIAL TOPICS
1-4 credits.

Specialized subject matter of current interest to undergraduate students.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

F&W ECOL 379 — PRINCIPLES OF WILDLIFE MANAGEMENT
3 credits.

Ways of conserving desired numbers of animals for the overall best interests of society, be they aesthetic, ecological, economic, commercial or recreational; includes management of endangered species, exploited species, wildlife communities in nature reserves, and wildlife pests.
Requisites: F&W ECOL 318 or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

F&W ECOL 390 — LEARNING TO ACTION: PROFESSIONAL DEVELOPMENT
1 credit.

Preparation for natural resources professions and the job market after graduation. Development of professional skills including communication, ethical decision-making, and conflict resolution. Experience in job searching, editing resumes, and interviewing for jobs.
Requisites: Declared in Forest Science
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Reflect on your internship experience, what you learned, and how it informs your professional future
Audience: Undergraduate

2. Understand opportunities and challenges in forestry and natural resources professions
Audience: Undergraduate

3. Improve your ability to find, apply, and interview for a job
Audience: Undergraduate

4. Improve your facilitation, communication, and conflict resolution skills
Audience: Undergraduate

5. Consider and articulate your desired long-term contributions to natural resources and society
Audience: Undergraduate

F&W ECOL 395 – DATA AND GIS TOOLS FOR ECOLOGY
3 credits.

Quantitative tools applicable to the investigation of ecological problems, including but not limited to, statistics, Geographic Information Systems (GIS), Remote Sensing, and spatial analysis. Overview of commonly used quantitative techniques in ecological sciences with an emphasis on GIS and spatial analysis. Introduces spatial tools and practical applications using ecological/environmental data sets.
Requisites: MATH 113, 114, 171, placement into MATH 221, or graduate/professional standing
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe ecological datasets spatially and statistically using data storage and Geographic Information Systems (GIS) tools
Audience: Undergraduate

2. Acquire and map spatially explicit ecological data using GIS tools
Audience: Undergraduate

3. Identify patterns in complex ecological data sets
Audience: Undergraduate

4. Conduct common statistical analysis of digitized ecological data (such as: description, correlation, univariate regression, and hypothesis testing)
Audience: Undergraduate

5. Critically evaluate the results of statistical analyses, including validation, of ecological datasets
Audience: Undergraduate

F&W ECOL 399 – COORDINATIVE INTERNSHIP/COOPERATIVE EDUCATION
1-8 credits.

An internship under guidance of a faculty or instructional academic staff member in Forest and Wildlife Ecology and an internship site supervisor. Students are responsible for arranging the work and credits with the faculty or instructional academic staff member and the internship site supervisor.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Workplace - Workplace Experience Course
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025
Learning Outcomes: 1. Apply concepts learned in coursework to authentic professional situations
Audience: Undergraduate

2. Demonstrate professional skills appropriate for the industry
Audience: Undergraduate

3. Identify and reflect on how concepts learned in coursework apply to specific work settings and situations
Audience: Undergraduate

F&W ECOL 400 – STUDY ABROAD IN FOREST AND WILDLIFE ECOLOGY
1-6 credits.

Provides an area equivalency for courses taken on Madison Study Abroad Programs that do not equate to existing UW courses. Current enrollment in a UW-Madison study abroad program
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions

F&W ECOL/BOTANY 402 – DENDROLOGY: WOODY PLANT IDENTIFICATION AND ECOLOGY
3 credits.

Identification, ecological characteristics, ranges, adaptations to environment, and uses of evergreen and deciduous woody plants, with emphasis on species native to Wisconsin; lab and field work.
Requisites: Sophomore standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify all native Wisconsin trees, some common shrubs and vines, and a few important woody exotics by common and scientific name, in summer or winter condition.
Audience: Both Grad & Undergrad

2. Demonstrate a basic understanding of wood structure and use a key to identify blocks of wood.
Audience: Both Grad & Undergrad

3. Recognize the characteristic tree taxa of some of the world's major forest types and some interesting examples of the diversity of trees and their adaptations to their environments.
Audience: Both Grad & Undergrad

4. Compare the morphology, life history, and ecology of woody species to their distribution and habits.
Audience: Both Grad & Undergrad

5. Understand how humans affect the composition, structure and economic value of tree communities and apply this information to questions about management of woody vegetation under changing conditions.
Audience: Both Grad & Undergrad

6. Compare at least two methods for learning to identify a plant species using evidence from your experience in this course.
Audience: Both Grad & Undergrad

7. Construct new materials to teach woody plant ID or tree management issues to a particular target audience.
Audience: Graduate

8. Survey current scientific literature on a particular topic relevant to management of woody vegetation under changing conditions, and summarize current knowledge and knowledge gaps. Recommend next steps in research to improve management.
Audience: Graduate

F&W ECOL 410 – SILVICULTURE: APPLIED FOREST ECOLOGY
3-4 credits.

Ecologically-based forest management principles and practices for sustainable timber production, maintenance or restoration of biological diversity, and maintenance of aesthetic quality and site productivity. Includes coverage of even-aged and uneven-aged management, reforestation principles, and ecological restoration techniques.
Requisites: ZOOLOGY/BOTANY/F&W ECOL 460, F&W ECOL 550, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe stand dynamics, including concepts of stand structure, function, establishment, growth, composition, health, and quality.
Audience: Both Grad & Undergrad

2. Explain the ecological underpinnings and technical considerations for common regeneration, establishment, and intermediate treatments that comprise modern silvicultural systems.
Audience: Both Grad & Undergrad

3. Develop data-driven, time- and space-bounded prescriptions for forest stands considering ecological, economic, and societal aspects of management decisions in an ethical context.
Audience: Both Grad & Undergrad

4. Communicate technical material using text, tables, graphs, and maps, including logical rationale supporting management decisions.
Audience: Both Grad & Undergrad

5. Create solutions to real-world forest management challenges by applying higher-order thinking skills to their knowledge of silviculture.
Audience: Both Grad & Undergrad

6. Survey current scientific literature on a particular topic relevant to management of forests in WI under changing conditions, summarize current knowledge and knowledge gaps, and recommend next steps in research to improve management.
Audience: Graduate

F&W ECOL 411 — PRACTICES OF SILVICULTURE
1 credit.

Utilization of ecologically-based forest management practices for sustainable timber production, maintenance or restoration of biological diversity, and maintenance of aesthetic quality and site productivity. Includes coverage of even-aged and uneven-aged management, reforestation principles, and ecological restoration techniques.
Requisites: F&W ECOL 410 or concurrent enrollment
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe stand dynamics, including concepts of stand structure, function, establishment, growth, composition, health, and quality
Audience: Undergraduate

2. Explain the ecological underpinnings and technical considerations for common regeneration, establishment, and intermediate treatments that comprise modern silvicultural systems
Audience: Undergraduate

3. Develop data-driven, time- and space-bounded prescriptions for forest stands considering ecological, economic, and societal aspects of management decisions in an ethical context
Audience: Undergraduate

4. Communicate technical material using text, tables, graphs, and maps, including logical rationale supporting management decisions
Audience: Undergraduate

5. Create solutions to real-world forest management challenges by applying higher-order thinking skills to their knowledge of silviculture
Audience: Undergraduate

F&W ECOL 420 — REGULATED TRAPPING IN WILDLIFE MANAGEMENT AND CONSERVATION
1 credit.

Training and professional skill development for future natural resources professionals. Introduction to the importance of regulated trapping as a technique used in research, wildlife damage management, wildlife reintroduction, disease management, fur/food acquisition, etc.
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Identify the important biological and ecological aspects of furbearers
Audience: Undergraduate

2. Discuss furbearer management related laws and regulations, research, population modeling, and furbearer diseases
Audience: Undergraduate

3. Explain how regulated trapping is used by State, Federal and Tribal agencies to manage wildlife and their habitats
Audience: Undergraduate

4. Describe the many benefits of regulated trapping to society
Audience: Undergraduate

5. Identify terminology and workings of several types of traps, sets, and trapping equipment used to legally harvest furbearers and to avoid non-target species
Audience: Undergraduate

6. Summarize the goals of the Best Management Practices for Trapping Program (BMPs)
Audience: Undergraduate

7. Demonstrate proper fur handling and processing and knowledge of related terminology
Audience: Undergraduate

8. Communicate effectively about regulated trapping
Audience: Undergraduate

F&W ECOL 422 – HUNTING FOR CONSERVATION
1 credit.

Introduces the diverse values and important roles hunters and hunting play in wildlife conservation through historical and contemporary contexts. Provides practical skills for future natural resources professionals.
Requisites: Consent of instructor
Repeatable for Credit: No
Learning Outcomes: 1. Describe the demographics of hunters in North America and their motivations for participating.
Audience: Undergraduate

2. Explain the role of hunting in wildlife management and conservation and how this relationship evolved.
Audience: Undergraduate

3. Identify the reason for and effect of hunting laws and regulations.
Audience: Undergraduate

4. Demonstrate the principles of firearm safety and describe the role of hunter education.
Audience: Undergraduate

5. Identify methods, types of hunting, and skills hunters use to legally harvest game animals in North America.
Audience: Undergraduate

6. Discuss the unique roles hunting plays in society, including intrinsic, cultural, biological, ecological, economic, and personal values.
Audience: Undergraduate

7. Describe the responsibility and ethics hunters are charged with to not only pursue their quarry safely and legally, but also ethically.
Audience: Undergraduate

F&W ECOL 424 – WILDLIFE ECOLOGY SUMMER FIELD PRACTICUM
2 credits.

Practicum emphasizing research and habitat management techniques through individual and group field work, tours, demonstrations and lectures.
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Summer 2024
Learning Outcomes: 1. Identify northern Wisconsin wildlife (birds, mammals, reptiles and amphibians) and plant (trees, shrubs, and herbaceous) species
Audience: Undergraduate

2. Perform wildlife inventory and monitoring techniques for birds, mammals, reptiles and amphibians
Audience: Undergraduate

3. Apply proper handling procedures for various wildlife species
Audience: Undergraduate

4. Conduct forest measurements and vegetation sampling
Audience: Undergraduate

5. Use a compass, Global Position System (GPS) and ArcGIS software
Audience: Undergraduate

6. Collect, summarize and integrate field data into a final report
Audience: Undergraduate

F&W ECOL/A A E 430 – DECISION METHODS FOR NATURAL RESOURCE MANAGERS
3 credits.

Applications of quantitative methods, including optimization and simulation, to the management of natural resources, especially forests.
Requisites: MATH 112, 114, or 171 or placement into MATH 211 or 221. Not open to students with credit for A A E 652 prior to Fall 2025.
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Quantify the timber and non-timber values of forest resources
Audience: Undergraduate

2. Describe and apply financial decision criteria to evaluate forest investments
Audience: Undergraduate

3. Explain how optimal rotation ages are determined and what factors affect this calculation
Audience: Undergraduate

4. Create harvest scheduling models and apply them to diverse landowner objectives
Audience: Undergraduate

5. Apply knowledge of mathematical models and financial theory to determine optimal rotation age for a given species and communicate findings in written and verbal formats
Audience: Undergraduate

F&W ECOL 448 – DISTURBANCE ECOLOGY
3 credits.

An introduction to fire, wind, flooding, disease, insects and other disturbance regimes that serve as primary drivers of the structure and function of terrestrial ecosystems. Discusses how these disturbances interact, using case studies and data that highlight the role of disturbance in different ecosystems (e.g. grasslands, forests, tundra) with a focus on the ecosystem services they provide. Discusses and critiques management strategies used to mitigate biotic and abiotic disturbances, gaining critical insights from the literature as well as personal perspectives and experiences.
Requisites: BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY/BOTANY 151, BIOCORE 381, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify what characteristics are necessary to refer to an event as a disturbance and clearly define ways in which disturbances are categorized
Audience: Undergraduate

2. Determine and discuss mechanisms underlying different disturbance regimes in the context of ecological theory and observations
Audience: Undergraduate

3. Interpret, critique, and appropriately cite primary scientific literature in the field of disturbance ecology and extract critical information from figures and graphs
Audience: Undergraduate

4. Analyze and interpret data collected at various scales that relate to the causes and consequences of various disturbance regimes and identify the limitations and advantages of each data type
Audience: Undergraduate

5. Describe (through examples and case studies) how different disturbances interact with each other using appropriate terminology and definitions and evaluate context-dependent consequences for ecosystem function
Audience: Undergraduate

6. Evaluate how disturbance risk is assessed in various systems and determine approaches that are most amenable to intervention based on costs, benefits, and feasibility
Audience: Undergraduate

F&W ECOL 449 – DISTURBANCE ECOLOGY LAB (I): HERBIVORES AND FIRE
1 credit.

Explores natural and anthropogenic disturbances occurring in forest ecosystems through hands on learning experiences. Emphasis on the role of herbivores and fire with examination of management strategies. Applies basic ecological laboratory and field techniques to understanding disturbances that change the physical environment and disrupt ecosystem structure.
Requisites: BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY/BOTANY 151, BIOCORE 381, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Discuss the importance of disturbance for ecosystem processes (e.g., nutrient cycling, biodiversity, soil development, etc.)
Audience: Undergraduate

2. Describe the effect of herbivores and fire on local forest habitats.
Audience: Undergraduate

3. Identify native and non-native members of local forest ecosystems and explain how they respond to herbivory and fire.
Audience: Undergraduate

4. Explain how population and community dynamics of plants are influenced by disturbance, stress, and species interactions.
Audience: Undergraduate

5. Formulate novel hypotheses related to declining forest understory biodiversity, design experimental protocols to falsify those hypotheses, and communicate research proposals in oral and written forms to a scientific audience.
Audience: Undergraduate

6. Apply basic ecological laboratory and field techniques to understanding ecological principles.
Audience: Undergraduate

F&W ECOL 450 – DISTURBANCE ECOLOGY LAB (II): FOREST PATHOGENS
1 credit.

Explores natural and anthropogenic disturbances occurring in forest ecosystems through hands on learning experiences. Focuses on the causes of impoverished forests and the role and management of pathogens. Applies basic ecological laboratory and field techniques to understanding disturbances that change the physical environment and disrupt ecosystem structure.
Requisites: BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY/BOTANY 151, BIOCORE 381, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss the importance of disturbance for ecosystem processes (e.g., nutrient cycling, biodiversity, soil development, etc.)
Audience: Undergraduate

2. Describe the problems associated with and causes of depauperate understories in the Deciduous Forest Biome.
Audience: Undergraduate

3. Describe the role of pathogens (including fungi, bacteria, and viruses) in forest disturbance.
Audience: Undergraduate

4. Explain how population and community dynamics of plants are influenced by disturbance, stress, and species interactions.
Audience: Undergraduate

5. Test novel hypotheses related to declining forest understory biodiversity, implement experimental protocols to falsify those hypotheses, graph/analyze/interpret results, and communicate these results in oral and written forms to a scientific audience.
Audience: Undergraduate

6. Apply basic ecological laboratory and field techniques to understanding ecological principles.
Audience: Undergraduate

F&W ECOL/SOIL SCI 451 – ENVIRONMENTAL BIOGEOCHEMISTRY
3 credits.

Explores long and short-term cycles of carbon, nitrogen, phosphorus, sulfur, and metals as well as water and energy cycles between water, the atmosphere, terrestrial vegetation, and soils. Emphasizes the linkage between terrestrial vegetation and soils across global biomes for managed and unmanaged ecosystems. Investigates biogeochemical processes through their biochemical constituents, conceptual models and exploration of isotopic and chemical data. Provides a practical understanding of the interactions between components and fluxes of terrestrial ecosystems and how data is developed and employed.
Requisites: CHEM 104, 109, 116, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe global biogeochemical cycles of C, N, P, K, S, Fe, energy, and water and their importance
Audience: Both Grad & Undergrad

2. Explain the importance of human perturbations to and management of biogeochemical cycles
Audience: Both Grad & Undergrad

3. Describe key methods used to study biogeochemistry and explain their limitations
Audience: Both Grad & Undergrad

4. Predict which biogeochemical reactions would be likely across different environments and conditions
Audience: Both Grad & Undergrad

5. Discuss and critically evaluate scientific papers in biogeochemistry at a graduate level
Audience: Graduate

6. Discuss and critically evaluate scientific papers in biogeochemistry at an advanced undergraduate level
Audience: Undergraduate

7. Characterize elemental cycling within a system of interest, comparing and contrasting different elements
Audience: Graduate

8. Characterize elemental cycling within a system of interest
Audience: Undergraduate

F&W ECOL 458 – ENVIRONMENTAL DATA SCIENCE
3 credits.

Introduces fundamental machine learning techniques for numerical modeling and data analysis and modern computer programming tools used to analyze, prepare, and visualize data from common formats of datasets in the field of Earth and environmental sciences. Emphasizes opportunities to consider real-world applications for concepts in environmental data science.
Requisites: STAT 240, 301, 324, 371, or graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate introductory skills in using collaboration technology (e.g. Jupyter Notebooks) to write, edit, and run programs in a scientific programming language (e.g. Python)
Audience: Both Grad & Undergrad

2. Recognize, read, write and use common environmental dataset formats
Audience: Both Grad & Undergrad

3. Use a scientific programming language (e.g. Python) to read and process environmental data
Audience: Both Grad & Undergrad

4. Produce visualizations of environmental data, including basic scientific charts, statistics, and maps
Audience: Both Grad & Undergrad

5. Understand fundamentals of modern machine learning algorithms and gain experience of practical use of them
Audience: Both Grad & Undergrad

6. Solve real-world data science problems individually and in teams
Audience: Both Grad & Undergrad

7. Identify the frontiers in real-world environmental science challenges and how data science can help
Audience: Both Grad & Undergrad

8. Identify a problem in environmental science that may be solved or better understood through data science, provide a basic visualization or analysis of a data set associated with that problem, and communicate findings effectively
Audience: Undergraduate

9. Develop in-depth spatial and/temporal analyses using advanced data science tools (such as machine learning) and visual datasets related to your own research or anticipated area of research that meet the standards of scientific journals, critically evaluate your findings, and situate them within the larger context of current research literature
Audience: Graduate

F&W ECOL/BOTANY/ZOOLOGY 460 — GENERAL ECOLOGY
4 credits.

Ecology of individual organisms, populations, communities, ecosystems, landscapes, and the biosphere. The interaction of organisms with each other and their physical environment. These relationships are studied, often in quantitative terms, in both field and laboratory settings.
Requisites: Satisfied Quantitative Reasoning (QR) A requirement and ZOOLOGY/BIOLOGY/BOTANY 152, (ZOOLOGY/BIOLOGY 101 and 102), BIOCORE 381, or BOTANY/BIOLOGY 130, or graduate/professional standing
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

F&W ECOL/ENVIR ST 515 — NATURAL RESOURCES POLICY
3 credits.

Examine natural resources policy and law in the United States relating to forests, wildlife, and other natural resources. Investigates the policy-making process and the role of science, values, property, economics, and justice in the development of federal and state resources policy. Practice professional written and oral communication and ethical engagement in resources policy and administration.
Requisites: Satisfied Communications A requirement or graduate/professional standing
Course Designation: Gen Ed - Communication Part B
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

F&W ECOL/BOTANY/ENVIR ST/ZOOLOGY 516 — CONSERVATION BIOLOGY
3 credits.

Investigate the science behind the protection of nature and preservation of biodiversity by focusing on both the biological and socioeconomic factors that underlie the challenges to and the impacts of conservation efforts. Explore the theory, research, and application of biological conservation from an interdisciplinary, international, solutions-focused perspective. Learn about the many threats to Earth's biodiversity but also examine in-depth and apply approaches to overcome them.
Requisites: Satisfied Quantitative Reasoning (QR) A requirement and ZOOLOGY/BIOLOGY/BOTANY 152, BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY 101, BIOCORE 381, or graduate/professional standing
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Distinguish conservation biology from other scientific disciplines and describe its over-arching principles.
Audience: Both Grad & Undergrad

2. Articulate many reasons why the conservation of biological diversity (at many levels) is important.
Audience: Both Grad & Undergrad

3. Quantify biodiversity at the individual, population, and species level by applying various commonly used models and indices.
Audience: Both Grad & Undergrad

4. Explain orally and in writing the principal threats to biodiversity, to both scientific and layperson audiences (habitat loss and fragmentation; industrial agriculture; climate change; overexploitation; invasive species; pollution) and the specific biological effects of these threats.
Audience: Both Grad & Undergrad

5. Outline strategies to implement at the personal, local, and global scales for solving the biodiversity crisis.
Audience: Both Grad & Undergrad

6. Critically analyze, apply, and communicate recommendations for changing personal behaviors to mitigate the biodiversity and climate crises.
Audience: Both Grad & Undergrad

7. Assess the strengths and weaknesses of various conservation strategies or policy approaches.
Audience: Both Grad & Undergrad

8. Synthesize multiple investigations of conservation strategies to assess trade#offs and synergies among them.
Audience: Graduate

9. Make science#based recommendations for the appropriate conservation approach or strategy for a given situation.
Audience: Graduate

10. Manipulate quantitative data using multi-step arguments to evaluate, interpret, and express solutions to problems in biodiversity estimation, population monitoring, and genetics in the context of conservation.
Audience: Both Grad & Undergrad

F&W ECOL/AN SCI/ZOOLOGY 520 — ORNITHOLOGY
3 credits.

Introduction to bird biology, ecology, and behavior. Topics include the evolutionary origin of birds and flight, anatomy and physiology, functional morphology, migration, communication, reproductive strategies, ecological adaptations and roles, and biogeographical patterns.
Requisites: ZOOLOGY/BIOLOGY 101 and 102, ZOOLOGY/BIOLOGY/BOTANY 152, (BIOCORE 381 and 382), or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

F&W ECOL/AN SCI/ZOOLOGY 521 — BIRDS OF SOUTHERN WISCONSIN
3 credits.

Outdoor and indoor labs/lectures emphasizing identification of southern Wisconsin birds by sight and vocalization. Two required Saturday field trips in Southern Wisconsin.
Requisites: ZOOLOGY/BIOLOGY 101 and 102, ZOOLOGY/BIOLOGY/BOTANY 152, (BIOCORE 381 and 382), or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

F&W ECOL/A A E/ECON 531 — NATURAL RESOURCE ECONOMICS
3 credits.

Economic concepts and tools relating to management and use of natural resources, including pricing principles, cost-benefit analysis, equity, externalities, economic rent, renewable and nonrenewable resources, and resource policy issues.
Requisites: ECON 301 or 311 or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Employ appropriate concepts in order to correctly define the economic benefits accrued from different natural resources.
Audience: Both Grad & Undergrad

2. Apply appropriate methodologies and tools to demonstrate the conditions under which the benefits are likely to be captured or dissipated by real world actors.
Audience: Both Grad & Undergrad

3. Explain the social, economic, and/or environmental dimensions of the sustainability challenges of maintaining healthy supplies of forests, biodiversity, fish and wildlife, and freshwater.
Audience: Both Grad & Undergrad

4. Analyze the causes of and solutions for the sustainability challenges of maintaining healthy supplies of forests, biodiversity, fish and wildlife, and freshwater.
Audience: Both Grad & Undergrad

5. Apply academic principles of natural resource economics to a real-world policy problem.
Audience: Graduate

F&W ECOL/SURG SCI 548 – DISEASES OF WILDLIFE
3 credits.

Provides an overview of the issues involved across a wide range of wildlife diseases, presented within the context of ecosystem health or "one health". Content will be on the biological, epidemiological, clinical, public health and, in some cases, sociopolitical ramifications of wildlife diseases. Covers a wide variety of wildlife diseases caused by bacteria, viruses, parasites, prions, and environmental contaminants. Consequences associated with environmental changes on the manifestation of wildlife diseases will also be discussed. This range of diseases will be presented in order to familiarize the many facets involved in disease management, from animal and human health issues, to ecological and environmental considerations, to the role of society in contributing to, and managing, these diseases.
Requisites: BOTANY/BIOLOGY 130, (ZOOLOGY/BIOLOGY 101 and 102), ZOOLOGY/BIOLOGY/BOTANY 151, BIOCORE 381, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain how an infection differs from disease.
Audience: Undergraduate

2. Recognize different groups of infectious microorganisms: viruses, bacteria, fungi, parasites, prions, etc.
Audience: Undergraduate

3. Define and describe ecosystem health or one health.
Audience: Undergraduate

4. Define the terms zoonosis, zoonoses, and zoonotic.
Audience: Undergraduate

5. Evaluate how anthropogenic influences exacerbate transmission of zoonotic diseases.
Audience: Undergraduate

6. Describe and explain the epidemiological concepts related to each wildlife disease presented in this course.
Audience: Undergraduate

7. Recognize diseases that are specific to animal groups or humans, or are nonspecific, having the potential to infect many different species.
Audience: Undergraduate

F&W ECOL 550 – FOREST ECOLOGY
3 credits.

Introduction to major abiotic and biotic factors that influence forest ecosystem composition, structure, and function. Reviews important processes that influence structure and function of forest ecosystems. Uses basic ecosystem concepts to elucidate influence of anthropogenic (including forest management) and natural disturbances on forest ecosystem structure and function.
Requisites: BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY/BOTANY 152, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

F&W ECOL 551 – FOREST ECOLOGY LAB
1 credit.

Review concepts presented in F&W ECOL 550 by exposing the key concepts and processes discussed that can best be seen in the field or illustrated with the use of ecosystem models.
Requisites: F&W ECOL 550 or concurrent enrollment, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

F&W ECOL 561 – WILDLIFE MANAGEMENT TECHNIQUES
3 credits.

Preparation of collections, analyses of food habits, sex and age determinations, censuses, trapping and banding, planting food and cover, research techniques.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and list various wildlife research techniques, such as GIS, GPS, animal capture, and tracking methods
Audience: Undergraduate

2. Explain the principles and applications of different wildlife research techniques, including the use of trail cameras and habitat surveys
Audience: Undergraduate

3. Use field equipment and techniques, such as radio-tracking and stable isotope analysis, in real-world wildlife research scenarios
Audience: Undergraduate

4. Analyze data collected from field experiments, such as mark-recapture and occupancy models, to draw meaningful conclusions about wildlife populations and behaviors
Audience: Undergraduate

5. Critically evaluate the effectiveness and limitations of various wildlife research techniques and methodologies discussed in the course
Audience: Undergraduate

6. Design and propose a comprehensive wildlife research project, incorporating appropriate techniques and methodologies learned throughout the course
Audience: Undergraduate

F&W ECOL/LAND ARC/ZOOLOGY 565 – PRINCIPLES OF LANDSCAPE ECOLOGY
2 credits.

Emphasizes the importance of spatial patterns at broad scales. Concepts and applications are covered.
Requisites: (ZOOLOGY/BOTANY/F&W ECOL 460 or F&W ECOL 550) and (STAT 301, 371, or F&W ECOL/STAT 571), or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019

F&W ECOL/STAT 571 – STATISTICAL METHODS FOR BIOSCIENCE I
4 credits.

Descriptive statistics, distributions, one- and two-sample normal inference, power, one-way ANOVA, simple linear regression, categorical data, non-parametric methods; underlying assumptions and diagnostic work.
Requisites: Graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

F&W ECOL/STAT 572 – STATISTICAL METHODS FOR BIOSCIENCE II
4 credits.

Polynomial regression, multiple regression, two-way ANOVA with and without interaction, split-plot design, subsampling, analysis of covariance, elementary sampling, introduction to bioassay.
Requisites: STAT/F&W ECOL 571
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

F&W ECOL 577 – COMPLEXITY AND CONSERVATION OF WHITE-TAILED DEER
3 credits.

Solve problems that arise in the conservation and management of wildlife populations requires that managers understand and evaluate human cultural, economic, and political issues in addition to ecological issues. Use case studies to understand the interdisciplinary nature of wildlife management while gaining practical hands-on experiences.
Requisites: Declared in Wildlife Ecology and Junior Standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

F&W ECOL 590 – INTEGRATED RESOURCE MANAGEMENT
3 credits.

Resource management planning in state and federal land management agencies. Apply principles by working in teams to develop a management plan for a real property by inventorying resources; developing management objectives and alternatives; and analyzing their ecological, social and institutional implications.
Requisites: Declared in Forest Science, Junior Standing, and F&W ECOL 658
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Integrate and apply knowledge and skills in forest and wildlife ecology, forest management, hydrology and watershed management, forest economics and policy acquired during your tenure as a student
Audience: Undergraduate

2. Identify and propose solutions to resource management problems
Audience: Undergraduate

3. Collaborate effectively in teams to solve resource management issues
Audience: Undergraduate

4. Discuss resource management problems and solutions with scientific and professional audiences in both written and oral forms
Audience: Undergraduate

F&W ECOL 599 – WILDLIFE RESEARCH CAPSTONE
3 credits.

Synthesize concepts in wildlife ecology and prepare for a wildlife research career. Develop a professional-quality research proposal for an extended project, carry out a pilot ecological field study, and design and implement a social survey questionnaire.
Requisites: F&W ECOL 561
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify contemporary 'real world' issues facing wildlife specialists
Audience: Undergraduate

2. Apply knowledge gained in their academic programs to develop plans for addressing these issues
Audience: Undergraduate

3. Defend proposed plans in#written and oral forma
Audience: Undergraduate

4. Collaborate effectively in a team to carry out proposed plans
Audience: Undergraduate

5. Communicate findings in the form of written reports, professional presentations, and informal social media public communication
Audience: Undergraduate

6. Apply key professional skills marketable to future employers#
Audience: Undergraduate

F&W ECOL 655 – ANIMAL POPULATION DYNAMICS
3 credits.

Fluctuations of animal populations: techniques of study, documentation, controls.
Requisites: (F&W ECOL 318 or ZOOLOGY/BOTANY/F&W ECOL 460) and (MATH 112, 114, 171 or placement into MATH 221), or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply field specific vocabulary and foundational theories of population dynamics to describe current understandings of how animal populations behave and interact
Audience: Both Grad & Undergrad

2. Assess how existing theories, models, and field data are understood and applied in wildlife conservation
Audience: Both Grad & Undergrad

3. Analyze population dynamics using species-specific examples that would be relevant to a professional wildlife biologist using data and conceptual models
Audience: Both Grad & Undergrad

4. Synthesize, evaluate, and formulate a position on current scholarly research in a focused area of population dynamics
Audience: Graduate

5. Demonstrate oral communication skills including identification and explanation of relevant content, clear organization, and effective delivery
Audience: Graduate

F&W ECOL 658 – FOREST RESOURCES PRACTICUM
3 credits.

Field training and experience; exposure to forestry operations, equipment, procedures, and management problems.
Requisites: None
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Identify native and non-native members of local forest ecosystems, including plants, vertebrates, and invertebrates.
Audience: Undergraduate

2. Apply forest measurement techniques to complete forest ecosystem assessments.
Audience: Undergraduate

3. Collect, manage, analyze, and draw conclusions from datasets.
Audience: Undergraduate

4. Formulate and test novel hypotheses related to forest ecosystems.
Audience: Undergraduate

5. Work collaboratively to accomplish measurement, analysis, and writing tasks.
Audience: Undergraduate

F&W ECOL/ZOOLOGY 660 – CLIMATE CHANGE ECOLOGY
3 credits.

The evidence that the Earth's climate is changing at unprecedented rates is now overwhelming. Environmental tipping points are being crossed and many species are adapting or failing to adapt. Climate change poses a significant problem for conserving and managing wildlife and their habitats. Climate change, its ecological impacts, and the principle of climate change adaptation in natural resources conservation will be discussed.
Requisites: BOTANY/BIOLOGY/ZOOLOGY 152, (BIOLOGY/ZOOLOGY 101 and 102), BIOCORE 381, or BIOLOGY/BOTANY 130, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. explain historic and future trends in climate change within an ecological context.
Audience: Both Grad & Undergrad

2. identify the eco-evolutionary impacts of climate change on biological communities (including changes in phenology and ranges, community dynamics, and altered trophic interactions).
Audience: Both Grad & Undergrad

3. develop a climate change vulnerability assessment for a given species or community.
Audience: Both Grad & Undergrad

4. analyze and incorporate climate and biological data in vulnerability assessments.
Audience: Graduate

F&W ECOL/BOTANY/ZOOLOGY 672 – HISTORICAL ECOLOGY
2 credits.

Study the importance of past events for current ecosystems. Emphasizes concepts and applications.
Requisites: Senior standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

F&W ECOL 675 – PROFESSIONAL DEVELOPMENT IN FOREST & WILDLIFE ECOLOGY
1 credit.

Provides opportunities for additional training in professional development skills relevant to careers in natural resources.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

F&W ECOL 681 – SENIOR HONORS THESIS
2-4 credits.

Individual study for undergraduate students in an Honors program completing a thesis in the area of Forest and Wildlife Ecology, as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Review and analyze scientific literature
Audience: Undergraduate

2. Identify and use appropriate research methodologies to address a research question
Audience: Undergraduate

3. Begin structuring and writing a thesis based on original research
Audience: Undergraduate

F&W ECOL 682 – SENIOR HONORS THESIS
2-4 credits.

Second semester of individual study for undergraduate students in an Honors program completing a thesis in the area of Forest and Wildlife Ecology, as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Review and analyze scientific literature##
Audience: Undergraduate

2. Identify and use appropriate research methodologies to address a research question#
Audience: Undergraduate

3. Write a thesis based on original research#
Audience: Undergraduate

F&W ECOL 691 – SENIOR THESIS
2-4 credits.

Independent research for Honors students completing a thesis in the areas of Forest Science or Wildlife Ecology, under the guidance of a faculty member.
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Review and analyze scientific literature
Audience: Undergraduate

2. Identify and use appropriate research methodologies to address a research question##
Audience: Undergraduate

3. Begin structuring and writing a thesis based on original research
Audience: Undergraduate

F&W ECOL 692 – SENIOR THESIS
2-4 credits.

Independent research for Honors students completing a thesis in the areas of Forest Science or Wildlife Ecology, under the guidance of a faculty member.
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Review and analyze scientific literature
Audience: Undergraduate

2. Identify and use appropriate research methodologies to address a research question##
Audience: Undergraduate

3. Write a thesis based on original research#
Audience: Undergraduate

F&W ECOL 699 – SPECIAL PROBLEMS
1-4 credits.

Individual advanced work in an area of Forest and Wildlife Ecology under the direct guidance of a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Develop critical, analytical, and independent thinking skills#
Audience: Undergraduate

2. Apply the scientific method and engage in constructive problem solving #
Audience: Undergraduate

3. Demonstrate application of research skills and methodologies#
Audience: Undergraduate

4. Effectively communicate findings#
Audience: Undergraduate

F&W ECOL/ENTOM 711 – MULTIVARIATE ANALYSIS OF ECOLOGICAL AND COMMUNITY DATA
2 credits.

Examines common methods of multivariate data analysis in ecology and environmental science. Covers methods for the analysis of complex, multidimensional datasets that are collected in the study of plant, invertebrate, fish, and bird communities. Addresses the concurrent analysis of the environmental factors that may drive community distributions. Provides the basis for predictive modeling of distributions across landscapes. General methods covered include ordination (PCA, DCA, NMDS, CCA), clustering (or classification), and other comparative analyses of data matrices (ANOSIM, Mantel tests). Includes an applied, "hands-on" approach on how to use these tools, and the circumstances under which their uses are either appropriate or inappropriate.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

F&W ECOL 799 – PRACTICUM IN FORESTRY AND WILDLIFE ECOLOGY TEACHING
1-3 credits.

Instructional orientation to teaching at the higher education level in the agricultural and life sciences, direct teaching experience under faculty supervision, experience in testing and evaluation of students, and the analysis of teaching performance.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022
Learning Outcomes: 1. Articulate learning goals for the practicum in cooperation with supervising instructor#
Audience: Graduate

2. Prepare and/or implement lesson plans for a class period, week, or module of the class#
Audience: Graduate

3. Deliver course content and/or facilitate discussion
Audience: Graduate

4. Identify pedagogical strengths and opportunities for growth based on classroom assessment and/or feedback#
Audience: Graduate

F&W ECOL/BOTANY/ENTOM/ZOOLOGY 821 – FOUNDATIONS OF ECOLOGY
2 credits.

Foundational ideas in the field of ecology. Discussion topics trace the development of ecology as a discipline, and the roots of modern ecological thought, as well as the research approaches in ecology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and describe key debates in the history of ecology and ongoing controversies in the field.
Audience: Graduate

2. Differentiate ecological processes and how they sustain ecological systems.
Audience: Graduate

3. Moderate and participate in discussions about the significance of important ecological concepts.
Audience: Graduate

4. Summarize, interpret, and synthesize conceptual theories of ecology orally and in writing.
Audience: Graduate

5. Evaluate peer work and provide constructive, professional feedback.
Audience: Graduate

F&W ECOL 850 – DEMOGRAPHIC METHODS IN WILDLIFE CONSERVATION
3 credits.

Explores the application of demographic methods in the conservation and management of animal populations. Techniques explored include maximum likelihood and Bayesian estimation, count-based models, mark-recapture models, occupancy models, matrix models, and sensitivity analyses. Emphasizes application of these models in conservation decision making.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Estimate model parameters using maximum likelihood and Bayesian procedures
Audience: Graduate

2. Construct, implement, and interpret output from deterministic and stochastic matrix models of population growth
Audience: Graduate

3. Estimate and model ecological drivers of mortality and survival rates in wildlife populations using mark-recapture modeling methods
Audience: Graduate

4. Estimate and model ecological drivers of site occupancy rates for wildlife populations using occupancy modeling methods
Audience: Graduate

5. Evaluate model limitations, model assumptions, and the effects of violations of assumptions on inference
Audience: Graduate

6. Interpret population model output and apply results to conservation decision making in the face of uncertainty
Audience: Graduate

F&W ECOL 875 – SPECIAL TOPICS
1-4 credits.

Specialized subject matter of current interest to graduate students.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

F&W ECOL/AGROECOL/ATM OCN/BOTANY/ENTOM/ENVIR ST/GEOG/ZOOLOGY 953 – INTRODUCTION TO ECOLOGY RESEARCH AT UW-MADISON
1-2 credits.

Introduction to diverse ecological research across the UW-Madison Campus. Discussions on adapting to graduate school and graduate-level ecological research, key topics in professional development, and research presentations by faculty members.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop an appreciation for the foundations and legacy of ecology research and conservation science at UW-Madison
Audience: Graduate

2. Recognize the diversity and strength of current research in ecology at UW-Madison
Audience: Graduate

3. Differentiate expectations between undergraduate education and those of independent research for graduate degrees in ecology
Audience: Graduate

4. Develop appropriate expectations for advisors and advisees
Audience: Graduate

5. Reason through hypothetical ethical challenges and identify potential solutions based on professional codes of ethics
Audience: Graduate

6. Develop an understanding of the suite of skills associated with success in graduate school and in science
Audience: Graduate

F&W ECOL/DS/URB R PL 955 – PRACTICAL RESEARCH DESIGN AND METHODS OF EMPIRICAL INQUIRY
3 credits.

Provides a practical introduction to basic concepts of research question formulation, research designs and alternative methods of inquiry, implications for internal validity of the research and generalizability of the findings, operational definitions and measurement validity, reliability, utility and precision.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022

F&W ECOL/ATM OCN/BOTANY/ENVIR ST/GEOG/GEOSCI/ZOOLOGY 980 – EARTH SYSTEM SCIENCE SEMINAR
1 credit.

Topics in earth system science. Emphasis on the coupling between atmospheric, oceanic and land surface systems, involving physical geochemical and biological processes, and including interactions with human systems.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

F&W ECOL 990 – RESEARCH AND THESIS
1-12 credits.

Independent research in preparation of a graduate thesis under supervision of a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Devise an engaging overview of a research area##
Audience: Graduate

2. Explain background, methods, results, and a discussion of experimental data#
Audience: Graduate

3. Design charts/tables that effectively communicate data#
Audience: Graduate

4. Assess peers on the effectiveness of a scientific presentation#
Audience: Graduate

5. Generate goals to improve presentation skills#
Audience: Graduate

F&W ECOL 999 – ADVANCED INDEPENDENT STUDY
1-3 credits.

Independent graduate study under supervision of a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Develop critical, analytical, and independent thinking skills#
Audience: Graduate

2. Apply the scientific method and engage in constructive problem solving

Audience: Graduate

3. Demonstrate application of research skills and methodologies
Audience: Graduate

4. Effectively communicate findings#
Audience: Graduate

FRENCH (FRENCH AND ITALIAN) (FRENCH)

FRENCH 101 – FIRST SEMESTER FRENCH
4 credits.

Oral practice and conversation, grammar, reading, vocabulary building, and study of French and Francophone cultures.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

FRENCH 102 – SECOND SEMESTER FRENCH
4 credits.

Oral practice and conversation, grammar, reading, vocabulary building, and study of French and Francophone cultures.
Requisites: FRENCH 101 or placement into FRENCH 102
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

FRENCH 105 – ACCELERATED INTRODUCTORY FRENCH
4 credits.

Accelerated development of communicative literacy skills in French and exploration of the contemporary French-speaking world, equivalent to the completion of both FRENCH 101 and FRENCH 102.
Requisites: Not open to students with credit for FRENCH 102
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Accelerated Honors (!)
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Communicate in French both orally and in writing to share ideas, ask questions, and answer questions about personal identity, daily life, likes and dislikes, travel, fashion, housing, and university and work life.
Audience: Undergraduate

2. Demonstrate understanding of the main idea and some details of texts in French including short articles, surveys, interviews, songs, and other video texts related to personal identity, daily life, likes and dislikes, travel, fashion, housing, and university and work life.
Audience: Undergraduate

3. Compose brief informal written texts in French about course topics listed above and formally in three writing projects.
Audience: Undergraduate

4. Describe and narrate ideas in French about course topics listed above in an interview and a short digital recording.
Audience: Undergraduate

5. Demonstrate understanding of lexico-grammatical structures in French for communicating in the present, past, and near future about information relevant to course topics listed above.
Audience: Undergraduate

6. Demonstrate understanding of cultural products, practices, and perspectives related to course topics listed above.
Audience: Undergraduate

7. Reflect on differences between one's own culture and the cultural products, practices, and perspectives of the French-speaking world.
Audience: Undergraduate

FRENCH 203 – THIRD SEMESTER FRENCH
4 credits.

Oral practice and conversation, grammar review, reading, vocabulary expansion, creative writing and study of French and Francophone cultures.
Requisites: FRENCH 102 or placement into FRENCH 203
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

FRENCH 204 – FOURTH SEMESTER FRENCH
4 credits.

Advanced oral practice and conversation, grammar review, reading, vocabulary expansion, creative writing and study of French and Francophone cultures.
Requisites: FRENCH 203 or placement into FRENCH 204
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

FRENCH 211 – FRENCH LITERARY AND INTERDISCIPLINARY STUDIES
3-4 credits.

An introductory, interdisciplinary area of French studies with a focus on French literary texts in English translation.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify key writers, filmmakers and/or artists who are associated with the given course topic.
Audience: Undergraduate

2. Discuss several key literary, cinematic and artistic trends associated with the given course topic.
Audience: Undergraduate

3. Apply basic concepts of literary and film analysis to perform close readings of texts and film related to the given course topic.
Audience: Undergraduate

4. Demonstrate how contemporary social, cultural, and artistic practices associated with the given course topic have been influenced by historical events.
Audience: Undergraduate

5. Analyze literary texts, films and artistic works in relation to specific course topic-related themes or issues.
Audience: Undergraduate

6. Create a presentation or other creative project synthesizing knowledge about the given course topic.
Audience: Undergraduate

FRENCH/AFRICAN 216 – MODERN AND CONTEMPORARY FRANCOPHONE TOPICS
3 credits.

Modern and contemporary topics in the African francophone world, which includes both the African continent and the African diaspora. Taught in English.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, for 2 number of completions
Learning Outcomes: 1. Recognize canonical authors (writers and directors), historical forms, genres, and structures, in Africa and its diasporas.
Audience: Undergraduate

2. Develop a level of proficiency in the different "ways of knowing" Africa and the diaspora through cinema and/or literature.
Audience: Undergraduate

3. Discuss visual and literary texts from various theoretical and critical perspectives, formulate ideas and make connections between visual/cultural concepts and themes.
Audience: Undergraduate

FRENCH 228 – INTERMEDIATE LANGUAGE AND CULTURE
3-4 credits.

Enhance writing and speaking proficiency through cultural readings on France and the francophone world. Review of grammar and focus on more complex grammatical structures.
Requisites: FRENCH 204 or placement into FRENCH 228
Course Designation: Frgn Lang - 5th + semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

FRENCH 248 – ETHNIC STUDIES IN THE FRENCH/FRANCOPHONE WORLD(S)
3 credits.

An introduction to French colonialism in the New World and its effects on African-American, Afro-Creole, Native American, Franco-American, Cajun, and Caribbean diasporan communities in the U.S. through literature, history, and culture.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2019

FRENCH 271 – LITERATURE, COMICS, AND FILM IN FRENCH
3-4 credits.

An introduction to reading and analyzing literary works, comics, and film, with special emphasis on the development of writing skills in French.
Requisites: FRENCH 228
Course Designation: Breadth - Literature. Counts toward the Humanities req
Frgn Lang - 5th + semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Master a selected set of terminology (in French) and tools of close reading pertaining to the three genres of literature (poetry, prose, and theater), comics/graphic novels, and films
Audience: Undergraduate

2. Produce nuanced written analyses of literary texts, comics, and films, in order to reveal their deeper significance
Audience: Undergraduate

3. Present original ideas about a work in front of the class with a solid command of spoken French
Audience: Undergraduate

4. Demonstrate an understanding of the social stakes of texts from different periods of the history of France and Francophone nations
Audience: Undergraduate

5. Better understand different (French and Francophone) cultural perspectives and reflect upon your own
Audience: Undergraduate

6. Improve ability to formulate and express your own ideas in French, both in speaking and in writing
Audience: Undergraduate

FRENCH/GEN&WS 285 – REBELLIOUS WOMEN FROM THE GLOBAL SOUTH
3-4 credits.

Explores how women from different francophone regions (with a specific focus on North and Sub-Saharan Africa and the Middle East) gain agency through literature, movies, comics, and songs, contesting different forms of domination, exclusion, and injustice, based on gender, race, class, and religion.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Identify key women writers, filmmakers, and/or artists associated with the course topic.
Audience: Undergraduate

2. Be familiar with the socio-historical contexts in which these women thrive.
Audience: Undergraduate

3. Learn how to closely read and critically analyze literary texts, films and artistic works.
Audience: Undergraduate

4. Demonstrate improvement in oral and writing skills.
Audience: Undergraduate

5. Show awareness of variances in culture, ethnicity, class, sexuality, and religion inherent in all societies.
Audience: Undergraduate

FRENCH 288 – DOCTORS WITHOUT BORDERS (MÉDECINS SANS FRONTIÈRES)
3 credits.

An overview of the global humanitarian NGO, Doctors without Borders (or Médecins sans Frontières MSF) including its history, mission, organization, and the cultural, political, and ethical challenges it faces. Explores issues of global health, social justice, and humanitarian action. Features distinguished global practitioners with first-hand experience in health crisis situations.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Learn about the history, vision, mission, and impact of Doctors without Borders (MSF) in a range of health and humanitarian crises over time and world regions. Become knowledgeable about the ethical, political, cultural, economic, and professional dilemmas associated with a global health and humanitarian organization in crisis situations across different world regions.
Audience: Undergraduate

2. Develop critical thinking and interdisciplinary views while reading a variety of texts and documents, and analyze sociological, historical, or cultural phenomena with rigor and depth.
Audience: Undergraduate

3. Become knowledgeable about the role of writing - in essay, fiction, or reporting - as a feature of witnessing ("temoignage") in health and humanitarian crises.
Audience: Undergraduate

4. Be challenged to see and capture the world through the eyes of other cultures in order to enhance intercultural knowledge and develop a critical perspective to positively contribute to health and humanitarian action, globally and locally.
Audience: Undergraduate

5. Learn to conduct comparative analysis of health and humanitarian organizations and engage critically with staff, stakeholders and partners of health and humanitarian NGOs as organizations and in the field.
Audience: Undergraduate

FRENCH 298 – DIRECTED STUDY
1-3 credits.

Independent study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2006

FRENCH 299 – DIRECTED STUDY
1-3 credits.

Independent study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023

FRENCH 301 – PRACTICAL FRENCH CONVERSATION
1 credit.

Enhances speaking in an informal, conversational atmosphere at the French House. Taught in French.
Requisites: FRENCH 203 or placement into FRENCH 204
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2019

FRENCH 302 – PRACTICAL FRENCH CONVERSATION
1 credit.

Further enhances speaking in an informal, conversational atmosphere at the French House. Taught in French.
Requisites: FRENCH 203 or placement into FRENCH 204
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2020

FRENCH 311 – ADVANCED COMPOSITION AND SPEAKING
3 credits.

Learn to write essays on a variety of topics, using different registers of French, and work to correct pronunciation and improve conversation skills. Taught in French.
Requisites: FRENCH 228
Course Designation: Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop confidence and accuracy in articulating, debating, and defending ideas in advanced ways in French.
Audience: Undergraduate

2. Grow more familiar with various written genres such as narrative and persuasive writing and how one constructs a text in a particular genre.
Audience: Undergraduate

3. Learn information about today's French-speaking world and the current cultural practices and perspectives.
Audience: Undergraduate

4. Work on the continued development of skills in understanding culture.
Audience: Undergraduate

5. Develop the ability to make cross-cultural comparisons.
Audience: Undergraduate

FRENCH 312 – ADVANCED WRITING WORKSHOP
3 credits.

Develop writing and oral expression at an advanced level through writing and discussion of internet journalism, translation, or creative genres. Taught in French.
Requisites: FRENCH 228
Course Designation: Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Gain experience in presentational writing in French in a variety of genres
Audience: Undergraduate

2. Demonstrate understanding of the relationships between form and content in French texts, i.e., how certain linguistic and stylistic techniques are used to make meaning in particular genres
Audience: Undergraduate

3. Develop interpersonal speaking abilities in French (e.g., giving constructive criticism, complimenting, seeking additional details, hypothesizing, making descriptions, comparing)
Audience: Undergraduate

4. Refine your presentational speaking abilities in French, e.g., pronunciation, intonation, and other aspects of engaging delivery of oral texts
Audience: Undergraduate

5. Be an active participant in a writing community
Audience: Undergraduate

6. Gain awareness of the language-learning process and your own identity as a developing language learner through goal setting and self-reflection
Audience: Undergraduate

FRENCH/INTL BUS 313 – PROFESSIONAL COMMUNICATION AND CULTURE IN THE FRANCOPHONE WORLD
3 credits.

Study and analysis of the culture and sociology of professional environments in the French and Francophone worlds, including government, international organizations, NGO's and business. Students develop communication skills through interactive teaching methods in multimedia labs.
Requisites: FRENCH 228 or 311
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

FRENCH/INTL BUS 314 – CONTEMPORARY ISSUES IN BUSINESS, GOVERNMENT AND NGOS
3 credits.

Cultural study of contemporary Francophone Africa, focusing on issues in government, organizations and enterprise. Exploration of cultural and professional relations between Francophone Africa and France, the European Union, and the United States.
Requisites: FRENCH 228, 311, or INTL BUS/FRENCH 313
Course Designation: Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand current events in French-speaking Africa.
Audience: Undergraduate

2. Recognize the ways in which those phenomena are understood, discussed and represented in other major Francophone regions (like Quebec, Mali, Morocco, France, and other regions), as well as in the United States.
Audience: Undergraduate

3. Conceptualize and apply transferrable skills acquired in a liberal arts education to French-related international business and non-profit careers.
Audience: Undergraduate

4. Apply the fundamentals of intercultural communication with a personal profile and "pitch," in both English and French, to network more effectively.

Audience: Undergraduate

5. Enhance oral and written communication skills, in both languages, applicable to networking and job-seeking situations.
Audience: Undergraduate

FRENCH 316 – STUDY ABROAD: ADVANCED FRENCH LANGUAGE
2-6 credits.

Used as a study abroad equivalent for advanced-level French language courses. Enrollment in a UW-Madison study abroad program
Requisites: None
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

FRENCH 321 – MEDIEVAL AND EARLY MODERN FRENCH LITERATURE
3 credits.

Introduction to important literary works from the medieval era to the French Revolution. Taught in French.
Requisites: FRENCH 271
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify key French writers and texts from the Middle Ages to the 18th century.
Audience: Undergraduate

2. Discuss literary trends and schools of thought associated with this time period.
Audience: Undergraduate

3. Apply concepts of literary analysis to perform close readings of texts.
Audience: Undergraduate

4. Demonstrate understanding of French culture and its evolution from the Middle Ages to the 18th century.
Audience: Undergraduate

5. Express complex ideas/analysis in French both verbally and in writing.
Audience: Undergraduate

FRENCH 322 – MODERN FRENCH AND FRANCOPHONE LITERATURE
3 credits.

Introduction to important literary works of modernity (from the French Revolution to the twenty-first century). Taught in French.
Requisites: FRENCH 271
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify key writers, filmmakers, and/or artists who are associated with French modernity.
Audience: Undergraduate

2. Discuss several key literary, cinematic, and artistic trends associated with French modernity.
Audience: Undergraduate

3. Apply concepts of literary and film analysis to perform close readings of texts and films.
Audience: Undergraduate

4. Demonstrate how French social, cultural, and artistic associated practice has been influenced by historical events.
Audience: Undergraduate

5. Analyze literary texts, films and artistic works in relation to specific France-related themes or issues.
Audience: Undergraduate

FRENCH 325 – VISUAL CULTURE IN FRENCH/FRANCOPHONE STUDIES
3 credits.

Aspects of French culture as manifested in painting, photography, film or other visual media in relation to literature. Taught in French.
Requisites: FRENCH 271
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023

FRENCH 345 – FRENCH FASHION AND LITERATURE FROM THE MIDDLE AGES TO TODAY
3 credits.

Study of French literary texts embedded in their cultural contexts, with a focus on clothing and fashion. Chart the emergence and representation of sartorial taste in France through analysis and discussion of selected texts and other media that feature clothing as a reflection of aesthetic and social values. Rather than evidence for material and economic history, literature and the visual arts will be ways to touch on issues such as the evolution of the notion of human physical beauty, of taste, of gender differences and roles, of social status and stratification in different historical contexts.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify key writers, filmmakers, and/or artists who are associated with the material and historical periods covered in the course.
Audience: Undergraduate

2. Develop critical thinking and interdisciplinary views while reading a variety of texts and documents, and analyze sociological, historical, and cultural phenomena.
Audience: Undergraduate

3. Apply concepts of literary and film analysis to perform close readings of texts and films.
Audience: Undergraduate

4. Demonstrate how contemporary social, cultural, and artistic practice associated with fashion in France has been influenced by historical events.
Audience: Undergraduate

FRENCH 347 – MEDIEVAL AND EARLY MODERN CULTURE
3 credits.

An introduction to the political, social, intellectual, artistic and literary development of French culture, from its origins to the French Revolution (1789). Taught in French.
Requisites: FRENCH 311, 312, 321, 322, or 325
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and understand major thinkers, ideas, and events from the middle ages to the French Revolution and how they have shaped French culture.
Audience: Undergraduate

2. Better understand the subtle differences between French and American culture.
Audience: Undergraduate

3. Improve your oral and written comprehension in French, as well as your capacities to express yourself in that language.
Audience: Undergraduate

4. Learn to research historical reasons underlying the particularities of French culture.
Audience: Undergraduate

FRENCH 348 – MODERNITY STUDIES
3 credits.

An introduction to political, social, intellectual, artistic and literary developments in French and Francophone culture, within the time period from the French Revolution to the current era. Taught in French.
Requisites: FRENCH 271
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

FRENCH 350 – APPLIED FRENCH LANGUAGE STUDIES
1-3 credits.

Selected applied language topics pertaining to teaching French as a second language. Taught in French.
Requisites: FRENCH 271 or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020

FRENCH 361 – STUDY ABROAD: FRENCH/FRANCOPHONE LITERATURE
2-3 credits.

Used as a study abroad equivalent for French/Francophone literature courses. Enrollment in a UW-Madison study abroad program
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

FRENCH 362 – STUDY ABROAD: FRENCH/FRANCOPHONE CIVILIZATION
2-3 credits.

Used as a study abroad equivalent for French/Francophone civilization courses. Enrollment in a UW-Madison study abroad program
Requisites: None
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

FRENCH 391 – FRENCH FOR READING KNOWLEDGE
3 credits.

Intensive grammar and reading for those with little or no experience in French. Readings from appropriate texts in the humanities, sciences, social sciences.
Requisites: Sophomore standing
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

FRENCH 420 – TOPICS IN FRENCH: STUDY ABROAD
1-6 credits.

Used as a study abroad equivalent. Enrollment in a UW-Madison study abroad program
Requisites: None
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2001

FRENCH/ITALIAN/PORTUG/SPANISH 429 – INTRODUCTION TO THE ROMANCE LANGUAGES
3 credits.

Introduction to structural similarities and differences apparent in major Romance languages (French, Italian, Portuguese, Spanish) and to their historical developments, with reference to basic linguistic features of each language: phonology, morphology, syntax, and lexicon.
Requisites: SPANISH 226, FRENCH 228, ITALIAN 311, or PORTUG 226
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023

FRENCH 430 – READINGS IN MEDIEVAL AND RENAISSANCE LITERATURE
3 credits.

Exploration of a thematic selection of texts from the Middle Ages and the Renaissance. Taught in French.
Requisites: FRENCH 321 or 322
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2021

FRENCH 431 – READINGS IN EARLY MODERN LITERATURE
3 credits.

Exploration of a thematic selection of texts from the Early Modern period. Taught in French.
Requisites: FRENCH 321 or 322
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2022

FRENCH/AFRICAN 440 – AFRICAN/FRANCOPHONE FILM
3 credits.

Overview of cinematic works from francophone Africa and/or other areas of Africa. Teaches analysis and writing about cinema. Explores links between cinema and national or regional politics and ideology. Examines spectatorship in relation to questions of identity formation.
Requisites: Sophomore standing and 3 credits in AFRICAN, or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2021

FRENCH 461 – FRENCH/FRANCOPHONE LITERARY STUDIES ACROSS THE CENTURIES
3 credits.

A study of how literature has evolved over the course of French history, in relation to a chosen topic. Taught in French.
Requisites: FRENCH 321 or 322
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

FRENCH 462 – FRENCH/FRANCOPHONE CULTURAL STUDIES ACROSS THE CENTURIES
3 credits.

A study of how culture has evolved over the course of French history, in relation to a chosen topic. Taught in French.
Requisites: FRENCH 321 or 322
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

FRENCH 464 – LITERATURE AND MEDICINE IN FRENCH-SPEAKING CULTURES
3 credits.

Choice of themes and periods studied will vary, and may range from historical surveys of the meanings of health and illness across the spectrum of French and Francophone cultures, to a close examination of texts or literary genres from a particular time that incorporate or respond to biomedical knowledge. Genre studied could include prose fiction, theater, creative non-fiction, film, comics, and works of medical popularization. Taught in French.
Requisites: FRENCH 321 or 322
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022

FRENCH 465 – FRENCH/FRANCOPHONE FILM
3 credits.

Representative French-language films will be studied from an esthetic and a cultural perspective. Choice of themes and periods studied will vary, and may range from historical surveys to a close examination of films from a particular time or place. Taught in French.
Requisites: FRENCH 321 or 322
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2022

FRENCH 467 – ASPECTS OF CONTEMPORARY FRENCH LITERATURE
3 credits.

A study of the latest developments in contemporary French Literature. Taught in French.
Requisites: FRENCH 321 or 322
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023

FRENCH 567 – UNDERGRADUATE SEMINAR IN FRENCH/ FRANCOPHONE LITERARY STUDIES
3 credits.

Particular emphasis on discussion, research, and collective preparation of readings, on a topic within French and/or Francophone literary studies. Taught in French.
Requisites: One of: (FRENCH 430, 431, 449, 451, 461, 462, 464, 465, 467, or 472) or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2020

FRENCH 568 – UNDERGRADUATE SEMINAR IN FRENCH/ FRANCOPHONE CULTURAL STUDIES
3 credits.

Particular emphasis on discussion, research, and collective preparation of readings, on a topic within French and/or Francophone cultural studies. Taught in French.
Requisites: One of: (FRENCH 430, 431, 449, 451, 461, 462, 464, 465, 467, or 472) or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2021

FRENCH 569 – CRITICAL APPROACHES TO LITERATURE AND CULTURE: FRENCH AND FRANCOPHONE PERSPECTIVES
3 credits.

An introduction to theoretical and critical thinking about literary and visual texts, meant to accompany and supplement interpretative skills. Fundamental notions of rhetoric (principles of versification) and principles of narratology designed to improve the practice of close reading in poetry, drama, prose, and cinema across time periods. Taught in French.
Requisites: One of: (FRENCH 430, 431, 449, 451, 461, 462, 464, 465, 467, or 472) or graduate/professional standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Acquiring knowledge on theoretical and critical thinking about literary and visual texts in the French and francophone context.
Audience: Graduate

2. Familiarization with fundamental notions of rhétorique (figures et versification) and principles of narratology designed to improve the practice of close reading in poetry, drama, prose, and cinema across time periods.
Audience: Both Grad & Undergrad

3. Improve interpretative skills.
Audience: Undergraduate

FRENCH 590 – INTRODUCTION TO PHONETICS
3 credits.

Study of French sounds, phonetic transcription, practice in pronunciation. Taught in French.
Requisites: FRENCH 228 or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Learn the International Phonetic Alphabet (IPA) and use it for phonetic transcription.
Audience: Both Grad & Undergrad

2. Familiarize yourself with basic notions of phonetics and French phonology.
Audience: Both Grad & Undergrad

3. Improve and perfect your pronunciation of Modern Standard French. The emphasis will be put on the pronunciation of vowels and consonants, and on intonation patterns, rhythm, and liaisons.
Audience: Both Grad & Undergrad

4. Prepare for instruction by designing a phonetics lesson which will be taught to classmates and/or in the student's own TA section.
Audience: Graduate

5. Complete additional and/or longer audio recording and assignments as preparation for their own instructional needs.
Audience: Graduate

FRENCH 615 – ADVANCED GRAMMAR
3 credits.

French grammar and style, with a special focus on various critical and professional applications. Taught in French.
Requisites: Graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2020

FRENCH 616 – SOCIAL RESPONSIBILITY IN CONTEMPORARY FRENCH-LANGUAGE PROFESSIONAL WRITING
3 credits.

Investigates discourses of social responsibility in the French-speaking professional world and across sectors, in the fields of international development, marketing, management, and administration. By studying how concepts of socially responsible practice are represented in business and professional writing in France, Quebec and Francophone Africa, consider how trends in one's own concentration areas relate to those of classmates and future colleagues. Taught in French.
Requisites: Graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021

FRENCH 617 – CONTEMPORARY SKILL SET LITERATURE IN FRENCH
3 credits.

Examines how contemporary business and professional writing in French portrays professional skill sets for readers in Francophone Europe and North America, and to a lesser extent in Francophone Africa, particularly in the fields of international education, international development, marketing, management, and administration. Taught in French.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022

FRENCH 618 – CAREER STRATEGIES FOR THE FRENCH-SPEAKING WORLD
2 credits.

Study published contemporary French-language writing on career strategies for emerging professionals and professionals in transition in Europe, Africa and North America. Taught in French.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021

FRENCH 623 – ORAL COMMUNICATION
3 credits.

Professional communication for advanced speakers of French, with a particular focus on intercultural analysis, nonverbal communication, and public speaking. Taught in French.
Requisites: Graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2021

FRENCH 630 – THE AGE OF REASON
3 credits.

Advanced study of 18th-century French literature and culture, in relation to a chosen topic. Taught in French.
Requisites: Graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2018

FRENCH 631 – 17TH-CENTURY FRENCH LITERATURE
3 credits.

Literary and philosophical trends of the Age of Enlightenment with special emphasis on Montesquieu, Voltaire, Diderot, and Rousseau. Taught in French.
Requisites: Graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2020

FRENCH 639 – 17TH-CENTURY LITERATURE
3 credits.

Advanced study of important literary works of the 17th century. Taught in French.
Requisites: Graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2020

FRENCH 642 – CULTURE AND SOCIETIES
3 credits.

Survey of major socio-political, cultural, and economic developments in the major French-speaking regions of the world, with a focus on Europe, Africa and Canada. Taught in French.
Requisites: Graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2021

FRENCH 647 – THE 20TH-CENTURY FRENCH NOVEL
3 credits.

Advanced study of important literary works of the 20th century. Taught in French.
Requisites: Graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2018

FRENCH 665 – INTRODUCTION TO FRANCOPHONE STUDIES
3 credits.

Study of literary texts from diverse Francophone cultures (Africa, the Caribbean, Quebec) and the cultural and political dynamics between these texts and these cultures. Taught in French.
Requisites: Graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2018

FRENCH 672 – TOPICS IN LITERATURE AND CULTURE
3 credits.

Explores a specific topic in the history of French and/or Francophone literature and culture; includes analysis and interpretation of texts and/or film in their historical contexts. May be focused on one, or cut across different literary periods. Applies diverse interpretative methodologies to a coherent body of material. Taught in French.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Explore a historically grounded question pertaining to a specific chronological timeframe of French and/or Francophone literature and culture
Audience: Graduate

2. Design and complete an short research project in the field of French and/or Francophone literature and culture
Audience: Graduate

3. Analyze literary texts within their historical and cultural contexts
Audience: Graduate

4. Write scholarly reviews of published scholarship in the field
Audience: Graduate

5. Perfect strategies for successfully delivering a research paper before an academic audience
Audience: Graduate

FRENCH 681 – SENIOR HONORS THESIS
3 credits.

Individual mentored study for seniors completing theses for Honors in the Major as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2016

FRENCH 682 – SENIOR HONORS THESIS
3 credits.

Individual mentored study for seniors completing theses for Honors in the Major as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2017

FRENCH 691 – THESIS
2 credits.

Individual mentored study for seniors completing theses, as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 1996

FRENCH 692 – THESIS
2 credits.

Individual mentored study for seniors completing theses, as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 1997

FRENCH 698 – DIRECTED STUDY
1-6 credits.

Advanced independent study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

FRENCH 699 – DIRECTED STUDY
1-6 credits.

Advanced independent study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022

FRENCH/MEDIEVAL 704 – LA LITTERATURE FRANCAISE DU XIV ET DU XV SIECLE
3 credits.

Study of important literary works of the 14th and 15th centuries. Taught in French.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020

FRENCH 750 – RESEARCH LABORATORY I: INTRODUCTION TO GRADUATE RESEARCH
3 credits.

An introduction to graduate studies in French that provides the necessary skills for success. Includes exploration of structure and expectations of graduate programs, the basics of scholarly research, reflection upon research interests and possible individual scholarly identities, and academic conferences. Taught in French.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify the different kinds of research tasks and projects you will have to carry out as a graduate student in our program.
Audience: Graduate

2. Distinguish and effectively locate the different kinds of scholarly resources in your field.
Audience: Graduate

3. Describe the different research fields of department faculty and begin to develop your own.
Audience: Graduate

4. Execute strategies for successfully delivering a research paper before an academic audience.
Audience: Graduate

5. Implement strategies for creating a professional research/teaching portfolio and CV.
Audience: Graduate

FRENCH 752 – RESEARCH LABORATORY II: PRODUCING PROFESSIONAL RESEARCH
3 credits.

Provides the necessary skills for success in the PhD program. Includes exploration of structure and expectations, as well as of the professional skills needed to succeed in the profession after graduation. Taught in French.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022
Learning Outcomes: 1. Identify the different kinds of research tasks and projects you will have to carry out as a professional in your field.
Audience: Graduate

2. Implement strategies for developing relevant and meaningful research questions.
Audience: Graduate

3. Distinguish the current state of scholarship on a given topic in your field.
Audience: Graduate

4. Develop an original scholarly contribution to a topic in your field.
Audience: Graduate

5. Design an effective teaching activity using content from your research.
Audience: Graduate

FRENCH 793 – PROFESSIONAL FRENCH MASTERS PROGRAM INTERNSHIP
2-3 credits.

Professional internship abroad, in a French-speaking business or organization, in the student's professional field.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2021

FRENCH 799 – INDEPENDENT STUDY
1-6 credits.

Independent study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

FRENCH/GERMAN/HISTORY/POLI SCI/SOC 804 – INTERDISCIPLINARY WESTERN EUROPEAN AREA STUDIES SEMINAR
3 credits.

Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

FRENCH 820 – COLLEGE TEACHING OF FRENCH
3 credits.

Introduction to teaching collegiate world languages with an emphasis on communicative and literacy-based pedagogical strategies.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

FRENCH/ITALIAN 821 – ISSUES IN METHODS OF TEACHING FRENCH AND ITALIAN
1-3 credits.

Intended for instructors of elementary- and intermediate-level collegiate instructors of Italian; key concepts of communicative, literacy-oriented language teaching and related techniques for classroom instruction of Italian.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

FRENCH 825 – GRAMMAR AND STYLE
3 credits.

Grammatical review and stylistic practice. Taught in French.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021

FRENCH 901 – SEMINAR-MATERIALS AND METHODS OF RESEARCH
1-3 credits.

Dissertation writing practicum.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

FRENCH 947 – SEMINAR: LITERATURE QUESTIONS
3 credits.

Study of literature and culture organized thematically or by time period. Taught in French.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

FRENCH 948 – SEMINAR: LITERATURE QUESTIONS
3 credits.

Study of literature and culture organized thematically or by time period. Taught in French.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

FRENCH 951 – SEMINAR ON 19TH CENTURY FRENCH POETRY
3 credits.

Study of 19th-century poetry. Taught in French.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2019

FRENCH 990 – INDIVIDUAL RESEARCH
1-12 credits.

Mentored reading and research for students with dissertator status.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

GENDER AND WOMENS STUDIES (GEN&WS)

GEN&WS 100 – OPEN HOUSE GENDER LEARNING COMMUNITY SEMINAR
1 credit.

This seminar is for residents of Open House Gender Learning Community. It addresses various topics of interest to this community.
Requisites: Member of Open House Gender Learning Community.
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

GEN&WS 101 – GENDER, WOMEN, AND CULTURAL REPRESENTATION
3 credits.

A humanities-oriented analysis of cultural representations of women and men within the social and historical contexts of race, class, gender and sexuality; engages with a range of traditions and modes of representation including literature, mass media and popular culture.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

GEN&WS 102 – GENDER, WOMEN, AND SOCIETY IN GLOBAL PERSPECTIVE
3 credits.

Global, interdisciplinary, social science-oriented analysis of gender, race, class and sexuality in relationship to social institutions and movements for social change. Focus on gender and women in institutions such as education, the economy, the family, law, media, medicine, and politics.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

GEN&WS 103 – GENDER, WOMEN, BODIES, AND HEALTH
3 credits.

Examines both physiological and social processes relating to gender and health across the lifespan among cisgender, transgender, and non-binary individuals. Examples of topics include hormonal processes, reproductive anatomy physiology, sexuality, sexual pleasure, chronic illness, depression, and sexual violence. A primary course objective is for students to connect information about their bodies and personal health to larger social and political contexts. In particular, considers how health and health disparities are shaped by multiple kind of social inequalities, particularly inequalities based on gender.
Requisites: None
Course Designation: Breadth - Natural Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand and describe physiological processes and phenomena relating to health (for example, menstruation, menopause) and ill health (for example, cancer, maternal mortality).
Audience: Undergraduate

2. Recognize that bodies are located in a social context that influences health and illness.
Audience: Undergraduate

3. Understand and analyze the dramatic interplay between physiological processes and social processes.
Audience: Undergraduate

4. Contextualize health within the social and cultural influences on people's lives.
Audience: Undergraduate

5. Evaluate how multiple kinds of social inequalities (e.g., race, ethnicity, social class, sexual identity, gender identity) shape health and health disparities.
Audience: Undergraduate

6. Become more active patients and better-educated healthcare consumers.
Audience: Undergraduate

GEN&WS 104 – GENDER, SEXUALITY, AND GLOBAL HEALTH
3 credits.

Provides an introductory overview to critical global health studies, linking past trends to current research and health inequalities. Examines current trajectories in disaster relief and public health interventions through a gendered lens, with a solid grounding in the historical context. Explores social, demographic, political, economic, and ecological determinants of global health, and the ways that these factors interconnect with biomedicine to create and affect health outcomes, both within and across countries. Uses an intersectional approach to analyze how public health policies prioritize whose lives represent "save-able" or "salvageable" ones in the public, political, and corporate eye.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify key current gendered and sexual health concerns around the globe.
Audience: Undergraduate

2. Critically analyze the intellectual history of the global health field, tracing its origins from colonial medicine through to the current day using the lens of gender and sexuality.
Audience: Undergraduate

3. Appraise the ways that colonialism, scientific racism, misogyny, and other forms of structural exclusion shape the global health field and its objects/methods of study
Audience: Undergraduate

4. Question the neutrality of quantitative global health metrics, and understand indicators as a contested form of knowledge production.
Audience: Undergraduate

5. Develop analytical thinking and improve written and spoken communication skills.
Audience: Undergraduate

6. Engage empathic connections, intellectual exploration, and ethical actions in the face of gendered health inequalities.
Audience: Undergraduate

GEN&WS 105 – INTERSECTIONAL APPROACHES TO DISABILITY STUDIES
3 credits.

Analysis of disability as an identity, culture, community, and political concern. Brief introduction to disability studies and intersectionality. Examines historical, political, artistic and cultural representations of disability as it intersects with gender, sexuality, race, class and other systems of oppression. Engage with a variety of academic, literary, visual and other cultural representations by and about disabled people.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Describe the history and current state of disability studies
Audience: Undergraduate

2. Explain intersectionality and the impacts of intersectional identity on disabled people
Audience: Undergraduate

3. Demonstrate the wide-ranging impact of disability studies research and apply this scholarship to history, politics, and everyday life
Audience: Undergraduate

GEN&WS/HISTORY 134 – WOMEN AND GENDER IN WORLD HISTORY
3-4 credits.

A global (comparative and transnational) survey of women and gender from the ancient world to the modern period. Introduces students to key issues in the history of women and gender, including the historical construction of identities, roles, symbols, and power relationships.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023

GEN&WS/ENGL 144 – WOMEN'S WRITING
3 credits.

An introduction to literature in English written by women in various periods and places; specific topics will vary.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

GEN&WS/ED POL 160 – GENDER, SEXUALITY, AND EDUCATION POLICY
3 credits.

Explores how gender, sexuality, and gender identity are conceptualized, practiced, protected, and policed in K-12 schools and in out-of-school contexts in the United States and globally. Examines how gender, sexuality, and gender identity intersect with race, class, language, nationality, and religion to shape the experiences of school-age children and youth.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain how gender, sexuality, and gender identity, as separate and intersected identities, have become situated as normal, natural, and static concepts, and the role that schooling plays in those processes
Audience: Undergraduate

2. Identify and summarize how students are racialized and gendered within educational settings and by educational policies and practices, and how class, religion, language, national status, and other factors intersect with gender, sexuality, and gender identity to shape different educational outcomes and experiences for students
Audience: Undergraduate

3. Analyze the effects of an intersectional approach to understanding gender, sexuality, and gender identity within students' educational experiences, in the US and globally
Audience: Undergraduate

GEN&WS/SOC 200 – INTRODUCTION TO LESBIAN, GAY, BISEXUAL, TRANSGENDER AND QUEER+ STUDIES
3-4 credits.

A multidisciplinary introduction to lesbian, gay, bisexual, transgender, and queer+ (LGBTQ+) studies, including theories of identity formation, different societal interaction with LGBTQ+ communities, LGBTQ+ cultures in history, and contemporary legal and political issues. Course materials explore the intersections between LGBTQ+ identities and other socially marginalized identities, including (but not limited to) those based on race, ethnicity, religion and disability.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

GEN&WS/RELIG ST 202 – QUEERING RELIGION
3 credits.

Explore the intersections of religiosity and queerness, including the role of religion in the lives of LGBTQ+ individuals and communities, the role of queerness and LGBTQ inclusion in various religious traditions, and what queerness can add to the study of religion (and vice versa).
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze oral and written materials about religion, queerness, and transness.
Audience: Undergraduate

2. Compare diverse systems of value and belief.
Audience: Undergraduate

3. Interpret the interrelationships and impact of religious worldviews and communities.
Audience: Undergraduate

4. Understand core concepts and debates in queer and trans studies of religion.
Audience: Undergraduate

5. Connect scholarship to the institutions that shape everyday life.
Audience: Undergraduate

GEN&WS/LITTRANS 205 – WOMEN IN RUSSIAN LITERATURE IN TRANSLATION
3-4 credits.

Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

GEN&WS/AFROAMER 221 – INTRODUCTION TO BLACK WOMEN'S STUDIES
3 credits.

This course will provide students with an overvview of the field of Black women's studies.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

GEN&WS/AFROAMER 222 – INTRODUCTION TO BLACK WOMEN WRITERS
3 credits.

An introduction to the writings of Afro-American women from the nineteenth to the twentieth century. Fiction, autobiography, non-fiction prose, and poetry will be read and discussed.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

GEN&WS 240 – FEMINIST APPROACH TO RESEARCH AND WRITING
3 credits.

Experience the excitement and rewards of doing research in the field of Gender and Women's Studies via substantial instruction in the four modes of literacy (that is, speaking, reading, writing, and listening). Through engagement with primary sources, you will ask and define research questions, find and analyze evidence, assess and discuss scholarly interpretations of same sources, build a bibliography, and try out making an argument. Upon successful completion of this course, you will be prepared to undertake substantial research and writing in more advanced courses.
Requisites: Satisfied Communications A requirement
Course Designation: Gen Ed - Communication Part B
Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop scholarly questions through engagement with different kinds of sources and posing questions to prompt productive group discussion.
Audience: Undergraduate

2. Learn the logic of notes, bibliographies, libraries, and archives, and how to consult them to identify and locate source materials. Further, students will take full advantage of the range of library resources including interlibrary loan.
Audience: Undergraduate

3. Determine the perspective, credibility, and utility of source materials. Distinguish between primary and secondary material for a particular topic. Identify the perspective or authorial stance of a source. Summarize an argument presented in a text. Distinguish between the content of a source and its meaning in relation to a particular question.
Audience: Undergraduate

4. Develop and present an argument. Use sources appropriately to create, modify, and support tentative conclusions and new questions.
Audience: Undergraduate

5. Make an argument. Identify the parts of an argument and how to support it convincingly.
Audience: Undergraduate

6. Communicate ideas and research findings effectively through formal and informal written and oral presentations.
Audience: Undergraduate

GEN&WS/CHICLA/HISTORY 245 – CHICANA AND LATINA HISTORY
3 credits.

Introduces the cultural, economic, social, and political history of Chicanas and Latinas in the U.S. and focuses on four major themes: contact between different ethnic/racial groups; ideas of nation and nationalism; constructions of identity; and struggles for social justice.
Requisites: None
Course Designation: Gen Ed - Communication Part B
Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Critically analyze the presence or absence of Chicanas and Latinas in US history.
Audience: Undergraduate

2. Use methods and vocabularies of history to analyze primary and secondary sources.
Audience: Undergraduate

3. Consider the relevance of Chicana and Latina history to present-day issues.
Audience: Undergraduate

4. Write and revise research aimed at an audience beyond the classroom.
Audience: Undergraduate

GEN&WS/ENGL 248 – WOMEN IN ETHNIC AMERICAN LITERATURE
3 credits.

American literature by and about women, written by authors from ethnic groups.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

GEN&WS/AFROAMER 267 – ARTISTIC/CULTURAL IMAGES OF BLACK WOMEN
3 credits.

Cultural images by and about Black women; feminine creativity in the arts within their historical, cultural, social, and political contexts.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

GEN&WS/LITTRANS 270 – GERMAN WOMEN WRITERS IN TRANSLATION
3 credits.

Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

GEN&WS/FRENCH 285 – REBELLIOUS WOMEN FROM THE GLOBAL SOUTH
3-4 credits.

Explores how women from different francophone regions (with a specific focus on North and Sub-Saharan Africa and the Middle East) gain agency through literature, movies, comics, and songs, contesting different forms of domination, exclusion, and injustice, based on gender, race, class, and religion.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Identify key women writers, filmmakers, and/or artists associated with the course topic.
Audience: Undergraduate

2. Be familiar with the socio-historical contexts in which these women thrive.
Audience: Undergraduate

3. Learn how to closely read and critically analyze literary texts, films and artistic works.
Audience: Undergraduate

4. Demonstrate improvement in oral and writing skills.
Audience: Undergraduate

5. Show awareness of variances in culture, ethnicity, class, sexuality, and religion inherent in all societies.
Audience: Undergraduate

GEN&WS 299 – DIRECTED STUDY
1-3 credits.

For highly qualified and motivated students.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2020

GEN&WS/RELIG ST 305 – WOMEN, GENDER AND RELIGION
3 credits.

Explores themes significant to the impact of religion on women and women on religion, historically and today, across a diverse range of contexts.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

GEN&WS/CHICLA/GEOG 308 – LATINX FEMINISMS: WOMEN'S LIVES, WORK, AND ACTIVISM
3 credits.

An examination of Latinx women's lives, experiences, and activism through the lens of testimonio, life histories, and feminist writings rooted in social justice movements and critical pedagogies.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Identify and describe key theoretical concepts and frameworks used in interdisciplinary studies of Latinas/xs and other women of color in the U.S.
Audience: Undergraduate

2. Explain the historical origins of Chicanx and Latinx feminisms and their relationship with social justice movements.
Audience: Undergraduate

3. Critically analyze the works of leading Latinx feminist scholars and theorists, who have written on issues of race, ethnicity, gender, LGBTQ identities, labor, color, citizenship status, and generation.
Audience: Undergraduate

4. Explore different writing genres and methodologies used in the study of women’s lives, experiences, and activism.
Audience: Undergraduate

5. Apply the framework of testimonio to complete a digital storytelling project, examining a key theme or issue in women’s lives.
Audience: Undergraduate

GEN&WS/COM ARTS 316 – GENDER AND COMMUNICATION
3 credits.

Effective communication requires awareness of how gender influences communication and our capacity to build lasting and meaningful relationships. Learn about theories and concepts to understand how gender influences our interpersonal, professional, and social lives. Topics include terms and concepts relevant to the study of how we communicate about gender, sex and sexuality, including identity, language and nonverbal behavior, socialization, close personal relationships, education, work, violence, media and social movements.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Employ the definitions and theoretical explanations of gender and communication
Audience: Undergraduate

2. Examine how gender intersects with our personal identity
Audience: Undergraduate

3. Raise self-awareness concerning our communication behaviors within a gendered context
Audience: Undergraduate

4. Foster an open mind so that we may fully comprehend the complex social constructs that influence gender and communication
Audience: Undergraduate

5. Critically evaluate the impact gender has as a tool of power
Audience: Undergraduate

6. Create a safe space for online discussion and learning
Audience: Undergraduate

GEN&WS 319 – STUDY ABROAD SPECIAL TOPIC: GENDER, WOMEN AND THE HUMANITIES
3-4 credits.

Provides a gender and women's studies course equivalency for humanities courses taken in UW-Madison study abroad programs that do not equate exactly to an existing gender and women's studies course.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

GEN&WS 320 – SPECIAL TOPICS IN GENDER, WOMEN AND SOCIETY
1-3 credits.

Investigation of some specific topic in gender and women's studies related to gender, women and society.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

GEN&WS/ASIAN AM 321 – ASIAN AMERICAN FEMINIST & QUEER CULTURAL PRODUCTIONS
3 credits.

Examines the different ways feminist and queer Asian Americans have used cultural production to speak up about issues of race, class, gender, sexuality, identity, diaspora, nation, justice, art, and activism. Asian American feminist and queer critiques can bring to light the ways that structures of domination uphold and further perpetuate Asian American marginalization within the U.S. Examines Asian American racialized, gendered, and sexualized images and stereotypes, as well as the daily lives and experiences of Asian American women and queer folks. Engages with scholarly articles, novels, memoirs, documentaries, and narrative films authored by and/or focusing on feminist and queer Asian Americans. Explores how systemic ideologies are reflected, challenged, and deconstructed in Asian American feminist and queer cultural productions.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Explain the historical, political, social, and cultural implications of Asian American feminist and queer cultural productions and formations as they relate to larger social issues.
Audience: Undergraduate

2. Recognize how critical race theory, feminist theory, and queer theory can help with deconstructing taken-for-granted assumptions about race, class, gender, sexuality, identity, injustice, art, and activism.
Audience: Undergraduate

3. Articulate how feminist and queer politics have changed the terrains of Asian American identities and culture.
Audience: Undergraduate

4. Explain how historical forces such as war, colonialism, and immigration policies have shaped contemporary Asian American experiences of sexuality and gender.
Audience: Undergraduate

5. Foster self-awareness and empathy toward the experiences of Asian Americans of all gender and sexual identities.
Audience: Undergraduate

GEN&WS/PSYCH 322 – SEXUAL & RELATIONSHIP VIOLENCE RESEARCH & ACTIVISM
3 credits.

Examine sexual and relationship violence and how they intersect with various aspects of identity (race, gender, sexual orientation, disability, poverty, etc.) in the general community as well as within particular populations (college, military, incarcerated) with a heavy focus on college populations (some of the applied parts of the course will focus here). Learn about power and oppression, as well as ways that both research and practice in these arenas have been marginalized and underfunded. Additional focus on community and campus responses to sexual and relationship violence through a series of speakers as well as about anti-violence activism through course activities and group projects.
Requisites: Junior standing and 3 credits in PSYCH or GEN&WS
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand the prevalence of sexual and relationship violence, whom it impacts, how it can affect survivors, and service seeking options for survivors.
Audience: Undergraduate

2. Understand the role of identity and intersectional identities in the experience and impact of violence as well as service seeking.
Audience: Undergraduate

3. Understand the role of alcohol and other drugs in sexual and relationship violence and their intersections with personal and social identities.
Audience: Undergraduate

4. Understand the history and practice of advocacy.
Audience: Undergraduate

5. Apply knowledge in determining the medical, mental health, legal, and other options for survivors
Audience: Undergraduate

6. Analyze and apply fourth-wave feminism to anti-violence activism.
Audience: Undergraduate

GEN&WS/AFROAMER 323 – GENDER, RACE AND CLASS: WOMEN IN U.S. HISTORY
3 credits.

Historical interplay of racism and sexism in the lives of Black and White women of different class backgrounds in the United States.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2017
Learning Outcomes: 1. Explain the relationship between gender, race, and class in the United States.
Audience: Both Grad & Undergrad

2. Appreciate the multitude of contributions made by women of African descent in the social, political, cultural, and economic development of the United States of America.
Audience: Both Grad & Undergrad

3. Identify how certain histories have been valued and devalued, and how these differences have promulgated disparities in contemporary American society.
Audience: Both Grad & Undergrad

4. Critique canonical US history and its impact on gender and race relations in the US, developing a healthy skepticism of knowledge claims.
Audience: Both Grad & Undergrad

5. Use primary sources and secondary peer-reviewed sources in written assignments to connect course topics to the lived experiences of African Americans.
Audience: Both Grad & Undergrad

6. Communicate with others in a way that displays an understanding of racial inequities in the US.
Audience: Undergraduate

7. Understand and apply the primary theories and methods employed by historians of African American history.
Audience: Graduate

GEN&WS/AFROAMER 324 – BLACK WOMEN IN AMERICA: RECONSTRUCTION TO THE PRESENT
3 credits.

Explores African American women's experience from waning days of slavery to present. Topics include slavery, emancipation, reconstruction, segregation, migration, urban and rural poverty, civil rights, nationalism, feminism and sexual politics.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2017
Learning Outcomes: 1. Explain the implications of being Black and female in the United States since the Reconstruction era.
Audience: Both Grad & Undergrad

2. Appreciate the multitude of contributions made by women of African descent in the social, political, cultural, and economic development of the United States of America.
Audience: Both Grad & Undergrad

3. Describe how certain histories have been valued and devalued, and how these differences have promulgated racial disparities in contemporary American society.
Audience: Both Grad & Undergrad

4. Critique canonical US history and its impact on gender and race relations in the US, developing a healthy skepticism of knowledge claims.
Audience: Both Grad & Undergrad

5. Use primary sources and secondary peer-reviewed sources in written assignments to connect course topics to the lived experiences of African Americans.
Audience: Both Grad & Undergrad

6. Communicate with others in a way that displays an understanding of racial inequities in the US.
Audience: Undergraduate

7. Understand and apply the primary theories and methods employed by historians of African American history.
Audience: Graduate

GEN&WS/AFROAMER 326 — RACE AND GENDER IN POST-WORLD WAR II U.S. SOCIETY
3 credits.

Assesses how race and gender (as well as socio-economic status, age, sexuality, region, etc.) shaped the experiences and options of African Americans, especially women, in U.S. society from WW II to the present.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

GEN&WS 329 — STUDY ABROAD SPECIAL TOPIC: GENDER, WOMEN IN SOCIETY
3-4 credits.

Provides a gender and women's studies course equivalency for social science courses taken in UW-Madison study abroad programs that do not equate exactly to an existing gender and women's studies course.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

GEN&WS 330 — TOPICS IN GENDER/CLASS/RACE/ETHNICITY (HUMANITIES)
3 credits.

Topics in the feminist study of inequality and difference based on class, gender and race/ethnicity, with a humanities emphasis.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023

GEN&WS 331 — TOPICS IN GENDER/CLASS/RACE/ETHNICITY (SOCIAL SCIENCES)
3 credits.

Topics in the feminist study of inequality and difference based on class, gender and race/ethnicity, with a social science emphasis.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

GEN&WS/CHICLA 332 — LATINAS: SELF IDENTITY AND SOCIAL CHANGE
3 credits.

Explores the multiracial and multicultural reality of Latina societies by becoming familiar with the history and cultures of Chicana, Cuban-American, and Puerto Rican women. Interdisciplinary readings in law, journalism, public policy, history, and self-reflective literature.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

GEN&WS/AFROAMER 333 — BLACK FEMINISMS
3 credits.

Uses an interdisciplinary framework to interrogate core assumptions, arguments, and silences in past and present black feminist thought.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

GEN&WS/CHICLA 334 – FEMINIST SOCIAL MOVEMENTS ACROSS THE AMERICAS
3 credits.

Explores feminist activism in the United States, Canada, the Caribbean, and Latin America. Feminist activism, broadly construed, will be explored through ethnography, interviews, documentaries, public facing scholarship, among other forms of intellectual production. Applies transdisciplinary perspectives to consider work from a range of academic fields and topics to understand the major political, economic, and social issues framing feminist social movements across the Americas.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and recognize key themes and issues of feminist social movements across the Americas
Audience: Both Grad & Undergrad

2. Increase awareness of the histories of various social movements across the Americas and their impact in the present
Audience: Both Grad & Undergrad

3. Understand and analyze transnational connections among feminist social movements
Audience: Both Grad & Undergrad

4. Identify and critically analyze the theoretical frameworks that undergird feminist activist scholarship across the Americas
Audience: Both Grad & Undergrad

5. Engage more deeply with course materials with stronger written and analytical skills
Audience: Graduate

6. Develop critical thinking skills to identify and question the impact of power dynamics and institutionalized oppression on feminist social movements in the U.S and across the Americas.
Audience: Both Grad & Undergrad

GEN&WS 340 – TOPICS IN LGBTQ SEXUALITY
3 credits.

Topics in feminist study of LGBTQ sexualities, considering race, nationality, and time.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

GEN&WS 342 – TRANSGENDER STUDIES
3-4 credits.

Teaches students fluency with basic terms, concepts, and methodologies within the interdisciplinary field of Transgender Studies. Content includes transnational and cultural considerations; contemporary transgender issues in medicine, law, and education; cultural production, art and activism; transgender, feminist, and queer theories.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

GEN&WS 343 – QUEER BODIES
3 credits.

Centralizes the intersection of LGBTQ identities and dis/ability through various queer bodies which are also inflected by race, class, geographical and national locations. Approaches may include critical theory about queer bodies and personal narratives. Students will learn a variety of ways to think critically and creatively about the politics of bodily experience, including how those politics have shaped their own embodied lives.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

GEN&WS 344 – BI/PAN/ASEXUALITY: COMMUNITY & REPRESENTATION
3 credits.

Explore the experiences, needs, and goals of bisexual/biromantic, pansexual/panromantic, and asexual/aromantic (BPA) people, as well as their interactions with the mainstream lesbian gay community. Consider outcome disparities, community coalition building, and media representation. Explore how multiple marginalization within BPA communities may complicate analysis of members' experiences.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Learn about specific outcome disparities for BPA people as compared to both heterosexual and LG people. Pose potential explanations for these disparities with particular attention to the concepts of social support and minority stress.
Audience: Undergraduate

2. Build on existing understanding of identity categories to better understand the social context in which BPA people come to self-identify and form communities, with particular attention to how BPA identities may be shaped by and challenge existing norms and structures.
Audience: Undergraduate

3. Consider how BPA people and communities intersect and form coalitions with other identity categories and communities such as trans folks, new religious groups, kink, and disability communities, and explore how these groups may fit into existing structures or work towards social change.
Audience: Undergraduate

4. Analyze media representations of and by BPA people, consider their consequences for BPA individuals and communities, and engage with transformative works that explore alternative understandings of BPA identity.
Audience: Undergraduate

5. Throughout the course, recognize how sexual and romantic identity intersects with other identities such as gender, trans or cis status, race, ability, age, economic class, etc. and explore how a person's experiences are shaped by their identities and group memberships, with particular attention to which subgroups may experience disproportionately positive or negative outcomes.
Audience: Undergraduate

GEN&WS 345 – NARRATING QUEER LIVES
3 credits.

Asks how LGBTI+ identity informs life experiences. Explores how LGBTI + life experiences differ over time. Demonstrates the diversity of queer life stories. Examines the intersections of queer identity and other identity categories. Analyzes how religion, disability, race and class influence queer lives. Considers how and why queer memoirs share particular tropes. Investigates and employs oral history as a tool of preserving LGBTI+ life histories.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Discover and analyze the variety of queer (LGBTQ) experiences in the United States
Audience: Undergraduate

2. Discover how trends in queer experience have changed over time
Audience: Undergraduate

3. Analyze tropes of queer autobiography
Audience: Undergraduate

4. Develop oral history techniques
Audience: Undergraduate

5. Practice effective and respectful oral communication skills
Audience: Undergraduate

GEN&WS/HISTORY 346 – TRANS/GENDER IN HISTORICAL PERSPECTIVE
3-4 credits.

Focuses on sex/gender crossing and variation in historical contexts including Japan, South Africa, Europe, the African diaspora, and North America. Considers perspectives of people who themselves passed, crossed, transitioned, transed, or otherwise exceeded their culture's definitions of normative sex/gender. Alongside, consider the ways that dominant social institutions reinforced norms, recognized, tolerated, punished and/or celebrated gender variation. Examine popular culture, medical and legal perspectives, memoir, queer and trans theory, and social movement treatises.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2019

GEN&WS/C&E SOC/SOC 347 — GENDER AND SEXUALITY IN RURAL PLACES
3 credits.

A sociological examination of the influence of rurality and place on gender and sexual performances, norms, and identities in rural geographies.
Requisites: GEN&WS 101, 102, 103, C&E SOC/SOC 140, 210, 211, or SOC 181
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Explain the role of social organization and social change in shaping equities and disparities in environment, health, and community.
Audience: Undergraduate

2. Describe how rurality and place influence gender norms and performance in private and public spheres.
Audience: Undergraduate

3. Critique ideas related to gender, sexuality, and rurality, including anti-urbanism, metronormativity, the rural idyll, natural/unnatural, and visibility politics.
Audience: Undergraduate

4. Assess how discourses and ideas about gender and sexuality influence dominant and minority groups.
Audience: Undergraduate

GEN&WS/ENGL 350 — SPECIAL TOPICS IN GENDER & LITERATURE
3 credits.

Investigation of some specific topic in gender and women's studies related to gender and literature. Topic differs each semester.
Requisites: GEN&WS 101, 102, 103, or SOC/GEN&WS 200
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

GEN&WS/CLASSICS 351 — WOMEN AND GENDER IN THE CLASSICAL WORLD
3-4 credits.

Constructions of gender and sexuality in the classical world through art, literature and archaeology.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Demonstrate knowledge of Classical societies and cultures.
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts in translation and material culture.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

4. Demonstrate knowledge of constructions of gender and sexuality in the classical world and their relevance for the contemporary world.
Audience: Undergraduate

GEN&WS/HISTORY 353 — WOMEN AND GENDER IN THE U.S. TO 1870
3-4 credits.

An advanced and comparative study of the roles of gender, class, and race in American history and historiography. Themes include women as agents of social change and as builders of community.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

GEN&WS/HISTORY 354 — WOMEN AND GENDER IN THE U.S. SINCE 1870
3-4 credits.

See 520.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019

GEN&WS/ENGL 359 – VISIONARY AND SPECULATIVE FICTION: SOCIAL JUSTICE APPROACHES
3 credits.

Explores the genre of visionary fiction - speculative fiction written for social justice purposes - as a means to create, build and maintain new worlds. Examines the political potential of literature and multiple examples of visionary fiction.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Understand the social and political potential of literature to impart knowledge about gender, sexuality, race, and other intersectional social issues
Audience: Undergraduate

2. Develop interdisciplinary techniques to blend research with creative expression
Audience: Undergraduate

3. Develop critical thinking and creative writing skills
Audience: Undergraduate

GEN&WS/CLASSICS 361 – SEX AND POWER IN GREECE AND ROME
3 credits.

Sex as a source of domination and liberation in Ancient Greek and Roman literature and modern European and North American theory and practice, including questions of sexual orientation, gender identity, violence, and self-realization.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate knowledge of Classical societies and cultures.
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts in translation and material culture.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

4. Apply critical concepts relating to gender and sexuality to contemporary phenomena.
Audience: Undergraduate

GEN&WS/AFROAMER 367 – ART AND VISUAL CULTURE: WOMEN OF THE AFRICAN DIASPORA AND AFRICA
3 credits.

Art and visual culture by/or pertaining to women throughout the African Diaspora and Africa. Though the focus is on 10th century art by black women, it will go into visual culture (art objects, photographs, images, dress, culturally-coded representation) concerning black women historically.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze and interpret works of art by women artists of the African Diaspora and Africa.
Audience: Both Grad & Undergrad

2. Apply critical thinking and analytical skills regarding gender, race, and other social categories of identity and oppression to the study of visual images by and about Black women.
Audience: Both Grad & Undergrad

3. Demonstrate basic knowledge of 20th century artistic terminology and aesthetic movements.
Audience: Undergraduate

4. Develop an advanced research project on Black women artists and their art.
Audience: Graduate

GEN&WS 370 – TOPICS IN GENDER AND DISABILITY
3 credits.

Examines the social, cultural, political, and symbolic constructions of the intersecting categories of gender and disability.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023

GEN&WS 374 – DISABILITY, GENDER AND SEXUALITY
3 credits.

Explores gender identity and sexuality among disabled people using historical and theoretical articles to discuss and analyze films, memoirs, and poetry by people with disabilities. Provides a brief introduction to disability studies and intersectionality before delving into academic discussions and artistic representations of the intersections of disability, gender, and sexuality.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Increase knowledge of disability identity and disability studies
Audience: Undergraduate

2. Develop and hone critical thinking and communication skills
Audience: Undergraduate

3. Increase knowledge of intersectionality and intersectional approaches to reading and writing
Audience: Undergraduate

GEN&WS/HISTORY 392 – WOMEN AND GENDER IN MODERN EUROPE
3-4 credits.

An examination of the cultural role of gender and the social, economic, and political activities of women in modern Europe from the 18th to the late 20th centuries.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023

GEN&WS/ENGL 401 – RACE, SEX, AND TEXTS (HOW TO DO THINGS WITH WRITING)
3 credits.

Uses writing in many forms and genres to help students explore how race, gender, and sexuality intersect with language and inform textual experiences. From marriage licenses, passports, and don't ask, don't tell policies to literacy requirements and gag rules, written texts have played major roles in enforcing expectations about race and sex in the United States. At the same time, anti-slavery petitions, letters to the editor, wheat-pasted posters, and hashtag activism all also harness the power of writing to challenge and revise those expectations. In light of that active textual production and negotiation, this class traces public debates and daily experiences where people write or talk about race and sex in order to make a difference. Ultimately, the class takes on the power of words to break bones and heal wounds. Through reading and writing informed by scholarship in writing studies and rhetoric, students in this class will examine historical and contemporary interconnections among race, sexuality, gender, and texts in the United States, developing analytical tools for understanding how language works on and in their world.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

GEN&WS/LEGAL ST/SOC 406 – LAW, SEXUALITY, & SOCIETY
3-4 credits.

Examines the legal and social development and implications of laws governing sexual behavior, human reproduction, media, privacy, and topics related to sexuality, sex and gender. Includes historical analyses of laws connected to present day regulations of sexuality, demonstrating the origins of many of the world's most frequently debated civil rights issues. Chief focus on the United States legal system, with some content including examinations of institutions around the world. Investigates taken-for-granted knowledge and assumptions about sexuality and look at legal, cultural and social constructions of sex in society. Covers intersectional social implications, including race, (dis)ability, class, etc. Topics include: obscenity, pornography, sex work, sexual surrogacy, birth control, abortion, sex education, sexual violence, sex offenders, sexual citizenship rights, trans and intersex legal topics.
Requisites: GEN&WS 101, 102, 103 or SOC/LEGAL ST 131
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss social theory about law and human behavior, particularly human sexuality
Audience: Undergraduate

2. Explain historical roots of modern sexuality-related laws and legal systems worldwide
Audience: Undergraduate

3. Analyze topics related to sexuality and society; constructing arguments based on academic, peer-reviewed research
Audience: Undergraduate

4. Examine sociolegal governance over a wide variety of sexual behaviors and gender/sex topics in a critical, thorough, and thoughtful manner
Audience: Undergraduate

5. Comprehend and apply legal history, precedent, and course concepts to specific sociolegal cases concerning sexuality
Audience: Undergraduate

GEN&WS 410 – SPECIAL TOPICS IN GENDER AND VISUAL CULTURE
3 credits.

Explores topics in gender and visual culture, including artistic practice, political and creative expression, and cultural phenomena. Course topic changes; may be repeated with a different topic.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024
Learning Outcomes: 1. Define and use visual culture frameworks to further understanding of gender.
Audience: Undergraduate

2. Engage in critical discourse on the concepts, themes and strategies key to the production of visual cultureas it relates to gender.
Audience: Undergraduate

3. Define and use visual culture frameworks to advance understanding and analysis of gender.
Audience: Graduate

4. Complicate critical discourse on the concepts, themes and strategies key to the production of visual cultureas it relates to gender.
Audience: Graduate

GEN&WS 412 – CONTEMPORARY QUEER ART AND VISUAL CULTURE
3 credits.

Queer art and visual culture are defined not only through their subject matter but also by the methods through which they appropriate and subvert conventional visual practices. Such tactics may include a work's means of production, its formal properties, and the conditions of its reception. The political imperatives of a queer or queered position, linked to the intersections of race, class, sex and gender will shape thematic investigations of practices related to activism, documentation, abstraction, mining the archive, craft, camp, and drag, among others. Case studies will be drawn from film, performance, comics, video games, and fine art. Projects will engage text- and studio-based research in an interdisciplinary push to integrate theory and practice. No prior art or design experience required.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Engage in critical discourse on the concepts, themes and strategies key to queer art and visual culture.
Audience: Both Grad & Undergrad

2. Demonstrate a working knowledge of influential practitioners and texts in the field.
Audience: Both Grad & Undergrad

3. Analyze and apply text- and studio-based practices to generate projects that respond to or participate in a dialogue on queer theory.
Audience: Both Grad & Undergrad

4. Synthesize course content with your individual academic research and thesis interests.
Audience: Graduate

GEN&WS/THEATRE 415 – INTRODUCTION TO CONTEMPORARY FEMINIST THEATRE AND CRITICISM
3 credits.

Introduction to the history, literature and theory of feminist theatre and of feminist criticism of mainstream theatre in the United States from 1960 to the present.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

GEN&WS/COM ARTS 418 – GENDER, SEXUALITY, AND THE MEDIA
3 credits.

Examines images of gender and sexuality in the media, with a focus on contemporary media in the U.S. Using theories from cultural studies, film and media studies, gender studies, and communication explore different processes and practices of gender and sexuality. Look at the way that gender and sexuality are constructed through social, cultural, and economic forces, and the way that these identities intersect with other social identities such as race, ethnicity, and class. Consider the way that media impact our understanding of feminism and post-feminism, violence, celebrity, consumer culture, subcultures and activism.
Requisites: GEN&WS 101, 102, 103, SOC/GEN&WS 200, COM ARTS 250 or graduate/professional standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Explain the way that systems of oppression such as patriarchy and heteronormativity are manifested in today's society and media cultures
Audience: Both Grad & Undergrad

2. Analyze and interrogate the meaning of contemporary representations of sexuality and gender in the media
Audience: Both Grad & Undergrad

3. Conduct intersectional analyses of the way that different categories of identity such as gender, sexuality, race, class, and ability come together in the media
Audience: Both Grad & Undergrad

4. Articulate their own perspective on how empowerment and liberation are connected to media practices and cultures of production and consumption
Audience: Both Grad & Undergrad

5. Create and participate in creating a respectful environment for having informed discussions about power, identity, representation, and difference with peers
Audience: Both Grad & Undergrad

6. Demonstrate advanced analysis of gender and sexuality in media based on rigorous engagement with media studies scholarship
Audience: Graduate

GEN&WS 420 – WOMEN IN CROSS-SOCIETAL PERSPECTIVE
3 credits.

An interdisciplinary examination of the position of women in a variety of social contexts; an analysis of the society--specific and universal social forces that determine the position of women; an investigation of the change in women's status and role worldwide and an inquiry into the causes of this change.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

GEN&WS/LEGAL ST 422 – WOMEN AND THE LAW
3 credits.

Legal system, laws, and proposed legislation that have specific impact on the lives of women. Topics investigated in both the social and legal contexts.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Demonstrate an understanding of feminist legal theories and methodologies and apply them to real-world cases and historical legal scenarios.
Audience: Both Grad & Undergrad

2. Examine historical roots of modern gendered/sexed legal systems in the United States and worldwide.
Audience: Both Grad & Undergrad

3. Identify key court cases related to gender and civil rights; summarize the major holdings of those cases.
Audience: Both Grad & Undergrad

4. Investigate and research original projects about sex and society, construct research arguments, and plan legal/policy brief proposals.
Audience: Both Grad & Undergrad

5. Analyze sociolegal governance trends/patterns in the U.S. and internationally over a wide variety of sex/gender topics, including family rights, economic and financial rights, employment, voting, politics, sexuality, sport, education, abortion, birth control, and health.
Audience: Both Grad & Undergrad

6. Effectively present legal arguments in oral form, using the “Before the Courts” style, and in written form, using the style of law review articles.
Audience: Graduate

GEN&WS 423 – THE FEMALE BODY IN THE WORLD: GENDER AND CONTEMPORARY BODY POLITICS IN CROSS CULTURAL PERSPECTIVE
3 credits.

Explores the social, cultural, and political construction of the female/feminine body. Considers specifically the bodies of women and girls, transgender women, non-binary people that embody the feminine, female masculinities, and bodies that identify and are identified as female, as bodies that have historically and traditionally been sites of political contention, of societal meaning making, of cultural symbolism, and active resistance. Seeks to challenge what we think we know about bodies, challenging tacit knowledge and investigating how normative discourses of the female/feminine body are formed across cultures, around the world. Considers the impacts of phenomena such as globalization, neoliberalism, "global" feminism, imperialism, capitalism, and human rights movements on cultural conceptions of health, ability, beauty, representation, and the "value" of female/feminine bodies.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Critically analyze and provide concrete examples of how bodies are socially constructed, and how the female/feminine body in particular is a site of political and cultural meaning making, contention, and resistance
Audience: Both Grad & Undergrad

2. Articulate various theoretical frameworks (feminist theories, colorism, queer theory, disability studies, fat studies, etc.) as they relate to gender, embodiment, and the body, and use them in application of concrete ideas
Audience: Both Grad & Undergrad

3. Think, observe, and write critically and analytically and engage thoughtfully in analytic (rather than simply opinionated!) discussions
Audience: Both Grad & Undergrad

4. Understand and engage in the process of conducting a literature review and complete a clear, well organized, and thoughtful academic paper that explores a particular area of interest/scholarship
Audience: Graduate

5. Connect course content with your individual academic research and thesis interests.
Audience: Graduate

GEN&WS/LEGAL ST/SOC 425 — CRIME, GENDER AND JUSTICE
3 credits.

Focuses on the intersection between gender, crime and justice from a cross-cultural perspective. The gendered nature of the criminal justice system, female experiences of crime, prosecution and incarceration as well as the extent to which women are victims, offenders, and participants in the criminal justice system will be explored. Special emphasis will be placed on the theoretical implications of offending behavior and the intersection of gender with sexuality, race, ethnicity and class. The goal of this course is to provide a foundation for critically assessing the often controversial issues surrounding race, gender, crime, and criminal justice in society.
Requisites: SOC/LEGAL ST 131, GEN&WS 101, 102, 103 or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze the U.S. criminal justice system, including incarceration, sentencing, and policing, through the lens of gender studies
Audience: Undergraduate

2. Identify and describe criminological theories, specifically those focused on gender, race, class, and feminist academic thought
Audience: Undergraduate

3. Explore inequalities amongst gender groups and various other social intersections (race, class, ability, sexuality, age, parenthood, etc).
Audience: Undergraduate

4. Investigate topics related to gender and justice by conducting thorough literature reviews and preparing policy briefs with recommendations for legal change.
Audience: Undergraduate

5. Examine and discuss real-world experiences in criminal justice systems, both in the U.S. and abroad.
Audience: Undergraduate

GEN&WS/FOLKLORE 428 — GENDER AND EXPRESSIVE CULTURE
3 credits.

Examines the relationship between dominant images of gender representation as they emerge in expressive culture in various societies.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2019

GEN&WS/POLI SCI 429 — GENDER AND POLITICS IN COMPARATIVE PERSPECTIVE
3-4 credits.

Examines the gendered nature of political institutions around the world, including implications of women's exclusions from public life in a global context; the obstacles to women's greater participation; how women have gained greater voice in political leadership in some countries; and the differences women make in the political arena. Not open to students with credit for POLI SCI 643 prior to fall 2017
Requisites: Sophomore standing; not open to special students
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023

GEN&WS/POLI SCI 435 – POLITICS OF GENDER AND WOMEN'S RIGHTS IN THE MIDDLE EAST
3 credits.

Explores the intertwined relationship between gender and politics in contemporary Middle East and North Africa. Situates the region's historical, socio-political, and cultural context that have particularly contributed to shaping the current discourse on gender in the Arab World. Explores - both theoretically and empirically - the role of Arab women in influencing the political processes across the Middle East. Examines real-world examples of Middle Eastern women from different parts of the region who have succeeded to challenge the status quo and push for genuine change.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop a concrete understanding of the history and politics of the Middle East and North Africa (MENA) and the ways they shape gender power relations across the region.
Audience: Both Grad & Undergrad

2. Apply comparative politics frameworks and feminist theories toward understanding patterns of female political participation and better understand current events and complexities of the region's politics and governance structures.
Audience: Both Grad & Undergrad

3. Sharpen critical and analytical skills through exposure to different, even contradictory, points of views and contemporary debates relating to the role of women in shaping MENA's politics post-Arab uprisings.
Audience: Both Grad & Undergrad

4. Develop and present ideas and arguments to audience with diverse interests and backgrounds.
Audience: Both Grad & Undergrad

5. Apply pertinent theoretical and empirical evidence necessary to make critical and analytical arguments about gender and politics in comparative perspective.
Audience: Graduate

GEN&WS/AMER IND/ANTHRO/FOLKLORE 437 – AMERICAN INDIAN WOMEN
3 credits.

Examines and interprets the roles of American Indian women in traditional societies, and in contemporary North America.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

GEN&WS/LITTRANS/SCAND ST 438 – SEXUAL POLITICS IN SCANDINAVIA
3 credits.

Read and discuss works by Scandinavian writers of the nineteenth and twentieth century reflecting sexual politics and the roles of women in literature. Course taught in English.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and understand the categories depicting sexual politics and the position of women in Scandinavia as portrayed through various works of literature
Audience: Undergraduate

2. Analyze and discuss the important features characterizing sexual politics and the position of women in Scandinavia as portrayed through various works of literature
Audience: Undergraduate

3. Compose and produce writing that applies the concepts introduced to describe, analyze, and differentiate sexual politics and the position of women as portrayed through various works of literature about Scandinavian women.
Audience: Undergraduate

GEN&WS 441 – CONTEMPORARY FEMINIST THEORIES
3 credits.

Contemporary theoretical positions and debates about feminisms in the humanities and social sciences.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2021

GEN&WS/ANTHRO 443 – ANTHROPOLOGY BY WOMEN
3 credits.

Contributions of women anthropologists to feminist and anthropological theories and research methods. Field research and gender. Current debates in women's studies and anthropology in light of recent research on women and gender in cross-cultural perspective.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

GEN&WS 444 – FROM PAST FEMINISMS TO POSTFEMINISM: FEMINISMS FOR THE 21ST CENTURY
3 credits.

Explores feminist theories from a broad array of disciplines and perspectives. Beginning with early feminist writings, to the significance of the Second Wave, examines consciousness raising, political pamphlets, personal manifestos, and the feminist ideology of the "personal is political." Explores work from Black feminist thought, queer theory, theory from disability studies, fat studies, ecofeminism, and transnational and global feminisms. Identifies and addresses crucial areas of contestation that punctuate the dynamic relationships among texts from past and present-the arrivals, departures, and returns-in feminist theory. Listens to voices that align and voices that dissent. Engages with the work of writers and thinkers from the past and bringing these ideas to our current cultural configurations and conceptualizations of feminism(s) and feminist movement(s).
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Summarize and synthesize the work of feminist theorists and other theorists (queer and crip theory, fat studies, critical race theory, etc.) from the mid-20th century to the present day.
Audience: Undergraduate

2. Critically analyze feminist theory in conjunction with cultural and social events and draw connections among how feminist theory ideas align and how they differ from each other.
Audience: Undergraduate

3. Critically appreciate and constructively critique texts, theoretical frameworks, ideas, and praxis (the gap between text and world).
Audience: Undergraduate

4. Articulate your own ideas about what you think feminism for the 21st century can or should look like/sound like/feel like in conjunction with historical and contemporary feminist theories and frameworks.
Audience: Undergraduate

5. Build awareness and understanding of feminist principles, values, and epistemologies (knowledge development) and how these translate to praxis and feminist calls to action.
Audience: Undergraduate

6. Engage in the process of social science data collection, through interviews, oral history, textual and/or content analysis
Audience: Undergraduate

7. Conduct a literature review and seek out contemporary social science research using a feminist theory and research lens
Audience: Undergraduate

GEN&WS 445 – THE BODY IN THEORY
3 credits.

Explores a broad range of contemporary theories concerned with bodies and power. Intersections with gender, race, class, dis / ability, sexuality and nation.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2018

GEN&WS 446 – QUEER OF COLOR CRITIQUE
3 credits.

An examination of the emergent theoretical field of queer of color critique, a mode of analysis grounded in the struggles and world-making of LGBTQ people of color. Activists, artists, and theorists have mobilized queer of color critique to interrogate the intersections of race, gender, sexuality, class, nation, and diaspora as a response to the inherent whiteness of mainstream queer theory and persistent heterosexism in ethnic studies. Examines the development of queer of color critique (primarily in the United States) through both academic and activist domains; consider what queer theory has to say about empire, citizenship, prisons, welfare, neoliberalism, and terrorism; and articulate the role of queer of color analysis in a vision for racial, gender, sexual, and economic justice.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

GEN&WS 449 – SPECIAL TOPICS IN FEMINIST THEORY
3 credits.

Investigation of specific theorists, themes, problems, or eras in feminist social and cultural theory. Course topic differs each semester. Course may be repeated with different topics.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Define and use feminist theoretical frameworks to analyze historical and contemporary understanding of gender.
Audience: Both Grad & Undergrad

2. Develop writing and analytical skills needed to think critically about theory and practice.
Audience: Both Grad & Undergrad

3. Use feminist theory to help develop graduate level research, including but not limited to thesis and dissertation research.
Audience: Graduate

GEN&WS/PORTUG 450 – BRAZILLIAN WOMEN WRITERS
3 credits.

A survey of representative writing by contemporary Brazillian women writers in relation to representations of nationality, race, class, ethnicity, gender and sexualities.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

GEN&WS/PORTUG 460 – CARMEN MIRANDA
3 credits.

Examines the work, representation and interpretation of Carmen Miranda from her early days as a radio star in Brazil to a film actress and entertainer in Hollywood in the 1940s and 50s.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

GEN&WS/ASIAN AM/ENGL 463 – RACE AND SEXUALITY IN AMERICAN LITERATURE
3 credits.

Explores the intersection between race and sexuality in American literature with an emphasis on sex/gender difference, feminism, transgenderism, and nationalism. Focuses on the nature of literature as advocacy, with an emphasis on Asian-American issues.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

GEN&WS/ASIAN AM/ENGL 464 – ASIAN AMERICAN WOMEN WRITERS
3 credits.

Major texts by Asian American women writers.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

GEN&WS/POLI SCI 469 – WOMEN AND POLITICS
3-4 credits.

Changing political roles, status, attitudes, and behaviors of women in contemporary society and of the political implications of changing female/male relationships.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Introduce students to concepts of sex, gender and sexuality and how they have been fundamental to the shape and function of political institutions, laws, and policies.
Audience: Undergraduate

2. Understand how women have participated in politics despite severe legal and political restrictions.
Audience: Undergraduate

3. Understand how social policies and institutional rules inhibit women's influence and participation.
Audience: Undergraduate

4. Explore how the media cover female candidates.
Audience: Undergraduate

5. Examine what barriers inhibit female candidates from running for office.

Audience: Undergraduate

GEN&WS 472 – FOOD FOR THOUGHT: AN INTERSECTIONAL APPROACH
3 credits.

Approaches human relationships with food from micro to macro levels. Considers personal and interpersonal relationships with food, examining the social, cultural, and political meanings of food at various intersections of identity (gender, race, class, ability, age, etc.), and within different institutions such as family, education, and religion. Asks questions about personal/individual responsibility in relation to food, and the role of communities, municipalities, governments, and global entities in determining what people eat and how. Explores the gendered, raced, and classed politics of food systems; questions of sovereignty, sustainability, access, regulation, dissemination, and policy making. Examines the cultural, ecological, and economic implications of the ways food is perceived, produced, and consumed across cultures.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Create a foundation of knowledge to support further academic work and civic engagement in food sovereignty/food justice movements
Audience: Both Grad & Undergrad

2. Define food justice and explore where and how it connects to ourselves and our communities
Audience: Both Grad & Undergrad

3. Identify the different actors in food politics and the varying/conflicting ideas and intentions around food production, distribution, and access as it relates to equity
Audience: Both Grad & Undergrad

4. Report on current food justice issues by analyzing the obstacles that create them
Audience: Both Grad & Undergrad

5. Research and describe local, regional, and global social movements and policies around food politics and food justice
Audience: Both Grad & Undergrad

6. Articulate various theoretical frameworks as they relate to food, identity politics, and intersectionality and use them in application of concrete ideas

Audience: Both Grad & Undergrad

7. Think, observe, and write critically and analytically and engage thoughtfully in analytic (rather than simply opinionated!) discussions
Audience: Both Grad & Undergrad

8. Apply pertinent theoretical and empirical evidence necessary to make critical and analytical arguments about gender and food politics through an intersectional lens
Audience: Graduate

9. Articulate key issue areas of food justice and relate these issue areas to your area of disciplinary graduate level research
Audience: Graduate

GEN&WS/GEOG 504 – FEMINIST GEOGRAPHY: THEORETICAL APPROACHES
3 credits.

Provides an opening to some of the key debates and practices in feminist (political) geography. Feminist geography focuses on questions of power, difference, embodiment, and social change. How are feminist geographies in conversation with or part of other fields of inquiry, such as critical ethnic studies and Indigenous studies, which also focus on questions of difference, epistemologies of knowledge, and social transformation and/or decolonization? That is, what are the relationships of feminist geographic inquiry to liberatory projects of ending racism, capitalism, settler colonialism, and heteropatriarchy. Explore how feminist theories and approaches in geography transformed prevailing political geographic questions and concerns, such as power, politics, territory, boundaries, sovereignty, and violence. What do feminist principles and debates over feminist politics and methods bring to (political) geography?
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Describe the major trajectories of feminist perspectives in (political) geography.
Audience: Both Grad & Undergrad

2. Gain the ability to discuss some of the relationships between feminist geography and broader feminist inquiry and politics.
Audience: Both Grad & Undergrad

3. Gain the ability to develop feminist questions for research and/or action relevant to your project.
Audience: Both Grad & Undergrad

4. Explain the relevance of feminist theory, methods, and/or practice to your project.
Audience: Both Grad & Undergrad

5. Explore how issues of difference and positionality inform your project and study of geography.
Audience: Both Grad & Undergrad

6. Articulate key debates over feminist (geographic) theory for your field and directions these debates suggest for your thesis or dissertation research.
Audience: Graduate

GEN&WS/GEOG 514 – FEMINIST GEOGRAPHY: METHODOLOGICAL APPROACHES
3 credits.

An introduction to foundational approaches to feminist qualitative research in human geography. Research is not separate from a social world that historically has been and continues to be shaped by (settler) colonial, racialized, gendered, sexualized, and class-inflected relations of power (among others). Research practices and "findings" have been and continue to be used to inform and rationalize relations of oppression, exploitation, and violence. For feminist researchers, then, questions of power, difference, and social change are central to how we design and conduct research. Engages in political-ethical discussions about the positionality and responsibilities of ourselves as researchers, and how our knowledge production can reproduce and challenge prevailing relations of power.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Discuss the interplay between epistemology and methodology.
Audience: Undergraduate

2. Explain clearly how their epistemological positions inform their methodological decisions.
Audience: Graduate

3. Discuss the political dynamics shaping knowledge production, and how feminist, decolonial, and anti-racist projects have reshaped these dynamics.
Audience: Both Grad & Undergrad

4. Discuss the historical constructions of 'the field,' and how feminist critiques and research practices challenge expectations regarding field work experiences.
Audience: Both Grad & Undergrad

5. Discuss how feminist research ethics extend researchers' ethical obligations of beneficence, respect for research subjects, and justice (Belmont Report).
Audience: Both Grad & Undergrad

6. Evaluate the virtues, dilemmas, and limitations of common qualitative methods.
Audience: Both Grad & Undergrad

7. Develop a compelling rationalization for research questions and methodologies (design) for your qualitative project.
Audience: Undergraduate

8. Articulate how feminist principles influence your research questions and methodologies.
Audience: Graduate

9. Explain how social positionality shapes the research process, and develop a practice of self-reflexivity.
Audience: Both Grad & Undergrad

GEN&WS/HISTORY 519 – SEXUALITY, MODERNITY AND SOCIAL CHANGE
3 credits.

A history of sexuality approach to a period of major social, economic, and political change in US history, 1880-1930; medical, legal, and popular discourses shaping urbanization, reform, nationalism and colonialism.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020

GEN&WS/PSYCH 522 – PSYCHOLOGY OF WOMEN AND GENDER
3 credits.

Examination of theories and research on the psychology of women and gender. Explores topics such as sex bias in psychological research; psychological aspects of female sexuality and reproduction; gender-based violence; female achievement and power; lifestyle choices of women; women and mental health; and psychological research with transgender individuals.
Requisites: Sophomore standing, a course in PSYCH and (GEN&WS 102 or 103) or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Describe a variety of feminist perspectives on psychology and psychological research.
Audience: Both Grad & Undergrad

2. Analyze the ways in which theorists and researchers address issues of sexism and other forms of discrimination that affect people's psychological experiences.
Audience: Both Grad & Undergrad

3. Apply class content and knowledge by evaluating personal experiences and the world around you in line with theories and concepts learned in class.
Audience: Both Grad & Undergrad

4. Apply a global perspective to the study of psychology of gender and articulate how class topics and concepts operate across culture.
Audience: Both Grad & Undergrad

5. Summarize how the study of psychology of gender contributes to social justice.
Audience: Graduate

GEN&WS 523 – FRAMING FATNESS: GENDER, SIZE, CONSTRUCTING HEALTH
3 credits.

Explores various aspects of identity politics and body politics such as gender, race, ethnicity, sexuality, ability, and citizenship status as they relate to and intersect with body size and constructions of fatness. Situates how fatness has been conceptualized over time, the formation of the gendered body ideals, and the proliferation of obesity rhetoric. Investigates how fat individuals experience the social world, in particular related to arenas such as the American health care system, and other societal institutions such as education, social welfare, immigration, and media. Interrogates how the "obesity epidemic" came to be, how it is framed in the United States, and how it intersects with other systems like big pharma, the food industry, beauty industry, globalization, neoliberalism, and consumerism. Deploys a critical approach in understanding fatness and body size as dimensions of difference that inform experiences of privilege and oppression.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Critically analyze and provide concrete examples of how fatness has been socially constructed in various institutions such as healthcare, medicine, beauty, and media, and how the meanings of fatness have changed over time and across identities (gender, race, class, sexuality, ability, etc.)
Audience: Both Grad & Undergrad

2. Articulate various theoretical frameworks (fat studies, feminist theories, disability studies, queer theory, etc.) as they relate to fatness, embodiment, gender, and discrimination, and use them in application of concrete ideas
Audience: Both Grad & Undergrad

3. Think, observe, and write critically and analytically and engage thoughtfully in analytic (rather than simply opinionated!) discussions
Audience: Both Grad & Undergrad

4. Understand and engage in the process of conducting a literature review and complete a clear, well organized, and thoughtful academic paper or presentation that explores a particular area of scholarship related to fat embodiment
Audience: Undergraduate

5. Conduct a literature review and complete a clear, well organized, and thoughtful academic paper or presentation around their graduate research, at the intersection of their own disciplinary areas of interest and the course content
Audience: Graduate

GEN&WS 524 – RACE, GENDER, HEALTH, AND MEDICINE
3 credits.

Uses race and gender theoretical frameworks to understand peoples' experiences with health and medicine. Conceptualizes race and gender as social categories and applies these frameworks to how people experience health, wellness, and disease. Examines how healthcare and medicine are structured according to racialized and gendered frameworks. Surveys a wide range of issues including reproductive health, body size, mental health, COVID, among other topics. Uses an intersectional approach to analyzing key debates in scholarship on health and medicine.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Understand how the concepts “race” and “gender” are socially constructed and explore what this means for our understandings of health and disease
Audience: Undergraduate

2. Identify and describe how race and gender shape health outcomes and structures disparities
Audience: Undergraduate

3. Identify and describe how race and gender structure health institutions (e.g. hospitals, medical school, etc.)
Audience: Undergraduate

4. Demonstrate understanding and engagement with course material and produce thoughtful and compelling arguments in assigned work
Audience: Undergraduate

GEN&WS 525 – GENDER AND GLOBAL HEALTH IN CRITICAL PERSPECTIVE
3 credits.

Examines the contemporary global health project in historical and cultural context, highlighting some of the greatest sources of tension and struggle. Using a feminist lens and focusing on gender as key analytic category, explores the ways that the distribution of global wealth and power impacts health and well-being around the world. Explores social, demographic, political and economic determinants of global health, and the ways that these factors interconnect with biomedicine to create and affect health outcomes, both within and across countries. Drawing on critical theories, situates the study and practice of global health in an intersectional framework.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Critically analyze the intellectual history of the global health field, tracing its origins from colonial medicine through to the current day using a gendered lens
Audience: Both Grad & Undergrad

2. Appraise the ways that colonialism, scientific racism, misogyny, and other forms of structural exclusion shape the global health field and its objects/methods of study
Audience: Both Grad & Undergrad

3. Question the neutrality of quantitative global health metrics, and understand indicators as a contested form of knowledge production.
Audience: Both Grad & Undergrad

4. Describe several current global health issues related to gender in-depth, as well as their contexts
Audience: Both Grad & Undergrad

5. Synthesize information from multiple sources and present it both in oral and written formats.
Audience: Both Grad & Undergrad

6. Perform original global health research that integrates feminist theories with empirical public health approaches.
Audience: Graduate

7. Conduct advanced analysis of global health policies and programs using a critical lens.
Audience: Graduate

GEN&WS 527 – THE ENVIRONMENT OF THE WOMB: EPIGENETICS AND PARENT/CHILD HEALTH
3 credits.

Concentrating social and ecological environments as well as that of the body, focuses on the toxic effects of late industrialism, epigenetics and maternal/fetal health as well as destabilizing ideas about "normal" reproduction. Examine how the possibilities for expanding the scope from maternal/fetal health to "parent/child" health - where kinship is not strictly about biologic belonging or coming "straight from the womb," but also about love and a safe home or chosen family. Undergirding our analysis is an "eco-social" approach, guided by questions of what constitutes "health," access to living a healthy life - in a body and on a planet that feels safe to inhabit.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Increase knowledge of epigenetics and maternal/fetal as well as parent/child health.
Audience: Both Grad & Undergrad

2. Develop analytical thinking and improve written and spoken communication skills
Audience: Both Grad & Undergrad

3. Engage critical connections and construct ethical actions in the face of climate change, environmental racism, medical justice and planetary health

Audience: Both Grad & Undergrad

4. Demonstrate writing and analytical skills through a deeper engagement with the material and enriching their chosen field of study
Audience: Graduate

GEN&WS 528 – SEXUALITY AND SCIENCE
3 credits.

Explores scientific approaches to studying sexuality. Examines current biological and neuroscientific research about sexuality, as well as feminist scholarship on these topics and critical responses to this research. Topics cover the intersections between biology (e.g., hormones, anatomy, neural activity, psychophysiology, evolution, etc.), sexuality (e.g., desire, dysfunction, arousal, bisexuality, orgasm, same-sex sexuality, pleasure, etc.), and feminist/critical scholarship about this research (e.g., feminist science studies, queer theory, feminist psychology, medicalization, etc.).
Requisites: Sophomore standing
Course Designation: Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe current biological, social, and feminist science research on sexuality, the research methods currently used to study sexuality, and the problematics of doing this research
Audience: Both Grad & Undergrad

2. Critically evaluate research on sexuality and science
Audience: Both Grad & Undergrad

3. Describe feminist science principles and how they can shape scientific methods and interpretations of data
Audience: Both Grad & Undergrad

4. Present scientific material on sexuality in concise, accessible ways
Audience: Both Grad & Undergrad

5. Identify primary scientific sources and summarize and interpret evidence from these sources
Audience: Both Grad & Undergrad

6. Support an argument about a sexuality topic in writing using scientific evidence from primary sources
Audience: Both Grad & Undergrad

7. Critically evaluate the impact of sexuality science on society
Audience: Both Grad & Undergrad

8. Use scientific theorizing about sexuality to help develop graduate level research including but not limited to thesis and dissertation research
Audience: Graduate

9. Formulate a novel or advanced argument about a sexuality topic in writing using scientific evidence from primary sources
Audience: Graduate

GEN&WS 529 – THE SCIENCE AND POLITICS OF REPRODUCTIVE HEALTH
3 credits.

Explores the contemporary science and politics of reproductive health in North America. Taught from a reproductive justice (RJ) perspective, a framework for analysis and action developed by Black women health organizers and scholars. Examines several aspects and applications of the reproductive justice framework itself; RJ approaches to pregnancy and birth; RJ as a diagnosis and refusal of eugenics; and RJ and abortion. Engages with case studies, scholarship, and theory from a variety of literatures relevant to public health: epidemiology, feminist and queer theory, critical race studies, gender/sexuality studies, activist and policy analyses, and historical and contemporary primary sources. Explores a variety of experiences and meanings of reproductive health and illness, as well as the relationships between health/disease and racism, poverty, sexism, hetero- and cis- normativity, colonization, incarceration, and environmental degradation.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Define and use a reproductive justice framework to analyze the power relations, historical factors, and current material realities that produce states of reproductive health and disease.
Audience: Both Grad & Undergrad

2. Understand how histories and ongoing realities of eugenics, racial, sexual, gender, economic, and colonial domination and resistance impact reproductive health
Audience: Both Grad & Undergrad

3. Understand historical and contemporary research in the fields of public health, epidemiology, medicine, and health policy, reading appreciatively as well as critically
Audience: Both Grad & Undergrad

4. Assess public health policies and programs aimed at improving reproductive health from a reproductive justice perspective
Audience: Both Grad & Undergrad

5. Carry out an independent analysis of a contemporary problem related to reproductive health, survey existing public health, medical, and social science literature, and produce a research project
Audience: Graduate

GEN&WS 530 — BIOLOGY AND GENDER
3 credits.

Examines the theories and methodologies of the relevant research areas in biology and animal behavior that underlie biological determinist theories of gender and gender differences, and explores alternative approaches, theoretical constructs and interpretations.
Requisites: Junior standing or GEN&WS 103
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021

GEN&WS/HIST SCI/MED HIST 531 — WOMEN AND HEALTH IN AMERICAN HISTORY
3 credits.

Women as patients and as health professionals in America from the colonial period to the present.
Requisites: Sophomore standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

GEN&WS/HIST SCI/MED HIST 532 — THE HISTORY OF THE (AMERICAN) BODY
3 credits.

This course demonstrates that human bodies have social and cultural histories. It will highlight the social values placed on different bodies, the changing social expectations bodies create, and the role of science and medicine in creating the cultural meanings of bodies.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023

GEN&WS 533 — SPECIAL TOPICS IN GENDER AND BIOLOGY
3 credits.

Examination in depth of specific topics in the area of gender and biology. Critical feminist reading of scientific literature and exploration of relevant biomedical issues in social and cultural contexts.
Requisites: Sophomore standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize how gender and biology may affect each other.
Audience: Both Grad & Undergrad

2. Recognize how gender and biology may impact health.
Audience: Both Grad & Undergrad

3. Communicate basic biological concepts.
Audience: Graduate

GEN&WS 534 — GENDER, SEXUALITY, AND REPRODUCTION: PUBLIC HEALTH PERSPECTIVES
3 credits.

Explores several theoretical lenses, disciplinary approaches, and substantive topical areas relating to reproductive and sexual health. Begin by investigating the development of "sexual health" as a phenomenon in public health research, policy, and programs looking back to feminist responses to population control policies of the 1970s. Covers substantive topical areas in the field (e.g., adolescent sexual development, contraception, and AIDS).
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023

GEN&WS/INTL ST 535 — WOMEN'S GLOBAL HEALTH AND HUMAN RIGHTS
3 credits.

A human rights approach to global women's health to provide an overview of health issues within the context of a woman's life cycle. It will pay special attention to the socio-cultural and economic factors that play a role in determining women's access to quality basic health care.
Requisites: Sophomore standing
Course Designation: Breadth - Either Biological Science or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

GEN&WS 536 – QUEERING SEXUALITY EDUCATION
3 credits.

Situates sexual health education in historical and contemporary context by tracing its discursive production and envisioning a queering of both content and practice. An examination of what might it mean to queer sex education and what would a queer sex education look like. Utilizing theoretical interventions from critical education studies, queer theory, and trans/gender studies, this course.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

GEN&WS/HIST SCI 537 – CHILDBIRTH IN THE UNITED STATES
3 credits.

Using a reproductive justice framework, analyze contexts, experiences, practices, ideologies, and historiographies of childbirth in the United States from roughly the 17th century to the present, with the heaviest emphasis on the 20th and 21st century. Examines the ways that colonization, genocide, enslavement, racism, capitalism, heterosexism, patriarchy, and ableism have shaped all of these aspects of childbirth. Inquire how key movements and groups resisting some of these forms of oppression have had the power to reshape birth, as well as locating in birth a source of transformational power.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

GEN&WS 538 – SPECIAL TOPICS IN LGBTQ+ HEALTH
3 credits.

Examination in depth of specific topics in the area of LGBTQ+ health. Critical reading of evidence-based literature and exploration of relevant health and biomedical LGBTQ+ issues in biological, social, economic and cultural contexts.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Understand and interpret unique health challenges faced by LGBTQ+ communities.
Audience: Undergraduate

2. Understand and interpret heteronormative assumptions in health and science research, and how those assumptions shape LGBTQ+ health experience and outcomes.
Audience: Undergraduate

3. Read, analyze, and critique evidence-based literature.
Audience: Undergraduate

4. Situate health concepts within larger social structures.
Audience: Undergraduate

GEN&WS 539 – SPECIAL TOPICS IN GENDER AND HEALTH
3 credits.

Examination in depth of specific topics in the area of gender and health. Exploration of relevant health issues in social, economic, and cultural contexts, including public health and policy, and how they relate to gender, race, sexuality, disability, and class.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize how gender and health are impacted by social, economic, and/or political influences.
Audience: Both Grad & Undergrad

2. Apply gender and health frameworks to research and writing.
Audience: Graduate

GEN&WS 546 – FEMINIST THEORIES AND MASCULINITIES
3 credits.

Explores central assumptions, questions, and debates regarding the relationship between feminist theory, pro-feminist theory, and the practice and performance of multiple masculinities. Explores feminist-informed definitions of and debates about masculinity including whether masculinity is primarily a gender-role and/or a form of sexual expression. Further, key tensions related to men's status, or their lack thereof, as subjects of feminist theory will be examined. Examine the practice and performance of specific masculinities including but not limited to African American masculinities, trans masculinities, and faith-informed masculinities.
Requisites: GEN&WS/AFROAMER 333, GEN&WS 441, 445, 446, 449, or 547; or graduate/professional standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Develop the writing and analytical skills necessary to think critically about masculinities in theory and practice
Audience: Both Grad & Undergrad

2. Determine how feminist theorizing about masculinity shapes and is shaped by other hierarchies of power including race and sexuality
Audience: Both Grad & Undergrad

3. Use feminist theorizing about masculinity to help develop graduate level research including but not limited to thesis and dissertation research
Audience: Graduate

GEN&WS 547 – THEORIZING INTERSECTIONALITY
3 credits.

Critically examines important issues, questions, and debates regarding intersectionality or the notion that race, gender, and sexuality, and other terrains of difference gain meaning from each other. Materials include texts, films, and other multimedia resources drawn from an array of disciplines including sociology, critical race theory, history, political theory, and cultural studies.
Requisites: GEN&WS/AFROAMER 333, 441, 445, 446, 449, 546 or graduate/professional standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

GEN&WS/PHILOS 556 – TOPICS IN FEMINISM AND PHILOSOPHY
3 credits.

Topics from historical and contemporary feminist thought; attention to one or more feminist philosophers, historical movements, philosophical frameworks, or sets of philosophically related issues.
Requisites: Junior standing or 3 Credits in PHILOS
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Think critically about arguments.
Audience: Undergraduate

2. Interpret complex texts accurately and analyze them logically.
Audience: Undergraduate

3. Communicate precisely and concisely in both writing and speech.
Audience: Undergraduate

4. Express familiarity with central concepts in feminist philosophy.
Audience: Undergraduate

GEN&WS/ED POL 560 – GENDER AND EDUCATION
3 credits.

Examines the relationship between gender and education and explores notions of gender as socially constructed categories and identities. Identify the ways schools (re)produce and mediate gender identities and explore the experiences of students. Draws on critical and feminist perspectives to analyze the ways gender intersects with understandings of identity performance and expression such as masculinity and femininity, as well as at the intersection of race, ethnicity, class, and sexuality in schooling processes.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand the role schools and education play in enhancing or reproducing gender inequality
Audience: Both Grad & Undergrad

2. Explain theories on the social construction of gender and sexuality
Audience: Both Grad & Undergrad

3. Describe and reflect on the history of the gender equity movement in education
Audience: Both Grad & Undergrad

4. Read, discuss, and write about research on students with diverse gender and sexual identities
Audience: Both Grad & Undergrad

5. Develop analytical skills necessary to think about intersectional identities how they are tied to students' experiences in education
Audience: Both Grad & Undergrad

6. Explain and analyze pedagogical approaches and school policies' effects on learners of diverse gender and sexual identities
Audience: Both Grad & Undergrad

7. Analyze the role that educational research, policies and practices play in causing, ameliorating, or exacerbating gender inequities
Audience: Both Grad & Undergrad

8. Build the skills necessary to apply these concepts and approaches to our own final research project on a gender related topic
Audience: Both Grad & Undergrad

9. Read and evaluate scholarly research in the fields of education, sociology, feminist studies, anthropology, etc
Audience: Graduate

GEN&WS/AFROAMER 624 – AFRICAN AMERICAN WOMEN'S ACTIVISM (19TH & 20TH CENTURIES)
3 credits.

Examines Black women's struggles for racial justices; reconsiders conventional notions of leadership, politics and protest. Topics include abolitionism, anti-lynching campaigns, woman suffrage, labor movement, club movement, cultural expressions, civil rights protest, Black feminism/womanism, poverty and welfare rights, environmental racism, etc.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022

GEN&WS/AFROAMER 625 – GENDER, RACE AND THE CIVIL RIGHTS MOVEMENT
3 credits.

This course focuses on the emerging field of gender studies in the scholarship on the post-World War II civil rights movement in the United States.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

GEN&WS 640 – CAPSTONE SEMINAR IN GENDER AND WOMEN'S STUDIES
3 credits.

This capstone synthesizing seminar for Gender and Women's Studies majors focuses on the major contributions of gender and women's studies scholarship, requires students to hone their interdisciplinary skills, and apply their feminist theory knowledge. It is expected that students have completed more than 50% of their GENWS coursework before enrolling. Process for enrollment permission will be shared by GWS advisor.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

GEN&WS 642 – ADVANCED SEMINAR IN LGBT STUDIES (LGBT STUDIES CAPSTONE)
3 credits.

Capstone for LGBTQ+ Studies certificate; culminates certificate work through advanced interdisciplinary readings, analysis and discussion in LGBTQ+ Studies and completion of a research project. It is expected that students have completed more than 50% of their LGBTQ+ Studies coursework before enrolling. Process for enrollment permission will be shared by LGBTQ+ Studies advisor.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2021

GEN&WS 660 – INTERNSHIP IN GENDER AND WOMEN'S STUDIES
3 credits.

Opportunities for learning and working in organizations in ways that connect coursework in gender and women's studies to specific and applied issues in community settings. Permission to enroll is granted from the instructor after an application process is completed the semester before the course is taught.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Workplace - Workplace Experience Course
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply knowledge of gender and women's studies to practical and professional experiences outside of the classroom.
Audience: Undergraduate

2. Develop a professional feminist network.
Audience: Undergraduate

3. Engage in feminist social change and social justice.
Audience: Undergraduate

4. Gain discipline specific, professional experiences and skills to further personal and professional goals.
Audience: Undergraduate

5. Further understanding of gender & women's studies application in professional settings and career development.
Audience: Undergraduate

GEN&WS/AFROAMER 677 – CRITICAL AND THEORETICAL PERSPECTIVES IN BLACK WOMEN'S WRITINGS
3 credits.

Analyses and interpretations of literary works by black women writers through historical, philosophical, political, feminist, and other contemporary critical methods.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

GEN&WS 681 – SENIOR HONORS THESIS I
3 credits.

Research and preparation for completing the senior honors capstone experience carried out under the supervision of an advisor in the women's studies program.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025

GEN&WS 682 – SENIOR HONORS THESIS II
3 credits.

Completion of the senior honors capstone project begun in Gender and Women's Studies 681 carried out under the supervision of an advisor in the women's studies program.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2025

GEN&WS 691 – SENIOR THESIS I
2-3 credits.

Research and preparation for the writing of a senior thesis.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

GEN&WS 692 – SENIOR THESIS II
2-3 credits.

Senior thesis.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

GEN&WS 699 – DIRECTED STUDY
1-6 credits.

Graded on lettered basis.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

GEN&WS 720 – SPECIAL TOPICS IN GENDER AND WOMEN'S STUDIES
1-3 credits.

Advanced level investigation of some specific topic in gender and women's studies.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

GEN&WS/ENGL 737 – FEMINIST THEORY AND CRITICISM
3 credits.

Feminist theory, with an emphasis on literary and cultural theory and criticism in English.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

GEN&WS/CURRIC 760 – SEX/GENDER-RELATED ISSUES IN CURRICULUM AND INSTRUCTION
3 credits.

A poststructural feminist analysis of educational discourse and practice; examines selected sex/gender issues in curriculum and instruction; explores some implications for classroom teaching of the complex interrelationships between sex/gender, race, social class, sexuality, and ability/disability.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

GEN&WS 790 – RESEARCH & THESIS: MASTER'S AND PROFESSIONAL LEVEL
1-6 credits.

Research and thesis writing for students at the Master's and professional level.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2024

GEN&WS 799 – INDEPENDENT RESEARCH AT THE MASTER'S AND PROFESSIONAL LEVEL
1-3 credits.

Independent research for master's or professional level graduate students.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

GEN&WS 800 – RESEARCH METHODS IN GENDER & WOMEN'S STUDIES
3 credits.

Explores feminist approaches to methods in the social sciences, humanities, and health sciences, such as ethnography, interviews, statistics, focus groups, surveys, archival research, discourse analysis, and visual analysis. Applies transdisciplinary perspectives to consider work from a range of academic fields and topics in order to critique issues of epistemology, methodology, methods, interpretation, and writing.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Describe feminist conversations about epistemology (the study of knowledge – what it is, how we know); methodologies (how we go about producing new knowledges); methods (the actual tools we use to collect and analyze data) and the relationship between them.
Audience: Graduate

2. Identify historical and contemporary debates and tensions in conceptualizing, conducting, analyzing, and disseminating feminist research.
Audience: Graduate

3. Analyze research methods strategies and techniques through a feminist lens.
Audience: Graduate

4. Apply feminist methodologies to your own research projects and interests.
Audience: Graduate

GEN&WS/ED POL/PUB AFFR 805 – GENDER ISSUES IN INTERNATIONAL EDUCATIONAL POLICY
3 credits.

Exploration and analysis of recent debates related to gender issues in international educational policy, including the intersection of education and demographic processes, the play of history and culture, and the social construction of gender.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

GEN&WS 810 – GENDER AND WOMEN'S STUDIES: THE EMERGENCE AND TRANSFORMATION OF A FIELD
3 credits.

Provides an overview of the field of gender and women's studies. Surveys the origin of the field and traces its major transformations. Explores and analyzes historical and contemporary debates that have shaped and continue to shape the field. Interrogates the mission of gender and women's studies. Examines the processes and products of academic professionalization. Investigates the value of graduate training in gender and women's studies.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and analyze major shifts in the history of Gender and Women's Studies
Audience: Graduate

2. Develop and demonstrate a point of view about the animating controversies within Gender and Women's Studies
Audience: Graduate

3. Research and summarize changes in Gender and Women's Studies scholarship
Audience: Graduate

4. Develop and deploy critical reading skills
Audience: Graduate

5. Develop and apply critical writing skills
Audience: Graduate

GEN&WS/JOURN 828 – GENDER AND SEXUALITY IN MASS COMMUNICATION
3 credits.

A scholarly theory overview on gender and sexuality in communication studies.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain how cultural theorists have defined "gender," "sexuality," and "intersectionality."
Audience: Graduate

2. Analyze how gender and sexuality are represented in the mass media.
Audience: Graduate

3. Explain how gender and sexuality are relevant to media production, media consumption (media audiences), and media activism.
Audience: Graduate

4. Describe how gender and sexuality inform the creation of media publics.
Audience: Graduate

GEN&WS 830 – CONTEMPORARY THEORIZING IN GENDER AND WOMEN'S STUDIES
3 credits.

Examines assumptions and debates in contemporary theorizing about gender and women including what constitutes "good" gender and women studies' theorizing, how to recognize gender-based oppression when we see it, how gender, race, sexuality, and other hierarchies of power intersect, as well as the merits of transnational theorizing about gender and women. Explores whether gender and women's studies' theorizing is a form of activism, how to teach theory in gender and women's studies' classrooms, the value of cultivating distinct gender and women studies' methods, and other dimensions of putting gender and women's studies' theorizing into practice.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Interrogate contemporary debates regarding the causes and effects of gender-based experiences and oppression.
Audience: Graduate

2. Explore how race, class, and other intersecting hierarchies of power inform these causes and effects.
Audience: Graduate

3. Consider whether theorizing about gender and women is not only a scholarly enterprise but also as a professional, activist, and personal one.
Audience: Graduate

4. Build the skills and background that enable us to apply these theoretical frameworks and approaches to our own intellectual projects.
Audience: Graduate

GEN&WS 840 – PEDAGOGY IN GENDER AND WOMEN'S STUDIES
3 credits.

Provides an introduction to feminist pedagogy in Gender and Women's Studies, Focuses upon: (1) the historical importance of an explicit feminist pedagogy in the foundation of GWS, (2) the development of feminist pedagogical theory and (3) a hands-on experience with developing feminist pedagogical materials, classroom strategies and a teaching portfolio. Considers the ways that feminist pedagogical approaches reconsider and challenge aspects of traditional pedagogical practices and training. Engages the development of feminist pedagogical thought and interrogates the different intellectual traditions that have shaped debates and issues within feminist politics and practices.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand and apply a variety of pedagogical approaches to Gender and Women’s Studies teaching practice and curriculum design.
Audience: Graduate

2. Design a teaching portfolio suited to their particular interests and knowledge.
Audience: Graduate

GEN&WS 860 – PROSEMINAR IN GENDER AND WOMEN'S STUDIES
1 credit.

Provides an orientation to basic features of scholarly life as well as some professional options outside of academia, and become acquainted with our faculty and their research. Explores issues both broad (e.g., professional development) and specific (e.g., obtaining research grants) that are important to those building professional careers with a Gender and Women's Studies Ph.D.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Foster ethical and professional conduct.
Audience: Graduate

2. Learn about a range of careers in academia and outside academia.
Audience: Graduate

3. Acquire an understanding of how to become a successful professional in the field of gender and women’s studies through engaging one another, the faculty in the department, and outside speakers, as well as through readings and critical reflection through writing.
Audience: Graduate

GEN&WS 880 – PROSEMINAR: GRADUATE STUDY IN GENDER AND WOMEN'S STUDIES
3 credits.

Introduces new graduate students to the breadth of scholarship in Gender and Women's Studies. It also develops particular skills (critical reading, critical writing and basic research) important to graduate level scholarship.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022

GEN&WS/C&E SOC/SOC 904 – SOCIOLOGICAL PERSPECTIVES ON GENDER
3 credits.

Advanced topics in the analysis of gender relations in society.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

GEN&WS/ANTHRO 920 – ANTHROPOLOGY OF GENDER
3 credits.

Theoretical and ethnographic approaches to the anthropology of gender, focusing on current works. Topics include sexual inequality, research methods, gender and history, gender and ethnographic writing, cultural constructions of masculinity, sexuality, and gender studies and anthropological theory.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

GEN&WS 925 – SEMINAR: TOPICS IN GENDER AND GLOBAL PERSPECTIVES/ISSUES
3 credits.

Research seminar on gender and global issues.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Analyze topics on gender and global issues from an interdisciplinary perspective, using critical tools drawn from a variety of methodologies.
Audience: Graduate

2. Synthesize course content with your individual academic research and thesis interests.
Audience: Graduate

GEN&WS 930 – SEMINAR: TOPICS IN FEMINIST THEORY
3 credits.

Research seminar on feminist theory.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Analyze and apply feminist theory from an interdisciplinary perspective, using critical tools drawn from a variety of methodologies.
Audience: Graduate

2. Synthesize course content with your individual academic research and thesis interests.
Audience: Graduate

GEN&WS/PSYCH 932 – PSYCHOLOGY OF WOMEN AND GENDER
3 credits.

Examines research and theory in psychology of women and gender. Topics include feminist approaches to research methods, psychological gender differences and similarities, women of color, mental health and feminist therapy, rape, sexual harassment, transgender issues and research, and public policy issues.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Understand psychological research and theories on women and gender, at a level of proficiency to be qualified to teach an undergraduate course on the psychology of women and gender, and/or begin to conduct psychological research on gender, and/or conduct more gender-sensitive therapy.
Audience: Graduate

2. Apply feminist approaches and critiques in psychology.
Audience: Graduate

3. Understand the enormous diversity among women and trans folks along dimensions of ethnicity, social class, and sexual orientation.
Audience: Graduate

GEN&WS/POLI SCI 933 – FEMINIST POLITICAL THEORY
3 credits.

Focuses on how specific schools of feminist thought redefine the political, spanning historical and contemporary feminist political theory.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021

GEN&WS/HISTORY 938 – HISTORY OF SEXUALITY
3 credits.

Using sexuality as a category of historical analysis, examines historiographical, methodological, and theoretical contributions to understanding all aspects of the past.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023

GEN&WS 950 – SEMINAR: TOPICS IN GENDER AND WOMEN'S STUDIES
3 credits.

Research seminar on specific topics in gender and women's studies.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

GEN&WS 970 – SEMINAR: TOPICS IN GENDER AND DISABILITY
3 credits.

Research seminar on gender and disability.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Analyze gender and disability studies research from an interdisciplinary perspective, using critical tools drawn from a variety of methodologies.
Audience: Graduate

2. Synthesize course content with your individual academic research and thesis interests.
Audience: Graduate

GEN&WS 990 – RESEARCH & THESIS
1-6 credits.

Independent research and writing to complete dissertation requirement
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

GEN&WS 999 – INDEPENDENT RESEARCH
1-3 credits.

Directed study projects for graduate students as arranged with a faculty member
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

GENERAL BUSINESS (GEN BUS)

GEN BUS 106 – FOUNDATIONAL SKILLS FOR BUSINESS ANALYSIS
1 credit.

Build fundamental skills and processes to develop a strong foundation in business analysis utilizing Excel. Learn the fundamentals of data construction, manipulation, summarization, analysis and presentation.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply fundamental skills in structuring business information.
Audience: Undergraduate

2. Organize, search and analyze business data.
Audience: Undergraduate

3. Apply advanced skills in data summarization and analysis.
Audience: Undergraduate

4. Visualize and present information.
Audience: Undergraduate

5. Apply introductory programming skills.
Audience: Undergraduate

6. Explain recent developments in ‘data informed’ business problem solving.
Audience: Undergraduate

GEN BUS 107 – INTRODUCTION TO ARTIFICIAL INTELLIGENCE IN BUSINESS
1 credit.

Introduction to the foundational concepts and applications of Artificial Intelligence (AI) in today's business world. Covers what AI is, how it works, and its growing impact on various business contexts. Topics include predictive AI, deep learning, generative AI, leveraging AI tools, and responsible AI.
Requisites: None
Repeatable for Credit: No
Learning Outcomes: 1. Explain the basic principles of AI and machine learning.
Audience: Undergraduate

2. Describe how AI systems learn, process data, and make decisions.
Audience: Undergraduate

3. Discuss the application of AI in various business fields, and the resulting disruption.
Audience: Undergraduate

4. Articulate ethical considerations and challenges surrounding AI.
Audience: Undergraduate

5. Apply AI tools in both personal and professional settings to solve problems, meet user needs, and identify opportunities in business.
Audience: Undergraduate

GEN BUS 110 – PERSONAL AND PROFESSIONAL FOUNDATIONS IN BUSINESS
1 credit.

An introduction for new business students covering academic exploration and planning, career development, self-assessment for personal development, leadership, and diversity and inclusion.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate a basic ability to self-assess and reflect on their personality, identities, strengths, values, and personal ethics.
Audience: Undergraduate

2. Explain the importance of continuous self-assessment as a method for improving approaches to work and interactions with others.
Audience: Undergraduate

3. Demonstrate the foundational understanding of leadership development as related to business now and in the future.
Audience: Undergraduate

4. Demonstrate the foundational understanding of career development as related to business.
Audience: Undergraduate

5. Explain the importance of leading ethically, inclusively, and authentically in individual and group settings.
Audience: Undergraduate

GEN BUS 112 – EXPLORING BUSINESS
1 credit.

Develop student success strategies, engage with a community of peers, professionals, faculty and staff, and explore the breadth of professional opportunities available to launch an inspiring and meaningful career.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Critically reflect on improving study skills, career planning, and ethical perspectives to promote success in business.
Audience: Undergraduate

2. Demonstrate professional communications skills in written and spoken formats in individual and group settings.
Audience: Undergraduate

3. Identify business sectors, industries, and WSB majors that align with your desired future goals.
Audience: Undergraduate

GEN BUS 206 – BEGINNING DATA ANALYSIS FOR BUSINESS
3 credits.

Learn basic business statistical skills to comprehend business reports, and to calculate statistical findings from business data using Excel. Understand simple probability calculations and how to apply probability to specific business uncertainties. Build capability to use simple statistical models and tests to estimate business variables of interest, and learn about predictive relationships between variables. Become comfortable using Excel for data manipulation, data analytics, and data visualization. Apply statistical analysis to address business issues.
Requisites: MATH 112 and (GEN BUS 106 or concurrent enrollment)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain important statistics commonly used in business
Audience: Undergraduate

2. Apply basic probability concepts and models to uncertainty in business contexts
Audience: Undergraduate

3. Use data to estimate unknown business variables, test hypotheses, and learn with simple regression
Audience: Undergraduate

4. Use Excel to analyze data, create visualizations, and answer business questions
Audience: Undergraduate

5. Create a basic business proposal using statistics and data analytics
Audience: Undergraduate

GEN BUS 207 – INTERMEDIATE DATA ANALYSIS FOR BUSINESS
3 credits.

Enables you to understand and apply useful approaches to analyzing and presenting data to support business decision making. Emphasis on applications of predictive and prescriptive analytics. Predictive approaches use historical data to infer relationships and forecast future outcomes. Prescriptive methods formulate decision models to identify choices that are optimal with respect to a desired, measurable outcome. Provides experience integrating diverse data sources, modelling uncertainty, and visualizing key insights.
Requisites: GEN BUS 206
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze and communicate with data in business environments
Audience: Undergraduate

2. Implement and interpret output from common statistical methodologies
Audience: Undergraduate

3. Integrate data from multiple data sources
Audience: Undergraduate

4. Create compelling data visualizations
Audience: Undergraduate

5. Solve and interpret basic optimization and simulation models
Audience: Undergraduate

6. Integrate models of uncertainty into business decision-making
Audience: Undergraduate

GEN BUS/DS 240 – HUMAN-CENTERED DESIGN AND BUSINESS
2 credits.

Design thinking is an iterative problem-solving process geared toward producing innovative solutions for complex and persistent problems in various fields and organizations. Its process, culture, and value system from both design and business point of views will be covered: Empathetic understanding of the end users, problem definition rooted in systems thinking, ideation with a strong emphasis on creativity, visualization and prototyping, testing rooted in a set of research methods, and finally, the importance of iteration in bringing about innovative solutions. The path from project to market will also be explored, with an understanding of how one might balance desirability, feasibility and viability.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate the ability to understand and gain empathy into human (customer/consumer/user) experience of product, services and systems through systematic inquiries.
Audience: Undergraduate

2. Exhibit the ability to be creative, collaborative, and divergent thinkers who can generate and visually communicate multiple ideas.
Audience: Undergraduate

3. Demonstrate ability to iterate proposed solutions toward innovation.
Audience: Undergraduate

4. Explore questions around cultural and intellectual exchange between business and design such as "What can business learn from design, and vice versa?", or "How might the incorporation of design thinking help human-centered business to grow and flourish?
Audience: Undergraduate

5. Illuminate and expand on existing touch points between design thinking and "business thinking", including, but not limited to, marketing/new product design and development, entrepreneurship and venture creation, operations and new process design
Audience: Undergraduate

GEN BUS 250 – SUSTAINABLE CAPITALISM
2 credits.

Examination of how firms, government, and civil society interplay in free market capitalism to bring about not only prosperity and economic freedom but also economic inequality, environmental degradation, and a weakening of institutions. Application of this knowledge to how capitalism can be reimagined for free market economies and business to foster prosperous societies and planetary health.
Requisites: ECON 101 or declared in undergraduate Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe how the interplay between firms, governments, and market systems shape economic, societal and environmental outcomes, as well as tradeoffs within.
Audience: Undergraduate

2. Explain varieties of capitalism across nations and compare with United States capitalism over time.
Audience: Undergraduate

3. Analyze the role of business, governments, and civil society in managing free markets to balance the wellbeing of firms with the wellbeing of society and the natural environment.
Audience: Undergraduate

GEN BUS 301 – BUSINESS LAW
3 credits.

History of legal development, contracts, agency, sale of goods, insurance.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize the legal implications of transactions and events that impact the business environment.
Audience: Undergraduate

2. Describe the American legal system and how the American court system works.
Audience: Undergraduate

3. Apply the technical legal rules covered in the course regarding negligence, intellectual property, contract law, agency law, and employment law.
Audience: Undergraduate

4. Analyze and assess risks and opportunities inherent in business transactions and in everyday life.
Audience: Undergraduate

GEN BUS 306 – BUSINESS ANALYTICS I
3 credits.

Development of quantitative intuition through practical applications and use of analysis tools. Specifically, emphasis will be on how to manage, summarize, explore, and visualize databases. The essentials of probability will be introduced and applied to decision problems where there is uncertainty. Emphasis on hypothesis testing and regression analysis and include an introduction to simulation methods. Throughout, attention will be paid to effective communication of data analysis. The use of business cases will connect the course material to both real world settings and recent advances in data analysis, including big data and data mining.
Requisites: (GEN BUS 106 or concurrent enrollment) and (MATH 211, 217, or 221), or declared in undergraduate Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop "statistical literacy," meaning that you can interpret statistics frequently used in current events, industry reports, and so on
Audience: Undergraduate

2. Distinguish between descriptive and inferential statistics, and apply skills such as data summarization, hypothesis testing, and regression analysis, using Excel
Audience: Undergraduate

3. Apply the core concepts of probability to decision-making under uncertainty, including an introduction to simulation
Audience: Undergraduate

4. Synthesize your knowledge with quantitative business cases
Audience: Undergraduate

5. Create effective communication of data analyses in written, visual, and/or oral formats
Audience: Undergraduate

GEN BUS 307 – BUSINESS ANALYTICS II
3 credits.

Emphasis on hands-on experience with many commonly used analytic methodologies using the modeling and optimization tools available on almost every professional desktop. The focus is predictive and prescriptive analytics. Predictive approaches use historical data to infer causal relationships and forecast future outcomes from a given action. Prescriptive methods take this a step further, helping managers formulate decision models that identify optimal actions given a set of circumstances.
Requisites: GEN BUS 106 and 306, or declared in undergraduate Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the principles of different regression techniques for different forms of data
Audience: Undergraduate

2. Discriminate between types of explanatory variables and ways to incorporate these variables in a statistical model
Audience: Undergraduate

3. Implement and interpret output from the most common statistical methodologies
Audience: Undergraduate

4. Recognize the structure of relational databases
Audience: Undergraduate

5. Construct basic optimization and simulation models
Audience: Undergraduate

6. Understand the collection, management, reasoning, and communication with data in corporate and other environments
Audience: Undergraduate

GEN BUS 308 – CLOUD BASED BUSINESS ANALYTICS
2 credits.

Apply statistics and data literacy to business problems using the most popular analytics tools and technologies, many of which are in the cloud.
Requisites: GEN BUS 307, 317, ECON 400, 410, or declared in undergraduate Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Build and share dashboards using data visualization tools.
Audience: Undergraduate

2. Utilize SQL to query cloud databases.
Audience: Undergraduate

3. Build and deploy a predictive model in the cloud.
Audience: Undergraduate

4. Analyze big data in a cloud environment.
Audience: Undergraduate

GEN BUS 310 – FUNDAMENTALS OF ACCOUNTING AND FINANCE FOR NON-BUSINESS MAJORS
3 credits.

Part of a two course sequence introducing non-business students to basic concepts, practices and analytical methods that are part of the market enterprise system. This course is a basic overview on: accounting, finance, and business law.
Requisites: Sophomore standing or declared in the Business Exchange program
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate the application of fundamental business terminology and concepts in the disciplines of economics, business law, finance, and accounting to effectively communicate with professionals across a given business organization
Audience: Undergraduate

2. Explain the various reasoning businesses use to make decisions and the impact those decisions have on the firm and society
Audience: Undergraduate

3. Reflect on their assumptions and predispositions regarding the role of business in society
Audience: Undergraduate

4. Apply the common business processes and tools to develop professional, academic, and personal futures.
Audience: Undergraduate

GEN BUS 311 – FUNDAMENTALS OF MANAGEMENT AND MARKETING FOR NON-BUSINESS MAJORS
3 credits.

High-level introduction to concepts and practices in business. Overview of management, marketing, strategy, entrepreneurship, ethics, supply chain, and international business.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Summarize the business environment including core functions, participants, and the external forces that influence business activities such as globalization, diversity, business ethics, and corporate social responsibility
Audience: Undergraduate

2. Evaluate different types of business formations and create a business plan
Audience: Undergraduate

3. Describe and apply the role of marketing in business
Audience: Undergraduate

4. Analyze business strategies and management decisions in order to evaluate their impact on business performance
Audience: Undergraduate

GEN BUS 317 – MATHEMATICAL FOUNDATIONS OF BUSINESS ANALYTICS

3 credits.

Statistical inference and analyses based on models will be introduced and applied in a business context using a calculus-based focus. Topics covered include point estimation, confidence intervals, hypothesis testing, regression models, and time series models. Various methods for fitting a model to data will be explored, and uncertainty about parameter estimates will be quantified so decision makers have information about the quality of the estimates. Regression and time series models are commonly used in business analytics applications and will be used to analyze business data and make inferences and predictions.
Requisites: MATH 331, STAT/MATH 309, or 431
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply discrete and continuous probability distributions to data encountered in business applications and evaluate the quality of parameter estimates.
Audience: Undergraduate

2. Explain the basics of modeling using both regression and time series approaches.
Audience: Undergraduate

3. Recognize the assumptions and limitations of the methods utilized in this course to aid businesses in making decisions under uncertainty.
Audience: Undergraduate

4. Interpret statistical information for someone with a non/less technical background.
Audience: Undergraduate

5. Analyze business data and construct models using appropriate statistical software.
Audience: Undergraduate

6. Communicate and present the results of an analysis.
Audience: Undergraduate

GEN BUS/INTL BUS 320 – INTERCULTURAL COMMUNICATION IN BUSINESS

3 credits.

Develops awareness and knowledge of cultural influences on business. Focuses on various attitudes toward work, time, material possession, business, and the relationship of these attitudes to different social, religious, philosophical, and educational backgrounds of business people from cultures around the world.
Requisites: Sophomore standing or declared in the Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025

GEN BUS/INTL BUS 340 – CULTURE AND COMMUNICATION IN WESTERN EUROPE

3 credits.

Learn how to adapt writing, speaking, and nonverbal behavior to effectively communicate in a Western European context (e.g. Germany, France, United Kingdom, Italy, and Spain). Examine issues such as cultural attitudes toward authority, time, gender, and race, as well as the religious and philosophical values that support those attitudes. Explore frameworks for understanding a national culture's influence on communication and learn how to apply that to practical use.
Requisites: None
Repeatable for Credit: No

GEN BUS 360 – WORKPLACE WRITING AND COMMUNICATION
3 credits.

Develop and practice workplace communication skills: writing, speaking, and listening. A theoretical foundation provides a method of deep audience analysis; apply that analysis when producing a variety of written genres and when preparing content for formal presentations. Research communication and information sources specific to future careers. Strengthen information literacy by developing professional research skills and analyzing sources. Revise written work through a workshop process that requires giving, receiving, and implementing feedback.
Requisites: Satisfied Communications A requirement; no concurrent enrollment with GEN BUS 110 or 120
Course Designation: Gen Ed - Communication Part B
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate active listening skills
Audience: Undergraduate

2. Develop a writing process that includes drafting, incorporating feedback, and self-evaluation to create effective documents in various genres
Audience: Undergraduate

3. Analyze audiences with attention to differences in backgrounds, values, viewpoints, and experiences in order to tailor communication to a variety of workplace audiences, genres, and situations
Audience: Undergraduate

4. Employ appropriate style and discipline-specific conventions in writing and speaking
Audience: Undergraduate

5. Identify and locate resources specific to the students' industry/discipline using the library system and internet
Audience: Undergraduate

6. Analyze information sources and communication skills that professionals use
Audience: Undergraduate

7. Evaluate sources for credibility and relevance; use evidence recognized as credible by the students' industry/discipline and cite it appropriately
Audience: Undergraduate

8. Provide constructive feedback on peers' work-in-progress and presentations
Audience: Undergraduate

9. Incorporate feedback and self-evaluation to improve presentations
Audience: Undergraduate

10. Demonstrate effective visual design strategies in documents and slide-decks
Audience: Undergraduate

GEN BUS 365 – CONTEMPORARY TOPICS
1-3 credits.

A course for the exploration of subject areas possibly to be introduced into the business curriculum.
Requisites: Sophomore standing or declared in undergraduate Business Exchange program
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

GEN BUS 370 – CASE INTERVIEW ANALYSIS
1 credit.

Provides a fundamental understanding of how to prepare for a case interview, analyze problems based on limited information, consider alternatives to develop a solution and present the solution effectively.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Effectively implement a systematic approach to analyzing case problems.
Audience: Undergraduate

2. Identify types of case problems and match them with frameworks and analytical tools designed to inform those problems and structure recommended solutions.
Audience: Undergraduate

3. Apply relevant analytical tools to identify missing information needed to understand problems.
Audience: Undergraduate

4. Formulate probing questions to bring out critical facts and assumptions about problem contexts.
Audience: Undergraduate

5. Integrate available facts and data into the relevant analytical tools and frameworks to diagnose problems holistically.
Audience: Undergraduate

6. Concisely communicate the analysis of case problems along with actionable recommendations to address the situations.
Audience: Undergraduate

GEN BUS 399 – READING AND RESEARCH-BUSINESS RESEARCH
1-6 credits.

Individual work suited to the needs of undergraduate students may be arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2021

GEN BUS 400 – INTEGRATED STRATEGIC LEADERSHIP
3 credits.

Capstone integrating the curriculum through the application of business strategy to business problems in cross-functional teams. Develops and refines key skills introduced in core courses, including professional communications, inclusive leadership, and quantitative analysis.
Requisites: GEN BUS 360 and (M H R 300, OTM 300, FINANCE/ECON 300, and MARKETNG 300, or concurrent enrollment)
Repeatable for Credit: No
Last Taught: Fall 2025

GEN BUS 450 – PROFESSIONAL EXPERIENCE IN BUSINESS
1 credit.

Internship which allows students to augment their business education and gain professional experience in their major through related work experience. Intended for undergraduates in the School of Business. Not available with firms who participate in the ACCT I S 600 internship. See listing on Accounting Dept. website.
Requisites: Consent of instructor
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: Yes, for 2 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Complete projects and/or tasks that build upon knowledge and skills learned in the classroom.
Audience: Undergraduate

2. Acquire specific knowledge and skills that are relevant to the career pathway or industry.
Audience: Undergraduate

3. Apply knowledge gained through career experience to test and clarify career interests and goals.
Audience: Undergraduate

GEN BUS 451 – PROFESSIONAL EXPERIENCE IN BUSINESS-EXTENDED INTERNSHIP
1 credit.

Only allowed for six to eight month internships which will allow students to augment their business education and gain professional experience in their major area. Students receive one credit and will remain a full-time student. Intended for undergraduates in the School of Business
Requisites: Consent of instructor
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Complete projects and/or tasks that build upon knowledge and skills learned in the classroom.
Audience: Undergraduate

2. Acquire specific knowledge and skills that are relevant to the career pathway or industry.
Audience: Undergraduate

3. Apply knowledge gained through career experience to test and clarify career interests and goals.
Audience: Undergraduate

GEN BUS 656 – FOUNDATIONS OF STATISTICAL LEARNING FOR BUSINESS ANALYTICS
2-3 credits.

An introduction to predictive modeling for business applications beginning with some of the foundations. Leads to development of linear regression and classification models, and discussion of building models for prediction. Topics include selection, regularization, and the bias-variance tradeoff.
Requisites: GEN BUS 307, 317 704, 705, 881, ECON 400, 410, STAT/MATH 310, STAT 333, 340, or declared in the Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Build (generalized) linear regression models for the purpose of prediction in business contexts, choosing from a variety of statistical learning techniques.
Audience: Undergraduate

2. Select predictive algorithms and features for machine learning models in business settings, taking into account the fundamental bias-variance tradeoff.
Audience: Undergraduate

3. Evaluate prediction accuracy of models for regression and classification problems for business applications.
Audience: Undergraduate

4. Communicate the advantages and disadvantages of different prediction approaches, and justify and explain their choices in the context of business problems.
Audience: Undergraduate

5. Interpret the prediction outcomes of a given model in a business context, and communicate the results to non-expert audiences.
Audience: Undergraduate

GEN BUS 657 – MACHINE LEARNING AND ARTIFICIAL INTELLIGENCE MODELS FOR BUSINESS ANALYTICS
2 credits.

An introduction to machine learning models for business applications. Builds on the predictive modeling basics by developing general algorithmic prediction models for supervised machine learning. Covers additive models, CARTs, bagging/boosting, deep learning approaches, and AI models. Discussion of unsupervised learning techniques, including clustering and anomaly detection.
Requisites: ACT SCI 640 or (GEN BUS 656 or concurrent enrollment)
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Build machine learning models for the purpose of prediction in business contexts, choosing from a variety of approaches.
Audience: Both Grad & Undergrad

2. Tune models to optimize predictive performance in business settings.
Audience: Both Grad & Undergrad

3. Evaluate and compare prediction accuracy of regression and classification models in business settings.
Audience: Both Grad & Undergrad

4. Decompose and demystify machine learning models that underpin AI-driven business solutions.
Audience: Both Grad & Undergrad

5. Identify more advanced literature on machine learning for business applications and be able to develop skills in self-study.
Audience: Graduate

GEN BUS 704 – DATA TO DECISIONS
2-3 credits.

Exploration of statistical inference and data analytics tools. Review of relevant foundations of statistics, machine learning and probability theory. Emphasis on applying the resulting concepts to canonical business examples, using both Excel and R.
Requisites: Declared in an MBA program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Read, clean, create new datasets
Audience: Graduate

2. Describe the resulting data by computing and interpreting summary statistics, and via visualization tools
Audience: Graduate

3. Describe uncertainty and risk using the language of probability theory
Audience: Graduate

4. Perform hypothesis tests common in business applications
Audience: Graduate

5. Perform Monte Carlo simulations
Audience: Graduate

6. Estimate cross-sectional and time-series models for forecasting purposes and select among competing models via cross-validation
Audience: Graduate

7. Apply machine learning methods in the context of simple examples
Audience: Graduate

GEN BUS 705 – STATISTICS AND PROGRAMMING FOR BUSINESS ANALYTICS
3 credits.

A compact primer in statistics and an introduction to programming as a foundation for data-driven business analyses. The first part covers elementary concepts such as random variables, probability distributions, estimation, and ordinary least-squares regression. In the second part, the course exposes students to Python and R programming, including numerical and statistical packages that are relevant for practical applications in business.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Derive measures related to the characteristics of probability functions such as moments, mean, variance, median,mode, and percentiles.
Audience: Graduate

2. Carry out an ordinary least-squares (OLS) regression and interpret the parameter estimates as well as predictions.
Audience: Graduate

3. Prepare, compile, and run basic computer programs in a variety of programming languages including C/C++,Java, Python, R, Stata, and VBA.

Audience: Graduate

4. Implement algorithms for business analytics problems in a structured fashion in Python and R.
Audience: Graduate

5. Pick suitable numerical functions from available packages, including quadrature (numerical integration), numerical solution of non-linear equations, optimization, and random-number generation, and use the functionality for business analyses.
Audience: Graduate

6. Run a Monte Carlo simulation using R and Python.
Audience: Graduate

GEN BUS 707 – FOUNDATIONS OF ARTIFICIAL INTELLIGENCE IN BUSINESS
2 credits.

A comprehensive introduction to the foundational concepts and applications of Artificial Intelligence (AI) in today's business environment. Explore what AI is, how it works, and its growing impact on business, society, and daily life.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No

GEN BUS 708 – ARTIFICIAL INTELLIGENCE AND THE ENTERPRISE
2 credits.

A deep dive into the strategic, operational, organizational and cultural implications of applying Artificial Intelligence (AI) to today's business enterprise. Addresses the key dynamics required for individuals to provide leadership in AI within their organizations.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No

GEN BUS 709 – ARTIFICIAL INTELLIGENCE AND THE FUTURE OF MANAGEMENT
2 credits.

A comprehensive exploration of artificial intelligence (AI) and its profound implications for modern management, business strategy, innovations, and the future of work. Focuses on the AI-driven fundamental transformation of all aspects of business and management, including organizational structures, leadership, competition, governance, and decision making.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No

GEN BUS 710 – ETHICS, INTEGRITY AND SOCIETY
1 credit.

This class is designed to prepare students for dealing with ethical challenges in the world outside academia. Focus is on the role of personal values in all types of decision making, from personal to professional.
Requisites: Declared in an MBA program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Assess and explain your personal ethical principles and values.
Audience: Graduate

2. Analyze ethical dilemmas using philosophical theories and frameworks.
Audience: Graduate

3. Effectively communicate and persuasively advocate for the ethicalness of a proposed decision or action.
Audience: Graduate

GEN BUS 713 – ROLE OF BUSINESS IN SOCIETY
2 credits.

Explores and implements the critical thinking, communication, and managerial skills necessary for developing ethical organizations.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop a deeper understanding of ethical dilemmas at work and your personal ethical beliefs.
Audience: Graduate

2. Use a systematic ethics decision-making framework to arrive at moral conclusions.
Audience: Graduate

3. Explain why firms should be ethical.
Audience: Graduate

4. Describe best practices for enhancing an organization's ethical performance.
Audience: Graduate

5. Benchmark and assess your organization's ethical performance.
Audience: Graduate

GEN BUS 714 – CORPORATE GOVERNANCE AND BOARD MEMBERSHIP
2-3 credits.

Explore the roles and responsibilities of Management and Directors in protecting the interests of Shareholders and other Stakeholders. Topics include: the history of Corporate Governance, Board of Directors responsibilities, Corporate Governance nuances outside of the U.S., and current trends in Corporate Governance. Analyze how an entity's Corporate Governance environment can either prevent or permit failures and have a direct impact on the success of an organization.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain the roles management, shareholders and directors have in impacting the Corporate Governance environment.
Audience: Graduate

2. Articulate the responsibilities of a Board of Directors and its Committees as well as what makes for effective members.
Audience: Graduate

3. Evaluate the root cause of Corporate Governance breakdowns and apply this learning to new situations and environments.
Audience: Graduate

4. Compare public vs. private company Corporate Governance environments including the major influences on international Corporate Governance environments.
Audience: Graduate

5. Reflect on the current and future practices in Corporate Governance including those that address global environmental and social issues.
Audience: Graduate

GEN BUS 720 – DATA VISUALIZATION FOR BUSINESS ANALYTICS
1-2 credits.

Introduce students to principles of data visualization and provide hands-on experience using data visualization tools and techniques for business applications. Develop proficiency in current visualization software tools, and leverage these tools for data exploration, insight into decision-making, and data presentation. Recommended for students to have general computing skills and familiarity with MS Word, MS Excel and MS PowerPoint; introductory-level exposure to coding in any language; some R experience; basic statistical literacy, equivalent to at least one semester of statistics.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the information contained in data sets and make simple data corrections/transformations to prepare data for visualization tools
Audience: Graduate

2. Explore data sets visually to recognize patterns and relationships that provide insights and recommendations into business problems
Audience: Graduate

3. Identify design principles and best practices that make good visualizations effective and recognize challenges present in making data understandable across a range of audiences
Audience: Graduate

4. Construct effective static and interactive data visualizations for business decision-making and critique/improve existing ones
Audience: Graduate

5. Efficiently and persuasively communicate data insights through presentations, dashboards, and reports
Audience: Graduate

6. Explain history and current landscape of data visualization tools and their relative strengths and weaknesses
Audience: Graduate

7. Proficiently use Tableau visualization software
Audience: Graduate

8. Improve data presentation and visualizations in Excel and PowerPoint
Audience: Graduate

9. Make basic visualizations in R
Audience: Graduate

GEN BUS 725 – CONSULTING PRACTICUM
1 credit.

Solve critical business challenges. Drawing on and integrating the MBA core curriculum, conduct an in-depth analysis and make recommendations on a strategic problem posed by the sponsor company.
Requisites: GEN BUS 704, ACCT I S 700, FINANCE 700, M H R 706, MARKETNG 700, and OTM 700
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze a specific real-world organizational challenge and apply strategic thinking and decision-making skills to develop an effective and integrative business solution to that challenge.
Audience: Graduate

2. Apply creative and critical thinking to address ambiguity and uncertainty in the project.
Audience: Graduate

3. Communicate effectively with the client.
Audience: Graduate

4. Lead and function effectively in teams.
Audience: Graduate

5. Reflect on personal and professional development as business leaders for a global business environment.
Audience: Graduate

GEN BUS 730 – PRESCRIPTIVE MODELING AND OPTIMIZATION FOR BUSINESS ANALYTICS
2-3 credits.

Introduction to fundamentals of prescriptive analytics with emphasis on business applications. Modeling and mathematical optimization using Excel and Python. Designing, building, testing, and analyzing models, including sensitivity and risk analysis. Developing and solving optimization models, including linear, integer, and nonlinear problems. Course includes some principles of model-building and fundamentals of optimization theory but emphasizes practical application, hands-on learning, and problem-driven exercises.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify appropriate modeling, analysis, and optimization methodologies when faced with a concrete problem.
Audience: Graduate

2. Leverage spreadsheet software (e.g., Excel) and programming languages (e.g., Python) for modeling and optimization.
Audience: Graduate

3. Classify optimization problems (e.g., linear, integer, nonlinear) and explain the challenges of solving different problem types.
Audience: Graduate

4. Recognize classic optimization problems (e.g., knapsack, network, traveling salesman) and recall how to formulate them.
Audience: Graduate

5. Discuss fundamental optimization theoretical concepts and their practical implications.
Audience: Graduate

GEN BUS 732 – ECONOMICS FOR MANAGERS
2-3 credits.

Develops and applies economic principles to examine the effect of firm, industry, domestic and global market conditions on both day-to-day managerial decision-making and long-term strategic planning.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Demonstrate the proper use of costs and benefits in decision making (e.g., concepts of marginal, average, sunk, short-run, long-run, nominal, real, opportunity costs)
Audience: Graduate

2. Use the supply and demand framework to evaluate a range of economic events and activities, such as prices, interest rates and exchange rates, and at the levels of the firm, industry, domestic, and global market
Audience: Graduate

3. Apply economic principles to analyze decisions (e.g., pricing strategies, consumption, protectionism, regulations) when decision makers (e.g., firms, government) have market power
Audience: Graduate

4. Apply the notion of equilibrium from game theory to study settings with multiple decision makers
Audience: Graduate

GEN BUS 740 – EXPERIMENTS AND CAUSAL METHODS FOR BUSINESS INSIGHTS
2-3 credits.

Provides an introduction to experimental and causal methods for driving business insights. Topics include: (1) Review and distinction of correlation vs. causation; (2) design and analysis of randomized-controlled experiments; and (3) identification of "natural experiments" in business data and corresponding empirical strategies.
Requisites: (GEN BUS 704 or 705) and (GEN BUS 720 or concurrent enrollment); or GEN BUS 881
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify statements and analytical reports that use correlational evidence to infer causal relationships.
Audience: Graduate

2. Articulate why correlation may not equate to causation due to factors such as selection bias.
Audience: Graduate

3. Explain the value of randomization for establishing causal effects through experiments.
Audience: Graduate

4. Demonstrate skills to develop a randomized experiment and analyze the results.
Audience: Graduate

5. Identify potential “natural experiments” that allow for causal analysis from existing data in business environments and be able to implement analytic approaches to analyzing data in these situations.
Audience: Graduate

GEN BUS 745 – ROBOTIC PROCESS AUTOMATION
1-2 credits.

Explore the fundamentals of Robotic Process Automation, including common use cases and popular tools. Provides an opportunity to automate a variety of processes using this technology.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Communicate the fundamentals and common use cases for robotic process automation (RPA).
Audience: Graduate

2. Automate various business processes using RPA tools and best practices.
Audience: Graduate

3. Complete an RPA project that involves identifying automation opportunities and implementing solutions.
Audience: Graduate

GEN BUS 746 – ADVANCED SQL & DATA WAREHOUSING
2 credits.

Provides an opportunity to construct advanced SQL statements (including joins, common table expressions, window functions, etc.) and build cloud data warehouses in a variety of software vendor platforms.
Requisites: (GEN BUS 760 and 780), (GEN BUS 882 and 883), or member of Graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Construct advanced SQL statements – including joins, common table expressions, window functions, etc.
Audience: Graduate

2. Build cloud data warehouses in various software vendor platforms.
Audience: Graduate

3. Automate steps in a data pipeline within a cloud environment.
Audience: Graduate

4. Present self-designed technical solutions to address business problems.
Audience: Graduate

GEN BUS 750 – PROFESSIONAL EXPERIENCE IN BUSINESS
1 credit.

Internship which allows students to augment their business education and gain professional experience in their major through related work experience.
Requisites: Declared in an MBA program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Evaluate and apply an internship experience by illustrating the projects and responsibilities completed, key learnings, and conclusions from the work.
Audience: Graduate

2. Demonstrate successes, barriers, and learning opportunities through detailed examples, including future recommendation for subsequent students.
Audience: Graduate

GEN BUS 760 – DATA TECHNOLOGY FOR BUSINESS ANALYTICS
2-3 credits.

Focuses on various technologies needed to perform data analytics. Techniques of extracting structured and unstructured data from databases, applications, or social networks. Transform and combine data with other relevant information and load into targeted systems. How to use programming languages to collect data from the web and leverage libraries for other, more, advanced data analysis.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Extract data from both structured or unstructured databases
Audience: Graduate

2. Transform and combine data with other relevant information and load into targeted systems such as data warehouses, data marts or analytical applications
Audience: Graduate

3. Use Python to execute simple web scraping, mine data from social networks, and use the libraries for advanced data analysis beyond simple descriptive analytics
Audience: Graduate

4. Implement Online Analytical Processing (OLAP) and create multi-dimension data cubes
Audience: Graduate

5. Execute social mining techniques and create valuable information from text-mining for decision-making
Audience: Graduate

6. Discuss current landscape in data warehousing, big data, and other emerging topics
Audience: Graduate

GEN BUS 765 – CONTEMPORARY TOPICS
1-4 credits.

Exploration of advanced subject areas possibly to be introduced into the business curriculum.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2024

GEN BUS/ECON/STAT 775 – BAYESIAN STATISTICS
3 credits.

Introduces the theory, methods, and computational procedures needed to perform advanced Bayesian data analyses. Predictive and decision-theoretic motivations including subjective probability, risk, admissibility, and exchangeability; highlights key components of Bayesian analysis (i.e., prior, likelihood, posterior, and predictive distributions) within standard parametric models and advanced hierarchical and multilevel models; demonstrates the iterative process of model specification, implementation, criticism, and revision with applied case studies; implements computational techniques (e.g., Markov chain Monte Carlo, variational inference) in modern probabilistic programming languages.
Requisites: STAT 609, 610, 611, STAT/MATH 709, ECON 709, POLI SCI 818, or COMP SCI/E C E 761
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Justify the use of probability for coherent uncertainty quantification
Audience: Graduate

2. Explain how Bayesian updating occurs in conjugate models and hierarchical models
Audience: Graduate

3. Compare and contrast the conceptual and practical benefits and challenges of different posterior approximation strategies like MCMC and variational inference
Audience: Graduate

4. Implement posterior approximation algorithms in modern statistical and probabilistic programming languages such as R or Stan
Audience: Graduate

5. Specify, fit, criticize, and revise Bayesian models in practice
Audience: Graduate

GEN BUS 777 – CONSULTING SKILLS BOOTCAMP
1 credit.

An introduction to consulting tools and models.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply the SCQ framework to a business problem in a case format
Audience: Graduate

2. Develop a presentation using the answer-first principle and storyboarding techniques
Audience: Graduate

3. Prepare and deliver a persuasive presentation
Audience: Graduate

4. Reflect on your own progress and learning during the module and practice sharing constructive feedback
Audience: Graduate

GEN BUS 780 – CLOUD TECHNOLOGY FOR BUSINESS ANALYTICS
1 credit.

Provides an overview of cloud services that support business analytics. Load and analyze data, build and deploy machine learning models, and develop data pipelines through hands-on, in-class activities working in cloud environments.
Requisites: Graduate/professional standing or member of graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain, at a foundational level, the cloud landscape for business analytics – i.e. vendors, services, and costs.
Audience: Graduate

2. Demonstrate how to load and connect to data in the cloud for a variety of analytics.
Audience: Graduate

3. Setup and manage a cloud data warehouse.
Audience: Graduate

4. Build and deploy machine learning models in the cloud.
Audience: Graduate

5. Develop and test a data pipeline in the cloud.
Audience: Graduate

6. Analyze big data in a cloud environment.
Audience: Graduate

GEN BUS/ACCT I S/E P D 781 – FINANCIAL AND BUSINESS ACUMEN
1 credit.

This course is designed with a keen awareness for the needs of the non-financial student or professional. For this class, no previous financial training is required. The intent is to equip you with the essential concepts used to develop financial literacy. Content will cover basic financial terms and reports, analytical tools to help interpret financial data and using financial data in budgets and forecasts.
Requisites: Graduate/professional standing. Not open to students declared in an MBA program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Apply the language and foundational tools of finance to analyze how a company's economic activity is reflected in its financial reports
Audience: Graduate

2. Perform high-level financial statement analysis to identify important information from financial reports
Audience: Graduate

3. Apply basic financial concepts of valuation, capital budgeting, and financial decision making
Audience: Graduate

GEN BUS/E P D/MARKETNG 782 – MARKETING FOR NON-MARKETING PROFESSIONALS
1 credit.

An overview of marketing's role within an organization, the key elements of a marketing plan, and how the plan is implemented. Students will learn about buyer demographic, psychographic and purchasing decision behavior. A thorough understanding of the customer enables students to develop a coordinated marketing mix (product, price promotion and place) that will satisfy the customer better than the competition and at the required margin. Students will leave the course understanding the degree to which all company functions must be coordinated and focused on the customer. This course will not apply toward fulfilling the MBA degree requirements.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Explain how the marketing function impacts an organization's business operations
Audience: Graduate

2. Identify and use marketing terminology and concept
Audience: Graduate

3. Use both demographic and psychographic information to segment markets and select a target market
Audience: Graduate

4. Research and create a basic marketing plan that aligns customer expectations with organizational marketing activities and the organization's resources
Audience: Graduate

5. Coordinate consistency between product, price, promotion, and place (distribution)
Audience: Graduate

6. Relate and utilize the product life cycle concept to product and service offerings
Audience: Graduate

GEN BUS/E P D/M H R 783 – LEADING TEAMS
1 credit.

Students will gain the knowledge and skills to continuously enhance their own team performance and productivity as well as the teams they are involved with. They will also be in a much better position to lead teams effectively.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Describe team dynamics, roles, and expectations that influence a STEM team's performance
Audience: Graduate

2. Identify and effectively deploy specific team member strengths relevant for technical projects
Audience: Graduate

3. Plan, lead, and facilitate productive team meetings
Audience: Graduate

4. Identify and manage team conflict more effectively and constructively
Audience: Graduate

5. Assess and improve their current STEM team leadership methods and practices
Audience: Graduate

GEN BUS/E P D/OTM 784 – PROJECT MANAGEMENT ESSENTIALS
1 credit.

Techniques that will help to plan, execute, and deliver projects with desired scope on time and on budget. Learn to document clear project objectives and goals, accurately estimate project time and costs, schedule and allocate time-critical resources, and establish feedback systems for optimal project control.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2023
Learning Outcomes: 1. Plan and manage successful engineering projects using appropriate methods, tools, and techniques
Audience: Graduate

2. Estimate project costs, resources, and schedules
Audience: Graduate

3. Immediately apply project management principles regarding the five major project stages: initiate, plan, execute, control, and close
Audience: Graduate

4. Apply or customize the project management framework to engineering organizational needs
Audience: Graduate

5. Assess and improve the current project management system
Audience: Graduate

GEN BUS/E P D/M H R 785 – EFFECTIVE NEGOTIATION STRATEGIES
1 credit.

Improves students' negotiating skills, doing so by providing a theoretical underpinning that will help them to understand the sources of effective and ineffective approaches to negotiations.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Describe game theory and distinguish between distributive and integrative bargaining, recognizing appropriate tactics
Audience: Graduate

2. Identify bargaining styles, set goals, improve relationships, and leverage interests effectively
Audience: Graduate

3. Analyze ethical issues in negotiations and create mutual gain through value creation
Audience: Graduate

4. Demonstrate thorough preparation for negotiations, use individual and team techniques, and evaluate post-negotiation strengths and areas for improvement
Audience: Graduate

GEN BUS 790 – CONSULTING PROJECT CAPSTONE
1-3 credits.

Provides an opportunity to bring together all material learned throughout the program and synthesize it through an applied consulting project. Explore and apply concepts to a future career through: identifying and understanding the business challenge, applying analytic methods to discover insight(s) to answer the business challenge, developing recommendations based on the findings, and communicating those findings and recommendation(s).
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Identify and explain the business challenge being examined.
Audience: Graduate

2. Successfully engage in a team and "client" project.
Audience: Graduate

3. Apply analytic methods to discover insights to answer the business challenge.
Audience: Graduate

4. Create recommendations based on the analysis findings.
Audience: Graduate

5. Successfully present those findings and recommendations to an audience of business professionals.
Audience: Graduate

GEN BUS 791 – EMBA CONSULTING PRACTICUM I
1 credit.

Provides an opportunity to bring together all of the material learned throughout the program and synthesize it through an applied consulting project. Allows exploration and application of concepts to a future career through identifying and understanding the business challenge and applying research and analysis to discover insight(s).
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Articulate the business challenge being examined and establish a work plan for addressing that business challenge.
Audience: Graduate

2. Conduct, compile and synthesize research relevant to the business challenge.
Audience: Graduate

3. Work with a team to complete tasks and reflect on your own progress and learning as part of that team.
Audience: Graduate

GEN BUS 792 – EMBA CONSULTING PRACTICUM II
1 credit.

Provides an opportunity to bring together all the material learned throughout the program and synthesize it through an applied consulting project. Allows exploration and application of concepts to a future career through developing recommendations based on the research and findings from the first course and communicating those findings and recommendation(s).
Requisites: GEN BUS 791
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Determine recommendations for action that will positively impact the sponsor organization.
Audience: Graduate

2. Practice sharing and receiving feedback to improve outcomes.
Audience: Graduate

3. Present findings and recommendations to the sponsor organization.
Audience: Graduate

4. Work with a team to complete tasks and reflect on your own progress and learning as part of that team.
Audience: Graduate

GEN BUS 799 – READING AND RESEARCH-BUSINESS RESEARCH
1-6 credits.

Individual work suited to the needs of graduate students may be arranged both during regular sessions and during the intersession periods.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2022

GEN BUS 840 – CURRENT TOPICS IN BUSINESS ANALYTICS AND ARTIFICIAL INTELLIGENCE
1 credit.

Covers emerging and current topics in the industry through applied learning experiences - case studies, industry meetings, and exercises or workshops.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explore how organizations utilize analytics and artificial intelligence through interactions with industry professionals
Audience: Graduate

2. Articulate insights from interactions with industry professionals
Audience: Graduate

3. Articulate business recommendations based on in-class activities and analysis
Audience: Graduate

4. Demonstrate professional written and verbal communication skills
Audience: Graduate

5. Articulate current career aspirations
Audience: Graduate

GEN BUS 881 – BUSINESS STATISTICS USING PYTHON
2 credits.

A compact primer in statistics as a foundation for data-driven business analysis. A selection of concepts include probability, estimation, inference, correlation, and regression.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Calculate descriptive statistics and generate basic visualizations using Python.
Audience: Graduate

2. Explain and apply principles and rules of probability.
Audience: Graduate

3. Utilize inferential statistics and communicate the uncertainty in statistical estimates.
Audience: Graduate

4. Perform regression analysis, and distinguish between correlation and causation.
Audience: Graduate

GEN BUS 882 — SQL FUNDAMENTALS
2 credits.

Construct a wide variety of SQL statements; such as joins, common table expressions, window functions, etc. Basics of query optimization and data modeling.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Construct a variety of SQL statements.
Audience: Graduate

2. Query and prepare data in response to business questions.
Audience: Graduate

3. Design a database to meet a business need and technical requirements.

Audience: Graduate

GEN BUS 883 — DATA VISUALIZATION & CLOUD TECHNOLOGIES
2 credits.

Provides experience in data visualization and cloud technologies to support business analytics. Create and share compelling data visualizations to enhance decision making. Use cloud technologies to build scalable data warehouses, analyze big data, and develop and deploy machine learning models.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program. Not open to students with credit for GEN BUS 720 or 780.
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Create compelling data visualizations and dashboards.
Audience: Graduate

2. Explain the cloud landscape for business analytics - i.e. vendors, services, and costs.
Audience: Graduate

3. Setup and manage a cloud data warehouse.
Audience: Graduate

4. Build and deploy a machine learning model in the cloud.
Audience: Graduate

5. Analyze big data in a cloud environment.
Audience: Graduate

GEN BUS 884 — APPLIED ANALYTICS - CASE STUDIES
2 credits.

Project-based applications of statistics, programming, data visualization, and database management.
Requisites: GEN BUS 881, 882, and 883
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Develop and communicate analytics solutions to business challenges and opportunities.
Audience: Graduate

2. Build a predictive model using the Python programming language.
Audience: Graduate

3. Create an executive dashboard to support business decision making.
Audience: Graduate

4. Use SQL to query a database in response to business questions.
Audience: Graduate

GEN BUS 885 — PYTHON FUNDAMENTALS
2 credits.

Explore the fundamentals of the Python programming language - such as data structures, functions, loops, and control flow - and utilize Python for data wrangling and analysis.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Demonstrate the fundamentals of the Python programming language.
Audience: Graduate

2. Apply programming best practices; such as readability, simplicity, and reusability.
Audience: Graduate

3. Utilize Python for data manipulation and analysis
Audience: Graduate

GEN BUS 891 – TEXT MINING AND GENERATION FOR BUSINESS ANALYTICS

2 credits.

An introduction to text mining and generation for business applications. Includes an overview of text data and approaches for making text data useful for descriptive and predictive analytics. Also, includes key applications of natural language processing, such as chatbots and recommender systems.
Requisites: GEN BUS 657 (or GEN BUS 888 prior to Fall 2025) and GEN BUS 883
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Retrieve, assemble, and clean text data for use in analytics applications.
Audience: Graduate

2. Use text representation approaches, including bag of words, for visualizing text data.
Audience: Graduate

3. Build classification and regression models using features created from text data.
Audience: Graduate

4. Explain and experiment with text generation using artificial intelligence (AI).
Audience: Graduate

GEN BUS 893 – ANALYTICS CONSULTING PROJECT MANAGEMENT

2 credits.

Lays the foundation for understanding how to engage with external and internal clients and manage a business analytics consulting project. Covers consulting tools and models, as well as traditional and agile project management tools and concepts.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply a Situation-Complication-Question (SCQ) framework to a business problem
Audience: Graduate

2. Use answer-first principles and storyboarding techniques
Audience: Graduate

3. Scope a project and understand customer needs
Audience: Graduate

4. Manage time and resources in a project
Audience: Graduate

5. Differentiate between traditional and agile project management approaches
Audience: Graduate

GEN BUS 894 – PITFALLS, ETHICS, COMMUNICATION, AND LEADERSHIP IN BUSINESS ANALYTICS
2 credits.

Focus on applications, highlighting key practical issues in analytics projects. Discussion of pitfalls with regards to analytics applications, ethical aspects of analytics applications, as well as talent management and leadership in the context of analytics.
Requisites: GEN BUS 657 (or GEN BUS 888 prior to Fall 2025) and GEN BUS 883
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Recognize potential warning signs of predictive models failing or overpromising.
Audience: Graduate

2. Engage with ethical issues concerning analytics applications regarding autonomy, beneficience, and fairness.
Audience: Graduate

3. Audit algorithms/predictions for potential biases.
Audience: Graduate

4. Make strategic choices among analytics projects, including effective management of human resources.
Audience: Graduate

GEN BUS 895 – MASTERS CAPSTONE IN BUSINESS ANALYTICS
2 credits.

Complete a team project as a capstone to graduate studies in business analytics. Use analytics and project management to develop a solution to a provided business case.
Requisites: GEN BUS 884 and 893
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Develop and communicate an analytics solution to a business challenge or opportunity.
Audience: Graduate

2. Apply principles of project management to a business analytics project.
Audience: Graduate

3. Reflect on a team-based analytics project and identify lessons learned.
Audience: Graduate

GEN BUS 933 – BEGINNING A RESEARCH CAREER IN BUSINESS
1 credit.

Required of incoming students in the Wisconsin School of Business PhD program. Students are often overwhelmed and do not absorb material when offered all at once before they begin their regular courses. This format offers fundamental content about conducting research and academic life that is not specific to a given department in the business school, but will help to frame and motivate other studies. This format gives students more time to absorb the content at a point when they can better see how it applies to them.
Requisites: Declared in Business PHD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize what is required to be a successful academic including tenure process, networking, preparation for the job market.
Audience: Graduate

2. Recognize how to chart a path through PhD program requirements.
Audience: Graduate

3. Describe the basics of how research is conducted including generating ideas, framing a contribution, responding to reviewer.
Audience: Graduate

4. Access critical research resources including time, data, and critical feedback.
Audience: Graduate

5. Demonstrate motivation to conduct publishable and impactful research.

Audience: Graduate

6. Develop social ties within and beyond the school to serve as a career springboard.
Audience: Graduate

GEN BUS 999 – READING AND RESEARCH-BUSINESS RESEARCH PHD
1-6 credits.

Individual work suited to the needs of Ph.D. students may be arranged.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2001

GENETIC COUNSELOR STUDIES (GENECSLR)

GENECSLR 713 – INTRODUCTORY PRACTICUM IN GENETIC COUNSELING
3 credits.

Provides opportunities to develop skills in interviewing, data collection, case management and counseling through didactic work and observational and experiential clinical activities. Activities include clinic observation according to a structured format, and fieldwork participation.
Requisites: Declared in Master of Genetic Counselor Studies
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate and utilize a depth and breadth of understanding and knowledge of genetics and genomics core concepts and principles.
Audience: Graduate

2. Integrate knowledge of psychosocial aspects of conditions with a genetic component to promote client well-being.
Audience: Graduate

3. Construct relevant, targeted and comprehensive personal and family histories and pedigrees.
Audience: Graduate

4. Identify, assess, order, facilitate, and integrate genetic/genomic testing options in genetic counseling practice (including molecular and non-molecular testing that directly impacts assessment of inherited risk).
Audience: Graduate

5. Assess individuals' and their relatives' probability of conditions with a genetic component or carrier status based on their pedigree, test result(s), and other pertinent information.
Audience: Graduate

6. Demonstrate the skills necessary to successfully manage a genetic counseling case.
Audience: Graduate

7. Critically assess genetic/genomic, medical and social science literature and information.
Audience: Graduate

8. Establish a mutually agreed upon genetic counseling agenda with the client.
Audience: Graduate

9. Employ active listening and interviewing skills to identify, assess, and empathically respond to stated and emerging concerns.
Audience: Graduate

10. Use a range of genetic counseling skills and models to facilitate informed decision-making and adaptation to genetic risks or conditions.
Audience: Graduate

11. Promote client-centered, informed, non-coercive and value-based decision-making
Audience: Graduate

12. Demonstrate how to adapt genetic counseling skills for varied service

GENECSLR 714 – INTRODUCTORY PRACTICUM IN GENETIC COUNSELING
3 credits.

Provides additional opportunities to develop and improve skills in interviewing, data collection, case management and counseling. Develop skills through didactic work and observational and experiential clinical activities. Activities include clinic observation according to a structured format, and fieldwork participation.
Requisites: GENECSLR 713
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate and utilize a depth and breadth of understanding and knowledge of genetics and genomics core concepts and principles.
Audience: Graduate

2. Integrate knowledge of psychosocial aspects of conditions with a genetic component to promote client well-being.
Audience: Graduate

3. Construct relevant, targeted and comprehensive personal and family histories and pedigrees.
Audience: Graduate

4. Identify, assess, order, facilitate, and integrate genetic/genomic testing options in genetic counseling practice (including molecular and non-molecular testing that directly impacts assessment of inherited risk).
Audience: Graduate

5. Assess individuals' and their relatives' probability of conditions with a genetic component or carrier status based on their pedigree, test result(s), and other pertinent information.
Audience: Graduate

6. Demonstrate the skills necessary to success¬fully manage a genetic counseling case.
Audience: Graduate

7. Critically assess genetic/genomic, medical and social science literature and information.
Audience: Graduate

8. Establish a mutually agreed upon genetic counseling agenda with the client.
Audience: Graduate

9. Employ active listening and interviewing skills to identify, assess, and empathically respond to stated and emerging concerns.
Audience: Graduate

10. Use a range of genetic counseling skills and models to facilitate informed decision-making and adaptation to genetic risks or conditions.
Audience: Graduate

11. Promote client-centered, informed, noncoercive and value-based decision-making.
Audience: Graduate

12. Demonstrate understanding of how to adapt genetic counseling skills for varied service delivery models.
Audience: Graduate

13. Apply genetic counseling skills in a culturally responsive and respectful

GENECSLR 721 – INTRODUCTION TO CLINICAL GENETICS
2 credits.

Integrative introduction to the mechanisms of clinical genetic disease at the molecular, individual and population level.
Requisites: Declared in Master of Genetic Counselor Studies
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain mechanisms of genetic disease and how they result in genetic disorders using clinical examples.
Audience: Graduate

2. Assess available genetic testing and screening technologies; identify the most appropriate method to detect various etiologies of genetic disease.
Audience: Graduate

3. Calculate and assess risk for a patient, family members and population.
Audience: Graduate

4. Identify the benefits and limitations of a molecular diagnosis and result.
Audience: Graduate

5. Relate the mechanisms of gene therapies and/or treatments to the mechanisms of the genetic disorder(s) it addresses.
Audience: Graduate

6. Apply and adapt course information for use in a clinical setting, appreciating the familial and psychosocial implications of genetic disorders.
Audience: Graduate

GENECSLR 724 – CANCER GENETICS RISK ASSESSMENT AND COUNSELING
2 credits.

Provides a background in cancer genetics from a medical, biological, and clinical perspective. Includes: general principles and topics in oncology; familial cancers and cancer syndromes; and management, counseling, social, ethical, and legal issues.
Requisites: GENECSLR 721
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize family histories suggestive of sporadic, multifactorial, and hereditary cancer
Audience: Graduate

2. Demonstrate knowledge of all major inherited cancer susceptibility syndromes and genes, both moderate risk and high risk
Audience: Graduate

3. Demonstrate the ability to assess cancer risk based on personal and family history
Audience: Graduate

4. Identify individuals and families meeting guidelines for cancer susceptibility gene testing
Audience: Graduate

5. Interpret cancer genetic test results in the context of a patient's personal and/or family history
Audience: Graduate

GENECSLR 731 – ADVANCED CLINICAL GENETICS CONCEPTS
3 credits.

An advanced course covering clinical genetic concepts including phenotype, genetic mechanisms, approach to diagnosis (medical, clinical and genetic testing protocols), and natural history (including management approaches).
Requisites: GENECSLR 721
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss/explain the history and basic principles of clinical genetics including evolution of clinical genetics and history of eugenics, comparison of normal and abnormal patterns of growth, and patterns and mechanism of inheritance (Mendelian and non-Mendelian)
Audience: Graduate

2. Describe the phenotype, genetic mechanisms, approach to diagnosis (medical, clinical and genetic testing protocols), and natural history (including management approaches) for genetic disorders.
Audience: Graduate

3. Teach clinical genetic concepts to peers including, writing learning objectives and assessment questions.
Audience: Graduate

GENECSLR 737 – CONTEMPORARY PROFESSIONAL ISSUES IN GENETICS COUNSELING
1 credit.

A series of selected basic issues and topics that are core curricular requirements specific to genetics counseling.
Requisites: Declared in Master of Genetic Counselor Studies
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 4 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate and utilize a depth and breadth of understanding and knowledge of genetics and genomics core concepts and principles
Audience: Graduate

2. Integrate knowledge of psychological aspects of conditions with a genetic component to promote client well-being
Audience: Graduate

3. Critically assess genetic/genomic, medical and social science literature and information
Audience: Graduate

4. Promote client-centered, informed, non-coercive and value-based decision-making
Audience: Graduate

5. Adapt genetic counseling skills for varied service delivery models
Audience: Graduate

6. Apply genetic counseling skills in a culturally responsive and respectful manner to all clients
Audience: Graduate

7. Effectively give a presentation on genetics, genomics and genetic counseling issues.
Audience: Graduate

8. Act in accordance with the ethical, legal and philosophical principles and values of the genetic counseling profession and the policies of one's institution or organization
Audience: Graduate

9. Demonstrate understanding of the research process
Audience: Graduate

10. Advocate for individuals, families, communities and the genetic counseling profession
Audience: Graduate

11. Demonstrate a self-reflective, evidence-based and current approach to genetic counseling practice.
Audience: Graduate

GENECSLR 739 – RESEARCH STRATEGIES AND ANALYSIS IN CLINICAL GENETICS
1 credit.

Introduction to a variety of tools and resources commonly used in clinical genetics. Learn to critique these resources and start thinking about developing their own research projects. Emphasizes developing oral presentation skills through a variety of student presentations.
Requisites: Declared in Master of Genetic Counselor Studies
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and critique a variety of sources of information applicable to clinical genetics/genetic counseling.
Audience: Graduate

2. Demonstrate understanding of the research process.
Audience: Graduate

3. Develop oral communication skills allowing for communication of complex information to a variety of audiences.
Audience: Graduate

4. Apply content in a meaningful way to you and your practice as a genetic counselor.
Audience: Graduate

5. Develop a foundation and skills for lifelong learning.
Audience: Graduate

GENECSLR 740 – LABORATORY GENETICS AND GENOMICS FOR THE GENETIC COUNSELOR
2 credits.

Introduction to clinical laboratory genetics with a particular focus on the relevance of human cytogenetics and molecular genetics to the practice of medical genetics. Covers the fundamental principles of human cytogenetic and molecular genetics including human chromosome structure, function, cytogenetic and molecular nomenclature, and current clinical laboratory testing methods relevant to medical genetic professionals. Apply cytogenetic and molecular genetic understanding to clinical scenarios to help diagnosis and manage individuals with genetic disease.
Requisites: GENECSLR 721
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Distinguish between different types of genomic variants, both molecular and cytogenetic.
Audience: Graduate

2. Compare and contrast currently available genomic testing methods and their ability to detect genetic variation.
Audience: Graduate

3. Illustrate how different genomic variants can lead to human disease.
Audience: Graduate

4. Construct appropriate testing strategies for a variety of clinical scenarios.
Audience: Graduate

5. Analyze genetic test results and interpret their clinical significance.
Audience: Graduate

GENECSLR 741 – INTRODUCTION TO GENETIC COUNSELING
1 credit.

Emphasis will be on the tasks necessary to complete a genetic counseling session including, contracting/goal setting, history gathering, education, psychosocial assessment and support, clinical documentation and session management.
Requisites: Declared in Master of Genetic Counselor Studies
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Integrate knowledge of psychosocial aspects of conditions with a genetic component to promote client well-being.
Audience: Graduate

2. Construct relevant, targeted and comprehensive personal and family histories and pedigrees.
Audience: Graduate

3. Demonstrate the skills necessary to successfully manage a genetic counseling case.
Audience: Graduate

4. Establish a mutually agreed upon genetic counseling agenda with the client.
Audience: Graduate

5. Employ active listening and interviewing skills to identify, assess, and empathically respond to stated and emerging concerns.
Audience: Graduate

6. Apply genetic counseling skills in a culturally responsive and respectful manner to all clients.
Audience: Graduate

7. Educate clients about a wide range of genetics and genomics information based on their needs, their characteristics, and the circumstances of the encounter.
Audience: Graduate

8. Write concise and understandable clinical and scientific information for audiences of varying educational backgrounds.
Audience: Graduate

9. Demonstrate a self-reflective, evidenced-based, and current approach to genetic counseling practice.
Audience: Graduate

GENECSLR 742 – CLINICAL EMBRYOLOGY AND PRENATAL GENETICS
1 credit.

Review human development (normal and abnormal) and the influence of genetic disorders and teratogens, common indications for prenatal genetic counseling as well as available prenatal diagnosis and screening techniques. Prepares the genetic counseling student for the prenatal clinical practicum.
Requisites: GENECSLR 721
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe normal human embryological and fetal development.
Audience: Graduate

2. Describe the relationship between genetic disease and teratogens with abnormal embryologic and fetal development.
Audience: Graduate

3. Compare benefits and risks of available testing and screening strategies used to assess for birth defects and genetic disease.
Audience: Graduate

4. Discuss factors that influence patients' perception about information related to their child/baby/pregnancy presented during prenatal genetic counseling.
Audience: Graduate

5. Identify appropriate patient-centered prenatal resources about genetic diseases, birth defects and teratogens.
Audience: Graduate

GENECSLR 743 – ADVANCED INTERVIEWING AND COUNSELING FOR THE GC I
1 credit.

Advanced topics in clinical communication skills for the genetic counselor. Emphasis on different counseling strategies and approaches including counselor self-reference, facilitating family communication, shared decision-making, crisis counseling and, applying techniques from select counseling models to GC practice (e.g., cognitive behavioral therapy, solution-focused therapy).
Requisites: GENECSLR 741
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Use a range of genetic counseling skills and models to facilitate informed decision-making and adaptation to genetic risks or conditions.
Audience: Graduate

2. Promote client-centered, informed, non-coercive and value-based decision-making.
Audience: Graduate

3. Adapt genetic counseling skills for varied service delivery models.
Audience: Graduate

4. Apply genetic counseling skills in a culturally responsive and respectful manner
Audience: Graduate

5. Effectively give a presentation on genetic counseling issues.
Audience: Graduate

GENECSLR 744 – APPLICATIONS OF BIOCHEMICAL GENETICS FOR GENETIC COUNSELORS
2 credits.

Comprehensive overview of clinical biochemical genetics through a systematic review of classic and rare inborn errors of metabolism (IEM). Psychosocial issues are discussed as related to care of patients, and their families, with metabolic disorders.
Requisites: Declared in Master of Genetic Counselor Studies
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop a framework for understanding the natural history, disease mechanism, inheritance, testing sequence and therapies for specific biochemical genetic diseases.
Audience: Graduate

2. Explain newborn screening, including the historical perspective, testing methodologies used and ethical considerations.
Audience: Graduate

3. Describe the role of the genetic counselor as part of a multidisciplinary Biochemical Genetics Clinic
Audience: Graduate

GENECSLR 745 – SEMINAR IN MEDICAL GENETIC COUNSELING RESEARCH
1 credit.

Practice qualitative and quantitative research methods in genetic counseling. Develop research question, prepare research proposal including internal review board application.
Requisites: GENECSLR 739
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe qualitative and quantitative research methods used in genetic counseling
Audience: Graduate

2. Explain the ARROW IRB proposal process
Audience: Graduate

3. Identify research questions relevant to the discipline of genetic counseling
Audience: Graduate

GENECSLR 748 – SPECIAL TOPICS IN GENETIC COUNSELING
1 credit.

Advanced topics in the discipline of genetic counseling. Emphasis will be on advanced practice topics including setting boundaries, delivering life altering news, developing a socially responsible practice, moving from a novice to master counselor, and the job search.
Requisites: GENECSLR 743
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify how the genetic counselor's personal cultural characteristics and biases may impact encounters and use this knowledge to maintain effective client-focused services.
Audience: Graduate

2. Recognize the potential tension between the values of clients, families, communities and the genetic counseling profession.
Audience: Graduate

3. Demonstrate knowledge of psychological defenses, family dynamics, family systems theory, coping models, the grief process, and reactions to illness.
Audience: Graduate

4. Maintain professional boundaries by ensuring directive statements, self-disclosure, and self-involving responses are in the best interest of the client. Recognize and respond to client-counselor relationship dynamics, such as transference and countertransference, which may affect the genetic counseling interaction.
Audience: Graduate

GENECSLR 813 – ADVANCED PRACTICUM IN GENETICS COUNSELING
4-5 credits.

Advanced practicum experience for second year genetic counseling students, consisting of participatory fieldwork experiences in a diversity of clinic specialties and service delivery methods.
Requisites: GENECSLR 714
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate and utilize a depth and breadth of understanding and knowledge of genetics and genomics core concepts and principles.
Audience: Graduate

2. Integrate knowledge of psychosocial aspects of conditions with a genetic component to promote client well-being.
Audience: Graduate

3. Construct relevant, targeted and comprehensive personal and family histories and pedigrees.
Audience: Graduate

4. Identify, assess, order, facilitate, and integrate genetic/genomic testing options in genetic counseling practice.
Audience: Graduate

5. Assess individuals and their relatives probability of conditions with a genetic component or carrier status based on their pedigree, test result(s), and other pertinent information.
Audience: Graduate

6. Demonstrate the skills necessary to successfullymanage a genetic counseling case.
Audience: Graduate

7. Critically assess genetic/genomic, medical and social science literature and information.
Audience: Graduate

8. Establish a mutually agreed upon genetic counseling agenda with the client.
Audience: Graduate

9. Employ active listening and interviewing skills to identify, assess, and empathically respond to stated and emerging concerns.
Audience: Graduate

10. Use a range of genetic counseling skills and models to facilitate informed decision-making and adaptation to genetic risks or conditions.
Audience: Graduate

11. Promote client-centered, informed, non-coercive and value-based decision-making.
Audience: Graduate

12. Adapt genetic counseling skills for varied service delivery models.
Audience: Graduate

13. Apply genetic counseling skills in a culturally responsive and respectful manner to all clients.
Audience: Graduate

14. Effectively educate clients about a wide range of genetics and

GENECSLR 814 – ADVANCED PRACTICUM IN GENETICS COUNSELING
4-5 credits.

Advanced practicum experience consisting of participatory fieldwork experiences in a diversity of clinic specialties and service delivery methods.
Requisites: GENECSLR 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate and utilize a depth and breadth of understanding and knowledge of genetics and genomics core concepts and principles.
Audience: Graduate

2. Integrate knowledge of psychosocial aspects of conditions with a genetic component to promote client well-being.
Audience: Graduate

3. Construct relevant, targeted and comprehensive personal and family histories and pedigrees.
Audience: Graduate

4. Identify, assess, order, facilitate, and integrate genetic/genomic testing options in genetic counseling practice (including molecular and non-molecular testing that directly impacts assessment of inherited risk).
Audience: Graduate

5. Assess individuals' and their relatives' probability of conditions with a genetic component or carrier status based on their pedigree, test result(s), and other pertinent information.
Audience: Graduate

6. Demonstrate the skills necessary to successfully manage a genetic counseling case.
Audience: Graduate

7. Critically assess genetic/genomic, medical and social science literature and information.
Audience: Graduate

8. Establish a mutually agreed upon genetic counseling agenda with the client.
Audience: Graduate

9. Employ active listening and interviewing skills to identify, assess, and empathically respond to stated and emerging concerns.
Audience: Graduate

10. Use a range of genetic counseling skills and models to facilitate informed decision-making and adaptation to genetic risks or conditions.
Audience: Graduate

11. Promote client-centered, informed, noncoercive and value-based decision-making.
Audience: Graduate

12. Demonstrate how to adapt genetic counseling skills for varied service delivery models.
Audience: Graduate

13. Apply genetic counseling skills in a culturally responsive and respectful manner to all clients.
Audience: Graduate

GENECSLR 990 – RESEARCH IN GENETIC COUNSELING
1-8 credits.

Research and/or scholarly work (e.g. quality improvement, clinical case reports) supervised by faculty and/or staff member with appropriate content expertise and/or experience in research mentorship.
Requisites: GENECSLR 739 and 745
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 3 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Conduct research projects using a variety of approaches under the guidance of the primary mentor
Audience: Graduate

2. Think critically and independently to address research challenges
Audience: Graduate

3. Exhibit and foster professional and ethical conduct in research
Audience: Graduate

4. Collaborate with other investigators
Audience: Graduate

GENETICS (GENETICS)

GENETICS 133 — GENETICS IN THE NEWS
3 credits.

The science of genetics is at the heart of many issues facing our society, and as such, genetics is often in the news. Explores the underlying genetics and methodologies to gain a deeper understanding of the science behind the headlines so that we can make more informed decisions as citizens, and you can be part of a movement to help educate those around you.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the methodologies used in genetics to gain a deeper understanding of the science behind the headlines
Audience: Undergraduate

2. Apply foundational scientific knowledge to be informed, versed and up-to-date on current genetic topics
Audience: Undergraduate

3. Critically evaluate genetics in the news for credibility, validity. and merit
Audience: Undergraduate

4. Discuss how genetics is relevant to our everyday lives
Audience: Undergraduate

5. Discuss ethical concerns related to genetics and the applications of biotechnology
Audience: Undergraduate

6. Describe how genes influence inherited traits and how genetic variation leads to specific diseases
Audience: Undergraduate

GENETICS 155 — FRESHMAN SEMINAR IN GENETICS
1 credit.

Introduction to the discipline of genetics, to the UW Laboratory of Genetics, to some of the research projects the faculty are pursuing, to resources available at UW-Madison, and to the career options open to an individual with a genetics undergraduate degree.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss the broader role genetics plays in shaping societal issues and future career paths.
Audience: Undergraduate

2. Demonstrate team-work, interpersonal and problem-solving skills to address societal, ethical and scientific issues related to genetics, and communicate their findings through written, oral and multi-media reports.
Audience: Undergraduate

3. Discover academic, campus and community resources that assist in their transition to the university and increase their chance of success as an undergraduate.
Audience: Undergraduate

4. Engage in meaningful genetics-related dialogue that addresses inclusivity, diversity and identity in science.
Audience: Undergraduate

5. Understand how experiential and classroom learning can help them integrate, synthesize and apply knowledge that explores big questions and big ideas in genetics.
Audience: Undergraduate

GENETICS 234 – GENOMES AND SOCIETY
3 credits.

The sequencing of genomes has transformed our understanding of the evolution of species and human history, our approaches to improve health and medicine, as well as how we tackle global environmental challenges. Explore the many ways in which the sequencing of genomes is revolutionizing our world, and dive into DNA from viral to human genomes. Understand how genomes are expressed, the impact on phenotype, as well as how it can change over time and in different conditions, are processes that are essential for life and the evolution of species.
Requisites: GENETICS 133, ZOOLOGY/BIOLOGY/BOTANY 151, ZOOLOGY/BIOLOGY 101, or BIOCORE 381
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe ways in which the sequencing of diverse genomes including viral, bacterial, fungal, plant and animal species has impacted our understanding of the origins of life and evolution of species
Audience: Undergraduate

2. Describe how gene expression can change, and why this is essential for life
Audience: Undergraduate

3. Discuss the applications of genomic sequencing on the development of biotechnological advances and their impacts on society
Audience: Undergraduate

4. Discuss ethical concerns related to genetics and the applications of biotechnology
Audience: Undergraduate

5. Apply foundational scientific knowledge to be informed, versed and up to date on current genetic topics
Audience: Undergraduate

6. Engage in meaningful genetics-related dialogue about the global nature of genetics and genomics at the ethical, societal, legal, and scientific levels
Audience: Undergraduate

GENETICS 289 – HONORS INDEPENDENT STUDY
1-2 credits.

Research work for Honors students under direct guidance of a faculty member in an area encompassing Genetics. Students are responsible for arranging the work and credits with the supervising instructor.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2010

GENETICS 299 – INDEPENDENT STUDY
1-3 credits.

Research work for students under direct guidance of a faculty member in an area encompassing Genetics. Students are responsible for arranging the work and credits with the supervising instructor.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

GENETICS 335 – GENOMES IN A MODERN WORLD
3 credits.

The ability to sequence genomes rapidly has transformed our understanding of the evolution of species and human history, our approaches to improve health and medicine, as well as how we tackle global environmental challenges, and increasingly impacts our modern world. Explore the interdisciplinary connections between genetics- and genomics-based research and important current questions related to ethics, history, and public policy.
Requisites: GENETICS 234
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply basic knowledge of current genetics and genomics-based research to address important questions related to ethics, history, social science, and/or public policy
Audience: Undergraduate

2. Communicate an interdisciplinary perspective on a topic related to genomes and society effectively to multiple audiences
Audience: Undergraduate

3. Critically evaluate primary literature to identify and explore societal connections to the sequencing of genomes.
Audience: Undergraduate

4. Identify and use credible information resources to aid in the development of an interdisciplinary project
Audience: Undergraduate

5. Collaborate effectively in teams to address problems related to genetics and genomics
Audience: Undergraduate

GENETICS 375 – SPECIAL TOPICS
1-4 credits.

Specialized subject matter of current interest to undergraduate students.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

GENETICS 399 – COORDINATIVE INTERNSHIP/COOPERATIVE EDUCATION
1-8 credits.

An internship under guidance of a faculty or instructional academic staff member in Genetics and internship site supervisor. Students are responsible for arranging the work and credits with the faculty or instructional academic staff member and the internship site supervisor.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Workplace - Workplace Experience Course
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

GENETICS 400 – STUDY ABROAD IN GENETICS
1-6 credits.

Provides an area equivalency for courses taken on Madison Study Abroad Programs that do not equate to existing UW courses.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions

GENETICS 466 – PRINCIPLES OF GENETICS
3 credits.

Genetics in eukaryotes and prokaryotes. Includes transmission genetics, molecular genetics, evolutionary genetics, genetic engineering, and societal issues associated with genetics. Illustrative material includes bacteria, plants, insects, and vertebrates.
Requisites: (ZOOLOGY/BIOLOGY/BOTANY 151 or BIOCORE 381 or BOTANY/BIOLOGY 130 or ZOOLOGY/BIOLOGY 101 and 102) and (CHEM 104 or CHEM 109 or CHEM 115). Not eligible to enroll if credit earned for GENETICS 467 or 468
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall basic genetics terminology
Audience: Undergraduate

2. Understand central concepts in genetics
Audience: Undergraduate

3. Use concepts to solve qualitative and quantitative problems
Audience: Undergraduate

4. Interpret data from experiments
Audience: Undergraduate

5. Apply knowledge of experimental genetics to research problems
Audience: Undergraduate

GENETICS 467 – GENERAL GENETICS 1
3 credits.

Genetics of eukaryotes and prokaryotes. Includes transmission genetics, probability and hypothesis testing, genetic mapping, molecular genetics, gene expression, and genetic engineering. Illustrative material includes viruses, bacteria, plants, fungi, insects, and humans.
Requisites: (ZOOLOGY/BIOLOGY 101 and 102, or ZOOLOGY/BIOLOGY/BOTANY 151, BIOCORE 381, or BOTANY/BIOLOGY 130) and (CHEM 104, 109, or 115). Not open to students with credit for GENETICS 466.
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Employ Mendel's laws of inheritance and rules of probability to predict the outcome of genetic crosses
Audience: Undergraduate

2. Demonstrate how genes are mapped along chromosomes based on an understanding of meiosis and recombination
Audience: Undergraduate

3. Describe the power and limitations of genetic explanations for trait variation
Audience: Undergraduate

4. Highlight milestones in the history of genetics
Audience: Undergraduate

5. Recall core principles that govern the structure and function of DNA, RNA, and protein
Audience: Undergraduate

6. Explain how molecules and molecular processes carry out accurate information flow from DNA to RNA to protein in bacteria and eukaryotes
Audience: Undergraduate

7. Describe mechanisms that control expression of selected genes in cells
Audience: Undergraduate

8. Solve problems by applying techniques for quantifying the expression, interaction, and cellular localization of DNA, RNAs, and proteins
Audience: Undergraduate

GENETICS 468 – GENERAL GENETICS 2
3 credits.

Genetic analysis, population genetics, evolution and quantitative genetics. Includes mutant screens, pathway analysis, mosaic analysis, reverse genetics, genomics, Hardy-Weinberg linkage equilibrium, inbreeding, genetic drift, natural selection, population structure, inheritance of complex traits, domestication and human evolution.
Requisites: GENETICS 467
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the molecular mechanisms that contribute to expression regulation in bacteria and eukaryotes.
Audience: Undergraduate

2. Apply the tools of forward genetics, reverse genetics and mosaic analysis to investigate the regulatory networks that control growth, development and responses to the environment.
Audience: Undergraduate

3. Explain the genetic and molecular basis of immunity.
Audience: Undergraduate

4. Discuss the molecular mechanisms that contribute to somatic mutations and the progression to cancer.
Audience: Undergraduate

5. Calculate genetic parameters in populations using the tools of population genetics.
Audience: Undergraduate

6. Analyze the inheritance of complex traits using quantitative genetic analyses.
Audience: Undergraduate

7. Apply the methods of evolutionary genetics to predict how genes and genomes evolve in the long-term.
Audience: Undergraduate

GENETICS 520 – NEUROGENETICS
3 credits.

The genetic basis of nervous system development, structure, function, and dysfunction. Will emphasize both current research findings on the genetic basis of specific neurological disorders, as well as genetic methodologies and experimental approaches used in neurobiological research.
Requisites: GENETICS 466, 467, BIOCORE 587, ZOOLOGY/ PSYCH 523, or PSYCH 454
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and summarize key concepts that underlie the genetic basis of nervous system development and function.
Audience: Undergraduate

2. Explain specific examples of how genetic variation/mutation can alter cellular and molecular pathways to impact nervous system development and function, behavior, as well as cause neurological disorders and diseases.
Audience: Undergraduate

3. Analyze and interpret primary data, discuss how this data supports current neurogenetic hypothesizes, and formulate research questions that build on this data and address remaining uncertainties.
Audience: Undergraduate

4. Summarize experimental genetic and genomic techniques employed in neurogenetic research that utilize various model organisms, as well as humans.
Audience: Undergraduate

GENETICS/BIOLOGY 522 – COMMUNICATING EVOLUTIONARY BIOLOGY
2-3 credits.

Exposure to diverse topics in contemporary evolutionary biology and development of critical thinking and communication skills. Most weeks guest lecturers present their own primary research on a specialized topic in evolutionary biology. Seminars include perspectives from genetics, ecology, geoscience, zoology, botany, microbiology, systematics, molecular biology, and integrative research. Some weeks feature special topics and discussions on pedagogical, legal, outreach, or other issues in evolutionary biology. Includes thinking critically about methodology, experimental design and interpretation, and how conclusions are reached in evolutionary biology by reading primary and secondary literature, attending seminars, discussing topics with speakers and other students, and preparing a written report. The 3-credit version of the course delves deeper into communication of evolutionary biology to researchers, undergraduates, K-12 students, and the general public.
Requisites: GENETICS 466, 468, ZOOLOGY/ANTHRO/BOTANY 410, or BIOCORE 381, or concurrent enrollment
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate the ability to critically read and comprehend primary scientific literature from diverse areas of evolutionary biology.
Audience: Undergraduate

2. Comprehend and critically evaluate oral research presentations in the field of evolutionary biology.
Audience: Undergraduate

3. Participate effectively in discussions of scientific research in the field of evolutionary biology.
Audience: Undergraduate

4. Write a clear and concise review of a selected topic in evolutionary biology and a critique of a research seminar in that area.
Audience: Undergraduate

5. Synthesize and apply knowledge from other didactic courses and personal experiences in discussions of scientific research.
Audience: Undergraduate

GENETICS 525 – EPIGENETICS
3 credits.

Introductory course in epigenetics - the layer of chemical information that sits on top of the genome - that switch genes 'on' or 'off'. Will introduce how the epigenome, in collaboration with the genome, controls versatile biological processes and cell fates. Will also cover the latest advances of how humans can control their own epigenetic destiny by lifestyle, diet, and other environmental factors.
Requisites: GENETICS 466 or 467
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize and summarize the difference between genetics and epigenetics.
Audience: Both Grad & Undergrad

2. Apply the basic knowledge of epigenetic mechanism and illustrate how their misregulations cause abnormal development and diseases.
Audience: Both Grad & Undergrad

3. Critically review and discuss epigenetic literature.
Audience: Both Grad & Undergrad

4. Design epigenetic experiments and interpret the results of those experiments.
Audience: Both Grad & Undergrad

5. Demonstrate the ability to clearly communicate epigenetic research in both oral and written formats
Audience: Graduate

GENETICS 527 – DEVELOPMENTAL GENETICS FOR CONSERVATION AND REGENERATION
3 credits.

Human-induced factors such as changes in land use and global climate are causing rapid worldwide biodiversity loss. Can modern molecular genetics contribute to species preservation? In this course, we will first explore the challenges and potential of molecular genetic methods based on biobanking, gene editing and nuclear transfer for animal biodiversity preservation. Topics covered will include: i) maternal factors and early animal development, ii) interspecies somatic cell nuclear transfer (isSCNT) and oocyte-mediated reprogramming in animal cloning, iii) developmental, phylogenetic and ecological considerations for biobanking, iv) gene editing and synthetic biology as potential tools to recapture biodiversity. Use knowledge in animal population status, developmental genetics and phylogeny to address real-life problems involving the conservation of threatened animal populations.
Requisites: GENETICS 466, 467, or BIOCORE 381
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop a greater knowledge of global threats to animal populations
Audience: Undergraduate

2. Learn principles of animal development at the egg-to-embryo transition, the use of oocytes for reprogramming, cloning and xenograft production, and the effects of phylogenetic relatedness on these processes
Audience: Undergraduate

3. Learn developmental basis and consequences of inbreeding, breeding in captivity and domestication
Audience: Undergraduate

4. Understand basic concepts in germ cell induction and manipulation
Audience: Undergraduate

5. Learn about assessing and banking genetic diversity towards animal species preservation
Audience: Undergraduate

GENETICS 528 – BANKING ANIMAL BIODIVERSITY: INTERNATIONAL FIELD STUDY IN COSTA RICA
1 credit.

Study abroad course that provides an on-site educational experience where we use developmental genetics concepts to guide projects of biobanking and oocyte-mediated cloning, as a potential last-defense resort for the preservation of living species under risk of extinction. It will provide hands-on experience in current research and activities in biodiversity areas, including visits to biodiversity-rich ecosystems, on site seminars and demonstrations, biodiversity preservation activities, as well as exposure to local culture and social needs.
Requisites: GENETICS 466, 467, BIOCORE 381, or ZOOLOGY 470
Repeatable for Credit: No
Learning Outcomes: 1. Exposure to biodiversity–rich areas and their challenges due to fragmentation, climate change and invasive species.
Audience: Undergraduate

2. Assessment of scientific methods applicable to biodiversity preservation including ecosystem preservation, restoration, and species reintroduction.
Audience: Undergraduate

3. Team-based assessment of regional animal phylogenetic biodiversity as related to bio-banking approaches.
Audience: Undergraduate

4. Achieve a better understanding of local cultural and socioeconomic needs on their own and in the context of balancing ecosystem preservation activities.
Audience: Undergraduate

GENETICS 545 – GENETICS LABORATORY
2 credits.

Gain practical experience in classical and molecular genetic laboratory techniques using plants, animals, and fungi. Topics include complementation and linkage analysis, gene mapping, library screening, yeast and bacterial transformation, restriction analysis, PCR, sequencing, and Southern blot analysis.
Requisites: GENETICS 466 or 467
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand central concepts in genetics.
Audience: Undergraduate

2. Use concepts to solve problems.
Audience: Undergraduate

3. Interpret data from experiments.
Audience: Undergraduate

4. Apply genetics knowledge to problems.
Audience: Undergraduate

5. Communicate effectively both written and orally.
Audience: Undergraduate

GENETICS 548 – THE GENOMIC REVOLUTION
3 credits.

Profound advances are now possible thanks to genomic data and analysis. Introduces the structure, function, and evolution of genomes. It also outlines the realized and prospective benefits of genomic technology for human health, agriculture, and conservation.
Requisites: GENETICS 466, 468, or BIOCORE 587
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use scientific literature to learn about new developments in genomic research.
Audience: Undergraduate

2. Examine methods for generating and analyzing genomic data.
Audience: Undergraduate

3. Investigate basic and applied questions being addressed by genomic research.
Audience: Undergraduate

4. Describe the organization, function, and evolution of genomes.
Audience: Undergraduate

5. Appraise the impact of genomic science on health, agriculture, and conservation.
Audience: Undergraduate

GENETICS 564 – GENOMICS AND PROTEOMICS
3 credits.

The basic principles of genomics, proteomics and bioinformatics will be taught through a semester-long project of the students choosing. Creative problem solving in science skills will be learned through a variety of active-learning techniques that include: reading of primary literature, group presentations, peer review, bioinformatic lab exercises, science communication skills (writing visualization), and creating a website. Emphasis will be placed upon how to effectively communicate science (written, oral and written). Topics include: genomic sequencing, phylogeny, domain analysis, transcriptomics, CRISPR screens, chemical genomics, quantitative proteomics and protein networks. Capstone course.
Requisites: GENETICS 466, 468, or BIOCORE 587. Not open to graduate students
Course Designation: Gen Ed - Communication Part B
Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Gain confidence in modern genomic and proteomic experimental methods used to ask fundamental biological questions and how to become creative problem solvers.
Audience: Undergraduate

2. Learn how to mine bioinformatic databases to obtain information about a gene/protein associated with a human disease assembled on a website built by the student.
Audience: Undergraduate

3. Learn how to apply what you learned, by writing and visualizing three specific aims of a grant with goals to address the gap in knowledge about the disease and gene of your choosing.
Audience: Undergraduate

4. Effectively communicate scientific research by applying unique visual, verbal, and oral techniques facilitated by the instructor called “Slide Evolution”.
Audience: Undergraduate

5. To learn how working in diverse teams (social and intellectual) makes you a more innovative problem solver.
Audience: Undergraduate

GENETICS/MD GENET 565 – HUMAN GENETICS
3 credits.

Principles, problems, and methods of modern human genetics. Focuses on how researchers discover the genetics of diseases and how those discoveries are used to improve clinical practice. Surveys aspects of (i) the molecular function of the human genome, (ii) the basic principles of human genetics including statistical genetics, quantitative genetics, and genomic variation in human populations, (iii) the genetics of rare disorders and common diseases, and genomic analysis approaches, including genome-wide association studies and sequencing, and (iv) how genetics are used in medicine and discussions covering ethical considerations of human genomic data.
Requisites: GENETICS 466, 468, BIOCORE 587, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Predict and describe how different classes of genetic variants, as defined by (a) mutation mechanism, (b) variant size, (c) population frequency, and (d) location in the genome, could affect molecular and cellular functions and risk for disease
Audience: Both Grad & Undergrad

2. Design experimental approaches to investigate the mechanisms of human genetic disorders
Audience: Both Grad & Undergrad

3. Explain and give examples of genetic inheritance patterns and the contribution of inherited factors to disease risk
Audience: Both Grad & Undergrad

4. Describe the design, strengths, and weaknesses of the various approaches for identifying genes or loci associated with a human disease or trait (e.g. linkage mapping, genetic association, sequencing), and interpret results from these studies
Audience: Both Grad & Undergrad

5. Explain how genetic information is used in the practice of medicine for diagnosis or to guide treatment and the limitations of current clinical diagnostic or treatment tools
Audience: Both Grad & Undergrad

6. Apply human genetics concepts to critically analyze published scientific studies and to describe experimental approaches that can be performed to address shortcomings and/or extend the findings of published work
Audience: Graduate

GENETICS 566 – ADVANCED GENETICS
3 credits.

Principles of classical and modern genetic analysis taught through readings in the scientific literature and group projects. Capstone course.
Requisites: Declared in Genetics undergraduate program and GENETICS 466, 468, or BIOCORE 587
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Critically evaluate primary literature in the field of genetics and genomics.
Audience: Undergraduate

2. Explore and utilize information resources available to aid in the advancement of future professional careers.
Audience: Undergraduate

3. Formulate research questions about the genetic control of biological processes and design experiments to answer these questions using appropriate genetic and genomic tools.
Audience: Undergraduate

4. Demonstrate teamwork, interpersonal and problem-solving skills to address societal, ethical, professional, and scientific issues related to genetics and genomics.
Audience: Undergraduate

5. Communicate scientific findings effectively to multiple audiences.
Audience: Undergraduate

GENETICS 567 – COMPANION RESEARCH SEMINAR
1 credit.

Student-led discussions on scientific, societal, and professional topics relevant to Senior research and selected original research presentations.
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Interpret primary literature data in genetics and related fields
Audience: Undergraduate

2. Communicate accompanying senior laboratory research
Audience: Undergraduate

3. Develop skills in science communication at multiple levels of detail
Audience: Undergraduate

4. Critically discuss interrelated aspects of science and society
Audience: Undergraduate

5. Explore careers related to genetics and genomics
Audience: Undergraduate

GENETICS 588 – IMMUNOGENETICS
3 credits.

Explores the interaction between genetics and the immune system. Examines the genetic mechanisms that drive the immunological and clinical differences observed between individuals when confronted with the same environment of immunological insults, such as COVID-19, influenza, allergies and cancer. Stresses clinical and research perspectives and their societal implications.
Requisites: GENETICS 466, 467 or BIOCORE 383
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the genetic mechanisms underlying interindividual immune response differences to the same immunological challenge
Audience: Undergraduate

2. Critically evaluate major research advances in the primary literature and place them within the historical context of other major immunogenetic discoveries
Audience: Undergraduate

3. Predict the downstream effects of manipulating variables that are involved in molecular pathways or currently being used in immunogenetic based research and clinical practices
Audience: Undergraduate

4. Effectively communicate difficult immunogenetics topics regarding interindividual immune response differences
Audience: Undergraduate

GENETICS 605 – CLINICAL CASES IN MEDICAL GENETICS
3 credits.

The use of genetics in medicine has experienced significant growth over the past 50 years, identifying risk genes, and devising diagnostic tests and therapies based on this knowledge for specific clinical disorders such as cystic fibrosis, achondroplasia, and Retts syndrome. MDs and biomedical scientists from UW Hospital and Clinics, the School of Medicine and Public Health, and other UW units will present lectures in this field followed by question-answers sessions. Other class sessions will be devoted to student presentations and open discussion of research literature.
Requisites: GENETICS 466, 467 or BIOCORE 383
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Design experiments to discover the genes and defects within genes that cause diseases in humans
Audience: Undergraduate

2. Understand how model organisms are used to investigate the molecular mechanisms for genetic disorders
Audience: Undergraduate

3. Design and interpret diagnostic DNA-based tests for the detection of allelic variants that cause disease
Audience: Undergraduate

4. Know the diverse physiological-developmental mechanisms that underlie a broad spectrum of diseases
Audience: Undergraduate

5. Devise strategies to develop therapies to treat or cure disease and understand the limits therapeutic interventions
Audience: Undergraduate

6. Develop a report on (1) the design of a diagnostic test for a genetic disorder, (2) the molecular biological pathways affected by the genetic disorder, and (3) application of the understanding of the disorder to develop a therapy or management regime
Audience: Graduate

GENETICS/BIOCHEM/MICROBIO 612 – PROKARYOTIC MOLECULAR BIOLOGY
3 credits.

Molecular basis of bacterial physiology and genetics with emphasis on molecular mechanisms; topics include nucleic acid-protein interactions, transcription, translation, replication, recombination, regulation of gene expression.
Requisites: (BIOCHEM 501 or 507) and (MICROBIO 470, GENETICS 466 or 468) or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Access and evaluate original research literature.
Audience: Undergraduate

2. Demonstrate problem solving practices.
Audience: Undergraduate

3. Identify enzyme mechanisms responsible for transcription, translation, gene regulation, and replication in bacteria.
Audience: Graduate

4. Compare the structural bases for the mechanisms.
Audience: Graduate

5. Evaluate the experiments that led to our understanding of theses mechanisms.
Audience: Graduate

6. Deconstruct how these enzymes respond to nutritional and environmental signals in cells.
Audience: Graduate

7. Outline the evolutionary basis and selection pressure for these mechanisms in vivo.
Audience: Graduate

GENETICS/PLANTSCI 615 – GENETIC MAPPING
3 credits.

Computing-intensive preparation for genetic mapping research, including linkage analysis and QTL mapping in designed crosses; linkage disequilibrium and association analysis (GWAS).
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Compare the principles and applicability of linkage vs association mapping
Audience: Graduate

2. Describe how population and model parameters affect statistical power

Audience: Graduate

3. Construct genetic linkage maps and discover QTL in designed crosses
Audience: Graduate

4. Conduct genome-wide association analyses and interpret the results
Audience: Graduate

GENETICS/BIOCHEM/MD GENET 620 – EUKARYOTIC MOLECULAR BIOLOGY
3 credits.

Focuses on the basic molecular mechanisms that regulate DNA, RNA, and protein metabolism in eukaryotic organisms.
Requisites: BIOCHEM 501, 508 or graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recall core principles that govern the structure and function of DNA, RNA, and protein.
Audience: Both Grad & Undergrad

2. Describe techniques for quantifying the expression, interaction, and cellular localization of specific molecules and for determining their necessity and sufficiency in molecular processes.
Audience: Both Grad & Undergrad

3. Explain how molecular processes that control the synthesis, decay, interactions, localization, folding, and modification of molecules are silenced, initiated, maintained, and terminated.
Audience: Both Grad & Undergrad

4. Describe how information is transferred between molecules to alter cellular activity in response to developmental and environmental signals.
Audience: Both Grad & Undergrad

5. Critique and weigh the credibility of existing molecular data.
Audience: Both Grad & Undergrad

6. Develop and draw hypotheses that use existing data to account for as yet unexplained molecular processes in eukaryotic organisms.
Audience: Both Grad & Undergrad

7. Design discovery/observation, loss-of-function, and gain-of-function experiments to test molecular hypotheses.
Audience: Both Grad & Undergrad

8. Implement problem solving strategies in thesis research project.
Audience: Graduate

GENETICS/ENTOM/ZOOLOGY 624 – MOLECULAR ECOLOGY
3 credits.

Basic principles of molecular ecology. Lecture topics include population genetics, molecular phylogenetics, rates and patterns of evolution, genome evolution, and molecular ecology.
Requisites: GENETICS 466, 467, BIOCORE 383, or graduate student standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and describe common molecular genetic techniques.
Audience: Both Grad & Undergrad

2. Demonstrate knowledge about the significance of genetic diversity in species biology.
Audience: Both Grad & Undergrad

3. Differentiate how ecological and evolutionary processes shape genetic variation.
Audience: Both Grad & Undergrad

4. Analyze genetic data and communicate the results.
Audience: Both Grad & Undergrad

5. Evaluate whether genetic data are appropriate for answering scientific questions.
Audience: Both Grad & Undergrad

6. Summarize and critique the primary literature in the field of Molecular Ecology.
Audience: Graduate

GENETICS/CHEM 626 – GENOMIC SCIENCE
2 credits.

Brings cutting-edge topics in the genomic sciences into the reach of those in chemistry, biology, engineering, computer science statistics fields. Enables biologically-oriented students to deal with advances in analytical science so that they may incorporate new genomic science concepts into their own scientific repertoires.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

GENETICS 627 – ANIMAL DEVELOPMENTAL GENETICS
3 credits.

Advanced genetics course focusing on genetic mechanisms of animal embryonic development, with particular emphasis on central molecular circuitries that control development and genetic analytical tools used to reveal them. Address topics including maternal and epigenetic inheritance, the egg-to-embryo transition, pattern formation, organogenesis, coordination of cellular and molecular mechanisms, and animal models of human congenital disorders.
Requisites: GENETICS 466, 468, or BIOCORE 587
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Integrate concepts in genetics in the identification and function of genes involved in development and cell differentiation.
Audience: Undergraduate

2. Understand developmental cascades and morphogenetic processes involved in patterning and diversification of the animal tissue plan.
Audience: Undergraduate

3. Apply developmental genetic principles towards the understanding of syndromes in animals, including humans.
Audience: Undergraduate

4. Learn principles underlying the divergence of body types during evolution.
Audience: Undergraduate

GENETICS/BIOCHEM 631 – PLANT GENETICS AND DEVELOPMENT
3 credits.

Covers the basic concepts of genetics and genomics as applied to plants and their development, including discussions on breeding systems (modes of reproduction, sex determination, self incompatibility and crossing barriers), linkage analysis, genome structure and function (structure, function and evolution of nuclear and organellar chromosomes; haploidy and polyploidy; expression regulation and epigenetics), along with a description of current methodologies used in the analysis of these processes within the context of plant development. The objective is to instigate a broader knowledge and understanding of the principles and methodologies used in plant genetics and their applications in investigations of the molecular mechanisms that modulate plant development.
Requisites: GENETICS 466, 468, BIOCORE 587, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the plant life cycles and key concepts in plant development
Audience: Both Grad & Undergrad

2. Explore and compare experimental approaches to study breeding systems, recombination, and modes of trait segregation in plants, including quantitative traits
Audience: Both Grad & Undergrad

3. Explain genetic, epigenetic and genomic approaches to study plant growth, development and responses to the environment
Audience: Both Grad & Undergrad

4. Analyze and interpret data in plant genetics and development
Audience: Both Grad & Undergrad

5. Critically evaluate papers from the primary literature
Audience: Both Grad & Undergrad

6. Compare and contrast published experimental data that address specific biological questions in plants, use the corresponding information to develop novel hypotheses, and design experiments that test these hypotheses.
Audience: Graduate

GENETICS 633 – POPULATION GENETICS
3 credits.

Preparation for initiating research in the population genetics field. Explore how genetic variation is influenced by mutation and recombination, population size changes and migration, and natural selection for or against new mutations.
Requisites: ZOOLOGY/ANTHRO/BOTANY 410, ZOOLOGY 415, GENETICS 466, 468, BIOCORE 381, or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Describe methods of measuring and summarizing DNA variation.
Audience: Both Grad & Undergrad

2. Examine fundamental population genetic models and their predictions.
Audience: Both Grad & Undergrad

3. Develop intuition for the impact of evolutionary processes on genetic variation.
Audience: Both Grad & Undergrad

4. Identify and understand modern methods of population genetic data analysis.
Audience: Both Grad & Undergrad

5. Evaluate ongoing controversies and unsolved problems in population genetics.
Audience: Both Grad & Undergrad

6. Assess the relevance and utility of course content to own research.
Audience: Graduate

GENETICS/MD GENET/POP HLTH 636 – PUBLIC HEALTH GENOMICS
1 credit.

Provides an introduction to public health genomics through a review of fundamental principles of genetics, the use of genetic information in clinical and research settings, and its implications for disease management and prevention, and health promotion. Explores policies that guide public health and discusses current ethical, legal, and social implications of these policies.
Requisites: (Junior standing and ZOOLOGY/BIOLOGY/BOTANY 151) or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Discuss the impact of genetics on clinical care and public health practice
Audience: Both Grad & Undergrad

2. Critically discuss genetic/genomic policies and the relevant ethical, legal, and social implications (ELSI) of these policies
Audience: Both Grad & Undergrad

3. Read, summarize, critique, and relate current news articles to key concepts in public health genomics
Audience: Graduate

GENETICS/NEURODPT 650 – FUNCTIONAL GENOMICS OF BRAIN DISORDERS
3 credits.

Functional genomics methods (RNA-seq, ATAC-seq, Hi-C, ChIP-seq, Tag, etc.) and their applications in the study of molecular and cellular mechanisms governing brain development, evolution, and neurodevelopmental and neuropsychiatric disorders. Overview of relevant aspects of Genetics and Neuroscience, including genomic approaches for gene discovery for human disorders and key properties of brain cells and circuit development. Bioinformatic approaches for analyzing genome-scale data sets. Critical consideration of experimental design and analysis strategies through reading and discussion of primary research literature and the development of an original research proposal. Emphasis will be placed upon how to effectively communicate science (written and oral).
Requisites: GENETICS 466, 468, BIOCORE 383, PSYCH/ZOOLOGY 523, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Recognize potential strengths, limitations, and assumptions of published scientific studies.
Audience: Undergraduate

2. Describe the genomics tools used to study brain development and disorders, including how these tools are run and how to interpret the results they generate.
Audience: Both Grad & Undergrad

3. Summarize current studies in genomics, brain development, evolution, and neurodevelopmental and neuropsychiatric disorders from primary scientific literature.
Audience: Both Grad & Undergrad

4. Design a research project that utilizes functional genomics approaches to interrogate fundamental questions of brain disorders, development, evolution, and function.
Audience: Both Grad & Undergrad

5. Evaluate the strengths, limitations, and assumptions of published and proposed research studies, including methods, results, conclusions, and context of the field.
Audience: Graduate

6. Critique study design and interpretation and communicate critiques in a constructive manner.
Audience: Graduate

GENETICS/BOTANY/M M & I/PL PATH 655 – BIOLOGY AND GENETICS OF FUNGI
3 credits.

Fungal genetics, genomics, and physiology using plant pathogenic fungi and the genetic models Aspergillus nidulans and Neurospora crassa as model systems to explore the current knowledge of fungal genetics and plant/fungal interactions.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Demonstrate a basic understanding of fungal biology and genetics
Audience: Graduate

2. Analyze current research topics in fungal genetics/biology
Audience: Graduate

3. Identify members of the fungal research community
Audience: Graduate

4. Write and critique research grants
Audience: Graduate

5. Critique and discuss peer reviewed manuscripts
Audience: Graduate

6. Develop and deliver oral presentations (research paper and own research)
Audience: Graduate

7. Improve communication skills (oral and written)
Audience: Graduate

GENETICS/MD GENET 662 – CANCER GENETICS
3 credits.

Focuses on the genetic basis by which cancer manifests. Provides a comprehensive overview of how cancer is generated as a result of abnormalities at the DNA level, paying special attention to oncogenes, tumor suppressors, DNA mutations, DNA repair mechanisms, chromosomal instability, and tumor heterogeneity. Stresses the role of the immune system in combating cancer, the phenomenon of cancer resistance, anti-tumor strategies, and epigenetic influences on tumorigenesis. Highlights connections between course material and clinical relevance.
Requisites: GENETICS 466, 467 or BIOCORE 383
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Describe major research advances in cancer genetics
Audience: Undergraduate

2. Discuss the promises and challenges that await the field of cancer genetics.
Audience: Undergraduate

3. Apply your understanding of cancer genetics to generate research questions and improve hypothetical patient care
Audience: Undergraduate

4. Critically evaluate primary literature regarding cancer genetics
Audience: Undergraduate

5. Organize and deliver a scientific presentation to your peers
Audience: Undergraduate

GENETICS/MD GENET 677 – ADVANCED TOPICS IN GENETICS
1-3 credits.

Contents vary; consideration of subjects not included in the curriculum.
Requisites: Graduate/professional standing, GENETICS 466, 468, or BIOCORE 383
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply, analyze, or evaluate advanced theories, concepts, or methods in genetics and genomics.
Audience: Both Grad & Undergrad

2. Apply knowledge of experimental genetics and genomics to related research projects.
Audience: Graduate

GENETICS 681 – SENIOR HONORS THESIS
2-4 credits.

Individual study for majors completing theses for Honors degrees as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

GENETICS 682 – SENIOR HONORS THESIS
2-4 credits.

Individual study for majors completing theses for Honors degrees as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2025

GENETICS 695 – ADVANCING TO BIOLOGICAL SCIENCES PHD STUDY
1 credit.

Explore the biological science PhD student experience, from the initial stages of consideration through applications and interviews, to graduate student life and career opportunities. Reflect on personal goals and the nature of graduate study to confirm that a research-focused PhD is right for you. Consider whether to apply this year or later on, in light of admissions expectations and personal readiness. Identify research areas, PhD programs, and prospective advisors of interest. Improve application materials, strengthen interview skills, and consider individual priorities for selecting a program.
Requisites: Senior standing
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Appraise the individual appropriateness and optimal timing of PhD study in light of personal goals and preparedness
Audience: Undergraduate

2. Identify research areas, graduate prospects, and prospective mentors of interest
Audience: Undergraduate

3. Recognize the admissions processes and priorities typically followed by graduate programs
Audience: Undergraduate

4. Develop, evaluate, and refine PhD application materials
Audience: Undergraduate

5. Communicate research interests, motivation, personal strengths, and career goals with faculty and peers
Audience: Undergraduate

GENETICS 699 – SPECIAL PROBLEMS
1-3 credits.

Individual advanced work in an area of Genetics under the direct guidance of a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

GENETICS 701 – ADVANCED GENETICS
3 credits.

First semester of professional level training in genetic mechanisms and analysis as applied to genetic transmission, gene expression, forward and reverse genetics, molecular genetics, genonmics, developmental genetics, and epigenetics.
Requisites: Declared in Genetics doctoral program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

GENETICS 702 – ADVANCED GENETICS II
3 credits.

Second of semester of professional level training in genetic mechanisms and analysis as applied to genetic transmission, gene expression, forward and revese genetics, molecular genetics, genonmics, developmental genetics, and epigenetics.
Requisites: GENETICS 701
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

GENETICS/MD GENET 707 – GENETICS OF DEVELOPMENT
3 credits.

A research-level analysis of the current status of the investigation of processes controlling differential gene activity and cellular behavior. The major emphasis is genetic. In successive years, the focus moves from the gene to the cell to the organism.
Requisites: Declared in Genetics graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

GENETICS/MD GENET 708 – METHODS AND LOGIC IN GENETIC ANALYSIS
3 credits.

Contemporary issues in genetic, developmental, cell, and molecular biology are addressed in a discussion format. Invited speakers give research lectures and reading material is taken from the primary literature. The discussion focuses on evaluating genetic approaches to biological problems.
Requisites: Declared in Genetics graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

GENETICS/CRB 710 – DEVELOPMENTAL GENETICS
3 credits.

Covers a broad range of topics in animal development, with an emphasis on molecular mechanisms. Focuses on common themes, with the goal of understanding and analyzing current research in developmental biology and genetics.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Ability to critically evaluate published scientific work (journal reviews).
Audience: Graduate

2. Ability to communicate critical evaluations professionally and articulately (lecturer and TA feedback at each session).
Audience: Graduate

3. Develop deep knowledge of developmental biology, use of genetic model organisms, stem cell biology and regenerative medicine (didactic portion of course).
Audience: Graduate

4. Improved presentation skills (each student has a scheduled presentation four times during the semester in addition to ad hoc participation).
Audience: Graduate

5. Skills in providing feedback to peers (through student evaluations peer presentations each class period).
Audience: Graduate

GENETICS 808 – FROM GENES TO GRANTS: WRITING WINNING RESEARCH PROPOSALS IN GENETICS
2 credits.

Introduction to professional scientific writing in the field of genetics. Develop skills and expertise in scientific writing with a special emphasis on preparing grant and fellowship research proposals in genetics and genomics.
Requisites: GENETICS 701 and 702
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Complete a two-page research proposal in the "3 Aims" format and a three-page personal/professional statement on a forward-thinking project in genetics.
Audience: Graduate

2. Differentiate among common genetics research proposal structures, including the "3 Aims" approach, the NIH F31 style used by the Genetics training program for its preliminary examinations, other standard styles for federal grants and fellowships relevant to genetics (e.g., NIH, NSF, USDA, DOE), and familiarity with alternative or highly specialized proposal styles (e.g., HHMI Gilliam Fellowships).
Audience: Graduate

3. Identify key principles in scientific writing, such as supporting claims with evidence, including appropriate literature citations, balancing clarity with complexity, and when to establish boundaries between evidence ("results") and argument ("discussion").
Audience: Graduate

4. Demonstrate professional skills in peer review, editing, and mentorship, including how to provide critical feedback effectively and without negativity, and how to maintain social and cultural sensitivity during peer review.
Audience: Graduate

5. Recognize how to effectively use both written and visual communication in genetics.
Audience: Graduate

GENETICS/BOTANY/ENTOM/ZOOLOGY 820 – FOUNDATIONS OF EVOLUTION
2 credits.

Explore some of the most important themes and debates that have permeated evolutionary biology over the last 50 years. Read key papers related to each controversial topic, debate the pros and cons of competing viewpoints, and reflect on the relevance of the issue to contemporary evolutionary biology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

GENETICS/BIOCHEM/BOTANY 840 – REGULATORY MECHANISMS IN PLANT DEVELOPMENT
3 credits.

Molecular mechanisms whereby endogenous and environmental regulatory factors control development; emphasis on stimulus perception and primary events in the signal chain leading to modulated gene expression and cellular development.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2020

GENETICS/AN SCI/POP HLTH 849 – GENOMIC EPIDEMIOLOGY
2 credits.

An introduction to genomic epidemiology, including a general overview of genetics and Mendelian and complex inheritance, as well as various elements of study design, such as participant ascertainment; phenotype definition; biologic sample selection; genotyping, sequencing, and quality control; measurement of covariates; and choice of analytic methods. Briefly covers original study designs; focuses on current study designs.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Evaluate and discuss genetic/genomic epidemiological literature.
Audience: Graduate

2. Design simple genetic/genomic epidemiological studies.
Audience: Graduate

3. Identify and apply appropriate tests of association between genetic variants and both qualitative and quantitative outcomes using either unrelated individuals or families.
Audience: Graduate

4. Summarize and interpret the results of genetic/genomic tests of association.
Audience: Graduate

GENETICS 875 – SPECIAL TOPICS
1-4 credits.

Special topics of current interest to graduate students.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

GENETICS 885 – ADVANCED GENOMIC AND PROTEOMIC ANALYSIS
3 credits.

With the availability of genome sequences and high-throughput techniques, organismal physiology can now be examined on a global scale by monitoring the behavior of all genes or proteins in a single experiment. This course will present modern techniques in genomics and proteomics, with particular focus on analyzing the data generated by these techniques. Course material will cover genomic sequencing, comparative sequence analysis, phylogeny construction and phylogenomics, transcription factor motif discovery, DNA microarray analysis, techniques in mass spectrometry, proteomic screening methods, and protein-interaction network analysis. In addition to lecture time, the course includes computer lab where students get hands-on experience analyzing genomic and proteomic datasets. Students should have coursework in general statistics and intermediate or advanced genetics.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

GENETICS/B M E/B M I/BIOCHEM/CBE/COMP SCI 915 – COMPUTATION AND INFORMATICS IN BIOLOGY AND MEDICINE
1 credit.

Participants and outside speakers will discuss current research in computation and informatics in biology and medicine. This seminar is required of all CIBM program trainees.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss how methods from computer science, statistics, information science and engineering are applied to problems in biology, medicine and population health
Audience: Graduate

2. Recognize and be able to define applications in translational bioinformatics, clinical informatics and public health informatics
Audience: Graduate

GENETICS/AN SCI/DY SCI 951 – SEMINAR IN ANIMAL BREEDING
0-1 credits.

Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020

GENETICS 990 – RESEARCH
1-12 credits.

Independent laboratory research in preparation of a graduate thesis under supervision of a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

GENETICS 993 – SEMINAR IN GENETICS
0-1 credits.

Various aspects of genetics: Drosophila, maize, immunogenetics, developmental genetics, or other special topics.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2024

GEOGRAPHY (GEOG)

GEOG 101 – INTRODUCTION TO HUMAN GEOGRAPHY
4 credits.

Human geographers explore socio-spacial relations, processes and representations of the world in which we live. Engages economic, political, urban, socio-cultural and environmental geographic perspectives to investigate patterns and processes that have come to be associated with 'globalization'.
Requisites: Not open to students with credit for GEOG 104
Course Designation: Gen Ed - Communication Part B
Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define key human geographic concepts, including place, space, territory, imagined geographies, and geopolitics.
Audience: Undergraduate

2. Identify human geographic concepts in everyday life and current events.
Audience: Undergraduate

3. Discuss the defining features and contributions of some human geography subareas.
Audience: Undergraduate

4. Explain how political and economic dynamics, past and present, have created uneven geographies across the globe and at different scales.
Audience: Undergraduate

5. Discuss interdependencies (and conflicts) across the globe, among nation-states, within cities, between humans and non-humans.
Audience: Undergraduate

6. Discuss the role of nation-states in spatializing sovereignty and regulating mobility.
Audience: Undergraduate

7. Discuss how spatial divisions are created, the power such divisions have in different groups of people's lives, and how people try to reshape these dynamics.
Audience: Undergraduate

8. Share course content and demonstrate key course concepts via writing and speaking.
Audience: Undergraduate

GEOG 104 – INTRODUCTION TO HUMAN GEOGRAPHY
3 credits.

Human geographers explore socio-spacial relations, processes and representations of the world in which we live. Engages economic, political, urban, socio-cultural and environmental geographic perspectives to investigate patterns and processes that have come to be associated with 'globalization'.
Requisites: Not open to students with credit for GEOG 101
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No

GEOG/ENVIR ST 120 – INTRODUCTION TO THE EARTH SYSTEM
3 credits.

Introduction to how the Earth system works and what makes Earth livable. Gain appreciation for how the atmosphere, oceans, life, and earth's surface interact to shape our local, regional and global landscapes.
Requisites: Not open to students with credit for ENVIR ST/GEOG 127
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

GEOG/ENVIR ST 127 – PHYSICAL SYSTEMS OF THE ENVIRONMENT
4 credits.

An introduction to natural environmental systems, emphasizing the interconnections between the systems of the solid earth (minerals, rocks, soils), the hydrosphere (water in all its forms), the biosphere, and the atmosphere. Emphasizes connections between basic concepts and specific environmental issues through hands-on case studies, lab projects, and field trips to collect samples and observations for lab projects.
Requisites: Not open to students with credit for ENVIR ST/GEOG 120
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe at a basic level the most important processes of the Earth system, including formation and weathering of rocks and minerals, soil development and erosion, atmospheric circulation, and the global cycles of water and carbon.
Audience: Undergraduate

2. Apply concepts from this course to understand environmental issues such as global climate change and the sustainability of agriculture, and natural hazards such as earthquakes and floods, and make informed contributions to public debate and decision-making on how to address these issues and hazards.
Audience: Undergraduate

3. Identify important research methods, through case studies and labs, that are the basis of modern Earth system science.
Audience: Undergraduate

GEOG/ENVIR ST 139 – GLOBAL ENVIRONMENTAL ISSUES
3 credits.

Explores the global and local nature of environmental problems, including issues of climate change, food, energy, globalization, deforestation, biodiversity loss, resource access, environmental justice, and population. Considers how we should analyze and act on environmental problems as we confront the apparently daunting scale of such issues. What appear to be single global environmental issues are actually composed of many smaller, context-specific, and place-dependent problems or conflicts. Through an interdisciplinary and geographic perspective, these issues can be understood and addressed at the scale of our lived lives.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the scientific basis of climate change, population growth, desertification, deforestation, water quality and quantity impairments, and the environmental challenges of agriculture and energy production.
Audience: Undergraduate

2. Critically assess the causal factors and drivers associated with global environmental issues.
Audience: Undergraduate

3. Explain the political context in which environmental issues are framed as global problems.
Audience: Undergraduate

4. Identify potential solutions to global environmental issues, and obstacles to their implementation.
Audience: Undergraduate

5. Describe your own relationship to global environmental issues and how global environmental issues manifest locally.
Audience: Undergraduate

GEOG 170 – OUR DIGITAL GLOBE: AN OVERVIEW OF GISCIENCE AND ITS TECHNOLOGY
3 credits.

Introduction to the collection, representation and use of geospatial data. Introduction to geospatial technologies like GPS, Google Earth, satellite imagery, and GIS, and provides a critical understanding of the strengths and limitations of spatial representations (e.g., maps, images).
Requisites: None
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe fundamental concepts and knowledge in geospatial fields, such as geospatial data, geographic coordinates, geographic coordinate systems, projection, maps, etc.
Audience: Undergraduate

2. Analyze and interpret aerial photos and remote sensing images.
Audience: Undergraduate

3. Describe the functionality of maps.
Audience: Undergraduate

4. Design and make a map using GIS tools (e.g., ArcGIS online).
Audience: Undergraduate

5. Build a solid foundation for more specialized courses on GIS, cartography, remote sensing, and GPS.
Audience: Undergraduate

6. Identify several widely used geospatial software and tools (e.g., Google Earth).
Audience: Undergraduate

GEOG 175 — TOPICS IN GEOGRAPHY
3 credits.

Explores emerging topics in human geography (e.g., economic geography, urban geography, political geography) and people-environment geography (e.g., political ecology, environmental history).
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024
Learning Outcomes: 1. Explain foundational concepts in human geography and people-environment geography.
Audience: Undergraduate

2. Identify social scientific theories and methods and apply them to geographical issues.
Audience: Undergraduate

3. Connect pressing social and ecological issues to human and people-environment geographical theory and methods.
Audience: Undergraduate

GEOG 198 — DIRECTED STUDY
1-2 credits.

Independent study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2013

GEOG 199 — DIRECTED STUDY
1-2 credits.

Independent study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2004

GEOG/ENVIR ST/SOIL SCI 230 — SOIL: ECOSYSTEM AND RESOURCE
3 credits.

Soils are fundamental to ecosystem science. A systems approach is used to investigate how soils look and function. Topics investigated include soil structure, biology, water, fertility, and taxonomy as well as the human impact on the soil environment.
Requisites: Not open to students with credit for SOIL SCI 301
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the significance of soil and its properties

Audience: Undergraduate

2. Identify and describe key components of soil solids and pores
Audience: Undergraduate

3. Explain and predict the interaction of water with soil
Audience: Undergraduate

4. Interpret basic nomenclature used in soil science
Audience: Undergraduate

5. Analyze that causes and solutions for sustainability of soil resources
Audience: Undergraduate

6. Quantify the interaction of clay surfaces with a soil solution
Audience: Undergraduate

7. Describe the role of soils in many different ecosystems
Audience: Undergraduate

8. Link soil orders with biomes and describe soil's edaphic character
Audience: Undergraduate

9. Analyze sustainability issues using a systems-based approach
Audience: Undergraduate

GEOG/ART HIST/ENVIR ST/HISTORY/LAND ARC 239 – MAKING THE AMERICAN LANDSCAPE
3-4 credits.

Traces the history and evolution of the American cultural landscape from precolonial times to present. Explores how class, ethnic, and racial inequality have shaped the appearance of the American landscape over time, and how that landscape in turn has affected relationships between people and groups through the present day. Examines extraordinary things (civic structures (like our State Capitol), National Parks, War Memorials) and more ordinary kinds of places (mining towns, cotton plantations, sites of recreation and leisure, and suburban tract housing) to stimulate critical thinking about how these places have served people and groups unequally and disproportionately over time and across space. Considers complex meanings of American spaces and places to different people and groups, stimulating empathy and encouraging participation in a multicultural society.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe and interpret the American landscape as a richly layered historical document mediated by complex relationships between people and groups
Audience: Undergraduate

2. Explain how the American cultural landscape has affected present day circumstances regarding ethnicity and race as well as racial and ethnic inequalities
Audience: Undergraduate

3. Articulate ways in which historical change manifest in buildings, enclosed spaces, and other elements of the American landscape reveal racial, ethnic, class and gender dynamics between and among people and groups over time
Audience: Undergraduate

4. Enlist forms of historical evidence – maps (current and historic), photographs (aerial and otherwise), historical newspapers, census records, deeds and land records – to interpret landscapes and landscape change
Audience: Undergraduate

5. Explain the American landscape as a product of competing interests, which will demonstrate self-awareness and empathy toward the cultural perspectives and worldviews of others
Audience: Undergraduate

GEOG/ASIAN/HISTORY/POLI SCI/SOC 244 – INTRODUCTION TO SOUTHEAST ASIA: VIETNAM TO THE PHILIPPINES
4 credits.

As an introduction to Southeast Asia, covers the ethnic, cultural, religious, and political histories of the region from the classical states period to the present, with an emphasis on colonialism, nationalism, decolonization, and the emergence of modern political and social systems into the 21st century, including an exposure to region's contemporary literature. Not open to students who completed LCA 244 prior to Fall 2019.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Examine the ethnic, cultural, religious, and political histories of Southeast Asia from the classical states period to the present.
Audience: Undergraduate

2. Analyze colonialism, nationalism, decolonization, and the emergence of modern political and social systems into the 21st century in Southeast Asia.

Audience: Undergraduate

3. Explore contemporary literature in Southeast Asia.
Audience: Undergraduate

GEOG/HISTORY/POLI SCI/SLAVIC 253 – RUSSIA: AN INTERDISCIPLINARY SURVEY
4 credits.

Comprehensive interdisciplinary survey of Russian civilization from its beginnings through the present day.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

GEOG/HISTORY/POLI SCI/SLAVIC 254 – EASTERN EUROPE: AN INTERDISCIPLINARY SURVEY
4 credits.

Comprehensive interdisciplinary survey of East European culture, society, politics, and literature from its beginnings to the present day.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

GEOG/AFROAMER/ANTHRO/C&E SOC/HISTORY/LACIS/ POLI SCI/SOC/SPANISH 260 — LATIN AMERICA: AN INTRODUCTION
3-4 credits.

Latin American culture and society from an interdisciplinary perspective; historical developments from pre-Columbian times to the present; political movements; economic problems; social change; ecology in tropical Latin America; legal systems; literature and the arts; cultural contrasts involving the US and Latin America; land reform; labor movements; capitalism, socialism, imperialism; mass media.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Analyze Latin American culture and society from an interdisciplinary perspective.
Audience: Undergraduate

2. Examine historical developments from pre-Columbian times to the present.
Audience: Undergraduate

3. Identify political movements, economic problems, social change, and ecology in Latin America.
Audience: Undergraduate

GEOG/AFRICAN/AFROAMER/ANTHRO/HISTORY/POLI SCI/ SOC 277 — AFRICA: AN INTRODUCTORY SURVEY
4 credits.

African society and culture, polity and economy in multidisciplinary perspectives from prehistory and ancient kingdoms through the colonial period to contemporary developments, including modern nationalism, economic development and changing social structure.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze African society and culture from a multidisciplinary perspective.
Audience: Undergraduate

2. Discuss polity and economy from prehistory and ancient kingdoms through the colonial period to contemporary developments.
Audience: Undergraduate

3. Study contemporary nationalism, economic development and changing social structure.
Audience: Undergraduate

GEOG 300 — WEIRD GEOGRAPHIES
3 credits.

An opportunity to re-imagine human geography. The history of geography is particularly violent and exclusive. It is well known that systems of colonialist exploitation, theft, kidnapping, and murder were facilitated in part by the work of modern cartographers and "explorers." The discipline that we have today is a product of these earlier colonial epistemologies and ideologies. The science that emerged from these fields - geography - institutionalizes and reproduces many the ideas and viewpoints of their modern practitioners. Creates a space to re-imagine and re-invent what the field of human geography might be. Interrogates the colonial history of geography as a social science and practice. Explores several ways of thinking about space and social life that might not fit cleanly into the discipline at large.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Describe many of the key debates, concepts, objects, and problems in geography.
Audience: Undergraduate

2. Read and research critical scholarship.
Audience: Undergraduate

3. Critically analyze several theoretical, practical, and scientific perspectives on space and place.
Audience: Undergraduate

4. Identify effective strategies for developing and conducting interdisciplinary research.
Audience: Undergraduate

5. Recall approaches to researching sociospatial topics.
Audience: Undergraduate

6. Identify the basics of writing and editing academic theoretical research.

Audience: Undergraduate

7. Develop curriculum that considers geography in a new light.
Audience: Undergraduate

GEOG 301 – REVOLUTIONS AND SOCIAL CHANGE
3 credits.

An introduction to the spatial dimensions of social movements, social struggles, and radical social change. Provides a range of critical and theoretical perspectives for reading and interpreting space as a tool of social transformation. Explores a variety of historical examples from the nineteenth century to the present.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify the key debates in Social and Radical Geography.
Audience: Both Grad & Undergrad

2. Demonstrate the basics of social movements, including their strategies, tactics, and spatialities.
Audience: Both Grad & Undergrad

3. Summarize the key issues in the recent history of social struggles.
Audience: Both Grad & Undergrad

4. Explain approaches to researching social struggles via academic and popular sources.
Audience: Undergraduate

5. Demonstrate the basics of creating academic scholarship on social struggles in a geographic context.
Audience: Undergraduate

6. Produce academic scholarship on social struggles in a geographic context.
Audience: Graduate

7. Use radical pedagogy for guiding classroom discussions.
Audience: Graduate

8. Develop a personalized set of approaches to mediating challenging geographical and theoretical concepts for a broad range of learners.
Audience: Graduate

GEOG 302 – ECONOMIC GEOGRAPHY: LOCATIONAL BEHAVIOR
4 credits.

Classic location theory with modern extensions. Examination of theoretical statements and selected empirical examples. Principles of economic regionalization and network analysis with emphasis on spatial implications of the economic development process.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

GEOG/URB R PL 305 – INTRODUCTION TO THE CITY
3-4 credits.

Investigates urbanization as a general process, as well as the resulting contemporary physical, social, cultural and political- economic forms of cities. Emphasis will be placed on the history and current forms of spatial and social segregation of cities by race, class, ethnicity, and gender. The myriad ways that cities have addressed the tensions emerging from this history of spatial and social segregation will be highlighted. Further, emphasis will be placed on understanding the experiences of those most-affected by historical and continuing segregation.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the largest factors influencing where, when, and how cities develop.
Audience: Undergraduate

2. Explain historical and contemporary patterns of social inclusion and exclusion in cities and identify and explain their underlying causes and effects.
Audience: Undergraduate

3. Apply lessons of the past to the puzzles of today's cities.
Audience: Undergraduate

4. Recognize and question assumptions about current city form, including racial segregation.
Audience: Undergraduate

5. Recognize and question assumptions about the experience of contemporary urban dwellers, particularly as these are shaped by race, class, and gender.
Audience: Undergraduate

6. Develop a consciousness of self and others.
Audience: Undergraduate

7. Participate effectively in a multicultural society by embracing your role as a citizen of Madison; valuing the positive aspects of American urban culture, including diversity in its many forms; and understanding cities as primarily social entities and problems of organized complexity.
Audience: Undergraduate

GEOG 307 – INTERNATIONAL MIGRATION, HEALTH, AND HUMAN RIGHTS
3 credits.

Provides an introduction to health and human mobility in a global context. Mobility is part of the human condition and international law enshrines freedom of movement, yet nation-states reserve the right to exclude. Examines the development of laws and institutions governing people on the move; how these solidify or reshape existing global, racial-ethnic, class, and gender hierarchies; and how they contribute to individual and population-level health.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Explain the principal economic, political, and social forces and government policies fueling international migration and attitudes toward it.
Audience: Undergraduate

2. Explain the principal economic, political, and social forces and government policies that create the conditions for protracted population displacements.
Audience: Undergraduate

3. Explain the principles of the structural determinants of health and life course frameworks.
Audience: Undergraduate

4. Apply the structural determinants of health framework to explain how governmental policies and practices shape international migrants' health
Audience: Undergraduate

GEOG/CHICLA/GEN&WS 308 – LATINX FEMINISMS: WOMEN'S LIVES, WORK, AND ACTIVISM
3 credits.

An examination of Latinx women's lives, experiences, and activism through the lens of testimonio, life histories, and feminist writings rooted in social justice movements and critical pedagogies.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Identify and describe key theoretical concepts and frameworks used in interdisciplinary studies of Latinas/xs and other women of color in the U.S.
Audience: Undergraduate

2. Explain the historical origins of Chicanx and Latinx feminisms and their relationship with social justice movements.
Audience: Undergraduate

3. Critically analyze the works of leading Latinx feminist scholars and theorists, who have written on issues of race, ethnicity, gender, LGBTQ identities, labor, color, citizenship status, and generation.
Audience: Undergraduate

4. Explore different writing genres and methodologies used in the study of women's lives, experiences, and activism.
Audience: Undergraduate

5. Apply the framework of testimonio to complete a digital storytelling project, examining a key theme or issue in women's lives.
Audience: Undergraduate

GEOG/ENVIR ST 309 – PEOPLE, LAND AND FOOD: COMPARATIVE STUDY OF AGRICULTURE SYSTEMS
3 credits.

Introduction to how and why humans have transformed natural landscapes around the world, including tropical deforestation. Exploration of different agricultural systems, and topics such as food security, land scarcity, bioenergy and the impacts of food production on the environment.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

GEOG/INTL ST 311 – THE GLOBAL GAME: SOCCER, POLITICS, AND IDENTITY
3-4 credits.

Soccer (or football) is played in almost every part of the world. Soccer will be used as a lens through which to think critically about a range of issues within our own societies and around the world. This includes examining the relationship between European imperialism and the globalization of soccer in the early 20th century; thinking about who gets to play (and who gets paid) across different contexts; and analyzing how soccer is both globally networked and intensely local in its passions and rivalries. Draws from a range of perspectives on soccer, from those who consider it to be an opium for the masses to those who see it as a vehicle for positive social change, in order to illuminate some of the big questions facing the world today.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Identify and describe the ways that soccer shapes societies and vice-versa.
Audience: Undergraduate

2. Demonstrate an understanding of different theoretical approaches to studying soccer.
Audience: Undergraduate

3. Analyze sites in which soccer can be a vehicle for contesting political and cultural injustices.
Audience: Undergraduate

4. Apply course insights to broader debates about globalization, identities, and inequalities.
Audience: Undergraduate

GEOG/INTL ST 315 – UNIVERSAL BASIC INCOME: THE POLITICS BEHIND A GLOBAL MOVEMENT
3 credits.

Should all individuals in society receive a regular transfer of cash from the state without any strings attached? If that question had been posed fifteen years ago, it would likely have been dismissed as unrealistic, undesirable, or just plain crazy. In recent years, however, the idea of introducing a universal basic income [UBI] has gained a lot of traction around the world. Growing inequalities, financial crises, fears about jobs being automated, and the COVID-19 pandemic have all helped to put UBI on the political map. But where did the idea come from? How is it traveling to different parts of the world? And on what grounds do different advocates justify their claims? Address these questions and more by exploring the history, philosophy, and political economy of UBI from a range of perspectives. Ongoing UBI experiments from different parts of the world will also be examined.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Describe the histories and philosophies that have shaped UBI claims.
Audience: Undergraduate

2. Differentiate UBI from other forms of social assistance.
Audience: Undergraduate

3. Compare and contrast different schools of thought regarding UBI.
Audience: Undergraduate

4. Evaluate evidence from recent and ongoing UBI experiments.
Audience: Undergraduate

5. Produce your own arguments about UBI.
Audience: Undergraduate

GEOG 318 – INTRODUCTION TO GEOPOLITICS
3 credits.

Introduction to the contemporary study of geopolitics, featuring the main concepts and research themes encountered in this field. Examine the formation of geopolitical images of the world, where these images come from, and how they have shaped our thinking and politics over time.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Define and distinguish between traditional and critical approaches to geopolitics.
Audience: Both Grad & Undergrad

2. Discuss the main elements of the geopolitical imagination that shape our understanding of the world and our place in it.
Audience: Both Grad & Undergrad

3. Describe, provide examples of, and critically analyze the formal, practical, and popular geopolitics that interact to produce our geopolitical understandings of the world.
Audience: Both Grad & Undergrad

4. Trace the continuities and discontinuities of United States geopolitics across imperial, cold war, post-cold war, and post-9/11 eras.
Audience: Both Grad & Undergrad

5. Situate course themes in the larger contemporary critical geopolitics literature.
Audience: Graduate

GEOG/GEOSCI 320 – GEOMORPHOLOGY
3 credits.

Principles and analysis of geomorphic processes and resulting land forms.
Requisites: GEOSCI/ENVIR ST 106, GEOSCI 100, 109, 204, ENVIR ST/GEOG 120, 127 or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain at a basic level how Earth surface processes shape landforms and create natural hazards, and how they respond to changing climate and human land use.
Audience: Both Grad & Undergrad

2. Apply knowledge of Earth surface processes to interpret new observations or processes, landforms, and natural hazards.
Audience: Both Grad & Undergrad

3. Summarize how geomorphologists use equations and quantitative models to represent geomorphic processes and apply some of those equations/models to solve realistic problems at a basic level
Audience: Both Grad & Undergrad

4. Develop and present a visualization related to geomorphology.
Audience: Graduate

GEOG/ATM OCN/ENVIR ST 322 – POLAR REGIONS AND THEIR IMPORTANCE IN THE GLOBAL ENVIRONMENT
3 credits.

Reviews the past, present, and future of the Arctic and Antarctic regions. Covers the history, geography, atmospheric and ocean circulations, permafrost, ice sheets, glaciers, and future state of the Arctic and Antarctica as projected by earth system models. Also explores the role of the polar regions in the earth's system and associated global climatic feedbacks.
Requisites: Sophomore standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Describe the history, geography, atmospheric and ocean circulations, permafrost, ice sheets, glaciers, and the future state of the Arctic and Antarctic Regions.
Audience: Both Grad & Undergrad

2. Explain the major theories and concepts of the Arctic and Antarctic regions.
Audience: Both Grad & Undergrad

3. Identify how interactions occur between the major components of each polar region and their influence on global processes and climate.
Audience: Both Grad & Undergrad

4. Recognize the need for multi-disciplinary research to further our understanding of the polar regions and their role in the global system.
Audience: Both Grad & Undergrad

5. Integrate thesis or dissertation research directly or indirectly with polar processes research, thereby gaining better insight into Arctic and Antarctic regions.
Audience: Graduate

GEOG/ATM OCN/ENVIR ST 332 – GLOBAL WARMING: SCIENCE AND IMPACTS
3 credits.

Offers a fundamental understanding of how and why global warming is happening and what to expect in the future. Investigate and discuss the evidence for change, the science that explains these observations, predicted impacts on humans and ecosystems, and the societal debate over proposed solutions.
Requisites: Sophomore standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

GEOG/ENVIR ST 333 – GREEN URBANISM
3 credits.

Over half of the world's population now lives in urban areas, with an expected increase of 2.5 billion people in the next 30 years. As urbanization (broadly defined as the conversion of previously undeveloped lands into urbanized uses) continues and intensifies, we are faced with a number of environmental issues, for instance, fragmentation and destruction of habitats, and decreased air and water quality. Explore how urbanization impacts ecological processes and resulting environmental outcomes, strategies for "designing with nature," and behavioral, planning, and policy responses to urban environmental problems.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe ecological processes as they relate to urbanization
Audience: Undergraduate

2. Describe the social, economic, and environmental dimensions of sustainable communities and identify potential trade-offs and interrelationships among these dimensions
Audience: Undergraduate

3. Analyze the causes of and solutions for the sustainability challenge of sustainable cities and communities
Audience: Undergraduate

4. Analyze local plans for sustainability strategies
Audience: Undergraduate

5. Identify strategies that cities can employ in preparing for the effects of the changing climate
Audience: Undergraduate

GEOG/ATM OCN/ENVIR ST/GEOSCI 335 – CLIMATIC ENVIRONMENTS OF THE PAST
3 credits.

Climate change at timescales from the last several million years to the last 100 years, with emphasis on more recent timescales. Examines how climate variability arises from interplay between external forcings, feedbacks within the earth system, and (more recently) human activity.
Requisites: Sophomore standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the major climatic events and trends during the Quaternary, spanning timescales from the last 50,000,000 years to the last 100 years.
Audience: Undergraduate

2. Identify the physical processes controlling the behavior of the earth system and its components (atmosphere, oceans, cryosphere, biosphere, etc.).
Audience: Undergraduate

3. Discuss how climatic variability results from a combination of external forcings and internal dynamics within the earth system.
Audience: Undergraduate

4. Recognize how paleoclimatologists collect, date, and analyze a staggering variety of paleoclimatic records, including ocean and lake sediment cores, ice cores, tree rings, corals, and speleothems.
Audience: Undergraduate

5. Analyze and critically evaluate climate experiments that are simulated by earth system models.
Audience: Undergraduate

6. Think and write critically, with particular attention to critically reading the scientific literature and critically employing the climate proxies and models used by paleoclimatologists.
Audience: Undergraduate

GEOG/ENVIR ST 337 – NATURE, POWER AND SOCIETY
3 credits.

Explores the links between nature, power and society in today's world. Considers the complex relationships between humans and the earth's resources, including food, energy, physical materials, water, biota, and landscapes. Examines issues linked to population and scarcity, resource tenure, green consumerism, political economy, environmental ethics, risks and hazards, political ecology, and environmental justice.
Requisites: Sophomore standing. Not open to students with credit for ENVIR ST 112
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe key elements that link nature, power, and society.
Audience: Undergraduate

2. Explain the social, economic, and/or environmental dimensions of the sustainability challenges regarding a range of important policy issues with environmental and sustainability implications.
Audience: Undergraduate

3. Apply sustainability principles and/or frameworks to address the challenges associated with a range of development issues that have environmental implications.
Audience: Undergraduate

4. Analyze the causes of and solutions for sustainability challenges of various development policy decisions.
Audience: Undergraduate

GEOG/BOTANY 338 – ENVIRONMENTAL BIOGEOGRAPHY
3 credits.

Explores how physical and biological factors affect the distribution of terrestrial biomes, ecosystem types, and biodiversity, as well as the role of disturbance and recent human activities on differences in past and modern day species distributions.
Requisites: Sophomore standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify patterns and mechanisms of local to global gene, species, ecosystem and biome distributions.
Audience: Both Grad & Undergrad

2. Describe how past, current and future environmental change affect biogeography.
Audience: Both Grad & Undergrad

3. Explain how humans affect geographic patterns of biodiversity.
Audience: Both Grad & Undergrad

4. Discuss major paradigm changes in biogeography and how changes in conceptual frameworks and technology have altered interpretations of data and understanding of processes.
Audience: Both Grad & Undergrad

5. Apply concepts from biogeography to current environmental problems.
Audience: Both Grad & Undergrad

6. Explain how legacies of colonialism and scientific racism affect historical and current biases in the representation, methods, practice, and applications of biogeography.
Audience: Both Grad & Undergrad

7. Discuss and critique the primary literature (scientific articles in peer-reviewed journals) in biogeography.
Audience: Both Grad & Undergrad

8. Identify a controversy in biogeography and state the problem, trace its origins in the literature, provide arguments on opposing sides from the peer-reviewed literature, and what implications it has on current thinking and practice in conservation or sustainable use.
Audience: Graduate

GEOG/ENVIR ST 339 – ENVIRONMENTAL CONSERVATION
4 credits.

Examines major environmental conservation approaches in the U.S. and developing countries and how they are influenced by sociopolitical factors, cultural values and scientific understandings of nature. Historical and contemporary cases are explored with emphasis on biodiversity and climate change issues.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the role of values, ecology, and institutions in shaping environmental threats and conservation strategies.
Audience: Both Grad & Undergrad

2. Analyze the history of conservation thought and action in the United States.
Audience: Both Grad & Undergrad

3. Recognize the major categories of federal land in the U.S., their environmental importance, and controversies, as well as the roots of wildlife management in the U.S. and current factors associated with public support or opposition to hunting.
Audience: Both Grad & Undergrad

4. Examine the uneven distribution of environmental harms both globally and within the U.S. and how this is affected by race, class, and geography.
Audience: Both Grad & Undergrad

5. Explain the urgency of environmental justice.
Audience: Both Grad & Undergrad

6. Evaluate the strengths and limits of rule-based and incentive-based conservation programs.
Audience: Both Grad & Undergrad

7. Recognize the key challenges and opportunities for biodiversity conservation in the tropics.
Audience: Both Grad & Undergrad

8. Produce an actionable analysis of an environmental issue of interest to the graduate student that integrates the social and biophysical dimensions of the environmental issue.
Audience: Graduate

GEOG 340 – WORLD REGIONS IN GLOBAL CONTEXT
3 credits.

Survey of development and change within each of the world's regions (e.g., Africa, Southeast Asia). Attention devoted to environment and society; history, economy, and demographic change; culture and politics; future challenges; key actors.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe geographic characteristics of world regions using multiple forms of knowledge (e.g., Sub-Saharan Africa, Southeast Asia).
Audience: Both Grad & Undergrad

2. Discuss how travel and fieldwork can generate unique insights about world regions.
Audience: Both Grad & Undergrad

3. Describe four major geographic concepts about world regions: identity, diversity, uneven development, and global interdependencies. (
Audience: Both Grad & Undergrad

4. Describe within each world region key features of environment and society; history, economy and demographic change; and culture and politics.
Audience: Both Grad & Undergrad

5. Compare and contrast each world region and identify the advantages and limitations of a regional approach to understanding the world.
Audience: Both Grad & Undergrad

6. Analyze the concept of “region” and determine how and when it is valid.
Audience: Graduate

GEOG 342 – GEOGRAPHY OF WISCONSIN
3 credits.

Overview of the physical and human geography of Wisconsin, with an emphasis on the physical, historical, and cultural processes that shaped the Badger State.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Explain at a basic level the processes that shaped the physical geography of the state, including its bedrock geology, glacial landforms, soils, and natural plant communities.
Audience: Undergraduate

2. Characterize the past and present physical geography of particular places within the state using key information sources, including public land survey records and web-based soil surveys.
Audience: Undergraduate

3. Explain at a basic level how the cultural geography of Wisconsin reflects the Native Nations that have lived in this place for many thousands of years, the expropriation of their lands in the 19th and 20th centuries, and the new communities and cultural landscapes created by immigrant settlers.
Audience: Undergraduate

4. Recognize distinctive characteristics of Wisconsin's rural geography, including dairy farming and other kinds of agriculture that developed here, the history of logging and the cutover lands, and emergence of tourism and the conservation movement.
Audience: Undergraduate

5. Use key information resources on rural geography, such as General Land Office records and first-hand accounts of Native American and immigrant communities.
Audience: Undergraduate

6. Explain at a basic level the historical development and present-day spatial structures of Wisconsin cities, especially the geography of industrial development, racism, and segregation in the Milwaukee metropolitan area.

Audience: Undergraduate

GEOG 344 – CHANGING LANDSCAPES OF THE AMERICAN WEST
3 credits.

Environmental change in the landscapes of the American West, in the recent past, present, and future, from the physical science background to human-environment interactions.
Requisites: Sophomore standing
Course Designation: Breadth - Either Social Science or Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Explain at a basic level the distinctive landforms and other features of major regions of the American West.
Audience: Both Grad & Undergrad

2. Describe at a basic level current scientific perspectives on the mechanisms and causes of recent and future changes in vegetation, fire regimes, and hydrology of the American West.
Audience: Both Grad & Undergrad

3. Use and critically evaluate key information resources to characterize the environments of the recent past and change since then, from first-hand accounts by Native peoples of the West to General Land Office records and historical or modern images.
Audience: Both Grad & Undergrad

4. Critically evaluate news reporting and advocacy of popular media on environmental change in the American West.
Audience: Both Grad & Undergrad

5. Critically analyze debates on the environmental impacts of major land uses in the American West, such as irrigated agriculture, outdoor recreation, forest products production, and livestock grazing, taking into account the economic, cultural, and political interests and perspectives of the various sides in each debate.
Audience: Both Grad & Undergrad

6. Develop an in-depth understanding of recent scientific research or public advocacy/activism on one specific aspect of environmental change in the American West.
Audience: Graduate

7. Present explanations of issues of environmental change at the level of an intermediate undergraduate class.
Audience: Graduate

GEOG/AMER IND/ENVIR ST 345 – CARING FOR NATURE IN NATIVE NORTH AMERICA
3 credits.

Surveys the concepts, practices, and issues associated with caring for nature in American Indian communities.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Interpret the diverse arrangements for tribal sovereignty, indigenous landtenure, and claims to natural resources and the environment.
Audience: Undergraduate

2. Illustrate natural resource and environmental issues important to bothAmerican Indians and Wisconsin Indians.
Audience: Undergraduate

3. Identify similarities and differences between indigenous knowledge systemsand Western Science.
Audience: Undergraduate

4. Discuss the marked cultural and natural diversity across native NorthAmerica.
Audience: Undergraduate

5. Recall the many different conceptions of place, nature, and development innative North America.
Audience: Undergraduate

6. Describe the diversity of American Indian experiences and their variedresponses to assorted histories of exclusion and marginalization.
Audience: Undergraduate

7. Demonstrate an awareness of history's impact on the present.
Audience: Undergraduate

GEOG 355 – AFRICA, SOUTH OF THE SAHARA
3 credits.

Physical and human distributions and interrelationships, with emphasis on the spatial processes and patterns of modernization.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Describe the variation of biophysical characteristics across the continent (geology, soils, landforms, rivers, ecology) and how these characteristics influence rural livelihood practices and the economic history of the continent.
Audience: Undergraduate

2. Identify features (and variations in) of African social organization and current dynamics of change.
Audience: Undergraduate

3. Discuss the social and political history of the continent and current political and economic challenges facing African nations.
Audience: Undergraduate

4. Explain major development challenges (including human health) and different approaches for addressing them.
Audience: Undergraduate

GEOG 358 – HUMAN GEOGRAPHY OF SOUTHEAST ASIA
3 credits.

Introduction to the human geography and history of Southeast Asia, including important political and theoretical issues and policies and positionings of relevance for understanding the spatiality of the region, including the ways that ethnicity and indigeneity are playing out in Southeast Asia and among Southeast Asians in the United States.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2020
Learning Outcomes: 1. Describe ethnic diversity and ethnic politics in Southeast Asia
Audience: Both Grad & Undergrad

2. Explain transnational and transcultural politics in the United States as they relate to Southeast Asia, especially associated with the Hmong and Lao, but also other groups as well.
Audience: Both Grad & Undergrad

3. Describe key human geographic patterns in Southeast Asia.
Audience: Both Grad & Undergrad

4. Apply knowledge of ethnic diversity and political issues in Southeast Asia when conducting research.
Audience: Graduate

GEOG 359 – AUSTRALIA: ENVIRONMENT AND SOCIETY
3 credits.

An introduction to the human and environmental geography of Australia, including Australian geology, ecology, society, and culture. Topics include analysis of current events in Australia and current resource management problems using Google Earth and other tools. Australia is a settler country, the scene of indigenous genocide, a former English colony, a mythical unknown, a biophysical puzzle, home to a startling diversity of life, a cradle of modern democracy, and a powerful industrial economy with a rich resource base. It thus serves in many ways as a mirror for the US - even matching the US roughly in size, if not in population. The two countries share many elements of a common history and biogeography and yet the human and environmental geographies of the two countries have traced very different paths into the modern world.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023

GEOG 365 – GEOGRAPHICAL TRADITIONS AND PRACTICES
3 credits.

An introduction to the breadth and practice of Geography. Introduces geographic perspectives, theories, themes, and research design. Covers the history of the discipline, applied quantitative and qualitative methodologies used in geographic research, and a selection of subfields within the discipline.
Requisites: Declared in Geography or Cartography and Geographic Information Systems undergraduate programs
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and describe careers that are relevant to geographers
Audience: Undergraduate

2. Identify learning and research resources available through the Department of Geography
Audience: Undergraduate

3. Describe and apply key definitions, methods, data sets, and theories commonly used in Geography
Audience: Undergraduate

GEOG 370 — INTRODUCTION TO CARTOGRAPHY
4 credits.

A broad introduction to cartography emphasizing the theory and practice of map-making. Topics include the basics in mapping (e.g., scale, spatial reference systems, projections), data acquisition, key techniques for thematic mapping, and principles of cartographic abstraction and design.
Requisites: Sophomore standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Design maps with the best and current cartographic principles in mind.
Audience: Both Grad & Undergrad

2. Execute original map designs from conceptualization to delivery while estimating and managing the time needed for an open-ended design project.
Audience: Both Grad & Undergrad

3. Design maps within client-defined constraints.
Audience: Both Grad & Undergrad

4. Acquire and prepare geographic datasets.
Audience: Both Grad & Undergrad

5. Follow and deviate from a cartographic workflow using contemporary cartography and GIS software.
Audience: Both Grad & Undergrad

6. Discuss cartographic design within its broader historical and social contexts.
Audience: Both Grad & Undergrad

7. Provide constructive feedback for peers and self during the process of design.
Audience: Both Grad & Undergrad

8. Place design principles within the contemporary cartographic literature.

Audience: Graduate

GEOG/ENVIR ST/F&W ECOL/G L E/GEOSCI/LAND ARC 371 — INTRODUCTION TO ENVIRONMENTAL REMOTE SENSING
3 credits.

Introduction to the Earth as viewed from above, focusing on use of aerial photography and satellite imagery to study the environment. Includes physical processes of electromagnetic radiation, data types and sensing capabilities, methods for interpretation, analysis and mapping, and applications.
Requisites: (Sophomore standing and MATH 113, 114, or 171), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025

GEOG/CIV ENGR/ENVIR ST 377 — AN INTRODUCTION TO GEOGRAPHIC INFORMATION SYSTEMS
4 credits.

Design, implementation and use of automated procedures for storage, analysis and display of spatial information. Covers data bases, information manipulation and display techniques, software systems and management issues. Case studies.
Requisites: Sophomore standing, member of Engineering Guest Students, or declared in Capstone Certificate in GIS Fundamentals
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the basic structures, concepts, and theories of GIS.
Audience: Both Grad & Undergrad

2. Conduct daily routines of GIS operations.
Audience: Both Grad & Undergrad

3. Make connections to the broader literature in GIS
Audience: Graduate

GEOG 378 – INTRODUCTION TO GEOCOMPUTING
4 credits.

Introduction to scripting for Geographic Information Science. Geoprocessing with open-source GIS utilities. Python scripting with ArcGIS and open-source libraries.
Requisites: CIV ENGR/ENVIR ST/GEOG 377 or concurrent enrollment, or graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Write shell commands to accomplish common (batch)geoprocessing tasks using popular open-source utility programs, and identify when these utilities are preferred over mainstream GIS software.
Audience: Both Grad & Undergrad

2. Develop basic skills in the Python programming language and programming concepts necessary for advanced GIS courses that require programming.
Audience: Both Grad & Undergrad

3. Use Python with open-source GIS libraries regardless of the Integrated Development Environment (IDE).
Audience: Both Grad & Undergrad

4. Demonstrate how Python can extend the capabilities of ArcGIS to solve problems difficult or impossible to address otherwise.
Audience: Both Grad & Undergrad

5. Describe major geospatial vector and raster file formats and specifications for spatial reference coordinate systems.
Audience: Both Grad & Undergrad

6. Identify online resources that support geocomputing and programming in the GIS profession.
Audience: Both Grad & Undergrad

7. Utilize newly developed GIS computation tools/libraries and platforms
Audience: Graduate

GEOG 379 – GEOSPATIAL TECHNOLOGIES: DRONES, SENSORS, AND APPLICATIONS
3 credits.

Introduction to state-of-the-art technologies that capture properties of the landscape, which is critical to better characterize and understand environmental properties and change. Develop skills in geospatial systems applicable to a variety of research and industry fields. Includes an overview of unmanned aerial systems (drones), light detection and ranging (LiDAR), high-grade Differential GPS (DGPS), Global Navigation Satellite Systems (GNSS), virtual reality, optical sensors, geocaching, and geotagging.
Requisites: Sophomore standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Identify Unmanned Aerial Systems hardware, safety, regulations, mission planning, and applications for the sciences.
Audience: Both Grad & Undergrad

2. Develop skills in the area of structure-from-motion 3D point cloud model development and visualization.
Audience: Both Grad & Undergrad

3. Identify and use high-grade differential Geographic Positioning Systems and Global Navigation Satellite Systems.
Audience: Both Grad & Undergrad

4. Develop proficiency in LiDAR technologies from satellite, airborne, Unmanned Aerial Systems, and terrestrial, including LiDAR data collection, visualization, and processing.
Audience: Both Grad & Undergrad

5. Use remote sensing instruments, such as multispectral and hyperspectral sensors and thermal cameras.
Audience: Both Grad & Undergrad

6. Become familiar with Virtual reality, augmented reality, geocaching and geotagging.
Audience: Both Grad & Undergrad

7. Apply geospatial technology data collection and processing to research.

Audience: Graduate

GEOG 399 – INDEPENDENT STUDY
1-3 credits.

Study under direct guidance of a faculty member. Appropriate for initial exploration of an area of scholarship in Geography through laboratory, field, or literary study.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No

GEOG/AMER IND 410 – CRITICAL INDIGENOUS ECOLOGICAL KNOWLEDGES
3 credits.

Critical Indigenous Ecological Knowledges are a set of diverse understandings, responsibilities, and laws held by distinct groups of Indigenous peoples that are enacted in multiple ways across socio-political and geographical contexts. These knowledges intersect with Indigenous political sovereignties and longstanding, complex, and nuanced relationships to the more-than-human world. Learn multiple entry points to exploring and examining these knowledge sets in the context of what's for now called the U.S. and Canada to think critically about the politics of Nature, environmentalism, race, indigeneity, and colonialism both historically and in the contemporary moment. Reflect upon how critical Indigenous knowledges about ecology, environment, and government have been erased, co-opted, criminalized, and also continually practiced, reimagined, and revitalized in multiple spheres through a range of interdisciplinary, critical, and cutting-edge Native scholarships and writings.
Requisites: Junior standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Gain understandings of the diversity of Ecological Thought among Native peoples across the U.S. and Canada.
Audience: Both Grad & Undergrad

2. Gain understanding of the intersections between Critical Indigenous Ecological Knowledges and Indigenous Sovereignty.
Audience: Both Grad & Undergrad

3. Identify forces of colonialism that have negatively shaped access to and continuation of Ecological Knowledges in Native communities both historically and in ongoing forms.
Audience: Both Grad & Undergrad

4. Identify and gain understanding of the ongoing practices of Indigenous Ecological Knowledges that have persisted against colonialism.
Audience: Both Grad & Undergrad

5. Identify and gain understanding of practices of revitalization that Native peoples practice to reestablish and reimagine relationships with their knowledges, languages, and lands
Audience: Both Grad & Undergrad

6. Engage and demonstrate knowledge with the latest and most cutting edge literature in the discipline of Native American and Indigenous Studies.
Audience: Graduate

7. Gain an ability to analyze and synthesize the political, philosophical, and analytical import of Native American and Indigenous Studies, especially in the context relating to Critical Indigenous Ecological Knowledges.
Audience: Graduate

GEOG/GEOSCI 420 – GLACIAL AND PLEISTOCENE GEOLOGY
3 credits.

Principles, characteristics and work of glaciers; events of the Pleistocene. Field trip.
Requisites: GEOSCI/ENVIR ST 106, GEOSCI 100, 109, ENVIR ST/GEOG 120, 127, or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

GEOG/C&E SOC/ENVIR ST 434 – PEOPLE, WILDLIFE AND LANDSCAPES
3 credits.

Explores the relationship between humans and wildlife amid diverse landscapes, both historic and contemporary, tropical and temperate. Investigates how humans shape wild animal populations by modifying physical environments, and by hunting, domesticating and introducing species.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

GEOG/ENVIR ST 439 – US ENVIRONMENTAL POLICY AND REGULATION
3-4 credits.

Covers a broad cross-section of American environmental policy by focusing on specific statutes and policy arenas. Surveys the basic elements of American environmental policy and regulation with a particular focus on the specific people, sites and scales at which environmental decision-making happens through primary-source case material. Maintains a dual focus on (a) the legal and regulatory aspects of environmental regulation and (b) the specific geographic and social features of actual cases in which regulations and policy are used. Understanding environmental outcomes in a complex society depends on observing both the structure of regulations and the geographic and social context in which such regulations emerge.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. dentify the spectrum of major U.S. environmental regulations, including the Clean Water Act, the Clean Air Act, the Endangered Species Act, CERCLA, and regulations involving environmental justice, climate change, and market environmentalism.
Audience: Both Grad & Undergrad

2. Discuss the specialized language of environmental policy and regulation.
Audience: Both Grad & Undergrad

3. Identify, through current case material, how these policies manifest in our daily interactions with the environment and government.
Audience: Both Grad & Undergrad

4. Describe the social and environmental background to each policy debate using critical and geographic viewpoints often adopted by social scientists.
Audience: Both Grad & Undergrad

5. Write long-form reports synthesizing regulatory issues with reportage on a major environmental policy issue.
Audience: Graduate

GEOG/ENVIR ST/HISTORY 460 — AMERICAN ENVIRONMENTAL HISTORY
4 credits.

Survey of interactions among people and natural environments from before European colonization to present. Equal attention to problems of ecological change, human ideas, and uses of nature and history of conservation and environmental public policy.
Requisites: Sophomore standing or 3 credits in HISTORY, GEOG or ENVIR ST
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

GEOG 475 — TOPICS IN GEOGRAPHY
1-4 credits.

Explores emerging topics in Geography.
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

GEOG 500 — QUALITATIVE STRATEGIES IN GEOGRAPHY
3 credits.

Surveys qualitative research and methods in geography, including the human subjects review process, research ethics, preparing for fieldwork, participant observation, interviewing, focus groups, filmic experiences, archival research, participatory action research, analyzing field materials and writing styles in qualitative research.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Implement different qualitative methods in research.
Audience: Both Grad & Undergrad

2. Identify different options for doing qualitative research.
Audience: Both Grad & Undergrad

3. Discuss what methods are appropriate for different circumstances and how to do research using these qualitative methods.
Audience: Both Grad & Undergrad

4. Identify best practices in qualitative research.
Audience: Graduate

GEOG 501 — SPACE AND PLACE: A GEOGRAPHY OF EXPERIENCE
3 credits.

Explore the concepts of space and place from the perspective of learning and everyday experience. Examines how space and place emerge out of fundamental human needs, experiences, and ways of thinking.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022

GEOG/URB R PL 503 — RESEARCHING THE CITY: QUALITATIVE STRATEGIES
3 credits.

Explores, and applies, qualitative methods in the field of urban geography. An introduction to debates around the analysis and interpretation of qualitative data is provided, grounded in concrete urban research. Participation in a three-day field course is required.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2020

GEOG/GEN&WS 504 – FEMINIST GEOGRAPHY: THEORETICAL APPROACHES
3 credits.

Provides an opening to some of the key debates and practices in feminist (political) geography. Feminist geography focuses on questions of power, difference, embodiment, and social change. How are feminist geographies in conversation with or part of other fields of inquiry, such as critical ethnic studies and Indigenous studies, which also focus on questions of difference, epistemologies of knowledge, and social transformation and/or decolonization? That is, what are the relationships of feminist geographic inquiry to liberatory projects of ending racism, capitalism, settler colonialism, and heteropatriarchy. Explore how feminist theories and approaches in geography transformed prevailing political geographic questions and concerns, such as power, politics, territory, boundaries, sovereignty, and violence. What do feminist principles and debates over feminist politics and methods bring to (political) geography?
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Describe the major trajectories of feminist perspectives in (political) geography.
Audience: Both Grad & Undergrad

2. Gain the ability to discuss some of the relationships between feminist geography and broader feminist inquiry and politics.
Audience: Both Grad & Undergrad

3. Gain the ability to develop feminist questions for research and/or action relevant to your project.
Audience: Both Grad & Undergrad

4. Explain the relevance of feminist theory, methods, and/or practice to your project.
Audience: Both Grad & Undergrad

5. Explore how issues of difference and positionality inform your project and study of geography.
Audience: Both Grad & Undergrad

6. Articulate key debates over feminist (geographic) theory for your field and directions these debates suggest for your thesis or dissertation research.
Audience: Graduate

GEOG/URB R PL 505 – URBAN SPATIAL PATTERNS AND THEORIES
3 credits.

Various urban empirical regularities and theories which explain them.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

GEOG 507 – WASTE GEOGRAPHIES: POLITICS, PEOPLE, AND INFRASTRUCTURES
3 credits.

Explores waste as discarded material, a polluting and threatening substance that must be managed, and as a political object. Waste's distribution across space and among groups of people, as well as the reasons for the effects of that distribution, will be examined using geographic perspectives. Who has the ability to avoid or remove themselves from waste? Who must live and work with it? The concept of infrastructure as a set of material things (roads, trucks, boats); laws and regulations; labor relations; and economies of disposal and consumption determining waste flows unites disparate topics and case studies across the semester. Concepts of and social movements for environmental justice are recurring themes.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Define waste as a political object and contrast this definition to popular, technical, and/or managerial definitions.
Audience: Both Grad & Undergrad

2. Apply new social-science definitions of infrastructure to waste geographies.
Audience: Both Grad & Undergrad

3. Appraise their own role(s) in various waste geographies and describe waste's ubiquity.
Audience: Both Grad & Undergrad

4. Explain the factors that produce uneven waste geographies, including the roles class, gender, and race play in personal and professional proximity to and distance from wastes of all kinds.
Audience: Both Grad & Undergrad

5. Make connections between, on the one hand, how problems having to do with waste are defined and, on the other hand, proposed solutions to 'the waste problem'.
Audience: Both Grad & Undergrad

6. Apply the lessons garnered from waste geographies to their research and disciplinary specialties.
Audience: Graduate

7. Synthesize major course concepts to frame novel and innovative research questions about waste geographies.
Audience: Graduate

8. Communicate complex conceptual arguments clearly and relate them to case studies.
Audience: Graduate

9. Explain the social, economic, and/or environmental dimensions of the sustainability challenge(s) of waste and waste management.
Audience: Both Grad & Undergrad

10. Describe the social, economic, and environmental dimensions of recycling and other waste reduction/management strategies and identify potential trade-offs and interrelationships among these dimensions at a level appropriate to the course.
Audience: Both Grad & Undergrad

GEOG 510 – ECONOMIC GEOGRAPHY
4 credits.

Theoretical aspects of spatial economic distributions and locational analysis.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the logics underpinning economic growth. (
Audience: Both Grad & Undergrad

2. Explain the main critiques that have been made of economic growth.
Audience: Both Grad & Undergrad

3. Evaluate alternatives to economic growth that have emerged.
Audience: Both Grad & Undergrad

4. Examine degrowth experiments in different contexts.
Audience: Both Grad & Undergrad

5. Apply these insights to your own life and community.
Audience: Both Grad & Undergrad

6. Place these debates within the wider economic geography literature.
Audience: Graduate

GEOG 511 – CRITICAL SOCIAL THEORY
3 credits.

An introduction to many key movements and thinkers within Critical Social Theory. Explores the changing histories and presents of the field through a range of primary works from philosophy, critical theory, and geography - paying particular attention to the points where social theory intersects with problems of space and place. Covers classic problems in social theory ranging from theories of the political-economic constitution of the social (Marxism) and its extensions into the culture (the Frankfurt School) to a range of mid- to late-twentieth-century epistemological interventions framed around questions of difference and identity. Recent contestations and reformulations that have surfaced across ontological, decolonial, non-human, algorithmic, and other reimaginings and extensions of the social are examined.
Requisites: Junior standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Describe the history of and key perspectives in Critical Social Theory.
Audience: Undergraduate

2. Read and research theoretical scholarship.
Audience: Undergraduate

3. Identify effective strategies for developing and conducting theory-driven research.
Audience: Undergraduate

4. Explain approaches to researching socio-spatial topics.
Audience: Undergraduate

5. Write and edit academic theoretical research.
Audience: Undergraduate

6. Describe the nuances of the key debates in Critical Social Theory.
Audience: Graduate

7. Identify the key issues in recent socio-spatial theory and the implications for, refractions through, and/or reactions by broader contemporary intellectual movements.
Audience: Graduate

8. Design and complete theoretical/critical scholarship.
Audience: Graduate

9. Guide classroom discussions.
Audience: Graduate

10. Develop a personalized set of approaches to mediating challenging geographical, critical and theoretical concepts for a broad range of learners.
Audience: Graduate

GEOG 513 – QUEER GEOGRAPHIES
3 credits.

Explores several key events, sites, thinkers, and texts that contribute to the social, personal, and intellectual landscapes of Queer Geographies. An invitation to survey and reflect on queer critical strategies that sample, record, and remix constellations of relationships between theory, space, sexuality, gender, and identity. It foregrounds modes of queer spacing and placemaking in academic and popular works devoted to queer lives, studies, sexualities, narratives, publics and privates, joys and griefs, art, theory, and beyond. Offers a range of strategies for reading, interpreting, and developing nuanced scholarly interventions and theories. Question and reimagine normative notions of the personal, the social, and the socio-spatial.
Requisites: Junior standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Describe the history of and key perspectives and debates in Queer Studies and Queer Theory.
Audience: Both Grad & Undergrad

2. Read and research theoretical scholarship.
Audience: Undergraduate

3. Describe strategies for developing and conducting theory-driven research.
Audience: Undergraduate

4. Identify approaches to researching socio-spatial topics.
Audience: Undergraduate

5. Compose and edit academic theoretical/critical scholarship.
Audience: Both Grad & Undergrad

6. Recall the key issues in recent socio-spatial theory and the implications for, refractions through, and/or reactions by broader contemporary intellectual movements.
Audience: Graduate

7. Identify pedagogical strategies for guiding classroom discussions.
Audience: Graduate

8. Develop a personalized set of approaches to mediating challenging geographical, critical, and theoretical concepts for a broad range of learners.
Audience: Graduate

GEOG/GEN&WS 514 – FEMINIST GEOGRAPHY: METHODOLOGICAL APPROACHES
3 credits.

An introduction to foundational approaches to feminist qualitative research in human geography. Research is not separate from a social world that historically has been and continues to be shaped by (settler) colonial, racialized, gendered, sexualized, and class-inflected relations of power (among others). Research practices and "findings" have been and continue to be used to inform and rationalize relations of oppression, exploitation, and violence. For feminist researchers, then, questions of power, difference, and social change are central to how we design and conduct research. Engages in political-ethical discussions about the positionality and responsibilities of ourselves as researchers, and how our knowledge production can reproduce and challenge prevailing relations of power.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Discuss the interplay between epistemology and methodology.
Audience: Undergraduate

2. Explain clearly how their epistemological positions inform their methodological decisions.
Audience: Graduate

3. Discuss the political dynamics shaping knowledge production, and how feminist, decolonial, and anti-racist projects have reshaped these dynamics.
Audience: Both Grad & Undergrad

4. Discuss the historical constructions of 'the field,' and how feminist critiques and research practices challenge expectations regarding field work experiences.
Audience: Both Grad & Undergrad

5. Discuss how feminist research ethics extend researchers' ethical obligations of beneficence, respect for research subjects, and justice (Belmont Report).
Audience: Both Grad & Undergrad

6. Evaluate the virtues, dilemmas, and limitations of common qualitative methods.
Audience: Both Grad & Undergrad

7. Develop a compelling rationalization for research questions and methodologies (design) for your qualitative project.
Audience: Undergraduate

8. Articulate how feminist principles influence your research questions and methodologies.
Audience: Graduate

9. Explain how social positionality shapes the research process, and develop a practice of self-reflexivity.
Audience: Both Grad & Undergrad

GEOG 515 – TRANS AUTOTHEORIES
3 credits.

Offers an in-depth examination of trans lives, selves, and ways of knowing. Focuses on the trans "I" as it appears in autobiography, memoir, theory, performance, visual arts, music, spacing, place making, zines, and vlogs. These works ask how styles of self-making ("auto") might lead to new and changing conceptions of trans lives, worlds, and social formations ("theory"). The trans artists and writers explored fashion selves into prisms to fracture, negotiate, meditate upon, think, and re/present the encounters, becomings, transitions, and enframings that constitute trans existence. This "auto-theoretical" strategy reimagines genre, style, space, and media to create launching points for new trans aesthetics, theories, joys, and struggles. The polyphonic voices of these trans selves, taken together, bring a trans "we" into view, creating a discursive trans space made material.
Requisites: Junior standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Explain the history of and critical perspectives in Trans Studies/Theory.
Audience: Undergraduate

2. Read and research theoretical scholarship.
Audience: Undergraduate

3. Identify practical strategies for developing and conducting theory-driven research.
Audience: Undergraduate

4. Describe approaches to researching socio-spatial topics.
Audience: Undergraduate

5. Demonstrate the basics of writing and editing academic theoretical research.
Audience: Undergraduate

6. Recall the key debates in Trans Studies/Theory.
Audience: Graduate

7. Identify critical issues in recent socio-spatial theory and the implications for, refractions through, and/or reactions by broader contemporary intellectual movements.
Audience: Graduate

8. Design and complete theoretical, critical scholarship.
Audience: Graduate

9. Describe pedagogical strategies for guiding classroom discussions.
Audience: Graduate

10. Develop personalized set of approaches to mediating challenging geographical, critical, and theoretical concepts for a broad range of learners.
Audience: Graduate

GEOG 518 – POWER, PLACE, IDENTITY
3 credits.

Advanced political geography course that explores reconceptualizations of power, place, and identity, as well as the interactive forces at work that continually reshape place-making and the inter-related processes of identification and differentiation.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Analyze current conceptualizations of power, place, identity, and difference, particularly those from geographers.
Audience: Both Grad & Undergrad

2. Evaluate major trends, themes, and approaches that have emerged in the field of political geography, especially as they are related to geographies of identification and differentiation.
Audience: Both Grad & Undergrad

3. Employ a performative approach in understanding processes of place-making, bordering, and identification/differentiation.
Audience: Both Grad & Undergrad

4. Identify theoretical debates in the political geography literature.
Audience: Both Grad & Undergrad

5. Discuss major themes and approaches related to questions of power, place, identity, difference, and nationalism.
Audience: Both Grad & Undergrad

6. Identify research questions related to course themes in ways that are responsive to major debates in the literature.
Audience: Graduate

GEOG 523 – ADVANCED PALEOECOLOGY: SPECIES RESPONSES TO PAST ENVIRONMENTAL CHANGE
3 credits.

Geographic and temporal responses of plant species and terrestrial ecosystems to the major environmental changes of the last 1,000,000 to 1,000 years, particularly glacial-interglacial changes in climate, carbon dioxide, and the end-Pleistocene extinctions of large animals. Key concepts include novel and no-analog ecosystems, abrupt climate and ecological change, and megaherbivore-vegetation interactions. This time period is of direct interest to global change ecologists and biogeographers studying species responses to 21st-century climate change. Hands-on practice emphasizes multivariate data analysis and quantitative paleoecological inference.
Requisites: Junior standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022
Learning Outcomes: 1. Critically evaluate the primary literature.
Audience: Both Grad & Undergrad

2. Describe the fundamental processes governing species responses to past and present climate change.
Audience: Both Grad & Undergrad

3. Obtain and analyze paleoecological data using multivariate methods.
Audience: Both Grad & Undergrad

4. Critically analyze the readings in light of prior knowledge gained in other advanced courses.
Audience: Graduate

5. Conduct new analyses by applying these methods to new data and questions.
Audience: Graduate

GEOG/SOIL SCI 525 – SOIL GEOMORPHOLOGY
3 credits.

Soil development as related to landscape throughout the Quaternary; focusing on the relationship of soils to climate and vegetation, landscape evolution, and time; principles of soil stratigraphy; case histories of soil geomorphic studies; field trips. Students should have completed one course in geomorphology to feel comfortable with the course content.
Requisites: SOIL SCI 325 or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify key concepts and research efforts that link soils and landscape evolution.
Audience: Both Grad & Undergrad

2. Analyze models of soil formation in the context of geomorphology, and determine which model(s) may be applicable to problems you are interested in.
Audience: Both Grad & Undergrad

3. Utilize important quantitative methods and research tools used in soil geomorphology, many of which are more broadly applicable in geomorphology, soils, and critical zone research.
Audience: Both Grad & Undergrad

4. Review the literature and propose new research on a topic of soil geomorphology.
Audience: Graduate

GEOG/SOIL SCI 526 – HUMAN TRANSFORMATIONS OF EARTH SURFACE PROCESSES
3 credits.

Takes an earth systems approach to explore the role of human societies in shaping earth surface processes from local to global scales. We address how alterations to our landscapes and waterways affect biological, physical and chemical interactions among our biosphere, geosphere, hydrosphere and atmosphere. We discuss methods used to distinguish the "human impact" from background variability.
Requisites: Junior standing or ENVIR ST/GEOG 120
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Synthesize how major global biogeochemical cycles and earth surface processes are influenced by human activities.
Audience: Both Grad & Undergrad

2. Identify positive and negative feedbacks among the biosphere, geosphere, and atmosphere at different spatial and temporal scales.
Audience: Both Grad & Undergrad

3. Explain how different methods are used to characterize and quantify human effects on the earth system.
Audience: Both Grad & Undergrad

4. Describe how legacies of colonialism affect historical and current biases in the practice and application of earth system science.
Audience: Both Grad & Undergrad

5. Interpret research findings in peer-reviewed literature.
Audience: Both Grad & Undergrad

6. Summarize research for different audiences.
Audience: Both Grad & Undergrad

7. Identify methods to answer specific research questions and write a research proposal.
Audience: Graduate

GEOG/ENVIR ST/LAND ARC/URB R PL 532 – APPLICATIONS OF GEOGRAPHIC INFORMATION SYSTEMS IN PLANNING
3 credits.

Explores planning-related Geographic Information System (GIS) data, applications, analytical tools, and implementation issues.
Requisites: GEOG/CIV ENGR/ENVIR ST 377 or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Identify how planning agencies use GIS.
Audience: Both Grad & Undergrad

2. Explain the nature, characteristics, and possible ways of analyzing spatial data in a planning context.
Audience: Both Grad & Undergrad

3. Communicate geospatial data and analyses effectively.
Audience: Both Grad & Undergrad

4. Obtain and analyze geospatial data using a range of spatial analysis tools for a number of planning practices.
Audience: Both Grad & Undergrad

5. Conduct site-selection and land-suitability analysis.
Audience: Both Grad & Undergrad

6. Identify ethical issues surrounding access to and use of geospatial data.

Audience: Both Grad & Undergrad

7. Analyze and provide written feedback on undergraduate student presentations.
Audience: Graduate

8. Produce a memo on land-suitability analysis.
Audience: Graduate

GEOG/ENVIR ST 534 – ENVIRONMENTAL GOVERNANCE: MARKETS, STATES AND NATURE
3 credits.

Covers real-world questions of how the environment is managed and governed through state policy, economics, and social institutions. Includes strategies within and outside of the formal institutions of government, and extends the discussion to the commodification of nature and the use of science to understand and govern the environment. Also includes case studies of environmental governance in water, carbon, species, and urban sustainability.
Requisites: Sophomore standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Explain the concepts of governance and the tools for its analysis.
Audience: Both Grad & Undergrad

2. Identify the tools, concepts, and controversies associated with market-based environmental governance and its origins in debates over the past century.
Audience: Both Grad & Undergrad

3. Discuss the variety of traditions in understanding the relationship between states, civil society, and the environment.
Audience: Both Grad & Undergrad

4. Describe and articulate connections and common themes in environmental governance as they are expressed in a variety of settings such as economic globalization, urban planning, water resource development, conservation, and climate change.
Audience: Both Grad & Undergrad

5. Discuss the scholarly literature around environmental governance, state theory, and neoliberalism.
Audience: Graduate

GEOG/ENVIR ST 537 — CULTURE AND ENVIRONMENT
4 credits.

Geographic approaches to culture-nature relationships, including human perception of, use of, and adaptation to the physical environment, with emphasis on traditional subsistence systems; selected topics from contemporary and historical sources.
Requisites: GEOG 359, ENVIR ST/GEOG 337, 339, 439, AMER IND/ENVIR ST/GEOG 345, or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop a cross-cultural perspective about environment-society relations.
Audience: Both Grad & Undergrad

2. Explain how certain conceptual frameworks for understanding culture-environmental relations developed in the social sciences and how these have affected conservation and development practice around the world.
Audience: Both Grad & Undergrad

3. Discuss the strengths and limitations of these frameworks for understanding the effect of human activities on the environment or in turn the effect of environmental change on human societies.
Audience: Both Grad & Undergrad

4. Identify the appropriate frameworks for analyzing particular culture-environment contexts and in so doing, be better placed to develop more effective conservation or development initiatives.
Audience: Both Grad & Undergrad

5. Apply an understanding of the strengths and weaknesses of different conceptual frameworks to develop a conceptual framing suitable for graduate research.
Audience: Graduate

GEOG 538 — THE HUMID TROPICS: ECOLOGY, SUBSISTENCE, AND DEVELOPMENT
4 credits.

Description and analysis of humid-tropical ecosystems, with emphasis on the relationships, production potential, and human modification of biotic resources.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022

GEOG/ENVIR ST 557 — DEVELOPMENT AND ENVIRONMENT IN SOUTHEAST ASIA
3 credits.

Examines the political, socio-cultural, economic and ecological aspects of contemporary development and human-environment relations in mainland Southeast Asia, applying a critical and theoretically informed perspective, and focusing largely on rural issues.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Describe key elements that link development and environmental issues in Southeast Asia.
Audience: Both Grad & Undergrad

2. Explain the social, economic, and/or environmental dimensions of the sustainability challenges regarding a range of important policy issues with environmental and sustainability implications.
Audience: Both Grad & Undergrad

3. Apply sustainability principles and/or frameworks to addressing the challenges associated with a range of development issues that have environmental implications.
Audience: Both Grad & Undergrad

4. Analyze the causes of and solutions for sustainability challenges of various development policy decisions.
Audience: Both Grad & Undergrad

5. Apply knowledge of development and environmental issues in Southeast Asia when conducting research.
Audience: Graduate

GEOG 560 – ADVANCED QUANTITATIVE METHODS
3 credits.

Selected topics in the analysis of spatial distributions with emphasis on multivariate techniques.
Requisites: Junior standing or GEOG 360
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss statistical concepts, methods, and techniques.
Audience: Both Grad & Undergrad

2. Conduct various staining analyses on geographic data.
Audience: Both Grad & Undergrad

3. Use R script programming for spatiotemporal statistical analysis.
Audience: Both Grad & Undergrad

4. Solve practical problems using statistics and spatiotemporal analysis methods.
Audience: Both Grad & Undergrad

5. Discuss the latest literature about the newly developed R scripts for geospatial data analysis.
Audience: Graduate

GEOG 565 – COLLOQUIUM FOR UNDERGRADUATE MAJORS
3 credits.

Orientation to geography as a scholarly discipline; its development, objectives, essential concepts, methods of investigation, institutions, opportunities, problems, and trends.
Requisites: Declared in Geography or Cartography and Geographic Information Systems undergraduate programs
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Conceptualize and implement an original research project.
Audience: Undergraduate

2. Collect and analyze primary data.
Audience: Undergraduate

3. Describe the breadth of geographic phenomena and arguments.
Audience: Undergraduate

4. Assess geographic explanations.
Audience: Undergraduate

5. Integrate knowledge across disciplines to develop novel perspectives.
Audience: Undergraduate

6. Present geographic arguments in written, oral, and visual formats.
Audience: Undergraduate

GEOG 566 – HISTORY OF GEOGRAPHIC THOUGHT
3 credits.

An analysis of the development and significance of basic geographic concepts and theories. Major emphasis on concepts of place, spatial relations, landscape, and human-environment relations.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2020

GEOG 572 – GRAPHIC DESIGN IN CARTOGRAPHY
3-4 credits.

Study of the map as a graphic communication, the technical and perceptual aspects of its organization, symbolic coding, color and lettering.
Requisites: GEOG 370 or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain how maps work by justifying design decisions.
Audience: Both Grad & Undergrad

2. Design maps while applying principles of visual storytelling genres and tropes; bivariate and multivariate mapping; visual layout and balance; terrain representation; time representation; iconic map symbol design; and aesthetics and style.
Audience: Both Grad & Undergrad

3. Execute original map designs for the web from conceptualization to delivery while estimating and managing the time needed for an open-ended design project.
Audience: Both Grad & Undergrad

4. Acquire and prepare geographic datasets.
Audience: Both Grad & Undergrad

5. Follow and deviate from a cartographic workflow using contemporary cartography and GIS software.
Audience: Both Grad & Undergrad

6. Discuss cartographic design within its broader historical and social contexts.
Audience: Both Grad & Undergrad

7. Provide constructive feedback for peers and self during the process of design
Audience: Both Grad & Undergrad

8. Place design principles within the contemporary cartographic literature.

Audience: Graduate

GEOG 573 – ADVANCED GEOCOMPUTING AND GEOSPATIAL BIG DATA ANALYTICS
4 credits.

Geospatial big data is an extension of big data with an emphasis on the geospatial component. It is used to describe large volumes of georeferenced data about various aspects of the environment and society captured by millions of environmental and human sensors. An introduction to the theory, techniques, and analytical methods for geospatial big data. Methods for storing, processing, analyzing, and visualizing various types of geospatial big data using advanced Python programming will be introduced. Designed for students who have programming experience and want to reinforce their programming skills and learn AI and machine learning methods for solving geospatial big data problems.
Requisites: GEOG 378, COMP SCI 220, or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Summarize the fundamental concepts of geospatial big data.
Audience: Both Grad & Undergrad

2. Describe how to develop computational models and analytical methods for geospatial big data.
Audience: Both Grad & Undergrad

3. Identify the challenges in storing, managing, processing, analyzing, visualizing, and verifying the quality of data.
Audience: Both Grad & Undergrad

4. Recall the major high-performance platforms for big data processing.
Audience: Both Grad & Undergrad

5. Use Python programming for (spatiotemporal) data analysis and machine-learning tasks.
Audience: Both Grad & Undergrad

6. Collaborate in teams and complete tasks under time pressure.
Audience: Both Grad & Undergrad

7. Lead efforts on teamwork and geospatial problem solving skill development.
Audience: Graduate

8. Demonstrate higher-order synthesis and spatial analysis skills in spatial data science.
Audience: Graduate

GEOG 574 – GEOSPATIAL DATABASE DESIGN AND DEVELOPMENT
4 credits.

Introduces the basic concepts, techniques and methodologies for designing and implementing a spatial database to prepare for professional work as a GIS designer, analyst, specialist or researcher. Design conceptual spatial database models and implement them within specific spatial data management systems (DBMS). Covers basic SQL database language and the latest developments in database systems (e.g. NoSQL database) for managing and mining spatial big data such as social media datasets and GPS trajectories.
Requisites: GEOG 170, GEOG 370, ENVIR ST/CIV ENGR/GEOG 377 or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe database design and implementation in GIS.
Audience: Both Grad & Undergrad

2. Utilize open-source database software to create, manipulate, and manage spatial relational databases.
Audience: Both Grad & Undergrad

3. Perform spatial queries and operations to analyze and manage geospatial data within a spatial database environment.
Audience: Both Grad & Undergrad

4. Use spatial databases for big data management.
Audience: Both Grad & Undergrad

5. Design and develop a spatial database and program to solve specific geographic information problems.
Audience: Both Grad & Undergrad

6. Describe the concept of spatial indexing and its significance in optimizing spatial data retrieval.
Audience: Both Grad & Undergrad

7. Design, develop, and implement spatial database solutions to address real-world geographic information problems .
Audience: Both Grad & Undergrad

8. Integrate spatial databases with programming languages to develop data-driven geospatial applications.
Audience: Graduate

GEOG 575 – INTERACTIVE CARTOGRAPHY & GEOVISUALIZATION
4 credits.

Examines emerging topics related to the design of user interfaces for manipulating maps, focusing on new cartographic challenges in Interactive Cartography, Geographic Visualization, and Geovisual Analytics and drawing upon relevant insight in Human-Computer Interaction, Information Visualization, and Usability Engineering.
Requisites: GEOG 370, 378, or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Design interactive maps by applying the principles of user experience and user interface design; interface complexity, constraint, flexibility, and freedom; user- and technology-based constraints on UI/UX design; interaction operators; non-map visualization techniques; direct and indirect map-based interface styles; coordinated big data visualization and interactive highlighting techniques.
Audience: Both Grad & Undergrad

2. Develop interactive maps that follow and deviate from a cartographic workflow using relevant coding languages.
Audience: Both Grad & Undergrad

3. Plan and execute a user-centered design process from needs assessment to transition
Audience: Both Grad & Undergrad

4. Acquire and prepare geographic datasets.
Audience: Both Grad & Undergrad

5. Design within user-defined and technology-defined functional constraints while evaluating and improving prototypes and application releases
Audience: Both Grad & Undergrad

6. Use online collaboration tools in small groups
Audience: Both Grad & Undergrad

7. Construct spatiotemporal and multivariate visualizations using contemporary cartographic software.
Audience: Both Grad & Undergrad

8. Place design principles within the contemporary cartographic literature.

Audience: Graduate

GEOG 576 – GEOSPATIAL WEB AND MOBILE PROGRAMMING
4 credits.

Covers the programming concepts and skills for understanding construction and implementation of high quality spatial web portal and mobile Apps to support geospatial data access, analysis, sharing, and synthesis over the internet. Builds on basic programming experience.
Requisites: (GEOG 170, GEOG 370, or CIV ENGR/ENVIR ST/ GEOG 377) and (GEOG 378, COMP SCI 300, COMP SCI 369, or COMP SCI 400), or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop web programs for geospatial data mapping and visualization.
Audience: Both Grad & Undergrad

2. Use GIS programming and mapping toolkits.
Audience: Both Grad & Undergrad

3. Determine, track, and record a mobile device's current location.
Audience: Both Grad & Undergrad

4. Design and develop mobile apps to retrieve, manipulate, and visualize geospatial datasets.
Audience: Both Grad & Undergrad

5. Judge the design and implementation of a web/mobile system for different geospatial applications.
Audience: Graduate

GEOG 578 – GIS APPLICATIONS
4 credits.

Application and use of GIS techniques in physical and human geography. Includes an introduction to a generic framework of GIS applications, case studies, and student projects. Cases range from urban and regional geography, to marketing geography, and to physical and environmental geography.
Requisites: GEOG/CIV ENGR/ENVIR ST 377 or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Conceptualize and implement a GIS project from start to finish within a team environment.
Audience: Undergraduate

2. Identify, formulate, and solve geographic problems using appropriate information analytical approaches.
Audience: Undergraduate

3. Communicate effectively through written reports, oral presentations, and discussion.
Audience: Undergraduate

4. Prepare and present effective, informative, and persuasive arguments utilizing GIS.
Audience: Undergraduate

GEOG 579 – GIS AND SPATIAL ANALYSIS
4 credits.

Principles and algorithms for spatial analysis in geographic imformation systems. A theoretical and practical examination of analytical methods used in GIS, including point, line and polygon processing, interpolation, smoothing, spatial overlay and query, network analysis, terrain analysis, and classification.
Requisites: GEOG/CIV ENGR/ENVIR ST 377 or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the limitations of common spatial data analytical techniques.
Audience: Both Grad & Undergrad

2. Determine the usefulness of common spatial data analysis techniques.
Audience: Both Grad & Undergrad

3. Select and apply these techniques in respective applications.
Audience: Both Grad & Undergrad

4. Investigate the limitations of emerging spatial data analytical techniques to avoid misuse or abuse of these techniques.
Audience: Both Grad & Undergrad

5. Make connections to one's own research areas either as the basis for technological improvements or as effective applications of these technologies.
Audience: Graduate

GEOG 675 – SPECIAL TOPICS IN GEOGRAPHY
3 credits.

Explores emerging topics in human and people-environment geography.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022

GEOG 681 – SENIOR HONORS THESIS
2-3 credits.

Individual mentored study for seniors completing theses for Honors in the Major as arranged with a faculty member
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025

GEOG 682 – SENIOR HONORS THESIS
2-3 credits.

Individual mentored study for seniors completing theses for Honors in the Major as arranged with a faculty member
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2025

GEOG 691 – SENIOR THESIS
2-3 credits.

Individual mentored study for seniors completing theses as arranged with a faculty member
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

GEOG 692 – SENIOR THESIS
2-3 credits.

Individual mentored study for seniors completing theses as arranged with a faculty member
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2022

GEOG 698 – DIRECTED STUDY
1-3 credits.

Independent study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2020

GEOG 699 – DIRECTED STUDY
1-3 credits.

Independent study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

GEOG 765 – GEOGRAPHICAL INQUIRY AND ANALYSIS: AN INTRODUCTION
1 credit.

Geographic perspectives and analyses: history of the discipline, issues and research frontiers, interests and perspectives of Madison faculty, structure of graduate study in the department, research facilities and opportunities.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

GEOG 766 – GEOGRAPHICAL INQUIRY AND ANALYSIS: TECHNIQUES
1-3 credits.

Engaging in geographic research: analysis of successful proposals and published papers and books; different approaches to geographic research; writing of proposals for students' own research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

GEOG 777 – CAPSTONE IN GIS DEVELOPMENT
4 credits.

Covers practical and challenging cases in GIS which require programming and other GIS development skills (such as geospatial algorithm development and implementation). Cases cover the wide spectrum of GIS development projects in the GIS professions ranging from GIS data management, advanced spatial analysis, spatial database development and web/mobile programming, to cartography/geovisualization. Focuses on integration of skills from other courses into a GIS development project.
Requisites: GEOG 378, 572, 574, 575, 576, 579 and graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

GEOG 778 – PRACTICUM IN GIS DEVELOPMENT
4 credits.

Develop the ability to conceive and manage a real-world GIS development project, and to design a plan for solving the project.
Requisites: GEOG 378, 572, 574, 575, 576, 579 and graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

GEOG 799 – INDEPENDENT READING
1-3 credits.

Independent study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2021

GEOG 900 – SEMINAR IN GEOGRAPHY
1-3 credits.

Surveys recent and classic works in geography.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2019

GEOG 901 – SEMINAR IN CULTURAL GEOGRAPHY
2-3 credits.

Surveys recent and classic works in cultural and human geography.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

GEOG 918 – SEMINAR IN POLITICAL GEOGRAPHY
2-3 credits.

Surveys recent and classic works in political geography.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

GEOG 920 – SEMINAR IN PHYSICAL GEOGRAPHY
1-3 credits.

Surveys recent and classic works in physical geography.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

GEOG 930 – SEMINAR IN PEOPLE-ENVIRONMENT GEOGRAPHY
2-3 credits.

Surveys recent and classic works in people-environment geography.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

GEOG/AGROECOL/ATM OCN/BOTANY/ENTOM/ENVIR ST/ F&W ECOL/ZOOLOGY 953 — INTRODUCTION TO ECOLOGY RESEARCH AT UW-MADISON
1-2 credits.

Introduction to diverse ecological research across the UW-Madison Campus. Discussions on adapting to graduate school and graduate-level ecological research, key topics in professional development, and research presentations by faculty members.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop an appreciation for the foundations and legacy of ecology research and conservation science at UW-Madison
Audience: Graduate

2. Recognize the diversity and strength of current research in ecology at UW-Madison
Audience: Graduate

3. Differentiate expectations between undergraduate education and those of independent research for graduate degrees in ecology
Audience: Graduate

4. Develop appropriate expectations for advisors and advisees
Audience: Graduate

5. Reason through hypothetical ethical challenges and identify potential solutions based on professional codes of ethics
Audience: Graduate

6. Develop an understanding of the suite of skills associated with success in graduate school and in science
Audience: Graduate

GEOG 970 — SEMINAR IN GEOGRAPHIC INFORMATION SCIENCE
1-3 credits.

Surveys recent and classic works in cartography and geographic information science.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

GEOG/ATM OCN/BOTANY/ENVIR ST/F&W ECOL/GEOSCI/ ZOOLOGY 980 — EARTH SYSTEM SCIENCE SEMINAR
1 credit.

Topics in earth system science. Emphasis on the coupling between atmospheric, oceanic and land surface systems, involving physical geochemical and biological processes, and including interactions with human systems.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

GEOG/A A E/ANTHRO/C&E SOC/HISTORY/LACIS/POLI SCI/ PORTUG/SOC/SPANISH 982 — INTERDEPARTMENTAL SEMINAR IN THE LATIN-AMERICAN AREA
1-3 credits.

Interdisciplinary inquiry in Latin American society and culture.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

GEOG/AFRICAN/ANTHRO/ECON/HISTORY/POLI SCI 983 – INTERDEPARTMENTAL SEMINAR IN AFRICAN STUDIES TOPICS
3 credits.

Interdisciplinary inquiry in African societies and cultures.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Develop in-depth knowledge in a sub-field of specialization within African studies
Audience: Graduate

2. Acquire and demonstrate understanding of major theories, approaches, concepts, currently informing African studies
Audience: Graduate

3. Understand your process of learning and possess the capacity to intentionally seek, evaluate, and learn from information, and to recognize and reduce bias in thinking.
Audience: Graduate

4. Gain firm knowledge of existing research in African studies
Audience: Graduate

5. Develop and improve speaking, readings, listening, and writing skills
Audience: Graduate

6. Write and speak across disciplinary boundaries
Audience: Graduate

7. Analyze texts from various theoretical and critical perspectives
Audience: Graduate

GEOG 990 – RESEARCH AND THESIS
1-9 credits.

Individual mentored study for completing theses, as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

GEOG 999 – INDEPENDENT WORK
1-3 credits.

Independent study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

GEOLOGICAL ENGINEERING (G L E)

G L E 1 – COOPERATIVE EDUCATION PROGRAM
1 credit.

Work experience which combines classroom theory with practical knowledge of operations to provide students with a background upon which to base a professional career in industry.
Requisites: Sophomore standing
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023
Learning Outcomes: 1. Identify and respond appropriately to real-life engineering ethics cases relevant to co-op work
Audience: Undergraduate

2. Synthesize and apply appropriate technical education to real world technical work
Audience: Undergraduate

3. Communicate effectively in writing and speaking with a range of audiences in the workplace, including those without disciplinary expertise
Audience: Undergraduate

4. Develop professional and transferable habits like time management skills, collaborative problem-solving skills, and research skills for learning new information
Audience: Undergraduate

G L E 171 – INTRODUCTION TO GEOLOGICAL ENGINEERING
1 credit.

Comprehensive introduction to engineering applications of earth sciences. Exploitation and management of geologic resources; mitigation of geologic hazards such as landslides and earthquakes; abatement of environmental problems such as land and water pollution; design of surface and underground excavations; principal methods of geological engineering.
Requisites: None
Repeatable for Credit: No
Last Taught: Spring 2022

G L E/CIV ENGR 291 – PROBLEM SOLVING USING COMPUTER TOOLS
4 credits.

Introduction to engineering computations with emphasis on computer tools and computer based measurement, data collection, and processing. Tools will include computer aided design, spreadsheets, other engineering computation tools, and hardware and software for laboratory and spatial measurements.
Requisites: MATH 222 or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use spreadsheet software to perform fundamental civil, environmental, and geological engineering calculations, analyze datasets using logical filters, and interpret numeric data meant to represent time and text values
Audience: Undergraduate

2. Use computer programming as a tool to streamline engineering data analysis tasks, create visualizations, obtain numerical approximations, and retrieve data from local and remote (web-based) data sources
Audience: Undergraduate

3. Use automatic levels, total stations, and aerial photography to conduct land surveying operations and collect the type of geospatial data required for creating drawings that support engineering design
Audience: Undergraduate

4. Explain how measuring devices (data acquisition systems and sensors) work, use measuring devices to record/monitor the physical properties of a system, and use sensor readings as the foundation to control devices in the physical world
Audience: Undergraduate

G L E/CIV ENGR 330 – SOIL MECHANICS
3 credits.

Basic principles of soil mechanics and fundamentals of application in engineering practice; soil composition and texture; classification; permeability and seepage; consolidation; settlement; shear strength; lateral earth pressures and retaining structures, shallow and deep foundations, slope stability; subsurface exploration; laboratory characterization of physical and engineering properties of soils.
Requisites: E M A 303 or M E 306, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the physicochemical characteristics of soils and their importance to the engineering behavior of soils.
Audience: Both Grad & Undergrad

2. Define the factors which control the physical, mechanical and hydraulic behavior of soils.
Audience: Both Grad & Undergrad

3. Run the laboratory tests used for the determination of physicochemical properties of soils, the engineering classification of soils, hydraulic properties, and the stiffness and shear strength properties.
Audience: Both Grad & Undergrad

4. Perform analyses in each area described in the course and understand the limitations to these analyses.
Audience: Both Grad & Undergrad

5. List basic problems in Soil Mechanics design and describe how these problems are tackled.
Audience: Both Grad & Undergrad

6. Experimentally assess the interaction of multiple parameters controlling the physical, mechanical and hydraulic behavior of soils; perform more advanced 2D or 3D analyses in one area described in the course and understand the limitations of these analyses; or summarize the state of the art in one research or engineering-applied area described in the course.
Audience: Graduate

G L E/GEOSCI 350 – INTRODUCTION TO GEOPHYSICS: THE DYNAMIC EARTH
3 credits.

Methods of geophysics applied to earth structure and plate tectonics. Principles of seismology, gravity, geodesy, magnetism and heat flow.
Requisites: MATH 217, 221, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

G L E/GEOSCI 360 — PRINCIPLES OF MINERALOGY
3 credits.

Minerals, their physical and chemical properties, crystallography, and geologic significance.
Requisites: (GEOSCI 100 or ENVIR ST/GEOSCI 106) and (CHEM 103, 109, 115, or concurrent enrollment), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

G L E/GEOSCI 370 — ELEMENTARY PETROLOGY
3 credits.

Igneous and metamorphic rocks, studied in hand sample and thin section.
Requisites: G L E/GEOSCI 360, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

G L E/ENVIR ST/F&W ECOL/GEOG/GEOSCI/LAND ARC 371 — INTRODUCTION TO ENVIRONMENTAL REMOTE SENSING
3 credits.

Introduction to the Earth as viewed from above, focusing on use of aerial photography and satellite imagery to study the environment. Includes physical processes of electromagnetic radiation, data types and sensing capabilities, methods for interpretation, analysis and mapping, and applications.
Requisites: (Sophomore standing and MATH 113, 114, or 171), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025

G L E 401 — SPECIAL TOPICS IN GEOLOGICAL ENGINEERING
1-3 credits.

Various topics in the field of geological engineering.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2024

G L E/CIV ENGR 421 — ENVIRONMENTAL SUSTAINABILITY ENGINEERING
3 credits.

Uses the three paradigms of sustainability (environmental, social, and economic) for strategic environmental initiatives in an engineering setting. Proactive environmental management opportunities, including practices of pollution prevention, industrial ecology, and design for the environment. A systems approach to manufacturing, examining the life cycle of products, incorporating total cost accounting, extended producer responsibility, and design for end-of-life.
Requisites: (MATH 217 or 221) and (CHEM 104 or 109), or graduate/professional standing or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Articulate why sustainability is important and relevant within the practice of engineering
Audience: Both Grad & Undergrad

2. Apply sustainability tools such as industrial ecology, life cycle assessment, economic assessment, material flow analysis, and criticality to inform engineering decisions
Audience: Both Grad & Undergrad

3. Analyze sustainability issues and/or practices using a systems-based approach
Audience: Both Grad & Undergrad

4. Describe the social, economic, and environmental dimensions of engineering and identify potential trade-offs and interrelationships among these dimensions at a level appropriate to the course
Audience: Both Grad & Undergrad

5. Identify and critique recent peer reviewed sustainability literature
Audience: Graduate

G L E/CIV ENGR 430 – INTRODUCTION TO SLOPE STABILITY AND EARTH RETENTION
1 credit.

Introduction to theory and approaches commonly used in geotechnical engineering practice for design and analysis of slopes and earth retaining structures.
Requisites: CIV ENGR/G L E 330, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Calculate the factor of safety of natural or engineered slopes
Audience: Both Grad & Undergrad

2. Design simple earth retaining structures
Audience: Both Grad & Undergrad

3. Perform additional design strategies to design complex slope or retaining structures
Audience: Graduate

4. Lead a team of undergraduate students for the final design project exercise
Audience: Graduate

G L E/GEOSCI 431 – SEDIMENTARY & STRATIGRAPHY LAB
1 credit.

Covers Sedimentology and Stratigraphy; emphasizes qualitative and quantitative description and interpretation of sediments and sedimentary deposits.
Requisites: GEOSCI 204 or G L E/GEOSCI 360, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

G L E/CIV ENGR 432 – INTRODUCTION TO SHALLOW AND DEEP FOUNDATION SYSTEMS
1 credit.

Introduction to theory and approaches commonly used in geotechnical engineering practice for design and analysis of slopes and earth retaining structures.
Requisites: CIV ENGR/G L E 330, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply methods and requirements of a subsurface investigation program
Audience: Both Grad & Undergrad

2. Collect sufficient information to design basic shallow or deep foundation systems
Audience: Both Grad & Undergrad

3. Fulfill the design criteria for different structures and facilities
Audience: Both Grad & Undergrad

4. Design shallow and deep foundation structures
Audience: Both Grad & Undergrad

5. Perform additional design strategies to design the foundation of a soil retaining structure
Audience: Graduate

G L E/CIV ENGR 434 – INTRODUCTION TO UNDERGROUND OPENINGS ENGINEERING
1 credit.

Subsurface stress; rock failure criteria; openings in competent rock; openings in layered rocks; plastic behavior around openings in weak rock; stereographic projections and stereonet; block theory; rock bolts; stabilization methods and design.
Requisites: CIV ENGR/G L E 330, GEOSCI/CIV ENGR/G L E/M S & E 474 or concurrent enrollment, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Predict stress concentrations around underground openings
Audience: Both Grad & Undergrad

2. Identify weak points around underground openings in conjunction with the rock mass type information
Audience: Both Grad & Undergrad

3. Design openings to minimize hazard
Audience: Both Grad & Undergrad

4. Design reinforcement strategies
Audience: Both Grad & Undergrad

5. Perform advanced design strategies
Audience: Graduate

G L E/CIV ENGR/ENVIR ST/GEOSCI 444 – PRACTICAL APPLICATIONS OF GPS SURVEYING
2 credits.

Global positioning system surveying for field applications. Signals. Coordinate systems. Datums. Cartographic projections. Satellite orbits. Choosing hardware. Strategies for data collection and analysis. Assessing uncertainty. Geocoding satellite images. Integrating data with Geographic Information Systems. Emerging technologies.
Requisites: MATH 211, 217, 221, or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

G L E/GEOSCI 455 – STRUCTURAL GEOLOGY
4 credits.

Principles of rock deformation, structures in layered rocks, structural analysis, intrusive structures. Lab: three-dimensional problems involving structural concepts; field trip.
Requisites: GEOSCI 202, 204, and (G L E/GEOSCI 370 or concurrent enrollment), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

G L E/CIV ENGR/GEOSCI/M S & E 474 – ROCK MECHANICS
3 credits.

Classification of rock masses, stress and strain in rock, linear and non-linear behavior of rock, failure mechanisms, state of stress in rock masses, lab testing, geological and engineering applications.
Requisites: E M A 201, PHYSICS 201, 207, or 247, or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Measure basic index properties for rock mass classification
Audience: Both Grad & Undergrad

2. Describe stress and strain in continuums
Audience: Both Grad & Undergrad

3. Describe the factors which control the mechanical behavior of rocks
Audience: Both Grad & Undergrad

4. Apply basic concepts of rock mechanics and rock physics to analyze basic geomechanical engineering problems
Audience: Both Grad & Undergrad

5. Prepare rock samples for mechanical testing, conduct experiment, and analyze experimental data to obtain rock strength properties
Audience: Both Grad & Undergrad

6. Describe analytically time-dependent rock behaviors
Audience: Graduate

G L E 479 – GEOLOGICAL ENGINEERING DESIGN
4 credits.

A practical problem in an area of geological engineering (such as development of a geologic resource or design of a structure in soil and/or rock) is selected, and then the principles and processes of design and analysis are applied to the solution of the problem.
Requisites: Senior standing, declared in Geological Engineering BS, and CIV ENGR/G L E 530, 532, 535, 635, 735, GEOSCI/G L E 629, CIV ENGR 414, 427, 514, or (CIV ENGR/G L E 430, 432, and 434)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Integrate and apply the knowledge gained in prior coursework into a simulated real-world design environment
Audience: Undergraduate

2. Use open-ended problem-solving skills
Audience: Undergraduate

3. Work effectively in a multidisciplinary team environment
Audience: Undergraduate

4. Use oral and written communication skills to articulate proposed and completed work
Audience: Undergraduate

5. Explain basic concepts in management, business, and public policy
Audience: Undergraduate

6. Explain the importance of professional licensure
Audience: Undergraduate

7. Identify common failure mechanisms of a component, process, or system and their causes and prevention
Audience: Undergraduate

G L E 489 – HONORS IN RESEARCH
1-3 credits.

Undergraduate honors research projects supervised by faculty members.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

G L E/CIV ENGR 511 – MIXING AND TRANSPORT IN THE ENVIRONMENT
3 credits.

Application of fluid mechanics to understand the mixing and transport of contaminants, pollutants, and other solutes in the environment. Introduction to chemical and biochemical transformation processes as well as boundary interactions at the air-water and sediment-water interfaces. Transport phenomena: diffusive processes, advective processes, turbulent diffusion, and shear flow dispersion. Introduction to both analytical and computational solutions with applications to mixing and transport in rivers, lakes, the atmosphere, and coastal waters.
Requisites: (CIV ENGR/G L E 291, COMP SCI 220, or E C E 203) and (CIV ENGR 310 or M E 363), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024
Learning Outcomes: 1. Recall the principles of conservation of mass, advective mass flux and Fick's law for diffusive mass flux
Audience: Both Grad & Undergrad

2. Apply the fundamental solution to the diffusion equation and use the principle of superposition to construct new solutions
Audience: Both Grad & Undergrad

3. Calculate the diffusivity given data of concentration distribution over time, and conversely, calculate the concentration distribution over time given the diffusivity
Audience: Both Grad & Undergrad

4. Calculate new solutions to advection-diffusion equation by modifying known solutions to include first-order reactions
Audience: Both Grad & Undergrad

5. Explain the differences between molecular diffusion, turbulent diffusion and shear flow dispersion
Audience: Both Grad & Undergrad

6. Apply models of mass transfer at boundaries to compute interfacial mass exchange between air-water and sediment-water interfaces
Audience: Both Grad & Undergrad

7. Evaluate the importance of mixing and transport processes in environmental processes and assess the utility of different types of solutions.
Audience: Graduate

G L E/CIV ENGR 520 – REACTIVE PROCESSES FOR SUSTAINABLE ENERGY AND RESOURCE PRODUCTION
3 credits.

Key scientific concepts related to fossil and renewable energy resources. Apply the fundamentals of thermodynamics and chemical kinetics at solid interfaces to better understand the science behind using fossil and renewable energy resources. Evaluate the impacts of existing and emerging energy technologies on the environment.
Requisites: Senior standing, (MATH 211, 217, or 221), (CHEM 103, 104, or 109), and CIV ENGR 320, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Identify major issues pertaining to energy and environmental science and engineering, and evaluate the sustainability of technologies grounded in the science of material and energy balances and reaction kinetics
Audience: Both Grad & Undergrad

2. Derive and solve mathematical expressions to describe energy and material transformations
Audience: Both Grad & Undergrad

3. Critically evaluate and present their analysis and synthesis of literature in this area of energy and environment
Audience: Both Grad & Undergrad

4. Evaluate and propose novel technological solutions grounded in the fundamentals of thermodynamics of kinetics
Audience: Graduate

5. Analyze and defend emerging technologies in the area of energy and environment
Audience: Graduate

G L E/CIV ENGR 530 – SEEPAGE AND SLOPES
3 credits.

Practical aspects of seepage effects and ground water flow. Stability of natural and man-made slopes under various loading conditions. Design and construction of earth dams and embankments. Flow net and its use; wells; filters; total and effective stress methods of slope analysis; selection of pertinent soil parameters.
Requisites: CIV ENGR/G L E 330, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Characterize and classify slope failure
Audience: Both Grad & Undergrad

2. Identify stability risk factors in generalized slope design
Audience: Both Grad & Undergrad

3. Apply soil and rock mechanics and strength principles in the context of slope stability investigation and design
Audience: Both Grad & Undergrad

4. Determine strength parameters of soil materials under saturated and unsaturated conditions
Audience: Both Grad & Undergrad

5. Understand pore fluid pressure in underground environments and its effect on manmade structures integrated within the soil as well as the failure potential of differing geometries
Audience: Both Grad & Undergrad

6. Design slope remedial plans for earth structures subjected to varying physical properties, overburden and pore pressures, and restrictive geometries
Audience: Both Grad & Undergrad

7. Act as leaders of the small groups they have been assigned for the mini design project
Audience: Graduate

G L E/CIV ENGR 532 – FOUNDATIONS
3 credits.

Shallow and deep foundations. Analysis and design of footings, mats, piers and piles, and related fill and excavation operations. Consolidation settlement, time rate of settlement, stress distribution, elastic (immediate) settlement, load bearing capacity; methods to reduce settlements and increase shear strength; the selection of a foundation system.
Requisites: CIV ENGR/G L E 330, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Provide examples of when and where to consider shallow foundation systems in lieu of deep foundation systems and where stone columns or rammed aggregate piers are appropriate
Audience: Both Grad & Undergrad

2. Scope and Prepare a Foundation Investigation, including the equipment and standards used for subsurface exploration and the advantages/disadvantages therein
Audience: Both Grad & Undergrad

3. Calculate Allowable Bearing Pressure using (a) presumptive values, (b) the bearing capacity equation and (c) in situ approaches
Audience: Both Grad & Undergrad

4. Design a safe spread foundation system where structural capacity exceeds demand
Audience: Both Grad & Undergrad

5. Design a drilled shaft and a driven pile for axial loading considering vertical loading and a settlement estimate
Audience: Both Grad & Undergrad

6. Prepare a bid sheet, plan set, and set of specifications for a successful foundation design
Audience: Both Grad & Undergrad

7. Use soil moduli in the application of a laterally loaded deep-foundation system using an appropriate software program with a hand-calculated backcheck
Audience: Graduate

G L E/CIV ENGR 534 – NONDESTRUCTIVE EVALUATION
3 credits.

Practical aspects of nondestructive evaluation (NDE) techniques for identifying physical properties and damage within civil and geologic materials and structures. Data analyses and data science for wave propagation, arrival picking, distributed fiber optic sensing, and visualization tools such as augmented/mixed/virtual reality.
Requisites: E M A 201, PHYSICS 201, 207, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe multiple nondestructive evaluation (NDE) testing methods and their applications
Audience: Both Grad & Undergrad

2. Characterize flaws within Civil and Geological Engineering materials
Audience: Both Grad & Undergrad

3. Determine source locations of flaws or damage within a structure based on NDE data
Audience: Both Grad & Undergrad

4. Characterize both active and passive elastic wave observations in rock
Audience: Both Grad & Undergrad

5. Apply seismological principles to observed acoustic emissions for determining source locations of microcracks and infer the mechanism of failure
Audience: Both Grad & Undergrad

6. Analyze fiber optic distributed acoustic sensing (DAS) to find earthquake events within timeseries data
Audience: Both Grad & Undergrad

7. Apply artificial intelligence techniques to analyze fiber optic sensing data
Audience: Graduate

G L E/CIV ENGR 535 – WIND ENERGY BALANCE-OF-PLANT DESIGN
3 credits.

Wind Energy Development and Balance-of-Plant Design. Up-front coverage includes the science and mechanics of wind energy including turbine basics, wind resource assessment, energy production, and economic return. Balance-of-plant design aspects include site layout and micro-siting, foundation systems, collector systems and interconnection, site civil and electrical infrastructure, and structural tower analysis. Development includes environmental due diligence and permitting, stakeholder engagement, energy policy and markets, and levelized cost of energy (LCOE).
Requisites: PHYSICS 201, 207, 247, E M A 201, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Provide the necessary steps to evaluate the wind resource at a prospective site by characterizing and correlating (vertically and horizontally) the wind speed distribution functions
Audience: Both Grad & Undergrad

2. Translate (forward and backward) wind power: kinetic to mechanical to electrical and select appropriate wind turbine given site wind resource and turbine power curve
Audience: Both Grad & Undergrad

3. Demonstrate knowledge of the mechanics and principles of the tower load document, shallow and deep foundation designs, transportation logistics, geotechnical investigation and reporting, thermal resistivity and collection system design, and interconnection
Audience: Both Grad & Undergrad

4. Develop civil balance-of-plant engineering calculation design bases for access roads, stormwater control, turbine foundations, and crane pads and electrical balance-of-plant engineering calculation design bases for the collection system, grounding, substation design, and interconnection
Audience: Both Grad & Undergrad

5. Analyze sustainability issues and/or practices using a systems-based approach.
Audience: Both Grad & Undergrad

6. Describe the social, economic, and environmental dimensions of wind energy and identify potential tradeoffs and interrelationships among these dimensions at an intermediate level.
Audience: Both Grad & Undergrad

7. Prepare an economic Pro Forma for a successful distributed wind project and calculate Levelized Cost of Energy (LCOE) and environmental Life Cycle Assessments (LCAs) of green-house gasses, water use, and CO2 per kW h.
Audience: Graduate

G L E/GEOSCI 537 – QUANTITATIVE METHODS FOR GEOSCIENCE
3 credits.

MATLAB is a powerful, high-level programming language and integrated development environment (IDE) that is used across a broad variety of scientific disciplines for tasks including data visualization, modeling, and application development. Focus on the active use of MATLAB for developing practical programming and data analysis skills that can be applied across a range of geoscience- relevant problems. Applications will include: data visualization and publishable figure development; automation of data processing; statistical and time-series analysis; image processing and mapping; and optimization. Additional topics may be guided by student interest.
Requisites: MATH 222, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

G L E/GEOSCI 594 – INTRODUCTION TO APPLIED GEOPHYSICS
3 credits.

Survey of applied geophysics, including seismic refraction, seismic reflection, electrical resistivity, gravity, and magnetics methods. Basic physics of each method and modeling techniques and field procedures.
Requisites: MATH 222 and (PHYSICS 202, 208, 248, or E M A 202), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

G L E/GEOSCI 595 – FIELD METHODS IN APPLIED AND ENGINEERING GEOPHYSICS
1 credit.

The application of geophysical field methods for delineating near-surface features and/or structures as applied to engineering, environmental and exploration problems.
Requisites: GEOSCI/G L E 594 or concurrent enrollment, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

G L E/GEOSCI 596 – GEOMECHANICS
3 credits.

Observation, description, and prediction of deformation of geomechanical systems at depth, and the forces (stress) causing those deformations, relevant for petroleum/geothermal reservoirs and studies of earthquake mechanics. Emphasis on computational exercises using datasets from the petroleum industry and earthquake catalogues, as well as prediction of ground deformation.
Requisites: GEOSCI/CIV ENGR/G L E/M S & E 474, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022
Learning Outcomes: 1. Conduct a borehole geomechanical analysis
Audience: Both Grad & Undergrad

2. Design casing plans for drilling
Audience: Both Grad & Undergrad

3. Use borehole data and earthquake focal mechanisms to gain information about in-situ stress and strain
Audience: Both Grad & Undergrad

4. Describe modern challenges in developing subsurface energy resources

Audience: Both Grad & Undergrad

5. Use modern software to find crustal deformation models that match observed ground deformation
Audience: Graduate

G L E/CIV ENGR 612 – ECOHYDROLOGY
3 credits.

Mutual interactions between the hydrologic cycle and ecosystems, including hydrologic mechanisms that underlie ecological patterns and processes, movement of water and energy through the soil-plant-atmosphere continuum, application and development of models for simulating ecohydrologic processes, and case studies on ecohydrologic function and ecosystem services of varied environments.
Requisites: CIV ENGR 311, GEOSCI/G L E 627, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Identify, describe, and quantify ecohydrologic processes
Audience: Both Grad & Undergrad

2. Build and use models for simulating hydrologic processes, ecologic structure and vegetation composition
Audience: Both Grad & Undergrad

3. Work effectively and collaborate in groups to communicate ecohydrologic concepts
Audience: Both Grad & Undergrad

4. Critically evaluate the ecohydrologic literature
Audience: Graduate

G L E/GEOSCI 627 – HYDROGEOLOGY
3-4 credits.

Mathematical treatment of the physical principles governing the flow of groundwater; emphasis on well hydraulics and flow system analysis.
Requisites: (GEOSCI 100, 109, 110, ATM OCN/GEOSCI 105, 140, ENVIR ST/GEOSCI 106, or ASTRON/GEOSCI 160) and (MATH 217 or 221), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

G L E/GEOSCI 629 – CONTAMINANT HYDROGEOLOGY
3 credits.

Physical and chemical processes governing the transport of solutes in groundwater; application of hydrogeologic and geochemical theory and practice to the protection of aquifers from contamination.
Requisites: G L E/GEOSCI 627 and MATH 222, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

G L E/CIV ENGR 635 – REMEDIATION GEOTECHNICS
3 credits.

Geotechnical practice for remediation of sites containing contaminated soil and groundwater is discussed. Topics include non-invasive and invasive subsurface exploration techniques, methods to monitor for the presence of contaminants in the saturated and unsaturated zones, and geotechnically-oriented remedial action technologies.
Requisites: CIV ENGR/G L E 330, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023

G L E 699 – INDEPENDENT STUDY
1-3 credits.

Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

G L E/GEOSCI 724 – GROUNDWATER FLOW MODELING
3 credits.

An introduction to the principles of modeling groundwater flow systems, with emphasis on regional flow system analysis. Conceptual understanding of governing equations, and the use of finite difference techniques to solve such equations are stressed. Develop codes and become introduced to packaged models, including those developed by the U. S. Geological Survey. Knowledge of hydrogeology [such as G L E/GEOSCI 627 or 629] required.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

G L E/CIV ENGR 730 – ENGINEERING PROPERTIES OF SOILS
3 credits.

Determination and interpretation of soil properties for engineering purposes; physio-chemical properties of soil-water systems, permeability and capillarity, compression characteristics of soils, measurement of soil properties in the triaxial test, properties of frozen soils and permafrost.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Describe the physicochemical characteristics of soils and their importance to the engineering behavior of soils
Audience: Graduate

2. Define the factors which control the hydraulic and mechanical behavior of soils
Audience: Graduate

3. Evaluate how engineering classification of soils capture fundamental responses
Audience: Graduate

4. Run and interpret laboratory tests used to characterize how physical and chemical properties of particles affect the behavior of soil masses, including hydraulic properties and the stiffness and shear strength properties
Audience: Graduate

5. Explain models that describe the behavior and properties of soils
Audience: Graduate

G L E/CIV ENGR 732 – UNSATURATED SOIL GEOENGINEERING
3 credits.

Engineering principles of unsaturated soils as they apply to geotechnical and geoenvironmental systems. Effect of soil water suction and stress on hydraulic conductivity, shear strength, and compressibility of soils in the context of geoengineering problems of flow and stability. Knowledge of Soil Mechanics [such as CIV ENGR/G L E 330] is required.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Define properties of unsaturated soils
Audience: Graduate

2. Use principles of interfacial physics, hydrology, and soil mechanics to interpret unsaturated soil behavior
Audience: Graduate

3. Use results from measurement methods to characterize unsaturated soil properties
Audience: Graduate

G L E/CIV ENGR 733 – PHYSICOCHEMICAL BASIS OF SOIL BEHAVIOR
3 credits.

Applications of physiochemical, mineralogical and environmental considerations to the engineering behavior of soils. Soil composition, formation, fabric, pore fluid chemistry and interaction of phases. The particulate nature of soils and the fabric-engineering property (volume change, strength, deformation and conduction) relationships. Knowledge of Soil Mechanics [such as CIV ENGR/G L E 330] is required.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Characterize properties of soils that consist partly or wholly of clay
Audience: Graduate

2. Define the composition and fabric of natural soils, their surface and pore-fluid chemistry, and the physical and chemical factors that govern fine-grained soil behavior
Audience: Graduate

G L E/GEOSCI 747 – TECTONOPHYSICS
3 credits.

Elasticity and flexure of the earth's lithosphere, heat conduction, mantle convection, earthquake mechanisms, rock rheology, and fluid migration in the earth's crust; integration of geophysical observations, laboratory experiments, and theoretical models.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022
Learning Outcomes: 1. Demonstrate an understanding of the Scientific Theory of Plate Tectonics by writing, solving, illustrating, and exemplifying Euler's formula for rigid tectonic plates moving on a sphere.
Audience: Graduate

2. Demonstrate an understanding of the earthquake deformation cycle in time and space by sketching a map over ~100 km and a time series over ~1000 years.
Audience: Graduate

3. Demonstrate an understanding of the physical principles of crustal deformation by writing, applying, and solving the differential equations governing motion under the constitutive relations for rigid, elastic, and Maxwell visco-elastic rheologies.
Audience: Graduate

4. Demonstrate an understanding of quantitative reasoning for testing geophysical hypotheses by comparing two competing models with appropriate statistical tests.
Audience: Graduate

5. Visualize plate motions on a 3-dimensional sphere by writing, debugging, and writing computer applications.
Audience: Graduate

6. Analyze geophysical data and interpret them by implementing simple models in the Matlab computer language.
Audience: Graduate

G L E/GEOSCI 757 – ADVANCED ROCK MECHANICS
3 credits.

Experimental rock mechanics, rock mechanics apparatus design, static and dynamic rock friction, rate and state friction, crack phenomena and rock fracture mechanics, earthquake energy budget, elastic/viscoelastic/plastic behavior of rocks, engineering and geological applications. Knowledge of introductory rock mechanics [such as M S E/GEOSCI/CIV ENGR/G L E/ M S & E 474] required.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Analyze technical construction of rock mechanics apparatuses
Audience: Graduate

2. Design and fabricate load cells and displacement sensors
Audience: Graduate

3. Measure dynamic rock frictional properties for fault instability analysis
Audience: Graduate

G L E 790 – MASTER'S RESEARCH OR THESIS
1-9 credits.

Under faculty supervision.
Requisites: Declared in Geological Engineering MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

G L E 801 – SPECIAL TOPICS IN GEOLOGICAL ENGINEERING
1-3 credits.

Topics vary.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

G L E 890 – PRE-DISSERTATOR'S RESEARCH
1-9 credits.

Under faculty supervision.
Requisites: Declared in Geological Engineering PHD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

G L E 900 – SEMINAR
1 credit.

Topics vary.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

G L E 990 – RESEARCH AND THESIS
1-9 credits.

Under faculty supervision.
Requisites: Declared in Geological Engineering PHD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

G L E 999 – INDEPENDENT WORK
1-3 credits.

Under faculty supervision.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2023

GEOSCIENCE (GEOSCI)

GEOSCI 100 – INTRODUCTORY GEOLOGY: HOW THE EARTH WORKS
3 credits.

Geologic processes; structure and history of the earth; earthquakes, volcanos, glaciers, groundwater, minerals, rocks, deserts, fossils; topographic and geologic maps; climate change on geologic and human time scales.
Requisites: Not open to students with credit for GEOSCI/ENVIR ST 106
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

GEOSCI/ATM OCN/ENVIR ST 102 — CLIMATE AND CLIMATE CHANGE
3 credits.

Describes the basic climate principles governing the climate system. It describes the climate and climate variability at present, climate evolution in the past, and the projected climate change into the future. The scientific principles underlying the natural and anthropogenic greenhouse effect and climate model forecasts are elucidated.
Requisites: None
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

GEOSCI/ATM OCN 105 — SURVEY OF OCEANOGRAPHY
3-4 credits.

Nature and behavior of ocean water, interaction of oceans and atmosphere, structure of the ocean floor, life in the oceans, our relationship to the marine environment.
Requisites: None
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

GEOSCI/ENVIR ST 106 — ENVIRONMENTAL GEOLOGY
3 credits.

Application of geology to problems resulting from the ever more intense use of the earth and its resources.
Requisites: Not open to students with credit for GEOSCI 100
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

GEOSCI 109 — THREE BILLION YEARS BENEATH YOUR FEET: GEOLOGY OF THE NATIONAL PARKS
3 credits.

Famously called "America's best idea", the National Parks of the US record two-thirds of Earth's history, from the most ancient mountains to active volcanic eruptions. The geologic story of the National Parks is explored in the framework of physiography, tectonics, time, and fundamental geologic processes, highlighting the major parks from Hawaii, to Alaska, to the conterminous US. Provides a view of the geological evolution of the Earth using specific examples.
Requisites: None
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

GEOSCI 110 — EVOLUTION AND EXTINCTION
4 credits.

Contemporary views of the origin and diversification of life and evolutionary processes; crises in the history of life, with emphasis on controversies regarding evolution, mass extinctions, and the co-evolution of Earth and life.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

GEOSCI 117 — EX-FILES: LIFE IN THE EARTH'S EXTREME ENVIRONMENT
2 credits.

Explores the diversity of microbial life forms in modern and ancient geological environments, with a focus on extreme environments of geological origin or relevance. Includes exploration of unusual aspects of microbial life in everyday settings.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

GEOSCI 118 — EYE IN THE SKY: MONITORING THE EARTH BY SATELLITE
1 credit.

Fundamentals of satellite imagery applied to the earth sciences. Basics of image interpretation. Multitemporal data. Resolution and uncertainty. Existing and emerging technologies. Orbits, wavelengths, and satellites. Socio-economic impact of remotely-sensed data.
Requisites: None
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

GEOSCI/ATM OCN 140 — NATURAL HAZARDS AND DISASTERS
3 credits.

An exploration of the science behind natural disasters including earthquakes, tsunamis, volcanic eruptions, landslides, tornadoes, hurricanes, and floods. Why, where, and when do these events occur, and why are some predictable but others are not? Addresses hazard assessment, forecasting, and mitigation to lessen their impact on society.
Requisites: None
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

GEOSCI/ASTRON 160 — LIFE IN THE UNIVERSE
2 credits.

An examination of the origin and evolution of life in the universe based on our knowledge of astronomy, biology, and geology. Includes discussions on the search for extraterrestrial life and the history of life in our solar system.
Requisites: None
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Show how scientific reasoning and the scientific method are used to determine Earth's place within the solar system and the cosmos.
Audience: Undergraduate

2. Connect our current observations of exoplanets with their potential roles in the origin of life elsewhere in the Universe.
Audience: Undergraduate

3. Describe the physical and chemical limits of life on Earth to chart the potential for life on Mars and other worlds.
Audience: Undergraduate

4. Apply the genetic code to interpret the origin and evolution of life on Earth.
Audience: Undergraduate

5. Summarize key geologic events on Earth and Mars; interpret relationships between planetary tectonics and habitability.
Audience: Undergraduate

6. Explain the range of evidence in the rock record for early life on Earth and critique the fidelity of this record.
Audience: Undergraduate

7. Illustrate how quantitative approaches are used to analyze problems in astronomy, biology, and geology.
Audience: Undergraduate

GEOSCI 198 — DIRECTED STUDY
1-3 credits.

Independent study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2012

GEOSCI 199 — DIRECTED STUDY
1-3 credits.

Independent study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023

GEOSCI 202 — INTRODUCTION TO GEOLOGIC STRUCTURES
4 credits.

Introduction to recognition and mapping of geologic structures in the field. Landforms, folds, faults, tectonics, geologic maps, and field instrumentation.
Requisites: GEOSCI 100 or ENVIR ST/GEOSCI 106
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

GEOSCI 204 — GEOLOGIC EVOLUTION OF THE EARTH
4 credits.

Physical evolution of the earth and its relationship to the development of life through geologic time. Includes field trip.
Requisites: GEOSCI 100 or ENVIR ST/GEOSCI 106
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

GEOSCI 304 — GEOBIOLOGY
3 credits.

An integrative approach to studying the interaction between the atmosphere, hydrosphere, biosphere, and geosphere as they have evolved during earth history. Overarching theme includes ocean-climate system changes, biogeochemical cycles, evolution from microbes to mammals, and critical events in life history.
Requisites: GEOSCI 204 or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

GEOSCI/GEOG 320 – GEOMORPHOLOGY
3 credits.

Principles and analysis of geomorphic processes and resulting land forms.
Requisites: GEOSCI/ENVIR ST 106, GEOSCI 100, 109, 204, ENVIR ST/GEOG 120, 127 or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain at a basic level how Earth surface processes shape landforms and create natural hazards, and how they respond to changing climate and human land use.
Audience: Both Grad & Undergrad

2. Apply knowledge of Earth surface processes to interpret new observations or processes, landforms, and natural hazards.
Audience: Both Grad & Undergrad

3. Summarize how geomorphologists use equations and quantitative models to represent geomorphic processes and apply some of those equations/models to solve realistic problems at a basic level
Audience: Both Grad & Undergrad

4. Develop and present a visualization related to geomorphology.
Audience: Graduate

GEOSCI 331 – GEMS: THE SCIENCE BEHIND THE SPARKLE
1-2 credits.

Explores the formation, collection, properties, and treatment of many popular gemstones.
Requisites: Junior standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

GEOSCI/ATM OCN/ENVIR ST/GEOG 335 – CLIMATIC ENVIRONMENTS OF THE PAST
3 credits.

Climate change at timescales from the last several million years to the last 100 years, with emphasis on more recent timescales. Examines how climate variability arises from interplay between external forcings, feedbacks within the earth system, and (more recently) human activity.
Requisites: Sophomore standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the major climatic events and trends during the Quaternary, spanning timescales from the last 50,000,000 years to the last 100 years.
Audience: Undergraduate

2. Identify the physical processes controlling the behavior of the earth system and its components (atmosphere, oceans, cryosphere, biosphere, etc.).
Audience: Undergraduate

3. Discuss how climatic variability results from a combination of external forcings and internal dynamics within the earth system.
Audience: Undergraduate

4. Recognize how paleoclimatologists collect, date, and analyze a staggering variety of paleoclimatic records, including ocean and lake sediment cores, ice cores, tree rings, corals, and speleothems.
Audience: Undergraduate

5. Analyze and critically evaluate climate experiments that are simulated by earth system models.
Audience: Undergraduate

6. Think and write critically, with particular attention to critically reading the scientific literature and critically employing the climate proxies and models used by paleoclimatologists.
Audience: Undergraduate

GEOSCI/G L E 350 – INTRODUCTION TO GEOPHYSICS: THE DYNAMIC EARTH
3 credits.

Methods of geophysics applied to earth structure and plate tectonics. Principles of seismology, gravity, geodesy, magnetism and heat flow.
Requisites: MATH 217, 221, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

GEOSCI/G L E 360 – PRINCIPLES OF MINERALOGY
3 credits.

Minerals, their physical and chemical properties, crystallography, and geologic significance.
Requisites: (GEOSCI 100 or ENVIR ST/GEOSCI 106) and (CHEM 103, 109, 115, or concurrent enrollment), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

GEOSCI/G L E 370 – ELEMENTARY PETROLOGY
3 credits.

Igneous and metamorphic rocks, studied in hand sample and thin section.
Requisites: G L E/GEOSCI 360, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

GEOSCI/ENVIR ST/F&W ECOL/G L E/GEOG/LAND ARC 371 – INTRODUCTION TO ENVIRONMENTAL REMOTE SENSING
3 credits.

Introduction to the Earth as viewed from above, focusing on use of aerial photography and satellite imagery to study the environment. Includes physical processes of electromagnetic radiation, data types and sensing capabilities, methods for interpretation, analysis and mapping, and applications.
Requisites: (Sophomore standing and MATH 113, 114, or 171), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025

GEOSCI 375 – PRINCIPLES OF GEOCHEMISTRY
3 credits.

Provides a chemical basis for understanding the origin, evolution, distribution and interactions of chemical elements and isotopes between the lithosphere, hydrosphere, biosphere, and atmosphere in geological and environmental processes.
Requisites: G L E/GEOSCI 360, (CHEM 109, 104, or 115) and G L E/GEOSCI 370 or concurrent enrollment in G L E/GEOSCI 370, or graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

GEOSCI 376 – TOPICS IN GEOLOGY
1-3 credits.

Special topics or discussions of recent research in Geoscience.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

GEOSCI 402 – RESEARCH AND COMMUNICATION IN THE GEOLOGICAL SCIENCES
3 credits.

Skills and strategies to conduct research in the geological sciences, including collection of data, analysis of the data, generation of models to explain the data, and clear communication of both the research process and results. As part of the research process, find, evaluate, and utilize information in the existing scientific literature. Practice effective scientific communication skills, including writing, oral presentations, and producing effective visualizations.
Requisites: Senior standing and declared in Geology and Geophysics
Course Designation: Gen Ed - Communication Part B
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Learn about how information is produced and disseminated in the geological sciences.
Audience: Undergraduate

2. Effectively and efficiently read the scientific literature for content - a foundation for life-long learning that is key to a successful career.
Audience: Undergraduate

3. Critically evaluate the primary literature including the nature of evidence, the logic of the approach, and appropriateness of the analyses to the addressed problem. This explicitly includes critical reading, logical thinking, quantitative analyses, and the use of evidence.
Audience: Undergraduate

4. Develop skills and strategies needed to find, evaluate, and utilize information in the geological sciences.
Audience: Undergraduate

5. Clearly communicate – both in writing and orally – the results of scientific investigation.
Audience: Undergraduate

6. Effectively use diagrams and graphs to explain scientific data.
Audience: Undergraduate

GEOSCI/ENVIR ST 411 – ENERGY RESOURCES
3 credits.

A critical examination of the full spectrum of renewable and nonrenewable energy options, from the unifying perspective of the Earth systems that govern their use. Energy conversion and efficiency, consumption patterns and trends, and environmental consequences of energy production and use.
Requisites: Sophomore standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

GEOSCI/GEOG 420 – GLACIAL AND PLEISTOCENE GEOLOGY
3 credits.

Principles, characteristics and work of glaciers; events of the Pleistocene. Field trip.
Requisites: GEOSCI/ENVIR ST 106, GEOSCI 100, 109, ENVIR ST/GEOG 120, 127, or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

GEOSCI 430 – SEDIMENTOLOGY AND STRATIGRAPHY
3 credits.

Comprehensive survey of the processes and products of sedimentation, including depositional environments, sedimentary tectonics, sequence stratigraphic principles, and analytical methods.
Requisites: GEOSCI 204 and G L E/GEOSCI 370, or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

GEOSCI/G L E 431 – SEDIMENTARY & STRATIGRAPHY LAB
1 credit.

Covers Sedimentology and Stratigraphy; emphasizes qualitative and quantitative description and interpretation of sediments and sedimentary deposits.
Requisites: GEOSCI 204 or G L E/GEOSCI 360, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

GEOSCI/CIV ENGR/ENVIR ST/G L E 444 – PRACTICAL APPLICATIONS OF GPS SURVEYING
2 credits.

Global positioning system surveying for field applications. Signals. Coordinate systems. Datums. Cartographic projections. Satellite orbits. Choosing hardware. Strategies for data collection and analysis. Assessing uncertainty. Geocoding satellite images. Integrating data with Geographic Information Systems. Emerging technologies.
Requisites: MATH 211, 217, 221, or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

GEOSCI/G L E 455 – STRUCTURAL GEOLOGY
4 credits.

Principles of rock deformation, structures in layered rocks, structural analysis, intrusive structures. Lab: three-dimensional problems involving structural concepts; field trip.
Requisites: GEOSCI 202, 204, and (G L E/GEOSCI 370 or concurrent enrollment), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

GEOSCI 456 – GEOLOGIC FIELD METHODS
2 credits.

Theory and techniques of geologic mapping; field trips.
Requisites: G L E/GEOSCI 455 or concurrent enrollment
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2019

GEOSCI 457 – CONDUCTED FIELD TRIP
2 credits.

Study of the principles and methods of geologic mapping.
Requisites: G L E/GEOSCI 370 or concurrent enrollment
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

GEOSCI 459 – FIELD GEOLOGY
6 credits.

Detailed geologic mapping and solution of related problems in the field.
Requisites: GEOSCI 202, G L E/GEOSCI 370, and 455
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2019

GEOSCI/CIV ENGR/G L E/M S & E 474 – ROCK MECHANICS
3 credits.

Classification of rock masses, stress and strain in rock, linear and non-linear behavior of rock, failure mechanisms, state of stress in rock masses, lab testing, geological and engineering applications.
Requisites: E M A 201, PHYSICS 201, 207, or 247, or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Measure basic index properties for rock mass classification
Audience: Both Grad & Undergrad

2. Describe stress and strain in continuums
Audience: Both Grad & Undergrad

3. Describe the factors which control the mechanical behavior of rocks
Audience: Both Grad & Undergrad

4. Apply basic concepts of rock mechanics and rock physics to analyze basic geomechanical engineering problems
Audience: Both Grad & Undergrad

5. Prepare rock samples for mechanical testing, conduct experiment, and analyze experimental data to obtain rock strength properties
Audience: Both Grad & Undergrad

6. Describe analytically time-dependent rock behaviors
Audience: Graduate

GEOSCI/HIST SCI 514 – HISTORY OF GEOLOGIC THOUGHT
3 credits.

Major concepts from earliest to modern times.
Requisites: GEOSCI 204 or graduate/professional standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

GEOSCI 515 – PRINCIPLES OF ECONOMIC GEOLOGY
4 credits.

Composition, structure, occurrence, origin, and economic investigation of important groups of mineral deposits; problems of mineral deposition.
Requisites: GEOSCI 204 and G L E/GEOSCI 370, or graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2018
Learning Outcomes: 1. Students will be able to identify common ore minerals in a variety of deposit types.
Audience: Undergraduate

2. Students will be able to identify and interpret common alteration types that accompany hydrothermal alteration in mineralized rocks.
Audience: Undergraduate

3. Students will be able to understand and explain the basics of stable and radiogenic isotopic systems and their application to ore deposit research.
Audience: Undergraduate

4. Students will be able to tell the history (formation condition and possible changes / reactions) of a deposit based on associated minerals and textures.
Audience: Undergraduate

5. Students will be able to synthesize research and develop hypotheses with respect to mineral abundances in different geologic environments.
Audience: Graduate

6. Students will be able to conceptualize the 3D distribution of mineral deposits in the crust of the earth.
Audience: Undergraduate

7. Students will be able to recognize the overall role of plate tectonics in the distribution of ore deposits.
Audience: Undergraduate

8. Students will come to recognize the role of the evolution of the Earth's systems over 4.5 Ga in the formation of ore deposits.
Audience: Undergraduate

GEOSCI/G L E 537 – QUANTITATIVE METHODS FOR GEOSCIENCE
3 credits.

MATLAB is a powerful, high-level programming language and integrated development environment (IDE) that is used across a broad variety of scientific disciplines for tasks including data visualization, modeling, and application development. Focus on the active use of MATLAB for developing practical programming and data analysis skills that can be applied across a range of geoscience- relevant problems. Applications will include: data visualization and publishable figure development; automation of data processing; statistical and time-series analysis; image processing and mapping; and optimization. Additional topics may be guided by student interest.
Requisites: MATH 222, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

GEOSCI/ZOOLOGY 542 – INVERTEBRATE PALEONTOLOGY
3 credits.

The evolutionary history, morphology, and ecology of fossil invertebrates. Labs emphasize fossil identification and recognition of basic morphological features.
Requisites: (GEOSCI 110 or 204), (ZOOLOGY/BIOLOGY 101 and 102), ZOOLOGY/BIOLOGY/BOTANY 152, (BIOCORE 381 and 382), or graduate/professional standing.
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

GEOSCI 551 – PALEOCEANOGRAPHY
3 credits.

Investigates the history of the Earth's oceans, focusing on the last 65 million years, with discussion of the chemical and physical methods through which oceans are studied and the role of oceans in the climate system.
Requisites: GEOSCI 100, 110, ATM OCN/GEOSCI 105, ENVIR ST/GEOSCI 106, or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the major climatic and oceanographic events and trends during the Cretaceous through the Cenozoic, spanning timescales from the last 150,000,000 years to the last 1,000 years. For this class emphasis is placed on the global climate and oceanographic systems, with some attention to regional changes.
Audience: Both Grad & Undergrad

2. Explain the physical processes controlling the behavior of the earth system and its related components (atmosphere, oceans, cryosphere, biosphere, etc.), and to articulate how oceanic/climatic variability results from a combination of external forcings and internal dynamics within the earth system.
Audience: Both Grad & Undergrad

3. Understand how paleoceanographers collect, date, and analyze a staggering variety of deep-sea records, as well as other paleoclimate archives as they pertain to oceanic and climate processes including ocean and lake sediment cores, ice cores, and speleothems.
Audience: Both Grad & Undergrad

4. Develop skills in critical thinking and technical writing, with particular attention to critically reading the scientific literature and critically evaluating the climate proxies and model simulations used by paleoceanographers.
Audience: Both Grad & Undergrad

5. Both explain and critically evaluate the data on which the majority of our ocean/climate knowledge of the last 150,000,000 years is based.
Audience: Graduate

6. Both explain and assess the external forcings and internal dynamics within the earth system and across the different earth spheres.
Audience: Graduate

7. Critically evaluate the scientific literature and provide your own perspective on the literature discussion and conclusions.
Audience: Graduate

GEOSCI 556 – MOUNTAIN BELTS
3 credits.

Examination of interaction of tectonic plates and the resulting structures.
Requisites: G L E/GEOSCI 455 or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022

GEOSCI 557 – STRUCTURAL PETROLOGY
3 credits.

Petrographic investigation of rock fabrics and deformation using thin sections. Use of petrographic microscopes and Scanning Electron Microscopes (SEMs).
Requisites: G L E/GEOSCI 370 and 455, or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

GEOSCI/G L E 594 – INTRODUCTION TO APPLIED GEOPHYSICS
3 credits.

Survey of applied geophysics, including seismic refraction, seismic reflection, electrical resistivity, gravity, and magnetics methods. Basic physics of each method and modeling techniques and field procedures.
Requisites: MATH 222 and (PHYSICS 202, 208, 248, or E M A 202), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

GEOSCI/G L E 595 – FIELD METHODS IN APPLIED AND ENGINEERING GEOPHYSICS
1 credit.

The application of geophysical field methods for delineating near-surface features and/or structures as applied to engineering, environmental and exploration problems.
Requisites: GEOSCI/G L E 594 or concurrent enrollment, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

GEOSCI/G L E 596 – GEOMECHANICS
3 credits.

Observation, description, and prediction of deformation of geomechanical systems at depth, and the forces (stress) causing those deformations, relevant for petroleum/geothermal reservoirs and studies of earthquake mechanics. Emphasis on computational exercises using datasets from the petroleum industry and earthquake catalogues, as well as prediction of ground deformation.
Requisites: GEOSCI/CIV ENGR/G L E/M S & E 474, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022
Learning Outcomes: 1. Conduct a borehole geomechanical analysis
Audience: Both Grad & Undergrad

2. Design casing plans for drilling
Audience: Both Grad & Undergrad

3. Use borehole data and earthquake focal mechanisms to gain information about in-situ stress and strain
Audience: Both Grad & Undergrad

4. Describe modern challenges in developing subsurface energy resources

Audience: Both Grad & Undergrad

5. Use modern software to find crustal deformation models that match observed ground deformation
Audience: Graduate

GEOSCI 610 – GEOCHRONOLOGY, TIMESCALES, AND RATES OF GEOLOGIC PROCESSES
3 credits.

Application of radioisotopic (Ar-Ar, U-Pb, U-Th, U-He) and cosmogenic (He, Ne, Cl, Be, C) dating methods. Status of geologic, astronomic and paleomagnetic timescales, Chronology of flood basalts, impacts, extinctions, glaciations. Constraints on rates of magmatism, mountain uplift, deformation, erosion, sedimentation.
Requisites: G L E/GEOSCI 370 or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

GEOSCI/G L E 627 — HYDROGEOLOGY
3-4 credits.

Mathematical treatment of the physical principles governing the flow of groundwater; emphasis on well hydraulics and flow system analysis.
Requisites: (GEOSCI 100, 109, 110, ATM OCN/GEOSCI 105, 140, ENVIR ST/GEOSCI 106, or ASTRON/GEOSCI 160) and (MATH 217 or 221), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

GEOSCI/G L E 629 — CONTAMINANT HYDROGEOLOGY
3 credits.

Physical and chemical processes governing the transport of solutes in groundwater; application of hydrogeologic and geochemical theory and practice to the protection of aquifers from contamination.
Requisites: G L E/GEOSCI 627 and MATH 222, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

GEOSCI 681 — SENIOR HONORS THESIS
3 credits.

Individual mentored study for seniors completing theses for Honors in the Major as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025

GEOSCI 682 — SENIOR HONORS THESIS
3 credits.

Individual mentored study for seniors completing theses for Honors in the Major as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2025

GEOSCI 691 — SENIOR THESIS
3-4 credits.

Mentored individual research and study for students completing a senior thesis.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

GEOSCI 692 — SENIOR THESIS
3-4 credits.

Mentored individual research and study for students completing a senior thesis.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

GEOSCI 698 — DIRECTED STUDY
1-6 credits.

Independent study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

GEOSCI 699 — DIRECTED STUDY
1-6 credits.

Independent study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

GEOSCI 701 – QUANTITATIVE GEOMORPHOLOGY
4 credits.

Quantitative study of processes that shape Earth's surface. Use theory and field observations to investigate major components of continental geomorphic systems, including hillslopes, rivers, and glaciers. Understand how the major factors that shape Earth's surface-tectonics, climate, and life-create the landscapes we observe.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Demonstrate knowledge of the processes that shape Earth's topography over a range of time scales and spatial scales
Audience: Graduate

2. Construct conservation of mass and momentum frameworks for topographic evolution
Audience: Graduate

3. Apply mathematical laws for mass transport that govern topographic evolution
Audience: Graduate

4. Make field observations that can be used to constrain multiple geomorphic processes
Audience: Graduate

5. Write scientific reports in the form of a short journal article
Audience: Graduate

GEOSCI 720 – GLACIOLOGY
3 credits.

Addresses the fundamentals of glaciology and glacier landform mechanics: mass balance, ice deformation, basal slip, temperature structure, glacial hydrology, sediment deformation and deposition, and landform building processes. Emphasizes an understanding of the mathematical principles that dictate how glaciers function. Begins with a classical treatment of the mechanics of glaciers and moves onto fundamental advances in the field of glaciology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

GEOSCI/G L E 724 – GROUNDWATER FLOW MODELING
3 credits.

An introduction to the principles of modeling groundwater flow systems, with emphasis on regional flow system analysis. Conceptual understanding of governing equations, and the use of finite difference techniques to solve such equations are stressed. Develop codes and become introduced to packaged models, including those developed by the U. S. Geological Survey. Knowledge of hydrogeology [such as G L E/GEOSCI 627 or 629] required.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

GEOSCI 727 – ADVANCED HYDROGEOLOGY
1-3 credits.

Advanced topics in Hydrogeology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

GEOSCI 731 – CARBONATE GEOLOGY
2 credits.

Comprehensive survey of the processes and products of carbonate sedimentation.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

GEOSCI 732 – GEOCHEMISTRY OF SEDIMENTS
3 credits.

Processes involved in the origin of chemical sediments; shales, carbonates, and evaporites.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

GEOSCI/G L E 747 – TECTONOPHYSICS
3 credits.

Elasticity and flexure of the earth's lithosphere, heat conduction, mantle convection, earthquake mechanisms, rock rheology, and fluid migration in the earth's crust; integration of geophysical observations, laboratory experiments, and theoretical models.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022
Learning Outcomes: 1. Demonstrate an understanding of the Scientific Theory of Plate Tectonics by writing, solving, illustrating, and exemplifying Euler's formula for rigid tectonic plates moving on a sphere.
Audience: Graduate

2. Demonstrate an understanding of the earthquake deformation cycle in time and space by sketching a map over ~100 km and a time series over ~1000 years.
Audience: Graduate

3. Demonstrate an understanding of the physical principles of crustal deformation by writing, applying, and solving the differential equations governing motion under the constitutive relations for rigid, elastic, and Maxwell visco-elastic rheologies.
Audience: Graduate

4. Demonstrate an understanding of quantitative reasoning for testing geophysical hypotheses by comparing two competing models with appropriate statistical tests.
Audience: Graduate

5. Visualize plate motions on a 3-dimensional sphere by writing, debugging, and writing computer applications.
Audience: Graduate

6. Analyze geophysical data and interpret them by implementing simple models in the Matlab computer language.
Audience: Graduate

GEOSCI/ATM OCN/ENVIR ST/ZOOLOGY 750 – PROBLEMS IN OCEANOGRAPHY
3 credits.

Introduction to techniques used in the study of the biology, chemistry, geology, and physics of the marine environment.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

GEOSCI 755 – ADVANCED STRUCTURAL GEOLOGY
3 credits.

Structures in layered, intrusive, and metamorphic rocks; structural analysis.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021

GEOSCI/G L E 757 – ADVANCED ROCK MECHANICS
3 credits.

Experimental rock mechanics, rock mechanics apparatus design, static and dynamic rock friction, rate and state friction, crack phenomena and rock fracture mechanics, earthquake energy budget, elastic/viscoelastic/plastic behavior of rocks, engineering and geological applications. Knowledge of introductory rock mechanics [such as M S E/GEOSCI/CIV ENGR/G L E/M S & E 474] required.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Analyze technical construction of rock mechanics apparatuses
Audience: Graduate

2. Design and fabricate load cells and displacement sensors
Audience: Graduate

3. Measure dynamic rock frictional properties for fault instability analysis
Audience: Graduate

GEOSCI 758 – MECHANICS OF EARTHQUAKES AND FAULTING
3 credits.

Addresses current topics and controversies on fault mechanics, earthquake physics, and the rock record of seismicity. Emphasizes critical reading and in-depth discussion of recent publications drawn from a variety of disciplines, including geophysical, geological, and geochemical studies and approaches.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

GEOSCI/ATM OCN 762 – ICE AND CLIMATE DYNAMICS
3 credits.

Introduction to the role of ice in the climate system. Review main components of the cryosphere (Arctic and Antarctic sea ice, Greenland and Antarctic ice sheets, mountain glaciers, snow cover, and permafrost), with particular focus on recent and future changes as documented in recent publications. Consider different methods to study the cryosphere and its role in the climate system, such as remote sensing and in situ observations, state estimates and reanalyses, with a particular focus on idealized and comprehensive global climate models. Covers fundamental physical concepts as well as unresolved research questions such as the debates surrounding potential instabilities in the climate system and uncertainties in future projections of ice loss, teleconnections, and sea level rise.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Differentiate between the main components of Earth's cryosphere and their respective roles in the climate system.
Audience: Graduate

2. Compare the range of methodologies used to study Earth's cryosphere, including in situ and remote sensing observations, theoretical considerations, and numerical models.
Audience: Graduate

3. Develop idealized models of sea ice, land ice, and snow and their interactions with the climate system.
Audience: Graduate

4. Carry out analysis of output from idealized and comprehensive ice and climate models.
Audience: Graduate

GEOSCI 765 – CRYSTAL CHEMISTRY
3 credits.

Principles of crystal chemistry, emphasizing the structure and behavior of rock forming minerals.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022

GEOSCI 771 – IGNEOUS PETROLOGY
3 credits.

Classification, characteristics, and petrogenesis of igneous rocks. Representative rock suites studied in lab.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

GEOSCI 777 – ELECTRON MICROPROBE ANALYSIS
3 credits.

Proper use and functioning of electron probe and SEM, their use in microanalysis (WDS, EDS), range of applications, and limitations.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

GEOSCI 793 – GEOPHYSICAL INVERSE THEORY
3 credits.

Application of inverse methods to geophysical measurements of the structure of the earth.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

GEOSCI 796 – PHYSICS OF THE EARTH II
3 credits.

Theory and observations of earthquakes, seismic waves and plate tectonics.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

GEOSCI 875 – ADVANCED TOPICS IN GEOLOGY
1-3 credits.

Special topics in Geoscience.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

GEOSCI/ATM OCN/BOTANY/CIV ENGR/ENVIR ST/ZOOLOGY 911 – LIMNOLOGY AND MARINE SCIENCE SEMINAR
1 credit.

Sections in various fields of zoological research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

GEOSCI 920 – SEMINAR IN GLACIAL AND PLEISTOCENE GEOLOGY
1-3 credits.

An exploration of modern glacial, glaciology, and Pleistocene geology literature. Includes a field trip to explore local glacial geology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

GEOSCI 929 – SEMINAR-HYDROGEOLOGY
1-2 credits.

Special topics in Hydrogeology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2022

GEOSCI 970 – SEMINAR-GEOCHEMISTRY
2 credits.

Exploration of topics in the field of Geochemistry with an emphasis on engagement with recent literature.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

GEOSCI/ATM OCN/BOTANY/ENVIR ST/F&W ECOL/GEOG/ZOOLOGY 980 – EARTH SYSTEM SCIENCE SEMINAR
1 credit.

Topics in earth system science. Emphasis on the coupling between atmospheric, oceanic and land surface systems, involving physical geochemical and biological processes, and including interactions with human systems.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

GEOSCI 990 – RESEARCH
1-12 credits.

Research supervised by individual faculty members.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

GEOSCI 999 – ADVANCED INDEPENDENT READING
1-3 credits.

Advanced level mentored reading and research for students with dissertator status.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2017

GERMAN (GERMAN)

GERMAN 101 – FIRST SEMESTER GERMAN
4 credits.

Emphasis on proficiency in German through speaking, listening, reading, and writing, and on communication in cultural context.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

GERMAN 102 – SECOND SEMESTER GERMAN
4 credits.

Emphasis on proficiency in German through speaking, listening, reading, and writing, and on communication in cultural context.
Requisites: GERMAN 101 or placement into GERMAN 102
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

GERMAN 111 – FIRST SEMESTER DUTCH
4 credits.

Emphasis on proficiency in Dutch through speaking, listening, reading, and writing, and on communication in cultural context.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

GERMAN 112 – SECOND SEMESTER DUTCH
4 credits.

Emphasis on proficiency in Dutch through speaking, listening, reading, and writing, and on communication in cultural context.
Requisites: GERMAN 111
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

GERMAN 203 — THIRD SEMESTER GERMAN
4 credits.

Four-skills approach (speaking, listening, writing, reading) centered around authentic texts, recordings, and images. Grammar review, concerted vocabulary expansion, and intensive practice.
Requisites: GERMAN 102 or placement into GERMAN 203
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

GERMAN 204 — FOURTH SEMESTER GERMAN
4 credits.

Four-skills approach (speaking, listening, writing, reading) centered around authentic texts, recordings, and images. Grammar review, concerted vocabulary expansion, and intensive practice.
Requisites: GERMAN 203 or placement into GERMAN 204
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

GERMAN 213 — THIRD SEMESTER DUTCH
4 credits.

Review of Dutch grammar and continuation of systematic vocabulary development.
Requisites: GERMAN 112
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

GERMAN 214 — FOURTH SEMESTER DUTCH
4 credits.

Review of Dutch grammar and continuation of systematic vocabulary development.
Requisites: GERMAN 213
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

GERMAN 236 — BASCOM COURSE
3 credits.

Developing skills in critical reading, logical thinking, use of evidence, and use of library resources. Emphasis on writing in the conventions of specific fields.
Requisites: Satisfied Communications A requirement
Course Designation: Gen Ed - Communication Part B
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2020

GERMAN/GNS/JEWISH 240 — HEALTH AND HOTELS IN CENTRAL EUROPE
3 credits.

Introduction to spaces of leisure, medical recuperation, and Christian and Jewish cross-cultural exchange. Literature and films focus on sites of rest and healing between the World Wars as well as post-Holocaust reflections on these sites.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Demonstrate close reading skills in writing assignments through interpretation and analysis of texts in a variety of genres, including critical theory, prose, poetry, and film.
Audience: Undergraduate

2. Discern and integrate divergent and contradictory perspectives, identify and question assumptions, and assess evidence and methods.
Audience: Undergraduate

3. Identify major and lesser-known writers of central Europe between the World Wars.
Audience: Undergraduate

4. Acquire a critical vocabulary to speak and write effectively about the experience of health, illness, leisure, recuperation, and Jewish identity.
Audience: Undergraduate

5. Engage in sustained discussion with peers in a respectful and empathetic manner on topics concerning diverse worldviews and value systems, including an understanding of interactions between Jews and Christians within the context of minority-majority relationships in central Europe and across the globe.
Audience: Undergraduate

GERMAN 245 — TOPICS IN DUTCH LIFE AND CULTURE
3 credits.

Cultural history and traditions of Dutch speaking countries. All readings and lectures in English.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023

GERMAN 249 – INTERMEDIATE GERMAN - SPEAKING AND LISTENING
3 credits.

Drawing mainly on contemporary audio and video materials from German-speaking countries, deepen understanding of German as a spoken language by learning how native speakers vary their use of sound structures, vocabulary, and grammar according to speech situation.
Requisites: GERMAN 204 or placement into GERMAN 249, 258, or 262
Course Designation: Frgn Lang - 5th + semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

GERMAN 253 – INTRODUCTION TO GERMAN CINEMA
3 credits.

An English-language survey of German film, one of the most influential national cinemas in the world. Consider important periods and topics such as the Weimar Republic (1918-1933); Nazism (1933-1945); post-war popular cinema; socialist East Germany; New German Cinema; and art house and international favorites of the contemporary period. Analyze how the films represent important cultural and social issues such as gender, sexuality, race/ethnicity, class, nationality, globalization, and migration.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze celebrated ("canonical") films and hidden gems from more than 100 years of German cinema.
Audience: Undergraduate

2. Recognize how history, context, and genre influence filmmaking.
Audience: Undergraduate

3. Compare representations of German culture to your own observations and experiences.
Audience: Undergraduate

4. Identify and interpret representations of gender/sexuality, race/ethnicity, class, and more.
Audience: Undergraduate

GERMAN 258 – INTERMEDIATE GERMAN-READING
3 credits.

Develop reading skills by working with literary and cultural texts from 1800 to the present. Emphasizes close reading, textual analysis, historical context, and the use of appropriate reading strategies.
Requisites: GERMAN 204 or placement into GERMAN 249, 258, or 262
Course Designation: Breadth - Literature. Counts toward the Humanities req
Frgn Lang - 5th + semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

GERMAN 262 – INTERMEDIATE GERMAN-WRITING
3 credits.

Individual and collaborative writing as well as teacher- and student-guided writing activities. Writings rely on authentic text models, many with German-specific cultural connotations.
Requisites: GERMAN 204 or placement into GERMAN 249, 258, or 262
Course Designation: Frgn Lang - 5th + semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

GERMAN 264 – CULTURE IN 20TH CENTURY BERLIN
3 credits.

In the twentieth century, Berlin functioned as the seat of government and as a showcase for conflicting ideologies during the Cold War, and it now faces the challenge of returning to its function as reunified Germany's capital without ignoring its past. Through it all, Berlin has maintained a reputation as a center for artistic experimentation and a mecca for alternative culture. Examine the various arts and forms of entertainment from the turn of the century through the Weimar Republic, the Third Reich, the Cold War, and the reunification, in an effort to determine how politics, economics, and demographics have come together to shape a unique Berlin culture.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. demonstrate a thorough understanding of the historical conditions that shaped Berlin’s unique culture
Audience: Undergraduate

2. demonstrate an awareness of the living circumstances of Berliners throughout the tumultuous changes they experienced in the twentieth century
Audience: Undergraduate

3. recognize the similarities as well as difference between Berlin culture and cultures of other contemporary societies through cultural phenomena that include the arts, media, literature, entertainment, taste, education, gender roles, national identities, and belief systems
Audience: Undergraduate

4. apply oral and written skills in interpreting memoirs and contemporary films (with English translations) in their historical context
Audience: Undergraduate

5. gain an appreciation for Berlin’s changing role in the world
Audience: Undergraduate

GERMAN 266 — TOPICS IN GERMAN AND/OR YIDDISH CULTURE
3 credits.

Introduction to diverse cultural expressions of German and/or Yiddish speakers worldwide.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2018

GERMAN 267 — YIDDISH SONG AND THE JEWISH EXPERIENCE
3-4 credits.

Explores Yiddish song as an expression of the modern Jewish experience from Eastern Europe to the US. Covers folk song, popular and art music. Music and readings together provide an analytical framework to examine cultural and historical issues.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

GERMAN/JEWISH/LITTRANS 269 — YIDDISH LITERATURE AND CULTURE IN EUROPE
3 credits.

Exploration of European Yiddish fiction, poetry, folklore, and cinema, with a focus on works of the 19th and 20th centuries.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

GERMAN 272 — NAZI CULTURE
3 credits.

Examines how ideology and new policies influenced cultural life in the Third Reich. Topics include propaganda and entertainment films, music, literature and theater, visual arts and architecture, youth education, and consumer culture specifically in its appeal to women.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

GERMAN/RELIG ST/SOC 273 — GOD & MONEY
3 credits.

Explores the historical connections between capitalism and religion. Considers if and how religious ideas and practices facilitated the rise of capitalism; asks whether religious institutions have supported the reproduction of social inequalities, unjust labor practices, and exploitative economies; and studies the role played by religious actors in the critique of capitalism. Pays attention to the historical specificity of the capitalist system, its conditions of emergence in the Christian West, and the effects of its globalization on non-Christian traditions. Covers topics including classical social theories of religion and capitalism; contemporary examples of religious practice and capital accumulation; and the relationship between religious movements and social-economic justice.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge of debates surrounding the historical and theoretical relationship between religion and capitalism
Audience: Undergraduate

2. Discern and integrate divergent and contradictory perspectives on the relationship between religion and capitalism across a range of fields (e.g., philosophy, history, sociology) and contexts (e.g., America, Europe, Middle East, and South Asia)
Audience: Undergraduate

3. Cultivate skills in textual analysis and evaluate a range of formal and structural elements in a range of media
Audience: Undergraduate

4. Generate original ideas and texts, experimenting and taking risks, solving problems, and answering textual questions
Audience: Undergraduate

5. Write original, coherent, and compelling arguments that push beyond summary to analysis and independent and critical thinking in clear prose that meets expectations for grammatical correctness
Audience: Undergraduate

GERMAN 275 — KAFKA AND THE KAFKAESQUE
3 credits.

Examines a wide selection of texts by Franz Kafka to approach an understanding of his universe and prepare ourselves to view this universe in comparison with other contemporary authors as well as authors from other cultures and eras (A. Camus, W. G. Sebald, T. Pynchon, H. Mulisch, P. Roth, H. Murakami). Also highlights literature, film, and art works in the tradition of the Kafkaesque.
Requisites: Satisfied Communications A requirement
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

GERMAN/LITTRANS 276 – SPECIAL TOPICS IN GERMAN AND WORLD LITERATURE/S
3 credits.

Exploration of diverse world literary traditions with an emphasis on German and German speaking cultures.
Requisites: Satisfied Communications A requirement
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Engage with world literature as a lens for the human experience
Audience: Undergraduate

2. Read and discuss literature of German speaking countries and the world in translation
Audience: Undergraduate

3. Recognize and explain general themes common to different cultures
Audience: Undergraduate

4. Write about the topics and texts covered in the course
Audience: Undergraduate

GERMAN 278 – TOPICS IN GERMAN CULTURE
3 credits.

Introduction to German-speaking cultures. Topics may include Weimar culture, Nazi culture, Berlin, fin-de-siecle Vienna, minorities, representatives of the Holocaust, Germanic mythology, East Germany, Germans in America. Readings and lectures in English.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

GERMAN/JEWISH/LITTRANS 279 – YIDDISH LITERATURE AND CULTURE IN AMERICA
3 credits.

Exploration of American Yiddish poetry, fiction, theater, and cinema created by European Jews in the United States.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Prepare students for life and careers in an increasingly multicultural and multilingual US environment
Audience: Undergraduate

2. Develop critical thinking skills through sustained discussion with one's peers and foster a constructive climate in which to engage with questions concerning cultural, racial, religious, and linguistic difference
Audience: Undergraduate

3. Acquire a critical vocabulary to speak about historical and present-day issues concerning migration, ethnic identity, and religious difference
Audience: Undergraduate

4. Engage in reflective writing practices, respond critically to feedback, and assess one's own communicative strengths
Audience: Undergraduate

5. Identify the major themes of American Yiddish literature and culture from the early-twentieth century until today. These themes include: the politics of language use; the negotiation of a minoritized status; regional vs. national American Jewish identity; inter-generational conflict; Jews and the question of race
Audience: Undergraduate

GERMAN/LITTRANS 280 – FROM GRIMM TO GRYFFINDOR: GERMAN FAIRYTALES (RE)IMAGINED
3 credits.

From Rumpelstiltskin to Rapunzel, the rich fairy-tale tradition of the German-speaking world is filled with familiar themes and subversive morals. With an eye to depictions of gender, gender roles, sexuality, and race, we critically engage with these tales and contextualize them within the social and political landscapes that shaped them.
Requisites: Satisfied Communications A requirement
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Critically engage with German fairytales from different time periods and contextualize them within the social and political landscapes that shaped them
Audience: Undergraduate

2. Explore fairytales through a variety of analytical lenses, including feminist and queer theories, ecocriticism, and psychoanalytic perspectives

Audience: Undergraduate

3. Recognize and analyze the fairytale's transcultural influences in literature, art, music, poetry, and pop culture
Audience: Undergraduate

GERMAN 285 – INTERMEDIATE INTENSIVE (HONORS) GERMAN: LANGUAGE, CULTURE, TEXTS
6 credits.

Intensive introduction to German-language culture and texts of varying length and genre, emphasizing reading, writing, and discussion skills. Equivalent to GERMAN 258 and 262.
Requisites: GERMAN 204. Not open to students with credit for GERMAN 258 or 262.
Course Designation: Breadth - Literature. Counts toward the Humanities req
Frgn Lang - 5th + semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Accelerated Honors (!)
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Gain knowledge of major periods in German culture, literature, and history from 1750 to the present
Audience: Undergraduate

2. Become aware of how German texts responded to contemporary events or issues and, conversely, how those texts have shaped and influenced both past and present-day German culture
Audience: Undergraduate

3. Develop intercultural competence by reflecting on the connections and differences between their native culture and German culture and its objects
Audience: Undergraduate

4. Learn to appreciate the relevance of grammatical accuracy, lexical precision, proper discourse organization, and voice/expressiveness in terms of conveyance of exact intended meaning (including tone, implications, and connotations), aesthetic value, and generally, as a means of sharing experiences across language and cultural boundaries
Audience: Undergraduate

5. Be able to approach a wide variety of textual genres in different ways appropriate to each
Audience: Undergraduate

6. Become attentive to rhetorical and formal strategies in different types of texts and gain the ability and vocabulary to describe and analyze them
Audience: Undergraduate

7. Learn how to write and talk about texts both analytically and creatively
Audience: Undergraduate

8. Improve critical thinking abilities through group discussion and individual assignments asking them to argue for and support positions
Audience: Undergraduate

9. Gain enhanced awareness of reading styles and strategies and how to apply them while reading to develop critical reading skills for different text types
Audience: Undergraduate

10. Improve German language abilities in the areas of writing, reading, listening, and speaking through individual assignments, collaborative work, and class discussions
Audience: Undergraduate

11. Enhance teamwork skills through extensive collaborative work both in and out of class
Audience: Undergraduate

GERMAN 298 – DIRECTED STUDY
1-3 credits.

Independent study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2018

GERMAN 299 – DIRECTED STUDY
1-3 credits.

Independent study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

GERMAN 305 – LITERATUR DES 20. UND 21. JAHRHUNDERTS
3-4 credits.

Overview of new and recent literature in German within its historical and cultural contexts using a variety of genres and cultural artifacts, including fiction, drama, poetry, film, and popular songs.
Requisites: (GERMAN 249, 258, and 262) or (GERMAN 249 and 285)
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2020

GERMAN 311 – FIRST SEMESTER DUTCH FOR GRADUATE STUDENTS
3 credits.

Acquire a minimal communication level of proficiency in Dutch through listening, speaking, reading, and writing.
Requisites: Graduate/professional standing
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

GERMAN 312 – SECOND SEMESTER DUTCH FOR GRADUATE STUDENTS
3 credits.

Acquire a minimal communication level of proficiency in Dutch through listening, speaking, reading, and writing.
Requisites: GERMAN 311
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

GERMAN 313 – THIRD SEMESTER DUTCH FOR GRADUATE STUDENTS
3 credits.

A review of Dutch grammar and vocabulary development. Reading and discussion of newspaper articles and modern short stories.
Requisites: GERMAN 312
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

GERMAN 314 – FOURTH SEMESTER DUTCH FOR GRADUATE STUDENTS
3 credits.

Reading and discussion of texts dealing with the cultural history of the Netherlands and Flanders as well as samples of modern Dutch fiction.
Requisites: GERMAN 313
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023

GERMAN 325 – TOPICS IN DUTCH LITERATURE
3 credits.

Study of an author or theme in modern Dutch/Flemish literature, presented by the current Dutch/Flemish writer in residence.
Requisites: GERMAN 214
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

GERMAN 337 – ADVANCED COMPOSITION & CONVERSATION
3-4 credits.

Enhances speaking, reading, listening, and writing skills within a range of situations; uses a variety of texts to cover current topics in German society, develop essay strategies, improve vocabulary, and review advanced grammar topics.
Requisites: (GERMAN 249, 258, and 262) or (GERMAN 249 and 285)
Course Designation: Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, for 2 number of completions
Last Taught: Fall 2025

GERMAN 351 – INTRODUCTION TO GERMAN LINGUISTICS
3-4 credits.

Understanding the German language in its historical development and its contemporary manifestations, using English as a point of reference.
Requisites: (GERMAN 249, 258, and 262) or (GERMAN 249 and 285)
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

GERMAN 352 – TOPICS IN GERMAN LINGUISTICS
3-4 credits.

Hands-on introduction to a topic in German language study. Topics are designed for future teachers of German and those interested in graduate study in German philology/linguistics.
Requisites: GERMAN 351
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

GERMAN 362 – TOPICS IN GERMAN LITERATURE
3-4 credits.

Selected topics in the literature of German-speaking countries.
Requisites: (GERMAN 249, 258, and 262) or (GERMAN 249 and 285)
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

GERMAN 367 – STUDY ABROAD IN GERMAN LITERATURE
2-5 credits.

Treatment of a topic in German literature in a course carried with a UW-Madison study abroad program which has no equivalent on this campus. Enrollment in a UW-Madison resident study abroad program.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2001

GERMAN 368 – STUDY ABROAD IN GERMAN CULTURE
2-5 credits.

Treatment of a topic in German culture in a course carried with a UW-Madison study abroad program which has no equivalent on this campus. Enrollment in a UW-Madison resident study abroad program.
Requisites: None
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2001

GERMAN 369 – STUDY ABROAD IN GERMAN LINGUISTICS
2-5 credits.

Treatment of a topic in German linguistics in a course carried with a UW-Madison study abroad program which has no equivalent on this campus. Enrollment in a UW-Madison resident study abroad program.
Requisites: None
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2001

GERMAN 372 – TOPICS IN GERMAN CULTURE
3-4 credits.

Selected topics in the culture of German-speaking countries.
Requisites: (GERMAN 249, 258, and 262) or (GERMAN 249 and 285)
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

GERMAN 377 – STUDY ABROAD IN DUTCH LITERATURE
2-5 credits.

Treatment of a topic in Dutch literature in a course offered at a university outside the United States. Enrollment in a UW-Madison resident study abroad program.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

GERMAN 378 – STUDY ABROAD IN DUTCH CULTURE
2-5 credits.

Treatment of a topic in Dutch culture in a course offered at a university outside the United States. Enrollment in a UW-Madison resident study abroad program.
Requisites: None
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2001

GERMAN 379 – STUDY ABROAD IN DUTCH LINGUISTICS
2-5 credits.

Treatment of a topic in Dutch linguistics in a course offered at a university outside the United States. Enrollment in a UW-Madison resident study abroad program.
Requisites: None
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

GERMAN 385 – HONORS SEMINAR IN GERMAN LITERATURE
3 credits.

Selected topics in the literature of German-speaking countries.
Requisites: (GERMAN 249, 258, and 262) or (GERMAN 249 and 285) and Declared in an Honors program
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

GERMAN 391 – GERMAN FOR GRADUATE READING KNOWLEDGE I
3 credits.

Intensive grammar and reading.
Requisites: Senior standing
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

GERMAN 392 – GERMAN FOR GRADUATE READING KNOWLEDGE II
3 credits.

Intensive grammar and reading.
Requisites: GERMAN 391
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

GERMAN 401 – FIRST-SEMESTER GERMAN FOR GRADUATE STUDENTS
3 credits.

Emphasis on proficiency in German through speaking, listening, reading, and writing, and on communication in cultural context.
Requisites: Graduate/professional standing
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025

GERMAN 402 – SECOND-SEMESTER GERMAN FOR GRADUATE STUDENTS
3 credits.

Emphasis on proficiency in German through speaking, listening, reading, and writing, and on communication in cultural context.
Requisites: GERMAN 401
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

GERMAN 403 – THIRD-SEMESTER GERMAN FOR GRADUATE STUDENTS
3 credits.

Four-skills approach (speaking, listening, wiriting, reading) centered around authentic texts, recordings, and images. Grammar review, concereted vocabulary expansion, and intensive practice.
Requisites: GERMAN 402
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

GERMAN 404 – FOURTH-SEMESTER GERMAN FOR GRADUATE STUDENTS
3 credits.

Four-skills approach (speaking, listening, wiriting, reading) centered around authentic texts, recordings, and images. Grammar review, concereted vocabulary expansion, and intensive practice.
Requisites: GERMAN 403
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

GERMAN 411 – KULTUR DES 20. UND 21. JAHRHUNDERTS
3-4 credits.

Analyzes the German-speaking world in the 20th and 21st centuries using variety of authors, films, music, and other art media. Works include literary and historical texts, central texts from German sociologists, and art history.
Requisites: (GERMAN 249, 258, and 262) or (GERMAN 249 and 285)
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

GERMAN/JEWISH 510 – GERMAN-JEWISH CULTURE SINCE THE 18TH CENTURY
3 credits.

Investigates German-Jewish culture since the 18th century, concentrating on toleration, emancipation, acculturation, assimilation, anti-Semitism, and Bildung.
Requisites: Junior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2020

GERMAN 560 – TOPICS IN GERMAN STUDIES
3 credits.

Topics will vary. Each seminar will focus on a topic in German Studies.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

GERMAN 612 – GERMAN LITERARY MOVEMENTS SINCE 1750
3 credits.

Ideas and theories of literary movements exemplified in selected primary and secondary literature.
Requisites: GERMAN 305, 285, or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

GERMAN 625 – LETTERKUNDE DER LAGE LANDEN
3-4 credits.

Topics vary. May include: medieval literature; Golden Age literature; texts from Europe, South Africa, Indonesia, the Caribbean; memory in post-war literature; women writers; twentieth-century movements; Dutch-Jewish literature. Taught primarily in Dutch.
Requisites: GERMAN 314
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

GERMAN 645 – CULTUURKUNDE DER LAGE LANDEN
3-4 credits.

Theory and analysis of such topics as: construction of Dutch and Belgian identities; medieval culture; the Dutch Revolt and Golden Age; colonialism, anti-colonialism, post-colonialism; immigration and emigration; Dutch and Flemish regionalism vis-a-vis Europeanization and globalization. Taught primarily in Dutch.
Requisites: GERMAN 314
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023

GERMAN 650 – HISTORY OF THE GERMAN LANGUAGE
3 credits.

Overview of the history of the German language; basic methodological and bibliographical training necessary for work in German philology/ linguistics and the older Germanic languages.
Requisites: Senior standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

GERMAN/MEDIEVAL 651 – INTRODUCTION TO MIDDLE HIGH GERMAN
3 credits.

Middle High German grammar and vocabulary with the goals of fluency and accuracy in reading medieval texts. Covers topics in phonology, morphology, syntax, and lexicon.
Requisites: (GERMAN 249, 258, and 262), (GERMAN 249 and 285), or graduate/professional standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

GERMAN 676 – ADVANCED SEMINAR IN GERMAN STUDIES
3 credits.

Focuses on a topic in German studies.
Requisites: Senior standing and GERMAN 337
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

GERMAN 681 – SENIOR HONORS THESIS-FIRST SEMESTER
3 credits.

Individual mentored study for seniors completing theses for Honors in the Major as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2020

GERMAN 682 – SENIOR HONORS THESIS-SECOND SEMESTER
3 credits.

Individual mentored study for seniors completing theses for Honors in the Major as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2021

GERMAN 683 – SENIOR HONORS SEMINAR IN GERMAN LITERATURE
3 credits.

Focuses on a topic in German studies.
Requisites: GERMAN 385 and Declared in an Honors program
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

GERMAN 698 – DIRECTED STUDY
1-6 credits.

Independent study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022

GERMAN 699 – DIRECTED STUDY
1-6 credits.

Independent study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

GERMAN 720 – COLLEGE TEACHING OF GERMAN
1 credit.

Discuss German-language specific instruction. Emphasis on teaching German and developing identity as a language instructor.
Requisites: Declared in German MA or PHD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

GERMAN 722 – THEORY OF TEACHING GERMAN
2 credits.

Theory and methodology of teaching German as a second language.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

GERMAN 723 – PRACTICUM IN TEACHING UNDERGRADUATE LITERATURE
1-2 credits.

Observation and discussion of undergraduate literature course. Consideration of pedagogical issues and limited opportunity for practice teaching.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

GERMAN 724 – PRACTICUM IN TEACHING UNDERGRADUATE LINGUISTICS
1-2 credits.

Observation and discussion of undergraduate linguistics course. Consideration of pedagogical issues and limited opportunity for practice teaching.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022

GERMAN 725 – PRACTICUM IN TEACHING UNDERGRADUATE CULTURE
1-2 credits.

Observation and discussion of undergraduate culture course. Consideration of pedagogical issues and limited opportunity for practice teaching.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

GERMAN 727 – TOPICS IN APPLIED LINGUISTICS
3 credits.

Selected issues in language acquisition and language teaching.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

GERMAN 742 – TOPICS IN GERMAN CULTURAL STUDIES
3 credits.

Selected topics in German culture.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

GERMAN/MEDIEVAL 755 – OLD GERMANIC LANGUAGES
3 credits.

Old High German, Old Saxon, and Gothic on a rotating basis.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023

GERMAN 758 – TOPICS IN CONTEMPORARY GERMAN
3 credits.

Topics in contemporary German culture, literature, and linguistics.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

GERMAN 799 – INDEPENDENT STUDY
1-6 credits.

Advanced study under guidance.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

GERMAN/FRENCH/HISTORY/POLI SCI/SOC 804 – INTERDISCIPLINARY WESTERN EUROPEAN AREA STUDIES SEMINAR
3 credits.

Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

GERMAN 947 – SEMINAR IN GERMAN LITERATURE AND CULTURE
3 credits.

Cultivate a deep knowledge and appreciation of German literature and German intellectual history.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

GERMAN 960 – SEMINAR IN GERMAN LINGUISTICS
3 credits.

Topic from a core area of linguistics, with integrated discussion of methodological approaches; bibliographical skills; basics of linguistic scholarship.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

GERMAN 990 – INDIVIDUAL RESEARCH IN LITERATURE
1-9 credits.

Independent research and writing under the supervision of a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

GERMAN 991 – INDIVIDUAL RESEARCH LINGUISTICS AND GERMANIC PHILOLOGY
1-9 credits.

Independent research and writing on the subject of linguistics and philology under the supervision of a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

GERMAN, NORDIC, AND SLAVIC (GNS)

GNS/JEWISH 105 – FIRST SEMESTER YIDDISH
4 credits.

Introduction to the Yiddish language through speaking, listening, reading, and writing. Emphasis on communication with attention to cultural and historical context.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Read the Yiddish alphabet and write in Yiddish cursive
Audience: Undergraduate

2. Express oneself in Yiddish at the sentence level in written and oral communications
Audience: Undergraduate

3. Read short Yiddish texts in the present, past, and future tenses
Audience: Undergraduate

4. Mobilize a vocabulary of 200+ Yiddish words, including those terms necessary to describe one's family, the life of the student, travel plans, daily life, and different geographic centers of Yiddish cultural production
Audience: Undergraduate

5. Name and describe major figures of twentieth and twenty-first century Yiddish culture
Audience: Undergraduate

GNS/JEWISH 106 – SECOND SEMESTER YIDDISH
4 credits.

Introduction to the Yiddish language through speaking, listening, reading, and writing. Emphasis on communication with attention to cultural and historical context.
Requisites: GNS/JEWISH 105
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Deploy Yiddish at the multi-sentence level in written and oral communications
Audience: Undergraduate

2. Express opinions about authentic Yiddish texts, including contemporary newspaper articles and poetry selections from the twentieth century
Audience: Undergraduate

3. Mobilize a vocabulary of 400+ Yiddish words, including those terms necessary to describe time, weather, calendrical units, literature (children's books, poetry, and the history of Yiddish publishing)
Audience: Undergraduate

4. Be creative with language in past, present, future, imperative, and conditional tenses
Audience: Undergraduate

5. Demonstrate familiarity with various forms of Yiddish cultural expression, such as Yiddish folksong, Yiddish poetry, Yiddish film, and the politics of Yiddishism
Audience: Undergraduate

GNS/FOLKLORE 200 – FOLKLORE OF CENTRAL, EASTERN AND NORTHERN EUROPE
3 credits.

Folklore of Central, Eastern and Northern Europe and among emigrants from these regions in North America. A survey of genres of folklore, history of research, and modes of interpretation, past and present.
Requisites: None
Course Designation: Gen Ed - Communication Part B
Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Recognize and understand key concepts important to the study of folklore as related to the cultures of people in and from the countries of Central, Eastern and Northern Europe.
Audience: Undergraduate

2. Articulate and apply methods folklorists use to document, describe, and discuss culture.
Audience: Undergraduate

3. Produce folkloristic products in the form of essays, oral presentations, and digital products.
Audience: Undergraduate

GNS/ENVIR ST 210 – CULTURES OF SUSTAINABILITY: CENTRAL, EASTERN, AND NORTHERN EUROPE
3 credits.

Exploration of the ideals and realities of sustainability in Central, Northern and East European contexts. Cultural, historical, environmental and other perspectives on sustainability on a local and global scale.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the social, economic, and/or environmental dimensions of the sustainability challenge(s) of culture in Central, Eastern and North (CEN) European by demonstrating a humanistic understanding of sustainability.
Audience: Undergraduate

2. Apply sustainability principles and/or frameworks to addressing the challenge of working respectfully with stakeholders from different cultural, geographic, and political backgrounds to sustain culture in Central, Eastern and North (CEN) European contexts
Audience: Undergraduate

3. Analyze the causes of and solutions for the sustainability challenge of culture in Central, Eastern and North (CEN) European contexts.
Audience: Undergraduate

4. Analyze sustainability issues and/or practices using a systems-based approach.
Audience: Undergraduate

5. Describe the social, economic, and environmental dimensions of culture in Central, Eastern and North (CEN) European contexts using a humanistic approach and identify potential tradeoffs and interrelationships among these dimensions at a level appropriate to the course.
Audience: Undergraduate

6. Use sustainability principles for developing personal goals and professional values.
Audience: Undergraduate

GNS/GERMAN/JEWISH 240 – HEALTH AND HOTELS IN CENTRAL EUROPE
3 credits.

Introduction to spaces of leisure, medical recuperation, and Christian and Jewish cross-cultural exchange. Literature and films focus on sites of rest and healing between the World Wars as well as post-Holocaust reflections on these sites.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Demonstrate close reading skills in writing assignments through interpretation and analysis of texts in a variety of genres, including critical theory, prose, poetry, and film.
Audience: Undergraduate

2. Discern and integrate divergent and contradictory perspectives, identify and question assumptions, and assess evidence and methods.
Audience: Undergraduate

3. Identify major and lesser-known writers of central Europe between the World Wars.
Audience: Undergraduate

4. Acquire a critical vocabulary to speak and write effectively about the experience of health, illness, leisure, recuperation, and Jewish identity.
Audience: Undergraduate

5. Engage in sustained discussion with peers in a respectful and empathetic manner on topics concerning diverse worldviews and value systems, including an understanding of interactions between Jews and Christians within the context of minority-majority relationships in central Europe and across the globe.
Audience: Undergraduate

GNS/HISTORY 265 – AN INTRODUCTION TO CENTRAL ASIA: FROM THE SILK ROUTE TO AFGHANISTAN
3 credits.

Examination of human geography, ethnicity, nomadism and pastoralism, oases cultures, religion and international politics of the silk routes of central Asia. Not open to students with credit for HIST 265 prior to Fall 2018.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

GNS 270 – INTRODUCTORY TOPICS IN GNS
3 credits.

Elementary topics in German, Nordic, and/or Slavic culture, folklore, linguistics, and/or language.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024
Learning Outcomes: 1. Recognize distinctive features of cultures of Central, Eastern and/or Northern Europe as reflected in specific cultural products
Audience: Undergraduate

2. Analyze cultural products from Central, Eastern, and/or Northern Europe in relation to societal and historical contexts.
Audience: Undergraduate

3. Create academic products that adhere to the norms of scholarly inquiry and communication in the humanistic study of the languages and cultures of Central, Eastern and/or Northern Europe.
Audience: Undergraduate

4. Recognize and discuss the complex ways in which culture is used to include and exclude people within the societies of Central, Eastern, and/or Northern Europe, as elsewhere in the world.
Audience: Undergraduate

GNS 324 – LITERATURES OF CENTRAL ASIA
3 credits.

Critical survey of the development of medieval and modern literatures of the peoples of Central Asia from pre-Islamic times to the present with selected readings in English translation. Not open to students with credit for LCA 314 prior to fall 2019.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020
Learning Outcomes: 1. Recognize and understand the fundamentals of cultural analysis and interpretation of verbal and visual arts. Students will be able to map major intellectual trends in Central Asian Literature and its influence worldwide.
Audience: Both Grad & Undergrad

2. Hone and apply students' analytical skills. The information will be provided via lectures and readings. Students' knowledge on the subject will be tested in exams, while their analytical skills and critical thinking abilities will be further examined through their paper assignments.
Audience: Both Grad & Undergrad

3. Identify the most important literature in major research languages and for utilizing materials in those research languages which they command.
Audience: Graduate

GNS 331 – FIRST SEMESTER KAZAKH
4 credits.

Provides an introduction to the Kazakh language, which is a Turkic language spoken by about 11 million people in Kazakhstan, China, Mongolia, Turkey, Uzbekistan, Tajikistan, Turkmenistan, Russia, and Iran. Work within four language skills: listening, reading, writing, and speaking. Learn to communicate in Kazakh in authentic situations. Kazakh will be used as the primary language in classroom instructions, with minimal use of English for explanations of grammar.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand and employ Kazakh Language at an intermediate level, mastering elements of grammar essential to effective communication in Kazakh
Audience: Undergraduate

2. Recognize aspects of Kazakh daily life
Audience: Undergraduate

3. Possess a firm grammatical foundation for further study of oral and written Kazakh
Audience: Undergraduate

GNS 332 – SECOND SEMESTER KAZAKH
4 credits.

Building on skills learned in first semester Kazakh, learn to communicate in more extended situations. Information on holidays, traditions and colloquial phrases will be introduced. Pays special attention to reading and writing and to vocabulary expansion.
Requisites: GNS 331
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Understand and employ Kazakh language at an elementary level
Audience: Undergraduate

2. Recognize aspects of Kazakh daily life
Audience: Undergraduate

3. Possess a firm grammatical foundation for further study of oral and written Kazakh
Audience: Undergraduate

GNS 339 – FIRST SEMESTER TURKISH
4 credits.

Provides an introduction to the Turkish language, which is spoken by more than 80 million people in Turkey and Europe. Work within four language skills: listening, reading, writing, and speaking. Learn to communicate in Turkish in authentic situations. Turkish will be used as the primary language in classroom instructions, with minimal use of English.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand and employ Turkish language at an elementary level
Audience: Undergraduate

2. Recognize aspects of Turkish daily life
Audience: Undergraduate

3. Possess a firm grammatical foundation for further study of oral and written Turkish
Audience: Undergraduate

GNS 340 – SECOND SEMESTER TURKISH
4 credits.

Building on skills learned in first semester Turkish, learn to communicate in more extended situations. Information on holidays, traditions and colloquial phrases will be introduced. Besides everyday Turkish, learn written Turkish such as formal letters, orders and messages. Pays special attention to reading and writing and to vocabulary expansion.
Requisites: GNS 339
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand and employ Turkish Language at an elementary level
Audience: Undergraduate

2. Recognize aspects of Turkish daily life
Audience: Undergraduate

3. Possess a firm grammatical foundation for further study of oral and written Turkish
Audience: Undergraduate

GNS 351 – FIRST SEMESTER CENTRAL EURASIAN LANGUAGE
4 credits.

Introductory study of a Central Eurasian study, including introductory grammar to read, write and speak about daily life and interactions in the topic language. Upon completion, student can expect to possess a firm grammatical foundation for further study of oral and written Tajik, Uyghur, or Uzbek.
Requisites: Declared in Central Eurasian Studies Summer Institute
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025
Learning Outcomes: 1. Understand and employ Tajik, Uyghur, or Uzbek Language at an elementary level
Audience: Undergraduate

2. Recognize aspects of Tajik, Uyghur, or Uzbek daily life
Audience: Undergraduate

3. Possess a firm grammatical foundation for further study of oral and written Tajik, Uyghur, or Uzbek
Audience: Undergraduate

GNS 352 – SECOND SEMESTER CENTRAL EURASIAN LANGUAGE
4 credits.

Introductory study of a Central Eurasian study, including introductory grammar to read, write and speak about daily life and interactions in the topic language. Upon completion, student can expect to possess a firm grammatical foundation for further study of oral and written Tajik, Uyghur, or Uzbek.
Requisites: Declared in Central Eurasian Studies Summer Institute
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025
Learning Outcomes: 1. Understand and employ Tajik, Uyghur, or Uzbek Language at an elementary level
Audience: Undergraduate

2. Recognize aspects of Tajik, Uyghur, or Uzbek daily life
Audience: Undergraduate

3. Possess a firm grammatical foundation for further study of oral and written Tajik, Uyghur, or Uzbek
Audience: Undergraduate

GNS 370 – TOPICS IN GNS (INTERMEDIATE)
3 credits.

Intermediate topics in German, Nordic, and/or Slavic culture, folklore, lingusitics, and/or language.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize distinctive features of cultures of Central, Eastern and/or Northern Europe as reflected in specific cultural products.
Audience: Undergraduate

2. Analyze cultural products from Central, Eastern, and/or Northern Europe in relation to societal and historical contexts.
Audience: Undergraduate

3. Create academic products that adhere to the norms of scholarly inquiry and communication in the humanistic study of the languages and cultures of Central, Eastern and/or Northern Europe.
Audience: Undergraduate

4. Recognize and discuss the complex ways in which culture is used to include and exclude people within the societies of Central, Eastern, and/or Northern Europe, as elsewhere in the world.
Audience: Undergraduate

GNS 375 – PHILOSOPHY, THEORY, CRITICISM
3 credits.

Selected studies in critical theory, continental philosophy, and/or literary criticism; topics may include German idealism, psychoanalysis, phenomenology, linguistics, Marxism, gender theory, critical race studies, religion, translation, poetics, media, migration studies, etc.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023
Learning Outcomes: 1. Demonstrate knowledge of major themes, terms, and interpretive currents in the history of modern/contemporary philosophy, theory, and criticism
Audience: Undergraduate

2. Discern and integrate divergent and contradictory perspectives, identify and question assumptions, and assess evidence and methods in modern philosophical/theoretical writing
Audience: Undergraduate

3. Cultivate skills in textual analysis and evaluate a range of formal and structural elements in modern philosophy, theory, and criticism
Audience: Undergraduate

4. Generate original ideas and texts, experimenting and taking risks, solving problems, and answering questions in a range of texts
Audience: Undergraduate

5. Write original, coherent, and compelling arguments that push beyond summary to analysis and independent and critical thinking in clear prose that meets expectations for grammatical correctness
Audience: Undergraduate

GNS/JEWISH 405 – FIRST SEMESTER YIDDISH FOR GRADUATE STUDENTS
4 credits.

Introduction to the Yiddish language through speaking, listening, reading, and writing. Emphasis on communication with attention to cultural and historical context. Includes tasks designed to facilitate Yiddish-related research.
Requisites: Graduate/professional standing
Repeatable for Credit: No
Learning Outcomes: 1. Read the Yiddish alphabet and write in Yiddish cursive
Audience: Undergraduate

2. Express oneself in Yiddish at the sentence level in written and oral communications
Audience: Undergraduate

3. Read short Yiddish texts in the present, past, and future tenses
Audience: Undergraduate

4. Mobilize a vocabulary of 200+ Yiddish words, including those terms necessary to describe one's family, the life of the student, travel plans, daily life, and different geographic centers of Yiddish cultural production
Audience: Undergraduate

5. Name and describe major figures of twentieth and twenty-first century Yiddish culture
Audience: Undergraduate

GNS/JEWISH 406 – SECOND SEMESTER YIDDISH FOR GRADUATE STUDENTS
4 credits.

Emphasis on proficiency in Yiddish through speaking, listening, reading, and writing, and on communication in cultural context.
Requisites: GNS/JEWISH 405
Repeatable for Credit: No
Learning Outcomes: 1. Deploy Yiddish at the multi-sentence level in written and oral communications
Audience: Undergraduate

2. Express opinions about authentic Yiddish texts, including contemporary newspaper articles and poetry selections from the twentieth century.
Audience: Undergraduate

3. Mobilize a vocabulary of 400+ Yiddish words, including those terms necessary to describe time, weather, calendrical units, literature (children's books, poetry, and the history of Yiddish publishing).
Audience: Undergraduate

4. Be creative with language in past, present, future, imperative, and conditional tenses.
Audience: Undergraduate

GNS 429 – INTERMEDIATE SUMMER IMMERSION TURKISH
8 credits.

Continues the study of the Turkish language with an emphasis on four language skills: listening, reading, writing, and speaking in order to develop proficiency at the intermediate level. Improve communication in Turkish. Instruction will emphasize the language that is relevant to situations that students are likely to encounter if they travel to or live in Turkey. The secondary goal of the course is to improve students' understanding of Turkish society and culture. Students are deeply engaged in Turkish culture through history, literature, art and politics.
Requisites: GNS 329 or 340 and declared in Turkish Flagship Language Initiative
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2019
Learning Outcomes: 1. Understand and employ Turkish language at an intermediate level, mastering elements of grammar essential to effective communication in Turkish
Audience: Undergraduate

2. Demonstrate cultural knowledge, especially in relation to professional situations
Audience: Undergraduate

3. Develop reading skills and speed, with expanded vocabulary and the ability to draw meaningful conclusions from text
Audience: Undergraduate

GNS 431 – THIRD SEMESTER KAZAKH
4 credits.

Continues the study of the Kazakh language with an emphasis on four language skills: listening, reading, writing, and speaking in order to develop proficiency at the intermediate level. The primary goal is to improve communication in Kazakh. Instruction will emphasize the language that is relevant to situations that students are likely to encounter if they travel to or live in Kazakhstan. The secondary goal of the course is to improve students' understanding of Kazakh society and culture.
Requisites: GNS 332
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Understand and employ Kazakh language at an intermediate level, mastering elements of grammar essential to effective communication in Kazakh
Audience: Undergraduate

2. Demonstrate cultural knowledge, especially in relation to professional situations
Audience: Undergraduate

3. Develop reading skills and speed, with expanded vocabulary and the ability to draw meaningful conclusions from text
Audience: Undergraduate

GNS 432 – FOURTH SEMESTER KAZAKH
4 credits.

Continue to learn more about the Kazakh language through history, literature and art, in order to better understand its cultural codes.
Requisites: GNS 431
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Understand and employ Kazakh language at an intermediate level, mastering elements of grammar essential to effective communication in Kazakh
Audience: Undergraduate

2. Demonstrate cultural knowledge, especially in relation to professional situations
Audience: Undergraduate

3. Develop reading skills and speed, with expanded vocabulary and the ability to draw meaningful conclusions from text
Audience: Undergraduate

GNS 439 – THIRD SEMESTER TURKISH
4 credits.

Continues the study of the Turkish language, focusing on four language skills--listening, reading, writing, and speaking--in order to develop proficiency at the intermediate level. Improve communication in Turkish. Instruction will emphasize the language that is relevant to situations that students are likely to encounter if they travel to or live in Turkey. The secondary goal of the course is to improve students' understanding of Turkish society and culture.
Requisites: GNS 340
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Understand and employ Turkish language at an intermediate level, mastering elements of grammar essential to effective communication in Turkish
Audience: Undergraduate

2. Demonstrate cultural knowledge, especially in relation to professional situations
Audience: Undergraduate

3. Develop reading skills and speed, with expanded vocabulary and the ability to draw meaningful conclusions from text
Audience: Undergraduate

GNS 440 – FOURTH SEMESTER TURKISH
4 credits.

Continues the study of the Turkish language, focusing on four language skills--listening, reading, writing, and speaking--in order to develop proficiency at the intermediate level. In addition to the topics covered in previous semesters, learn more about the language through history, literature and art, in order to better understand its cultural codes.
Requisites: GNS 439
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand and employ Turkish language at an intermediate level, mastering elements of grammar essential to effective communication in Turkish
Audience: Undergraduate

2. Demonstrate cultural knowledge, especially in relation to professional situations
Audience: Undergraduate

3. Develop reading skills and speed, with expanded vocabulary and the ability to draw meaningful conclusions from text
Audience: Undergraduate

GNS 451 – THIRD SEMESTER CENTRAL EURASIAN LANGUAGE
4 credits.

Third semester level language taught in an intensive 8-week summer language program.
Requisites: Declared in Central Eurasian Studies Summer Institute
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025
Learning Outcomes: 1. Understand and employ Tajik, Uyghur, or Uzbek Language at an intermediate level, mastering elements of grammar essential to effective communication in Tajik, Uyghur, or Uzbek
Audience: Undergraduate

2. Demonstrate cultural knowledge, especially in relation to professional situations
Audience: Undergraduate

3. Develop reading skills and speed, with expanded vocabulary and the ability to draw meaningful conclusions from text
Audience: Undergraduate

GNS 452 – FOURTH SEMESTER CENTRAL EURASIAN LANGUAGE
4 credits.

Introduces intermediate-level communication skills in Central Eurasian languages in varying settings. Students will learn a wide range of vocabulary, grammar structure and pragmatic usage in situated dialogues. They will improve four language skills (listening, speaking, reading and writing) and pragmatic competence through interactive and meaningful in-class activities and after-class assignments.
Requisites: Declared in Central Eurasian Studies Summer Institute
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025
Learning Outcomes: 1. Comprehend and employ Tajik, Uyghur, or Uzbek Language at an intermediate level, mastering elements of grammar essential to effective communication in Tajik, Uyghur, or Uzbek
Audience: Undergraduate

2. Demonstrate cultural knowledge, especially in relation to professional situations
Audience: Undergraduate

3. Develop reading skills and speed, with expanded vocabulary and the ability to draw meaningful conclusions from text
Audience: Undergraduate

GNS 460 – READINGS IN TURKISH: CONTEMPORARY TURKEY THROUGH LITERATURE AND MEDIA
4 credits.

Improve reading skills in Turkish by also developing and employing analytical skills to comprehend, identify and respond to salient features of the contemporary Turkish society. Acquire skills to comprehend a variety of texts within Turkey's social and political framework. Designed for students participating in the Turkish Overseas Flagship Program.
Requisites: GNS 429
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. read within a normal range of speed and with almost complete comprehension a variety of authentic prose material on unfamiliar subjects independent of subject matter knowledge.
Audience: Undergraduate

2. comprehend a variety of styles and forms pertinent to professional needs.
Audience: Undergraduate

3. read fluently and accurately all styles and forms of the language pertinent to professional needs.
Audience: Undergraduate

GNS 471 – ADVANCED TOPICS IN EAST EUROPEAN AND CENTRAL ASIAN LANGUAGES AND CULTURES
1-4 credits.

Advanced topics in East European and Central Asian culture, folklore, lingusitics, and/or language.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize distinctive features of cultures of Eastern Europe and Central Asia as reflected in specific cultural products.
Audience: Undergraduate

2. Analyze cultural products from Eastern Europe and Central Asia in relation to societal and historical contexts.
Audience: Undergraduate

3. Create academic products that adhere to the norms of scholarly inquiry and communication in the humanistic study of the languages and cultures of Eastern Europe and Central Asia.
Audience: Undergraduate

4. Recognize and discuss the complex ways in which culture is used to include and exclude people within the societies of Eastern Europe and Central Asia, as elsewhere in the world.
Audience: Undergraduate

GNS 529 – ADVANCED SUMMER IMMERSION TURKISH
8 credits.

Continues the study of the Turkish language with an emphasis on four language skills: listening, reading, writing, and speaking in order to develop proficiency at the advanced level. Improve communication in Turkish. Instruction will emphasize the language that is relevant to situations that students are likely to encounter if they travel to or live in Turkey. The secondary goal of the course is to improve students' understanding of Turkish society and culture. Students are deeply engaged in Turkish culture through history, literature, art and politics.
Requisites: GNS 429 or GNS 440 and declared in Turkish Flagship Language Initiative
Course Designation: Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2019
Learning Outcomes: 1. Understand and employ Turkish language at an advanced level, possessing the ability to speak and write in modes from colloquial to professional.
Audience: Undergraduate

2. Analyze and interpret texts with sound application of Turkish language and cultural awareness
Audience: Undergraduate

3. Evaluate and explain complex views and issues, using knowledge and perspective grounded in cultural competency
Audience: Undergraduate

GNS 531 – FIFTH SEMESTER KAZAKH
3-4 credits.

Enhance speaking, listening, writing and reading skills. Build confidence in speaking about issues related to daily life.
Requisites: GNS 432
Course Designation: Breadth - Humanities
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Maintain conversations and discussions on familiar, as well as unfamiliar, concrete topics using connected sentences and probing questions.
Audience: Undergraduate

2. Deliver detailed and organized presentations on familiar as well as unfamiliar concrete topics.
Audience: Undergraduate

3. Understand the underlying message and most supporting details in complex informational and fictional texts.
Audience: Undergraduate

4. Tell stories based on concrete experiences in academic, social, and professional topics of interest.
Audience: Undergraduate

5. Recognize and apply culturally relevant aspects of using the language in familiar and everyday contexts.
Audience: Undergraduate

6. Describe some aspects of Kazakh culture and customs.
Audience: Undergraduate

GNS 532 – SIXTH SEMESTER KAZAKH
3-4 credits.

Enhance speaking, listening, writing and reading skills. Build confidence in speaking about issues related to daily life.
Requisites: GNS 531
Course Designation: Breadth - Humanities
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Maintain conversations and discussions on familiar, as well as unfamiliar, concrete topics using connected sentences and probing questions.
Audience: Undergraduate

2. Deliver detailed and organized presentations on familiar as well as unfamiliar concrete topics.
Audience: Undergraduate

3. Understand the underlying message and most supporting details in complex informational and fictional texts.
Audience: Undergraduate

4. Tell stories based on concrete experiences in academic, social, and professional topics of interest.
Audience: Undergraduate

5. Recognize and apply culturally relevant aspects of using the language in familiar and everyday contexts.
Audience: Undergraduate

6. Describe some aspects of Kazakh culture and customs.
Audience: Undergraduate

GNS 539 – FIFTH SEMESTER TURKISH AND AZERI
3-4 credits.

Continues the study of the Turkish languages combined with Azerbaijani, which is a Turkic language closely related to Turkish. Learn Azerbaijani written in the Latin alphabet and its minor differences from Turkish. Develop proficiency at the advanced level in listening, speaking, reading and writing in Turkish and in Azerbaijani.
Requisites: GNS 440
Course Designation: Breadth - Humanities
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand and employ Turkish language at an advanced level, possessing the ability to speak and write in modes from colloquial to professional.
Audience: Undergraduate

2. Analyze and interpret texts with sound application of Turkish language and cultural awareness
Audience: Undergraduate

3. Evaluate and explain complex views and issues, using knowledge and perspective grounded in cultural competency
Audience: Undergraduate

GNS 540 – SIXTH SEMESTER TURKISH AND AZERI
3-4 credits.

A continuation of the study of Turkish language with Azerbaijani. Practice in understanding and employing Turkish at an advanced level, including spoken and written language in colloquial and professional modes. Analysis and interpretation of texts from a grammatical and cultural perspective.
Requisites: GNS 539
Course Designation: Breadth - Humanities
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand and employ Turkish language at an advanced level, possessing the ability to speak and write in modes from colloquial to professional.
Audience: Undergraduate

2. Analyze and interpret texts with sound application of Turkish language and cultural awareness
Audience: Undergraduate

3. Evaluate and explain complex views and issues, using knowledge and perspective grounded in cultural competency
Audience: Undergraduate

GNS 551 – FIFTH SEMESTER CENTRAL EURASIAN LANGUAGE
4 credits.

Introduces advanced-level communication skills in Central Eurasian languages in varying settings. Students will learn a wide range of vocabulary, grammar structure and pragmatic usage in situated dialogues. They will improve four language skills (listening, speaking, reading and writing) and pragmatic competence through interactive and meaningful in-class activities and after-class assignments.
Requisites: Declared in Central Eurasian Studies Summer Institute
Course Designation: Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025
Learning Outcomes: 1. Comprehend and employ Tajik, Uyghur, or Uzbek language at an advanced level, possessing the ability to speak and write in modes from colloquial to professional.
Audience: Undergraduate

2. Analyze and interpret texts with sound application of Tajik, Uyghur, or Uzbek language and cultural awareness
Audience: Undergraduate

3. Evaluate and explain complex views and issues, using knowledge and perspective grounded in cultural competency
Audience: Undergraduate

GNS 552 – SIXTH SEMESTER CENTRAL EURASIAN LANGUAGE
4 credits.

Introduces advanced-level communication skills in Central Eurasian languages in varying settings. Students will learn a wide range of vocabulary, grammar structure and pragmatic usage in situated dialogues. They will improve four language skills (listening, speaking, reading and writing) and pragmatic competence through interactive and meaningful in-class activities and after-class assignments.
Requisites: Declared in Central Eurasian Studies Summer Institute
Course Designation: Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025
Learning Outcomes: 1. Comprehend and employ Tajik, Uyghur, or Uzbek language at an advanced level, possessing the ability to speak and write in modes from colloquial to professional.
Audience: Undergraduate

2. Analyze and interpret texts with sound application of Tajik, Uyghur, or Uzbek language and cultural awareness
Audience: Undergraduate

3. Evaluate and explain complex views and issues, using knowledge and perspective grounded in cultural competency
Audience: Undergraduate

GNS 624 – PROSEMINAR IN CENTRAL ASIAN HISTORY
3 credits.

Introduction to the historiography of the Golden Horde and the Tatar, Kazak, and Uzbek nations; impact on Russia; Russian colonialism in Central Asia; innovative approaches to social and economic history. Not open to students with credit for LCA 640 prior to Fall 2019
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2019

GNS 700 – GRADUATE SEMINAR IN PROFESSIONAL DEVELOPMENT
3 credits.

Promotes the academic and professional development of graduate students in the humanities, in particular in the fields of German, Scandinavian, and Slavic studies. Students create and critique conference presentations, grant proposals, books reviews, CVs, and other important academic documents. The seminar includes visits from faculty in the various programs of German, Nordic, and Slavic.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

GREEK (CLASSICS) (GREEK)

GREEK 103 – FIRST SEMESTER ANCIENT GREEK
4 credits.

An introduction to ancient Greek grammar and the development of basic reading skills.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize, identify, and explain basic forms of the classical Greek language.
Audience: Undergraduate

2. Recognize, identify, and explain basic syntax of the classical Greek language.
Audience: Undergraduate

3. Recognize, identify, and explain basic vocabulary of the classical Greek language.
Audience: Undergraduate

GREEK 104 – SECOND SEMESTER ANCIENT GREEK
4 credits.

An introduction to ancient Greek grammar and the development of basic reading skills.
Requisites: GREEK 103
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize, identify, and explain all forms of the classical Greek language.
Audience: Undergraduate

2. Recognize, identify, and explain all syntax of the classical Greek language.
Audience: Undergraduate

3. Recognize, identify, and explain all vocabulary of the classical Greek language.
Audience: Undergraduate

GREEK 303 – FIRST SEMESTER ANCIENT GREEK
4 credits.

An introduction to ancient Greek grammar and the development of basic reading skills.
Requisites: Graduate/professional standing
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize, identify, and explain basic forms of the classical Greek language.
Audience: Graduate

2. Recognize, identify, and explain basic syntax of the classical Greek language.
Audience: Graduate

3. Recognize, identify, and explain basic vocabulary of the classical Greek language.
Audience: Graduate

4. Through intensive study, acquire and demonstrate skills necessary for reading Greek authors.
Audience: Graduate

GREEK 304 – SECOND SEMESTER ANCIENT GREEK
4 credits.

An introduction to ancient Greek grammar and the development of basic reading skills.
Requisites: GREEK 303
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Recognize, identify and explain all forms of the classical Greek language.
Audience: Graduate

2. Recognize, identify, and explain all syntax of the classical Greek language.
Audience: Graduate

3. Recognize, identify, and explain all vocabulary of the classical Greek language.
Audience: Graduate

4. Through intensive study, acquire and demonstrate skills necessary for reading Greek authors.
Audience: Graduate

GREEK 305 – THIRD SEMESTER ANCIENT GREEK
3 credits.

Selections from Plato's Dialogues, the New Testament, Homer's Iliad, or Herodotus.
Requisites: GREEK 104, 304, or graduate/professional standing
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply knowledge of forms, syntax, and vocabulary to the reading of classical Greek texts.
Audience: Undergraduate

2. Demonstrate accuracy in translation of classical Greek texts.
Audience: Undergraduate

3. Demonstrate basic competency in reading continuous classical Greek texts.
Audience: Undergraduate

GREEK 306 – FOURTH SEMESTER ANCIENT GREEK
3 credits.

Selections from Plato's Dialogues, the New Testament, Homer's Iliad, or Herodotus.
Requisites: GREEK 305 or graduate/professional standing
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply knowledge of forms, syntax, and vocabulary to the reading of classical Greek texts.
Audience: Undergraduate

2. Demonstrate accuracy and nuance in translation of classical Greek texts.
Audience: Undergraduate

3. Demonstrate competency in reading continuous classical Greek texts.
Audience: Undergraduate

GREEK 401 – READINGS IN GREEK LITERATURE
3 credits.

Selected readings in ancient Greek poetry or prose.
Requisites: GREEK 306 or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Frgn Lang - 5th + semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply knowledge of forms, syntax, and vocabulary to the reading of classical Greek texts.
Audience: Both Grad & Undergrad

2. Apply competency in reading continuous classical Greek texts.
Audience: Both Grad & Undergrad

3. Demonstrate basic critical reading skills of classical Greek texts.
Audience: Both Grad & Undergrad

4. Demonstrate competency in reading continuous Greek texts related to the student's area of research.
Audience: Graduate

GREEK 505 – GREEK PROSE COMPOSITION
3 credits.

The study of Greek grammar and style through composition.
Requisites: GREEK 306 or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2018
Learning Outcomes: 1. Analyze ancient classical Greek texts.
Audience: Undergraduate

2. Interpret ancient classical Greek texts.
Audience: Undergraduate

3. Evaluate ancient classical Greek texts.
Audience: Undergraduate

4. Explain and assess the position of the course topic in relation to the classical and near eastern tradition.
Audience: Undergraduate

5. Demonstrate competence in current scholarly approaches to course readings.
Audience: Graduate

6. Produce accurate grammatical forms in original Greek prose.
Audience: Both Grad & Undergrad

7. Differentiate Greek prose from English prose.
Audience: Both Grad & Undergrad

8. Explain how syntactical concepts tend to be expressed in Greek.
Audience: Both Grad & Undergrad

9. Appreciate (and imitate) the styles of particular prose authors.
Audience: Graduate

GREEK 510 – HOMER
3 credits.

Extensive reading in both Iliad and Odyssey.
Requisites: GREEK 306 or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Analyze ancient classical Greek texts.
Audience: Undergraduate

2. Interpret ancient classical Greek texts.
Audience: Undergraduate

3. Evaluate ancient classical Greek texts.
Audience: Undergraduate

4. Explain and assess the position of the course topic in relation to the classical and near eastern tradition.
Audience: Undergraduate

5. Demonstrate competence in current scholarly approaches to course readings.
Audience: Graduate

GREEK 511 – HESIOD
3 credits.

The writings of Hesiod in Greek.
Requisites: GREEK 306 or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022
Learning Outcomes: 1. Analyze ancient classical Greek texts.
Audience: Undergraduate

2. Interpret ancient classical Greek texts.
Audience: Undergraduate

3. Evaluate ancient classical Greek texts.
Audience: Undergraduate

4. Explain and assess the position of the course topic in relation to the classical and near eastern tradition.
Audience: Undergraduate

5. Demonstrate competence in current scholarly approaches to course readings.
Audience: Graduate

GREEK 512 – GREEK LYRIC POETS
3 credits.

The complete corpus of Alcman, Ibycus, Stesichorus, Sappho, Alcaeus, Corinna, Anacreon, Praxilla, and Simonides. Selections from Bacchylides and Pindar.
Requisites: GREEK 306 or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2021
Learning Outcomes: 1. Analyze ancient classical Greek texts.
Audience: Undergraduate

2. Interpret ancient classical Greek texts.
Audience: Undergraduate

3. Evaluate ancient classical Greek texts.
Audience: Undergraduate

4. Explain and assess the position of the course topic in relation to the classical and near eastern tradition.
Audience: Undergraduate

5. Demonstrate competence in current scholarly approaches to course readings.
Audience: Graduate

GREEK 520 – GREEK COMEDY
3 credits.

Close reading of several plays with attention to Aristophanes' lyric genius and political opinions.
Requisites: GREEK 306 or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2022
Learning Outcomes: 1. Analyze ancient classical Greek texts.
Audience: Undergraduate

2. Interpret ancient classical Greek texts.
Audience: Undergraduate

3. Evaluate ancient classical Greek texts.
Audience: Undergraduate

4. Explain and assess the position of the course topic in relation to the classical and near eastern tradition.
Audience: Undergraduate

5. Demonstrate competence in current scholarly approaches to course readings.
Audience: Graduate

GREEK 521 – GREEK TRAGEDY
3 credits.

Close reading of selected plays of Aeschylus, Sophocles or Euripides.
Requisites: GREEK 306 or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024
Learning Outcomes: 1. Analyze ancient classical Greek texts.
Audience: Undergraduate

2. Interpret ancient classical Greek texts.
Audience: Undergraduate

3. Evaluate ancient classical Greek texts.
Audience: Undergraduate

4. Explain and assess the position of the course topic in relation to the classical and near eastern tradition.
Audience: Undergraduate

5. Demonstrate competence in current scholarly approaches to course readings.
Audience: Graduate

GREEK 530 – HERODOTUS
3 credits.

Close reading of selections from Herodotus, with a focus on developing skills in reading and interpreting historical texts.
Requisites: GREEK 306 or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2018
Learning Outcomes: 1. Analyze ancient classical Greek texts.
Audience: Undergraduate

2. Interpret ancient classical Greek texts.
Audience: Undergraduate

3. Evaluate ancient classical Greek texts.
Audience: Undergraduate

4. Explain and assess the position of the course topic in relation to the classical and near eastern tradition.
Audience: Undergraduate

5. Demonstrate competence in current scholarly approaches to course readings.
Audience: Graduate

GREEK 532 – THUCYDIDES
3 credits.

Close reading of selections from Thucydides, with a focus on developing skills in reading and interpreting historical texts.
Requisites: GREEK 306 or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2019
Learning Outcomes: 1. Interpret ancient classical Greek texts.
Audience: Undergraduate

2. Evaluate ancient classical Greek texts.
Audience: Undergraduate

3. Explain and assess the position of the course topic in relation to the classical and near eastern tradition.
Audience: Undergraduate

4. Demonstrate competence in current scholarly approaches to course readings.
Audience: Graduate

GREEK 541 – GREEK PHILOSOPHICAL WRITERS
3 credits.

Featuring close reading in the original language of canonical works for classical Greek philosophy, including but not limited to Plato and Aristotle, develop proficiency in the Greek language of the classical and post-classical periods, emphasizing grammar, style, socio-historical context, and the history of ideas.
Requisites: GREEK 306 or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2020
Learning Outcomes: 1. Analyze ancient classical Greek texts
Audience: Both Grad & Undergrad

2. Interpret ancient classical Greek texts
Audience: Both Grad & Undergrad

3. Evaluate ancient classical Greek texts.
Audience: Both Grad & Undergrad

4. Explain and assess the position of the course topic in relation to the classical and near eastern tradition
Audience: Graduate

GREEK 551 – ATTIC ORATORS
3 credits.

Selected speeches from Antiphon to Hypereides, with emphasis upon the contribution of rhetoric to the intellectual life of the fourth century.
Requisites: GREEK 306 or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021
Learning Outcomes: 1. Analyze ancient classical Greek texts.
Audience: Undergraduate

2. Interpret ancient classical Greek texts.
Audience: Undergraduate

3. Evaluate ancient classical Greek texts.
Audience: Undergraduate

4. Explain and assess the position of the course topic in relation to the classical and near eastern tradition.
Audience: Undergraduate

5. Demonstrate competence in current scholarly approaches to course readings.
Audience: Graduate

GREEK 560 — HELLENISTIC GREEK
3 credits.

A selection of texts, chiefly religious in content, pagan, Jewish, and Christian.
Requisites: GREEK 306 or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Analyze ancient classical Greek texts.
Audience: Undergraduate

2. Interpret ancient classical Greek texts.
Audience: Undergraduate

3. Evaluate ancient classical Greek texts.
Audience: Undergraduate

4. Explain and assess the position of the course topic in relation to the classical and near eastern tradition.
Audience: Undergraduate

5. Demonstrate competence in current scholarly approaches to course readings.
Audience: Graduate

GREEK 571 — ADVANCED READINGS IN GREEK LITERATURE
3 credits.

Advanced practice in analyzing, evaluating, and interpreting ancient Greek texts.
Requisites: GREEK 401 or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze ancient classical Greek texts
Audience: Both Grad & Undergrad

2. Evaluate ancient classical Greek texts.
Audience: Both Grad & Undergrad

3. Interpret ancient classical Greek texts.
Audience: Both Grad & Undergrad

4. Explain and assess the position of the covered texts in relation to the classical and near eastern tradition.
Audience: Both Grad & Undergrad

5. Demonstrate competence in current scholarly approaches to course readings
Audience: Graduate

GREEK 681 — HONORS THESIS
3 credits.

Individual mentored study for completing theses for Honors in the Major as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No

GREEK 682 — SENIOR HONORS THESIS
3 credits.

Individual mentored study for seniors completing theses for Honors in the Major as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No

GREEK 691 – SENIOR THESIS
3 credits.

Individual mentored study for seniors completing theses, as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Analyze, interpret, and evaluate ancient classical Greek texts.
Audience: Undergraduate

2. Explain and assess the position of the course topic in relation to the classical and near eastern tradition.
Audience: Undergraduate

3. Produce an original scholarly project based on ancient Greek, Roman, or Near Eastern society and culture.
Audience: Undergraduate

GREEK 692 – SENIOR THESIS
3 credits.

Individual mentored study for seniors completing theses, as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No

GREEK 699 – DIRECTED STUDY
1-3 credits.

Independent study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze ancient classical Greek texts.
Audience: Both Grad & Undergrad

2. Interpret ancient classical Greek texts.
Audience: Both Grad & Undergrad

3. Evaluate ancient classical Greek texts.
Audience: Both Grad & Undergrad

4. Produce an original scholarly project based on ancient Greek, Roman, or Near Eastern society and culture.
Audience: Both Grad & Undergrad

5. Explain and assess the position of the topic in relation to the classical and near eastern tradition.
Audience: Graduate

GREEK 890 – INDIVIDUAL RESEARCH THESIS
1-12 credits.

Individual mentored study for completing theses, as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

GREEK 910 – SEMINAR-POETRY
3 credits.

Advanced study in Greek poetry, secondary scholarship, and ancient and modern literary interpretation.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

GREEK 930 – SEMINAR-HISTORY
3 credits.

Advanced study in Greek historiography, secondary scholarship, and ancient and modern literary interpretation.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

GREEK 970 – ADVANCED SEMINAR IN GREEK LITERATURE
3 credits.

Advanced study in ancient Greek language, secondary scholarship, and ancient modern literary interpretation.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Analyze ancient classical Greek texts
Audience: Graduate

2. Evaluate ancient classical Greek texts
Audience: Graduate

3. Interpret ancient classical Greek texts
Audience: Graduate

4. Explain and assess the position of the covered texts in relation to the classical and near eastern tradition
Audience: Graduate

5. Demonstrate competence in current scholarly approaches to course readings
Audience: Graduate

HEBREW-BIBLICAL (HEBR-BIB)

HEBR-BIB 103 – ELEMENTARY BIBLICAL HEBREW, I
4 credits.

Introduction to the language of the Hebrew Bible (Biblical Hebrew). Serves as basis for later forms of Classical Hebrew.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2019
Learning Outcomes: 1. Recognize, identify, and explain basic forms of the classical Hebrew Bible language.
Audience: Undergraduate

2. Recognize, identify, and explain basic syntax of the classical Hebrew Bible language.
Audience: Undergraduate

3. Recognize, identify, and explain basic vocabulary of the classical Hebrew Bible language.
Audience: Undergraduate

HEBR-BIB 104 – ELEMENTARY BIBLICAL HEBREW, II
4 credits.

Introduction to the language of the Hebrew Bible (Biblical Hebrew). Serves as basis for later forms of Classical Hebrew.
Requisites: HEBR-BIB 103
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2021
Learning Outcomes: 1. Recognize, identify and explain all forms of the classical Hebrew Bible language.
Audience: Undergraduate

2. Recognize, identify, and explain all syntax of the classical Hebrew Bible language.
Audience: Undergraduate

3. Recognize, identify, and explain all vocabulary of the classical Hebrew Bible language.
Audience: Undergraduate

HEBR-BIB 303 – ELEMENTARY BIBLICAL HEBREW, I
3 credits.

Forms and syntax, reading of Classical Hebrew prose in preparation for research.
Requisites: Graduate/professional standing
Repeatable for Credit: No
Last Taught: Fall 2020
Learning Outcomes: 1. Recognize, identify, and explain basic forms of the classical Hebrew Bible language.
Audience: Undergraduate

2. Recognize, identify, and explain basic syntax of the classical Hebrew Bible language.
Audience: Undergraduate

3. Recognize, identify, and explain basic vocabulary of the classical Hebrew Bible language.
Audience: Undergraduate

HEBR-BIB 304 – ELEMENTARY BIBLICAL HEBREW, II
3 credits.

Forms and syntax, reading of Classical Hebrew prose in preparation for research.
Requisites: HEBR-BIB 303
Repeatable for Credit: No
Last Taught: Spring 2020
Learning Outcomes: 1. Recognize, identify and explain all forms of the classical Hebrew Bible language.
Audience: Undergraduate

2. Recognize, identify, and explain all syntax of the classical Hebrew Bible language.
Audience: Undergraduate

3. Recognize, identify, and explain all vocabulary of the classical Hebrew Bible language.
Audience: Undergraduate

HEBR-BIB 323 – INTERMEDIATE BIBLICAL HEBREW, I
4 credits.

Review of grammar, introduction to reading narrative texts in Biblical Hebrew.
Requisites: HEBR-BIB 104, 304, or graduate/professional standing
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2020
Learning Outcomes: 1. Apply knowledge of forms, syntax, and vocabulary to the reading of classical Hebrew Bible texts.
Audience: Undergraduate

2. Demonstrate accuracy in translation of classical Hebrew Bible texts.
Audience: Undergraduate

3. Demonstrate basic competency in reading continuous classical Hebrew Bible texts.
Audience: Undergraduate

HEBR-BIB 324 – INTERMEDIATE BIBLICAL HEBREW, II
4 credits.

Review of grammar, introduction to reading narrative texts in Biblical Hebrew.
Requisites: HEBR-BIB 323 or graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2021
Learning Outcomes: 1. Apply knowledge of forms, syntax, and vocabulary to the reading of classical Hebrew Bible texts.
Audience: Undergraduate

2. Demonstrate accuracy and nuance in translation of classical Hebrew Bible texts.
Audience: Undergraduate

3. Demonstrate competency in reading continuous classical Hebrew Bible texts.
Audience: Undergraduate

HEBR-BIB/CLASSICS/JEWISH/LITTRANS/RELIG ST 332 – PROPHETS OF THE BIBLE
4 credits.

An introduction to the thought, literature, and history of the prophets of ancient Israel (in English).
Requisites: RELIG ST/CLASSICS/JEWISH/LITTRANS 227 or Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2019
Learning Outcomes: 1. Demonstrate knowledge of ancient Near Eastern societies and cultures.
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts in translation.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

4. Compare ancient Near Eastern prophetic voices to modern prophetic voices.
Audience: Undergraduate

HEBR-BIB 391 – INTENSIVE ELEMENTARY BIBLICAL HEBREW
4 credits.

An intensive introduction to the grammar and vocabulary of Classical (Biblical) Hebrew, the language of the Hebrew Bible and Ancient Israel, equivalent to HEBR-BIB 103 and 104. Gain skills in preparation for reading the Hebrew Bible in the original language. Focus on translation of Hebrew text (written grammar and lexicon). Includes aspects of ancient Israelite culture, history, and literature.
Requisites: Not open to students with credit for HEBR-BIB 103 or 104.
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Accelerated Honors (!)
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Recognize, identify and explain all forms of the classical Hebrew Bible language.
Audience: Undergraduate

2. Recognize, identify, and explain all syntax of the classical Hebrew Bible language.
Audience: Undergraduate

3. Recognize, identify, and explain all vocabulary of the classical Hebrew Bible language.
Audience: Undergraduate

4. Gain competence in translating simple passages of Classical Hebrew into English and vice versa.
Audience: Undergraduate

5. Learn about ancient Israelite culture, history, and literature.
Audience: Undergraduate

6. Building necessary skills for reading biblical texts in the original Hebrew.

Audience: Undergraduate

HEBR-BIB/JEWISH 513 – BIBLICAL TEXTS, POETRY
3 credits.

Critical reading of selected texts from the Minor Prophets and the Writings.
Requisites: HEBR-BIB 324
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2021
Learning Outcomes: 1. Analyze classical Hebrew Bible texts.
Audience: Undergraduate

2. Interpret classical Hebrew Bible texts.
Audience: Undergraduate

3. Evaluate classical Hebrew Bible texts.
Audience: Undergraduate

HEBR-BIB/JEWISH 514 – BIBLICAL TEXTS, POETRY
3 credits.

Critical reading of selected texts from the Latter Prophets and the Writings.
Requisites: HEBR-BIB/JEWISH 513
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022
Learning Outcomes: 1. Analyze classical Hebrew Bible texts.
Audience: Undergraduate

2. Interpret classical Hebrew Bible texts.
Audience: Undergraduate

3. Evaluate classical Hebrew Bible texts.
Audience: Undergraduate

HEBR-BIB 700 – ADVANCED NEAR EASTERN LANGUAGES
3 credits.

Provides graduate-level instruction in languages required for research in the literature, history, and culture of the Ancient Near East. Languages typically offered include Akkadian, Phoenician, Sumerian, Hittite, and Egyptian.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022

HEBR-BIB 701 – ARAMAIC I
3 credits.

Grammar and readings in Biblical Aramaic (Daniel, Ezra).
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2018

HEBR-BIB 702 – ARAMAIC II
3 credits.

Selections from non-biblical Aramaic texts: Inscriptions, Elephentine letters, Ahiqar, Targumim.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019

HEBR-BIB 705 – SYRIAC I
3 credits.

Syriac grammar and reading.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2019

HEBR-BIB 723 – CLASSICAL HEBREW LINGUISTICS: HISTORICAL AND DESCRIPTIVE
3 credits.

The phonology, morphology and syntax of biblical Hebrew; viewed from historical and descriptive linguistic perspectives.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019

HEBR-BIB 799 – INDEPENDENT STUDY
1-3 credits.

Independent study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

HEBR-BIB 990 – RESEARCH AND THESIS
2-9 credits.

Individual study for research and completing theses, as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

HEBREW-MODERN (HEBR-MOD)

HEBR-MOD 101 – FIRST SEMESTER HEBREW
4 credits.

Basic communication skills; speaking, reading, writing modern Hebrew; elements of grammar and syntax.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

HEBR-MOD 102 – SECOND SEMESTER HEBREW
4 credits.

Basic communication skills; speaking, reading, writing modern Hebrew; elements of grammar and syntax.
Requisites: HEBR-MOD 101 or placement into HEBR-MOD 102
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

HEBR-MOD 201 – THIRD SEMESTER HEBREW
4 credits.

Readings from modern Hebrew texts, intermediate grammar and syntax, development of oral proficiency, emphasis on class discussions.
Requisites: HEBR-MOD 102 or placement into HEBR-MOD 201
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

HEBR-MOD 202 – FOURTH SEMESTER HEBREW
4 credits.

Readings from modern Hebrew texts, intermediate grammar and syntax, development of oral proficiency, emphasis on class discussions.
Requisites: HEBR-MOD 201 or placement into HEBR-MOD 202
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

HEBR-MOD/JEWISH 301 – INTRODUCTION TO HEBREW LITERATURE
3 credits.

Selected works from different periods and genres. Taught in Hebrew.
Requisites: HEBR-MOD 202 or placement into HEBR-MOD/JEWISH 301
Course Designation: Breadth - Literature. Counts toward the Humanities req
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

HEBR-MOD/JEWISH 302 – INTRODUCTION TO HEBREW LITERATURE
3 credits.

Selected works from different periods and genres. Taught in Hebrew.
Requisites: HEBR-MOD/JEWISH 301 or placement into HEBR-MOD/JEWISH 302
Course Designation: Breadth - Literature. Counts toward the Humanities req
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

HEBR-MOD 310 – FIRST SEMESTER INTENSIVE MODERN HEBREW
4 credits.

Intensive study of the fundamental structure of Hebrew language, using the four language skills (listening, speaking, reading, and writing) to improve Hebrew proficiency. Grammar, pronunciation and vocabulary are incorporated into the daily activities, with an emphasis on speaking and using the language for communication. The Hebrew alphabet is also introduced.
Requisites: Declared in the Middle Eastern and Mediterranean Language Institute (MEDLI)
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, for 2 number of completions
Last Taught: Summer 2023
Learning Outcomes: 1. Achieve beginner level linguistic proficiency in the four language skills of reading, writing, speaking, and listening
Audience: Undergraduate

2. Use basic language skills for a variety of specific functions and contexts.
Audience: Undergraduate

3. Develop and refine their language study skills.
Audience: Undergraduate

4. Begin to develop their understanding of Israeli culture.
Audience: Undergraduate

HEBR-MOD 311 – SECOND SEMESTER INTENSIVE MODERN HEBREW
4 credits.

Intensive study of the fundamental structure of Hebrew language, using the four language skills (listening, speaking, reading, and writing) to improve Hebrew proficiency. Grammar, pronunciation and vocabulary are incorporated into the daily activities, with an emphasis on speaking and using the language for communication. The Hebrew alphabet is also introduced.
Requisites: Declared in the Middle Eastern and Mediterranean Language Institute (MEDLI)
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, for 2 number of completions
Last Taught: Summer 2023
Learning Outcomes: 1. Achieve beginner level linguistic proficiency in the four language skills of reading, writing, speaking, and listening
Audience: Undergraduate

2. Use basic language skills for a variety of specific functions and contexts.
Audience: Undergraduate

3. Develop and refine their language study skills.
Audience: Undergraduate

4. Begin to develop their understanding of Israeli culture.
Audience: Undergraduate

HEBR-MOD/JEWISH 401 – TOPICS IN MODERN HEBREW / ISRAELI LITERATURE AND CULTURE I
3 credits.

Readings in Hebrew literature. Taught in Hebrew.
Requisites: HEBR-MOD/JEWISH 302 or placement into HEBR-MOD/JEWISH 401
Course Designation: Breadth - Literature. Counts toward the Humanities req
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

HEBR-MOD/JEWISH 402 – TOPICS IN MODERN HEBREW / ISRAELI LITERATURE AND CULTURE II
3 credits.

Readings in Hebrew literature. Taught in Hebrew.
Requisites: HEBR-MOD/JEWISH 401 or placement into HEBR-MOD/JEWISH 402
Course Designation: Breadth - Literature. Counts toward the Humanities req
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

HISTORY (HISTORY)

HISTORY 100 – HISTORICAL STUDIES: INTRODUCTORY
3 credits.

Introduction to elementary-level historical studies at the research university. Emphasis on interpretation and critical thinking. Topics vary.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Understand that History is an interpretive account of the human past, one that historians create in the present from surviving evidence.
Audience: Undergraduate

2. Think self-consciously about the various methodologies that historians employ.
Audience: Undergraduate

3. Ask questions of primary sources of various types, including, if appropriate, non-textual sources, and use those sources to craft interpretations of the past in written and oral form.
Audience: Undergraduate

4. Reflect upon how the class materials allow them to better understand themselves, their own societies, and the larger global community, by engaging with multiple and diverse perspectives.
Audience: Undergraduate

HISTORY 101 – AMER HIST TO THE CIVIL WAR ERA, THE ORIGIN & GROWTH OF THE U S
4 credits.

American political, economic, and social development from the founding of the colonies to the Civil War.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

HISTORY 102 – AMERICAN HISTORY, CIVIL WAR ERA TO THE PRESENT
4 credits.

American political, economic and social development from the Civil War to the present.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

HISTORY/ASIAN 103 – INTRODUCTION TO EAST ASIAN HISTORY: CHINA
3-4 credits.

Survey of major developments in Chinese history from 1500 B.C. to the founding of the Communist state in 1949. Emphasis on patterns and themes; equal time devoted to the classical and traditional period and the modern era.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

HISTORY/ASIAN 104 – INTRODUCTION TO EAST ASIAN HISTORY: JAPAN
3-4 credits.

Survey of major cultural, social, political and economic developments in Japanese history from ancient to recent times.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

HISTORY/AFRICAN 106 – INTRODUCTION TO AFRICAN HISTORY
3-4 credits.

Introductory exploration of a thematic or chronological area of African history. Topics vary by instructor.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Evaluate and interpret a wide range of historical evidence in order to makearguments about changes over time in African societies
Audience: Undergraduate

2. Identify multiple methodologies that historians use to study the African past
Audience: Undergraduate

3. Interpret African history from different viewpoints and perspectives
Audience: Undergraduate

HISTORY/ED POL 107 — THE HISTORY OF THE UNIVERSITY IN THE WEST
3 credits.

Traces the development of higher education and, specifically, the institution known as the "university," in the United States and Europe since the Middle Ages. Concentrates on the intellectual, political, and social history of higher education, focusing particularly on the history of the "university" as an IDEA, an INSTITUTION, and as a community of PEOPLE, including students and faculty.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate your knowledge and explain—in essays, exams, and online and face-to-face discussions—the significance of key actors, events, themes, and ideas relating to the history of American education.
Audience: Undergraduate

2. Interpret and contextualize a range of primary historical sources.
Audience: Undergraduate

3. Identify and evaluate historical arguments in secondary scholarly works.
Audience: Undergraduate

4. Develop and support your own historical interpretations based on primary and secondary sources.
Audience: Undergraduate

5. Engage in open and respectful dialogue while reflecting upon and acknowledging your own biases.
Audience: Undergraduate

6. Connect your academic work to contemporary public debates, to consider diverse perspectives, and to develop, revise, and support your own ideas about the world.
Audience: Undergraduate

HISTORY/ASIAN 108 — INTRODUCTION TO EAST ASIAN HISTORY - KOREA
3-4 credits.

Survey of major cultural, social, political, and intellectual developments in Korea from the 10th century to the 21st century.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

HISTORY 109 — INTRODUCTION TO U.S. HISTORY
3-4 credits.

Exploration of a thematic or chronological area of United States history from a variety of critical historical perspectives. Topics vary by instructor.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

HISTORY/CLASSICS 110 — THE ANCIENT MEDITERRANEAN
4 credits.

An examination of the evolution of the human community in the Mediterranean Basin, from the beginning of the earliest civilizations in the Near East (3,000 B.C.E.) until the collapse of the Roman Empire in the West (500 C.E.).
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge of Classical and ancient Near Eastern societies and cultures.
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts in translation and material culture.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

4. Demonstrate a holistic view of the Ancient Mediterranean society and culture.
Audience: Undergraduate

HISTORY 115 — MEDIEVAL EUROPE 410-1500
4 credits.

From the later Roman Empire to the end of the Middle Ages.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

HISTORY 119 – EUROPE AND THE WORLD, 1400-1815
4 credits.

Introduces Europe when it entered the global stage economically, politically, socially, and culturally. How Europeans took to the seas and developed new forms of empire. How did this wave of contact, encounter, and conquest affect Europeans, indigenous peoples of the Americas, and Africans? Examine the early global economy and the development of plantation slavery. How did Europeans develop new ways to make sense of their world, its size, its peoples, its flora and fauna? Explore new forms of Christianity, the Jewish diaspora, and the globalization of Christianity. As thinkers debated how rulers should wield political power, monarchs strove to expand their authority and territory, and ordinary people demanded a greater share of political power, provoking revolutions across the Atlantic world. Encounter the lives of women and men from many backgrounds, from peasants to queens, and all kinds of people on the move.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Differentiate between primary and secondary sources
Audience: Undergraduate

2. Explain how historical knowledge is created through the examination of primary sources and the analysis of those materials in secondary sources
Audience: Undergraduate

3. Analyze primary sources by placing them in their historical contexts
Audience: Undergraduate

4. Pose a historical question
Audience: Undergraduate

5. Make a historical argument
Audience: Undergraduate

6. Analyze visual sources
Audience: Undergraduate

HISTORY 120 – EUROPE AND THE MODERN WORLD 1815 TO THE PRESENT
4 credits.

Political, economic, social, and cultural history of modern Western civilization.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

HISTORY 123 – ENGLISH HISTORY: ENGLAND TO 1688
3-4 credits.

Political, economic, social, and cultural history from earliest historic times.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2018

HISTORY 124 – BRITAIN SINCE 1688
3-4 credits.

Introduction to the major themes in the history of imperial Britain and the modern world. Themes include (but are not limited to) the changing patterns of life during those centuries, the development of modern identities and notions of the self, the emergence of a modern, commercial civil society, the rise of industrial capitalism, liberalism, the modern state, and imperial and total war.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and explain the major trajectories in British history since the 17th century.
Audience: Undergraduate

2. Explain the various interpretive frameworks that historians have used to analyze or explain cultural, political, and economic transformations in imperial Britain in the past 300 years.
Audience: Undergraduate

3. Analyze primary sources, both written and visual, in British history and evaluate or critique the ways in which it has been interpreted by others.
Audience: Undergraduate

4. Produce original historical arguments, in both written and oral communication, and properly mobilize evidence, from both primary and secondary sources, to support those arguments.
Audience: Undergraduate

5. Apply a critical and historical point of view to the contemporary world.
Audience: Undergraduate

HISTORY/ENVIR ST/HIST SCI 125 — GREEN SCREEN: ENVIRONMENTAL PERSPECTIVES THROUGH FILM
3 credits.

From Teddy Roosevelt's 1909 African safari to the Hollywood blockbuster King Kong, from the world of Walt Disney to The March of the Penguins, cinema has been a powerful force in shaping public and scientific understanding of nature throughout the twentieth and twenty-first century. How can film shed light on changing environmental ideas and beliefs in American thought, politics, and culture? And how can we come to see and appreciate contested issues of race, class, and gender in nature on screen? Explore such questions and come to understand the role of film in helping to define the contours of past, present, and future environmental visions in the United States, and their impact on the real world struggles of people and wildlife throughout the world.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

HISTORY/AFRICAN 129 — AFRICA ON THE GLOBAL STAGE
3-4 credits.

Explores the interplay between Africa and the World from the 19th century to the present, covering subjects such as the slave- trade, repatriation, Africanizing of culture in the Americas and Europe, the spread and revival of world religions, colonialism, global capitalism, the rise of global popular culture such as pop music and video films, environmental concerns and global epidemics.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

HISTORY 130 — AN INTRODUCTION TO WORLD HISTORY
3-4 credits.

Introduction to major themes in world history. Such themes might include: empire and imperialism, environmental impacts, global trade and globalization, war, migration, gender, race, religion, nationalism, class, and the like.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

HISTORY/HIST SCI/MED HIST 132 — BEES, TREES, GERMS, AND GENES: A HISTORY OF BIOLOGY
3 credits.

How did today's biology emerge out of the diverse traditions of agriculture and natural history (bees and trees), biomedicine and molecular biology (germs and genes), which stretch back into the eighteenth century? Examines classic texts and "game-changers" in the history of biology, putting them into broader scientific and social contexts to see how these different ways of knowing intertwined, competed, and yielded novel approaches to the study of life that still shape today's life sciences.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025

HISTORY 133 — GLOBAL MILITARY HISTORY (5000 BCE - PRESENT)
3-4 credits.

Introductory examination of the role of war and peace in human history from the earliest forms of organized violence to the 21st century "War on Terror." Rather than center on tactics, key battles, or even particular critical conflicts, instead focuses on how different military cultures and technologies emerged over time across the globe. Explores how organized violence shaped not just the lives of soldiers, but all members of society by examining key pieces of popular culture including poetry, propaganda, music, movies, and social media. Takes a deliberately global approach by examining the connections and commonalities of war across different world regions.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Explain the Impact of Military Technologies: identify major military-technological changes and their impact on societies more generally.
Audience: Undergraduate

2. Recognize Military Cultures: acknowledge the many ways in which war shaped culture outside of the battlefield in the arts, music, and literature.
Audience: Undergraduate

3. Demonstrate Critical Writing Skills: communicate complex ideas through written evaluations. Specifically, emphasis is placed on improving analytical/argumentative writing skills through a number of written assignments.
Audience: Undergraduate

4. Show Critical Reading and Communication: demonstrate critical thinking and reading through the analysis of historical primary and secondary sources, discussion, and independent research.
Audience: Undergraduate

HISTORY/GEN&WS 134 – WOMEN AND GENDER IN WORLD HISTORY
3-4 credits.

A global (comparative and transnational) survey of women and gender from the ancient world to the modern period. Introduces students to key issues in the history of women and gender, including the historical construction of identities, roles, symbols, and power relationships.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023

HISTORY 136 – SPORT, RECREATION, & SOCIETY IN THE UNITED STATES
3-4 credits.

As much as we may try to convince ourselves that sport offers an escape from the "real world," constant news of players' strikes, stadium financing controversies, and the lack of diversity in league management remind us that we cannot separate the games we play and watch from the political, social, and cultural contexts in which they are embedded. Explore how sport has shaped and been shaped by major trends in American social, political, and economic history. The focus is not on player stats or the morning edition of SportsCenter, rather with serious historical arguments and debates about sport's relationship to American capitalism, social movements, and urban development. Readings also provide a diverse set of perspectives on the politics of race, gender, and class in American sport in the twentieth century.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025

HISTORY 137 – THE HISTORY OF WAR IN FILM
3 credits.

Is there such a thing as a genuinely anti-war movie? The acclaimed, late French filmmaker Francois Truffaut thought not, as even the most brutal and honest depictions of war in film cannot help but valorize sacrifice and arouse something primordial in certain members of the audience. Nevertheless, some of the greatest films of all time are regarded as "anti-war classics" and not a few might be labeled "pro-war." Critically examine more than fifteen full movies (and parts of many more) from across this spectrum and from around the world. In addition to testing the "Truffaut Rule," evaluate the movies as both fictionalized secondary sources (conveying knowledge and influencing memory) and as primary sources that shed light on the moment and place in which they were created.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Critically examine war movies as media for communicating the experience of combat in different historical eras
Audience: Undergraduate

2. Grasp the unique power of motion pictures to convey “truth” and attitudes about war as understood in context (i.e. place, time, subject, and intermediate interpretation)
Audience: Undergraduate

3. Evaluate the ways in which war and movies about it have essentialized gender roles and promoted competing ideals of virtue, martial and otherwise
Audience: Undergraduate

4. Consider war movies as instruments of propaganda and evaluate the relationship between their effectiveness and their accuracy
Audience: Undergraduate

5. Apply the methods of historical research and writing
Audience: Undergraduate

HISTORY 139 – INTRODUCTION TO THE MODERN MIDDLE EAST
3-4 credits.

Traces the formation of the states and societies that compose the contemporary Middle East. How have global phenomena, including two world wars, the Cold War, women's movements, and modern science, technology, and fossil fuels, affected the politics, culture, and daily lives of Middle Eastern people? What is Islamism, and how should we explain its influence? Why has the United States had such a troubled relationship with this part of the world? Balances a generally thematic approach with several weeks of country-specific studies, including Iran, Saudi Arabia, Egypt, Syria, and Israel and the Palestinian territories.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the origins of the Middle East nation-states
Audience: Undergraduate

2. Compare the larger Middle East nation-states in terms of politics, economy, and society
Audience: Undergraduate

3. Analyze trends in the development of U.S. relations with the Middle East
Audience: Undergraduate

4. Explain the modern Middle East in terms of global processes of change
Audience: Undergraduate

5. Use primary sources to support all of the above
Audience: Undergraduate

HISTORY 142 – HISTORY OF SOUTH ASIA TO THE PRESENT
3-4 credits.

Survey of the development of societies within the Indian subcontinent. Equal segments for the ancient, medieval and modern periods.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

HISTORY/ED POL 143 – HISTORY OF RACE AND INEQUALITY IN URBAN AMERICA
3 credits.

Examine the historical relationships between metropolitan change, economic transformation, and the construction of race and how those processes have shaped mass incarceration, educational, housing, and income inequality, and the experiences of racial/ethnic minorities who have been marginalized or discriminated against. Key questions include: What is the historical nature of inequality and opportunity in metropolitan America? What policies and ideas have historically promoted inequality, and how have those policies and ideas shifted over time? How have marginalized people responded to inequality, and what impacts have various modes of resistance had? Lastly, what is "race," how has its meaning changed over time, and how has it historically shaped inequality and opportunity?
Requisites: None
Course Designation: Gen Ed - Communication Part B
Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate their awareness of History's Impact on the Present
Audience: Undergraduate

2. Recognize and Question Assumptions
Audience: Undergraduate

3. Demonstrate their consciousness of Self and Others
Audience: Undergraduate

4. Demonstrate their capacity for Effective Participation in a Multicultural Society
Audience: Undergraduate

5. Identify and discuss the significance of key actors, events, themes, and ideas relating to the history of race and inequality in the metropolitan United States
Audience: Undergraduate

6. Identify and evaluate historical arguments in secondary scholarly works
Audience: Undergraduate

7. Interpret, analyze, and contextualize primary historical sources
Audience: Undergraduate

8. Use library resources in order to locate relevant primary and secondary source materials
Audience: Undergraduate

9. Synthesize information from primary and secondary sources in order to develop and support their own evidence-based historical interpretations
Audience: Undergraduate

HISTORY 145 – AMERICA AND CHINA, 1776-TODAY
3-4 credits.

Analyzes the relationship between China and the United States since the birth of the U.S. in 1776, and tracks how the relationship has changed over time. Seeks to offer a broader perspective on the US-China relationship that includes not only diplomacy and war, but also culture, economics, and domestic politics. Contextualize the steady drumbeat of news stories about America and China, and make educated, historically rooted arguments about China, the US, and their complex relationship.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Identify and summarize the larger historical events that have shaped Chinese history since the 18th century as well as those which have shaped China's relationship to the U.S.
Audience: Undergraduate

2. Identify and summarize the major sources of US-China tension in the 1776 to 1899 period, and also for the period from 1899 to the Present.
Audience: Undergraduate

3. Identify the major American and Chinese cultural and political figures who have shaped the American and Chinese relationship.
Audience: Undergraduate

4. Identify and summarize potential future sources of tension or cooperation between the United States and China and how they are connected to historical events.
Audience: Undergraduate

5. Demonstrate knowledge of major movements, trends, or events in the development of world cultures.
Audience: Undergraduate

6. Recognize history as an interpretive account of the human past – one that historians create in the present from surviving evidence.
Audience: Undergraduate

7. Demonstrate how the use of different approaches, methodologies, analytical concepts, or sources can yield differing insights into a historical problem.
Audience: Undergraduate

8. Think critically about and appreciate the complexities of their own societies, cultures, and larger global communities.
Audience: Undergraduate

HISTORY/INTL ST 146 – A GLOBAL HISTORY OF NOW
3-4 credits.

An introduction to key historical events, movements, and systems that have shaped our present moment. Examines the relationship between empire-building and anti-colonial movements from the late 18th century to the current day. Focuses on the political, economic, and social/cultural dimensions of major global history themes, such as colonialism, capitalism, and revolution.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop a historical understanding of imperialism and decolonization since 1800
Audience: Undergraduate

2. Formulate arguments about change over time, and think critically about how narratives about the past are constructed
Audience: Undergraduate

3. Refine the ability to recognize and question assumptions
Audience: Undergraduate

4. Determine what constitutes reliable and valid evidence
Audience: Undergraduate

5. Interpret, compare, and contrast primary sources
Audience: Undergraduate

6. Improve writing and public speaking skills
Audience: Undergraduate

7. Acquire awareness of history's impact on the present
Audience: Undergraduate

HISTORY/CHICLA 151 – THE NORTH AMERICAN WEST TO 1850
3-4 credits.

Explores the history of places that have been called the American West before 1850. We start with Indigenous occupation; continue with European invasion and the creation of two new nations, Mexico and the U.S.; and end with U.S. conquest. We watch Indian lands becoming the object of Spanish, French, and English empires, and then see European incursions giving way to the hopes of new nation-states and newly empowered Indian peoples like Lakotas and Comanches. After studying the trails and trades that brought newcomers west, we reach key converging events: U.S. seizure of the Mexican North, resolution of the Oregon boundary dispute, discovery of western gold, West Coast arrival of Chinese immigrants, and Mormon exodus to the Great Basin. We use economic, environmental, political, cultural, and social analyses, and we attend to the dreams of many westerners: of North American, Latin American, European, African, and Asian origin or descent, and of all genders and class statuses.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the various peoples who occupied the North American West before the 16th century, how they lived in their respective environments and vis-à-vis one another, and how scholars and Native communities themselves have made sense of that occupation
Audience: Undergraduate

2. Identify and analyze the relationships among the political, social, cultural, economic, and environmental factors that brought Europeans and enslaved Africans to places that came to be called the West from the 16th through the 18th centuries
Audience: Undergraduate

3. Identify and analyze the political, social, cultural, economic, and environmental factors that gave rise to two new occupying nations in places that came to be called the West in the late 18th and early 19th centuries, as well as increasingly powerful Indigenous peoples
Audience: Undergraduate

4. Identify and analyze the political, social, cultural, economic, and environmental factors that paved the way for U.S. conquest of various parts of the North American West by the middle of the 19th century
Audience: Undergraduate

5. Identify and analyze the political, social, cultural, economic, and environmental factors that brought increasing numbers of Americans, Europeans, and Asians to the West by the middle of the 19th century
Audience: Undergraduate

6. Explain the how the history of places that came to be called the West demonstrates the workings of imperialism and colonialism
Audience: Undergraduate

7. Identify and analyze the ways in which westerners of various genders navigated their lives; the forces that created hierarchies among and within human communities; and the means by which various westerners either maintained or challenged those hierarchies
Audience: Undergraduate

8. Explain the significance of the West for the development of the U.S. nation-state and for the fate of those who lived in the West before the U.S. claimed it

HISTORY/CHICLA 152 – THE UNITED STATES WEST SINCE 1850
3-4 credits.

Introduction to histories of places that have been called the American West, focusing on the period since 1850. Beginning in the mid nineteenth century, the United States sought to establish power over vast western regions that it claimed on maps but did not in fact control. Moving through the twentieth century to the present day, considers how attention to the American West allows us to reimagine US history more broadly - and how the United States represents just one facet the region's pasts. Learn to think like a historian by analyzing primary sources, evaluating competing narratives, and formulating arguments about the past. Investigate how people, ideas, and infrastructures have transformed a region repeatedly redrawn and consider the ongoing legacies of the past - and the stories we tell about it - in the American West today.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Challenge common myths that distort our understanding of the modern U.S. West
Audience: Undergraduate

2. Understand how historians make history and why our understandings of the past change over time
Audience: Undergraduate

3. Use primary sources to ask and answer questions about the modern North American West
Audience: Undergraduate

4. Evaluate arguments about history and weigh in on existing historical debates
Audience: Undergraduate

5. Identify how the past has affected present day circumstances regarding race and racial inequalities in the U.S.
Audience: Undergraduate

HISTORY/CHICLA 153 – LATINA/LATINO/LATINX HISTORY
3-4 credits.

Examines the historical, social, and legal experiences of Latinas/Latinos/Latinxs in the US since the mid-1800s with emphasis on Mexican migrations. Latinxs became an important part of the US population through western expansion, conquest, and immigration. We will learn about the 3 main Latinx groups in the US: Mexicans, Puerto Ricans, and Cubans, but will also learn about other Latinx communities. We begin with an examination of conquest by studying the Treaty of Guadalupe Hidalgo that annexed roughly half of former Mexican territory and the Spanish-American War that resulted in the possession of Puerto Rico. Then, we examine the history of Latinx immigration to understand the experiences of Mexicans, Central Americans, South Americans, and people from the Caribbean who have immigrated to the US in search of economic opportunities and political asylum. This course serves as an introduction to the varied experiences of Latinxs in the US in order to understand their unique histories.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop a critical understanding of the diverse experiences of Latinas/Latinos/Latinxs in the U.S. by conducting a close examination of assigned readings through assignments, lectures, presentations, and in-class discussions.
Audience: Undergraduate

2. Build a critical lens of race, ethnicity, gender, sexuality, and class by engaging in analytical essay writing that incorporates the assigned readings and primary research in the archives at the Wisconsin Historical Society.
Audience: Undergraduate

3. Develop sociological tools and perspectives to discuss the experiences of Latinas/Latinos/Latinxs in the U.S. through in-class oral presentations based on the research conducted for the final paper.
Audience: Undergraduate

4. Critically engage in public debates about policies pertaining to Latinas/Latinos/Latinxs in the U.S. and be able to make informed decisions by learning about historical social and legal issues surrounding Latina/Latino/Latinx communities that continue to impact Latinxs today. This, through the assigned readings, original research, and data presented in lectures.
Audience: Undergraduate

HISTORY 154 – WHO IS AN AMERICAN?
3-4 credits.

Organized around the title question: Who is an American? Explores how answers to that question have changed over time, focusing on people whose actions and ideas shaped those answers. Rather than an overview of U.S. history, focuses on a variety of topics related to our central theme, moving roughly chronologically from the Revolutionary era to the present. Covers the history of racial ideologies and racial inequities, arguments over citizenship and "American" identity, and the ways that various groups have been included or excluded from the nation.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate how the history of racial ideologies, racial inequities, and racial formations in the United States has evolved in relation to histories of enslavement, conquest and territorial expansion, and immigration.
Audience: Undergraduate

2. Recognize arguments about citizenship and “American” identity as historical, contested, and evolving.
Audience: Undergraduate

3. Understand the ways various groups of Americans have been included in or excluded from the nation, and how groups have mobilized to resist exclusion.
Audience: Undergraduate

4. Investigate the rise, fall, and interaction of civic and ethnic nationalisms in U.S. history.
Audience: Undergraduate

HISTORY 155 – THE LONG BLACK FREEDOM STRUGGLE FROM THE CIVIL WAR TO THE PRESENT
3-4 credits.

Explores the generations-long effort by African Americans and allied forces to achieve full citizenship in the U.S. and equitable footholds in American society. Forged in a history of enslavement and in many ways ongoing, this freedom struggle encompasses the history of abolitionism to the struggle for civil rights to the fight for Black Power to the effort to make Black Lives Matter. Introduces the history of African American people in the U.S. from the end of the era of slavery to the present day; explores how that history has been shaped directly by the actions and activism of Black people and their allies; considers how that history intersects with, shapes, and is shaped by other historical moments and movements; provides opportunities to think more actively about issues of belonging, citizenship, difference, and interpersonal and structural power; develops skills in historical analysis and argumentation.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify important events, movements, and people, in African-American history since 1865
Audience: Undergraduate

2. Evaluate and formulate arguments about how racial dynamics in the United States and strategies for achieving racial equality have changed over time
Audience: Undergraduate

3. Determine what constitutes reliable and valid evidence when it comes to the history of inequality and social movements in African American history
Audience: Undergraduate

4. Interpret, compare, and contrast primary sources
Audience: Undergraduate

5. Think critically about how the narratives about the past are constructed and told
Audience: Undergraduate

6. Explain how racial conflict, inequality, and movements against the same in the past have shaped American society in the present
Audience: Undergraduate

7. Discuss their social position relative to history, as well as how other people's pasts and experiences perhaps don't align with their own
Audience: Undergraduate

8. Identify ways to operate in a pluralistic, multicultural society – one in which their own experiences are not the assumed default
Audience: Undergraduate

HISTORY/ASIAN AM 160 – ASIAN AMERICAN HISTORY: MOVEMENT AND DISLOCATION
3-4 credits.

Examines the impact of colonialism, war, and capitalism on the movement of Asians to the U.S. Considers how racial, gendered, class, sexual, and national formations within the U.S. structured Asian immigration to North America.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

HISTORY/ASIAN AM 161 – ASIAN AMERICAN HISTORY: SETTLEMENT AND NATIONAL BELONGING
3-4 credits.

Examines the social, cultural, and political citizenship of Asians in the U.S. with particular emphasis on diaspora, transnationality, and place.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

HISTORY 170 – EAST MEETS WEST: MYTH, MEANING, AND MODERNITY
3-4 credits.

The modern history of the concept "East Meets West" (or its variant "East vs. West"), with an emphasis on its changing meanings and uses from the nineteenth to the twenty-first centuries in East Asia (primarily Japan) and the United States. Analyzing works in the arts, literature, philosophy, political economy, and popular culture, trace how and why this intellectual construction became an important influence in modern history.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Recognize generalizations and stereotypes about “the East,” “the West,” and “East Meets West” and examine their goals and uses
Audience: Undergraduate

2. Think critically about the historical constructions, changes, complexities, and importance of ideas about “the East,” “the West,” and “East Meets West” within American and East Asian societies
Audience: Undergraduate

3. Demonstrate knowledge of major movements, trends, or events in the history of “East Meets West”
Audience: Undergraduate

4. Examine how the use of different approaches, methodologies, analytical concepts, or sources can yield differing insights into a historical problem.
Audience: Undergraduate

5. Read and evaluate a variety of materials to determine their origins, perspective, usefulness, and reliability
Audience: Undergraduate

6. Use library resources to find primary and secondary sources in order to develop an informed and original perspective on topics discussed in class
Audience: Undergraduate

7. Participate productively and respectfully in discussion and collaborative tasks
Audience: Undergraduate

HISTORY/HIST SCI 171 – HISTORY OF MEDICINE IN FILM
3-4 credits.

Considers the social and cultural history of 20th and early 21st century American medicine through the depiction of health care practitioners and health care systems in Hollywood movies. View films that featured medicine, doctors, nurses, patients, and hospitals. Using these films as primary sources, seek to place these representations into a broader social and cultural context. Evaluate the extent to which popular understandings of medicine, health, and healing as portrayed in the films corresponded to actual practices of medicine and medical research at the time the films were first screened for mass audiences.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2019
Learning Outcomes: 1. Identify key developments, actors, ideas, and institutions in the broad history of American medicine in the 20th century.
Audience: Undergraduate

2. Speak and write critically about primary and secondary historical sources by examining diverse interpretations of past events and ideas in their historical contexts.
Audience: Undergraduate

3. Ask analytic questions about the ways in which films express both cultural ideals and cultural anxieties about medicine within the constraints of "literary" genres: drama, horror, comedy, romance, tragedy and thriller.
Audience: Undergraduate

4. Understand that, in addition to the deliberate choices of plot-lines, locations and character development, films reveal a great deal about what was taken for granted at the time of each film's production: gender and race relations, physicians' paternalism and patients' autonomy, medical technology and expectations for care and cure; ethical and professional norms for medical research and decision making in patient care.
Audience: Undergraduate

HISTORY 179 — AFRO-ATLANTIC HISTORIES AND PEOPLES, 1791-PRESENT
3-4 credits.

The African-descended population of the Americas is around 180 million people. Roughly two-thirds of those live outside of the United States, mostly in Brazil and the Caribbean. Provides an overview of the histories, aspirations, and problems that have most impacted peoples of the African diaspora in the years since the Haitian Revolution. As such, the focus will be thematic rather than chronological. The primary emphasis will be on the history of political, social, and intellectual movements. Topics will include slave resistance, black nationalism, socialism, and anti-colonialism. Learn about figures as varied as Toussaint L'Ouverture, Ida B. Wells, Marcus Garvey, WEB DuBois, Carolina Maria de Jesus, Frantz Fanon, Paul Robeson, and many others. Other topics to be covered include: the meaning of "freedom," the construction of black "masculinities," diasporic religious expressions, art and literature, and race and medicine.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2019
Learning Outcomes: 1. Articulate how the past has affected present day circumstances regarding race and racial inequalities in the U.S. and in the African diaspora
Audience: Undergraduate

2. Define important questions related to the history of the modern African diaspora and explain their academic and public implications.
Audience: Undergraduate

3. Evaluate the evidentiary and theoretical bases of various historical conversations in the making of the modern African diaspora.
Audience: Undergraduate

4. Recognize, challenge, and avoid false analogies, overgeneralizations, anachronisms, and other logical fallacies.
Audience: Undergraduate

5. Examine the context in which sources were created, search for topical, chronological, and other relationships among them, and assess the sources in light of that knowledge.
Audience: Undergraduate

6. Drawing upon a diversity of primary- and secondary-sources, synthesize the most pertinent evidence to make persuasive arguments and draw innovative conclusions.
Audience: Undergraduate

7. Apply course concepts to your life outside the classroom, demonstrating self-awareness and empathy for people from a range of backgrounds and political perspectives.
Audience: Undergraduate

HISTORY/AMER IND 190 — INTRODUCTION TO AMERICAN INDIAN HISTORY
3-4 credits.

A broad survey of American Indian history which centers Indigenous peoples, communities, and nations in the context of U.S. policy and culture that emphasizes decolonial methods and Native ways of knowing the past.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe and explain the significance of the historical events, structures, and themes which historians have identified as foundational to the field of American Indian history.
Audience: Undergraduate

2. Deploy interdisciplinary Indigenous studies frameworks, theoretics, and methodologies in the analysis of historical events, structures, and themes to prioritize Indigenous worldviews and perspectives on American Indian history.
Audience: Undergraduate

3. Interpret the continuities and shifts in the lives of various Native peoples, communities, and nations in relation to political, cultural, and material conditions in U.S. history using terminology used within the field of American Indian history to describe processes (such as racialization) and structures (such as settler colonialism).
Audience: Undergraduate

4. Discuss tribal sovereignty and processes of racialization, which impact the historical experiences and contemporary struggles facing Native nations and peoples in the United States.
Audience: Undergraduate

5. Analyze historical sources to curate a collection that draws on both Euro-American and Native ways of knowing the past.
Audience: Undergraduate

HISTORY 199 — DIRECTED STUDY
1-3 credits.

Independent study in collaboration with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2018

HISTORY 200 – HISTORICAL STUDIES
1-4 credits.

Introduction to historical studies at the research university. Emphasis on interpretation and critical thinking. Topics vary.
Requisites: Sophomore standing or 3 credits in HISTORY
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

HISTORY 201 – THE HISTORIAN'S CRAFT
3-4 credits.

Conduct original historical research and convey the results to others. Through engagement with archival materials, become historical detectives; practice defining important historical questions, collecting and analyzing evidence, presenting original conclusions, and contributing to ongoing discussions. Confer individually with and receive feedback from instructors to improve skills of historical analysis and communication in both written and spoken formats. May not be repeated for credit.
Requisites: Satisfied Communications A requirement. Not open to students with credit for HIST SCI 211
Course Designation: Gen Ed - Communication Part B
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Ask Questions: develop the habit of asking questions, including questions that may generate new directions for historical research.
Audience: Undergraduate

2. Find Sources: learn the logic of footnotes, bibliographies, search engines, libraries, and archives, and consult them to identify and locate source materials.
Audience: Undergraduate

3. Evaluate Sources: determine the perspective, credibility, and utility of source materials.
Audience: Undergraduate

4. Develop and Present an Argument: use sources appropriately to create, modify, and support tentative conclusions and new questions.
Audience: Undergraduate

5. Plan Further Research: draw upon preliminary research to develop a plan for further investigation.
Audience: Undergraduate

6. Communicate Findings Effectively: make formal and informal, written and oral presentations tailored to specific audiences.
Audience: Undergraduate

HISTORY/RELIG ST 205 – THE MAKING OF THE ISLAMIC WORLD: THE MIDDLE EAST, 500-1500
3-4 credits.

Development of society and culture in the Middle East and North Africa from the emergence of Islam (7th century) to early modern times.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023

HISTORY/RELIG ST 208 – WESTERN INTELLECTUAL AND RELIGIOUS HISTORY TO 1500
3-4 credits.

Survey of key themes in Western intellectual history and religious thought from ancient Greece through the Renaissance, focusing on relationships among classical, Jewish, and Christian traditions.
Requisites: Sophomore standing or 3 credits in HISTORY or RELIG ST
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

HISTORY/RELIG ST 209 – WESTERN INTELLECTUAL AND RELIGIOUS HISTORY SINCE 1500
3-4 credits.

A survey of major trends in Western intellectual history and religious thought in the modern era, a period that saw a new range of competing ideas about the divine, the human condition, justice and the social order, and the quest for meaning. Explores shifts in Christian and Jewish thought as well as secular alternatives to religious outlooks. Topics include the impact of the Reformation, Scientific Revolution, and Enlightenment; radical critiques of religion; existentialism; theological responses to World Wars and the Holocaust; and civil rights and social justice. Sources include films, novels, autobiographies, essays, theological works, and political manifestos.
Requisites: Sophomore standing or 3 credits in HISTORY or RELIG ST
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

HISTORY/RELIG ST 212 – THE HISTORY OF WESTERN CHRISTIANITY TO 1750
4 credits.

A survey of Christianity from being a small, persecuted sect in the Roman Empire to becoming the dominant religion of western Europe, penetrating into the lives of Europeans, fissuring into multiple churches, and spreading across the globe. Attention is given to doctrine, ritual, worship, architecture, images, and music.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

HISTORY/JEWISH 213 – JEWS AND AMERICAN POP. CULTURE
3-4 credits.

Explores the interplay between Jews and U. S. popular culture, covering such subjects as early 20th century vaudeville, the "golden age" of Hollywood, rhythm and blues music, television, and stand-up comedy.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

HISTORY/JEWISH 219 – THE AMERICAN JEWISH EXPERIENCE: FROM SHTETL TO SUBURB
4 credits.

Surveys American Jews from the eighteenth century until after WW II, examining political behavior (radicalism, liberalism, and nationalism), class formation, social mobility, culture, inter-ethnic group relations, religion, and problems in community building.
Requisites: Sophomore standing or 3 credits in HISTORY or JEWISH
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

HISTORY/JEWISH 220 – INTRODUCTION TO MODERN JEWISH HISTORY
4 credits.

The history of the Jews in selected parts of the world since the 17th century. Particular attention will be paid to the fact that this is the history of a minority group whose life unfolds in relationship to a larger society.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2021

HISTORY 221 – EXPLORATIONS IN AMERICAN HISTORY (H)
3-4 credits.

Topics vary reflecting the interests, expertise, and innovating intention of the instructor.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

HISTORY 223 – EXPLORATIONS IN EUROPEAN HISTORY (H)
3-4 credits.

Topics vary reflecting the interests, expertise, and innovating intention of the instructor.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

HISTORY 224 – EXPLORATIONS IN EUROPEAN HISTORY (S)
3 credits.

Topics vary reflecting the interests, expertise, and innovating intention of the instructor.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2018

HISTORY 225 – EXPLORATIONS IN THIRD WORLD HISTORY (H)
3-4 credits.

Topics vary reflecting the interests, expertise, and innovating intention of the instructor.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2022

HISTORY 227 – EXPLORATIONS IN THE HISTORY OF RACE AND ETHNICITY
3 credits.

Topics on racial/ethnic minorities in the US in historical perspective; or topics that intersect with race or ethnicity in the US; or comparative historical topics that address how racial/ethnic minorities in the US negotiate exclusion and marginalization.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

HISTORY 229 – EXPLORATIONS IN TRANSNATIONAL/ COMPARATIVE HISTORY (HUMANITIES)
3 credits.

Explores topics that involve at least two continents. Topics vary reflecting the interests, expertise, and innovating intention of the instructor.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

HISTORY/LEGAL ST 235 – PRISONS: FROM ANTIQUITY TO SUPERMAX
3-4 credits.

Examines the development of prisons from the ancient Mediterranean world to the present in the US and Europe. Pays particular attention to the way in which imprisonment has been used against marginalized populations. Examines the development of carceral tactics across a number of registers, including the prison as an ancient political tactic, the economic logic of early modern debtors' prisons, the relationship of prisons and workhouses to forms of capitalism, prisons and colonial expansion, the relationship between mass incarceration and democratic forms of government, as well as the connections between the abolition of slavery and modern carceral practices. Also looks at the legal and constitutional limitations that have been put on imprisonment by the American legal system. Relies on interdisciplinary approaches to the study of prisons, including History, law, literature, and political theory.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze and articulate arguments about how social, political, and cultural phenomena shape law and legal systems, and in particular shape practices of imprisonment.
Audience: Undergraduate

2. Analyze and articulate arguments about the impact of imprisonment on social practices and political organization.
Audience: Undergraduate

3. Explain how legal ideas and ideologies have changed over time and have shaped law and legal systems.
Audience: Undergraduate

4. Find, interpret, and utilize resources relevant to law and society.
Audience: Undergraduate

5. Construct clear and persuasive arguments about legal systems and imprisonment.
Audience: Undergraduate

HISTORY/ART HIST/ENVIR ST/GEOG/LAND ARC 239 – MAKING THE AMERICAN LANDSCAPE
3-4 credits.

Traces the history and evolution of the American cultural landscape from precolonial times to present. Explores how class, ethnic, and racial inequality have shaped the appearance of the American landscape over time, and how that landscape in turn has affected relationships between people and groups through the present day. Examines extraordinary things (civic structures (like our State Capitol), National Parks, War Memorials) and more ordinary kinds of places (mining towns, cotton plantations, sites of recreation and leisure, and suburban tract housing) to stimulate critical thinking about how these places have served people and groups unequally and disproportionately over time and across space. Considers complex meanings of American spaces and places to different people and groups, stimulating empathy and encouraging participation in a multicultural society.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe and interpret the American landscape as a richly layered historical document mediated by complex relationships between people and groups
Audience: Undergraduate

2. Explain how the American cultural landscape has affected present day circumstances regarding ethnicity and race as well as racial and ethnic inequalities
Audience: Undergraduate

3. Articulate ways in which historical change manifest in buildings, enclosed spaces, and other elements of the American landscape reveal racial, ethnic, class and gender dynamics between and among people and groups over time
Audience: Undergraduate

4. Enlist forms of historical evidence – maps (current and historic), photographs (aerial and otherwise), historical newspapers, census records, deeds and land records – to interpret landscapes and landscape change
Audience: Undergraduate

5. Explain the American landscape as a product of competing interests, which will demonstrate self-awareness and empathy toward the cultural perspectives and worldviews of others
Audience: Undergraduate

HISTORY/INTL ST/LACIS 242 – MODERN LATIN AMERICA
3-4 credits.

A broad overview of Latin American history in the modern period, since independence but with a primary focus on the twentieth century. Particular emphasis will be placed on the socioeconomic, cultural, and political structures and processes that shaped and continue to influence life in Latin America. Key issues such as colonialism, nationalism, democracy, and revolution will be examined critically in light of broad comparative themes in Latin American and world history. Among the topics to be explored in detail will be the Mexican and Cuban revolutions, populism and dictatorship, socialism and neoliberalism, and drugs and migration.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2021
Learning Outcomes: 1. Describe the contours of Latin American history in the period since independence
Audience: Undergraduate

2. Apply and use key concepts relevant to Latin American history, such as imperialism, inequality, populism, socialism, neoliberalism
Audience: Undergraduate

3. Read for a dedicated purpose across different genres and forms of writing
Audience: Undergraduate

4. Apply historical reasoning to understand the origins of present-day issues
Audience: Undergraduate

5. Communicate effectively through presentations, discussion, and written work
Audience: Undergraduate

HISTORY/LACIS 243 – COLONIAL LATIN AMERICA: INVASION TO INDEPENDENCE
3-4 credits.

An introductory survey of colonial Latin American history, from the late fifteenth to the early nineteenth century. Examines developments in Spanish and Portuguese America by reading both secondary and primary sources. Beginning with fifteenth-century Europe, the Americas and West Africa, discusses European expansion and invasion, first contacts between the so-called Old and the so-called New Worlds, as well as the role of religion, sexuality, gender, labor and production, trade and exchange, and politics. Each week, a central question will address the topic for that week. Become familiar with and contextualize key processes and events in colonial Latin American history and learn about the nature of colonization. Identify and evaluate historical arguments. Practice interpreting primary sources and building historical arguments about them.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the contours of Latin American history in the period between invasion and independence
Audience: Undergraduate

2. Apply and use key concepts relevant to colonial Latin American history, such as colonialism, genocide, corporate society, transatlantic slave trade, independence movements
Audience: Undergraduate

3. Read for a dedicated purpose across different genres and forms of writing
Audience: Undergraduate

4. Apply historical reasoning to understand both the epistemology of early modern people and the origins of present-day issues
Audience: Undergraduate

5. Communicate effectively through presentations, discussion, and written work
Audience: Undergraduate

HISTORY/ASIAN/GEOG/POLI SCI/SOC 244 – INTRODUCTION TO SOUTHEAST ASIA: VIETNAM TO THE PHILIPPINES
4 credits.

As an introduction to Southeast Asia, covers the ethnic, cultural, religious, and political histories of the region from the classical states period to the present, with an emphasis on colonialism, nationalism, decolonization, and the emergence of modern political and social systems into the 21st century, including an exposure to region's contemporary literature. Not open to students who completed LCA 244 prior to Fall 2019.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Examine the ethnic, cultural, religious, and political histories of Southeast Asia from the classical states period to the present.
Audience: Undergraduate

2. Analyze colonialism, nationalism, decolonization, and the emergence of modern political and social systems into the 21st century in Southeast Asia.

Audience: Undergraduate

3. Explore contemporary literature in Southeast Asia.
Audience: Undergraduate

HISTORY/CHICLA/GEN&WS 245 – CHICANA AND LATINA HISTORY
3 credits.

Introduces the cultural, economic, social, and political history of Chicanas and Latinas in the U.S. and focuses on four major themes: contact between different ethnic/racial groups; ideas of nation and nationalism; constructions of identity; and struggles for social justice.
Requisites: None
Course Designation: Gen Ed - Communication Part B
Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Critically analyze the presence or absence of Chicanas and Latinas in US history.
Audience: Undergraduate

2. Use methods and vocabularies of history to analyze primary and secondary sources.
Audience: Undergraduate

3. Consider the relevance of Chicana and Latina history to present-day issues.
Audience: Undergraduate

4. Write and revise research aimed at an audience beyond the classroom.
Audience: Undergraduate

HISTORY/ASIAN/ASIAN AM 246 – SOUTHEAST ASIAN REFUGEES OF THE "COLD" WAR
4 credits.

In-depth study of the peoples, conflicts, and wars in Cambodia, Laos, and Vietnam, with emphasis on the Cold War era (1945-1990) and on the resulting migration and resettlement of over one million Hmong, Khmer, Lao, and Vietnamese in the United States. Not open to students with credit for LCA 246 prior to Fall 2019.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

HISTORY/GEOG/POLI SCI/SLAVIC 253 — RUSSIA: AN INTERDISCIPLINARY SURVEY
4 credits.

Comprehensive interdisciplinary survey of Russian civilization from its beginnings through the present day.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

HISTORY/GEOG/POLI SCI/SLAVIC 254 — EASTERN EUROPE: AN INTERDISCIPLINARY SURVEY
4 credits.

Comprehensive interdisciplinary survey of East European culture, society, politics, and literature from its beginnings to the present day.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

HISTORY/ASIAN/POLI SCI 255 — INTRODUCTION TO EAST ASIAN CIVILIZATIONS
3-4 credits.

Multidisciplinary and historical perspectives on the East Asian civilizations of China, Japan, Korea, Tibet and Mongolia from prehistory to the present, including developments in philosophy, economy, governance, social structure, kinship, geography, etc.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

HISTORY/C&E SOC/POLI SCI/SOC 259 — FORWARD? THE WISCONSIN IDEA, PAST AND PRESENT
1-3 credits.

Engage in ongoing reflection and dialogue on the Wisconsin Idea and how it informs the mission of the University of Wisconsin. Consider the Wisconsin Idea as it has developed since its beginnings, with a focus on what it means today and what it can mean in the future.
Requisites: Junior or senior standing only
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023
Learning Outcomes: 1. Listen respectfully to different opinions, respond rationally rather than emotionally, make reasoned arguments.
Audience: Undergraduate

2. Respond to another point of view with research and substantive comments or questions, present and support your own position, and thus engage in a wider conversation.
Audience: Undergraduate

3. Consider a specific question ("What makes an idea a Wisconsin Idea...?) and present a reasoned argument supporting the conclusion. (1-credit students)
Audience: Undergraduate

4. Deeply analyze an argument and respond by applying it to the student's own educational strengths and weaknesses. (3-credit students)
Audience: Undergraduate

5. Use course content to explain a controversial issue and suggest a course of action to address it, stating reasons, and anticipating counterarguments. (3-credit students)
Audience: Undergraduate

HISTORY/AFROAMER/ANTHRO/C&E SOC/GEOG/LACIS/ POLI SCI/SOC/SPANISH 260 – LATIN AMERICA: AN INTRODUCTION
3-4 credits.

Latin American culture and society from an interdisciplinary perspective; historical developments from pre-Columbian times to the present; political movements; economic problems; social change; ecology in tropical Latin America; legal systems; literature and the arts; cultural contrasts involving the US and Latin America; land reform; labor movements; capitalism, socialism, imperialism; mass media.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Analyze Latin American culture and society from an interdisciplinary perspective.
Audience: Undergraduate

2. Examine historical developments from pre-Columbian times to the present.
Audience: Undergraduate

3. Identify political movements, economic problems, social change, and ecology in Latin America.
Audience: Undergraduate

HISTORY/LEGAL ST 261 – AMERICAN LEGAL HISTORY TO 1860
3-4 credits.

Surveys the development of American law down to the U.S. Civil War. Reviews the English historical background, and examines how law changed in colonial America, culminating in the framing of the U.S. Constitution. Explores how territorial expansion, democracy, and slavery shaped nineteenth-century American law. Emphasis is on how law interacts with political, social, and cultural change, with a focus on the origins of modern civil and constitutional rights.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze how the social, political, and cultural context of England and colonial America helped to shape early American legal and political systems.
Audience: Undergraduate

2. Analyze how early legal and political systems impacted Americans of all types: men and women; landowners and the poor; settlers and indigenous people; free people, servants, and slaves.
Audience: Undergraduate

3. Assess how and why the Declaration of Independence, the U.S. Constitution, and other founding documents were shaped by traditions of representative government, Common Law, and the political philosophies of republicanism and liberalism.
Audience: Undergraduate

4. Find, interpret, and utilize resources relevant to early American law and society, including colonial charters, slave codes, the Declaration of Independence, the U.S. Constitution, and Supreme Court decisions.
Audience: Undergraduate

5. Analyze legal arguments in historical context, write clearly and persuasively, and construct original arguments.
Audience: Undergraduate

HISTORY/LEGAL ST 262 – AMERICAN LEGAL HISTORY, 1860 TO THE PRESENT
3-4 credits.

Surveys the development of American law from the Civil War to the early Twenty-First Century. After a review of the U.S. Constitution and its modification by the Civil War amendments, examine the legal dimensions of such topics as race relations and the Civil Rights movement, the growth of modern business, the New Deal, labor rights, the women's movement, the individual rights revolution of the postwar period, and the contemporary conservative reaction. Emphasis on how law interacts with political, social, and cultural change.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze how social, political, and cultural phenomena, such as the Civil War, industrialization, and the rise of modern mass education and administrative government shaped U.S. law and legal systems.
Audience: Undergraduate

2. Analyze how changes in U.S. legal and political systems impacted Americans, both as individuals of all sexes, races, and classes and as members of families and business and civic organizations.
Audience: Undergraduate

3. Assess how twentieth-century changes in legal ideas and ideologies have affected understandings of the law, the U.S. Constitution, and broader legal and political systems.
Audience: Undergraduate

4. Find, interpret, and utilize resources relevant to law and society, including political speeches, state and federal laws, and decisions of federal courts and of the Supreme Court.
Audience: Undergraduate

5. Analyze legal arguments in historical context, write clearly and persuasively, and construct original arguments.
Audience: Undergraduate

HISTORY/ANTHRO/ART HIST/DS/LAND ARC 264 – DIMENSIONS OF MATERIAL CULTURE
4 credits.

This course introduces students to the interdisciplinary field of material culture studies. It is intended for students interested in any professional endeavor related to material culture, including careers in museums, galleries, historical societies, historic preservation organizations, and academic institutions. During the semester, students have varied opportunities to engage with and contemplate the material world to which people give meaning and which, in turn, influences their lives. Sessions combine in some way the following: presentations from faculty members and professionals who lecture on a phase of material culture related to his/her own scholarship or other professional work; discussion of foundational readings in the field; visits to collections and sites on campus and around Madison; discussion of readings assigned by visiting presenters or the professors; and exams and short papers that engage material culture topics.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

HISTORY/GNS 265 – AN INTRODUCTION TO CENTRAL ASIA: FROM THE SILK ROUTE TO AFGHANISTAN
3 credits.

Examination of human geography, ethnicity, nomadism and pastoralism, oases cultures, religion and international politics of the silk routes of central Asia. Not open to students with credit for HIST 265 prior to Fall 2018.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

HISTORY/CHICLA/LACIS/POLI SCI 268 – THE U.S. & LATIN AMERICA FROM THE COLONIAL ERA TO THE PRESENT: A CRITICAL SURVEY
3 credits.

A critical examination of US-Latin American relations from the colonial era to the present, tracing the emergence and evolution of the United States as a hemispheric and global power and its political and economic impact on Latin America. Primary attention will be focused on US relations with Mexico, Central America and the Caribbean, but other Latin American countries will figure prominently during certain episodes.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2020
Learning Outcomes: 1. Critically examine US-Latin American relations from the colonial era to the present.
Audience: Undergraduate

2. Examine tracing the evolution of the United States as a hemispheric and global power and its political and economic impact on Latin America.
Audience: Undergraduate

3. Discuss US relations with Mexico, Central America and the Caribbean.
Audience: Undergraduate

HISTORY 269 – WAR, RACE, AND RELIGION IN EUROPE AND THE UNITED STATES, FROM THE SCRAMBLE FOR AFRICA TO TODAY
3-4 credits.

Investigates the complex history of European and American violence and war-making through the lens of race and religion. Taking a comparative approach, analyzes several major conflicts of the twentieth century, from World War I to the wars of decolonization, and from the genocide of the Herero peoples to the Armenian Genocide, the Holocaust, and beyond. Key topics include the genealogy of the modern idea of "race" in Europe and the U.S.; the drive towards a world of more homogeneous nation-states after World War I; and the emergence of transnational protest movements opposed to racism, imperialism, antisemitism, and Islamophobia. Drawing on a range of texts, songs, and films, investigates new connections between Europe and the United States. Take an international look at concepts like race and nation, and try to make sense of extreme violence, war-making, and the pre-requisites of peace.
Requisites: Sophomore standing or 3 credits in HISTORY
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

HISTORY 270 – EASTERN EUROPE SINCE 1900
3-4 credits.

Introduces the dramatic history of twentieth-century Eastern Europe, a place where imperialism, Nazism, Communism, genocide, democracy, and capitalism all left their mark. Three interrelated themes--war, revolution, and society--allow us to place Eastern Europe within broader comparative contexts. In addition to exploring significant political, economic, and cultural changes, discover how ordinary people--including workers, peasants, women, and children--experienced attempts to change the region and its people. Throughout, discuss how East Europeans continue to wrestle with the ghosts of their past today.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2021

HISTORY 271 – HISTORY STUDY ABROAD: EUROPEAN HISTORY
1-4 credits.

Topics vary reflecting the specializations, expertise, and curricula of study abroad programs. Enrollment in a UW-Madison resident study abroad program.
Requisites: None
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

HISTORY 272 – HISTORY STUDY ABROAD: UNITED STATES HISTORY
1-4 credits.

Topics vary reflecting the specializations, expertise, and curricula of study abroad programs. Enrollment in a UW-Madison resident study abroad program.
Requisites: None
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

HISTORY 273 – HISTORY STUDY ABROAD: NON-WESTERN HISTORY
1-4 credits.

Topics vary reflecting the specializations, expertise, and curricula of study abroad programs. Enrollment in a UW-Madison resident study abroad program.
Requisites: None
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

HISTORY 274 – HISTORY STUDY ABROAD: TRANSNATIONAL/ GLOBAL HISTORY
1-4 credits.

Topics vary reflecting the specializations, expertise, and curricula of study abroad programs. Enrollment in a UW-Madison resident study abroad program.
Requisites: None
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

HISTORY 275 – TOPICS IN LGBT HISTORY
3 credits.

Topics in the major issues and themes in lesbian, gay, bisexual, and transgender history, considered across race, class, nationality, and time.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023

HISTORY/AFRICAN/AFROAMER/ANTHRO/GEOG/POLI SCI/ SOC 277 – AFRICA: AN INTRODUCTORY SURVEY
4 credits.

African society and culture, polity and economy in multidisciplinary perspectives from prehistory and ancient kingdoms through the colonial period to contemporary developments, including modern nationalism, economic development and changing social structure.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze African society and culture from a multidisciplinary perspective.
Audience: Undergraduate

2. Discuss polity and economy from prehistory and ancient kingdoms through the colonial period to contemporary developments.
Audience: Undergraduate

3. Study contemporary nationalism, economic development and changing social structure.
Audience: Undergraduate

HISTORY 278 – AFRICANS IN THE AMERICAS, 1492-1808
3-4 credits.

Topics include demography and structure of the slave trade, but major focus on continuities and transformations of African cultures and social structures in the Americas--ethnicity, religion, kinship, gender, oral tradition, creolization, etc.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2021

HISTORY 283 – INTERMEDIATE HONORS SEMINAR-STUDIES IN HISTORY
3 credits.

Honors, intermediate-level exploration of selected topics, featuring intensive reading, writing, and small-group discussion. Topics vary reflecting the interests, expertise, and innovating intention of the instructor.
Requisites: Declared in an Honors program
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

HISTORY/AFRICAN/AFROAMER/POLI SCI 297 – AFRICAN AND AFRICAN-AMERICAN LINKAGES: AN INTRODUCTION
4 credits.

Analysis of retention of African elements in African-American oral, written, and material culture. Social, cultural, and political issues regarding race, self-definition, and self-determination in both Africa and North America will be examined.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze the retention of African elements in African-American oral, written, and material culture.
Audience: Undergraduate

2. Explore social, cultural, and political issues regarding race in both Africa and North America.
Audience: Undergraduate

3. Examine self-determination in both Africa and North America.
Audience: Undergraduate

HISTORY 300 – HISTORY AT WORK: PROFESSIONAL SKILLS OF THE MAJOR
1-2 credits.

Focuses on how a History major applies to the world of work. Explores how history skills relate to the needs of professional employers. Guides in the process of finding and obtaining professional internships. Polishes written and oral communication skills in forms appropriate for professional situations. Learn from the experiences of guest alumni speakers from a variety of fields.
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Learn from guest speakers in a variety of fields about how they used their history education as the foundation of a successful career
Audience: Undergraduate

2. Practice basic writing forms and listening styles for a successful job search and early career
Audience: Undergraduate

3. Create a professional resume and cover letter
Audience: Undergraduate

4. Articulate the value of your BA in History in a professional setting.
Audience: Undergraduate

5. Hone your written and oral presentation skills in order to communicate clearly, concisely, and effectively in a professional setting
Audience: Undergraduate

6. Research career fields and organizations in which you might want to work
Audience: Undergraduate

7. Practice explaining, in both speech and writing, how the skills you have learned in the history major can be useful in jobs and careers that you are interested in
Audience: Undergraduate

HISTORY 301 – HISTORY AT WORK: HISTORY INTERNSHIP SEMINAR
1 credit.

Identify and analyze the differences between an internship and a non-professional job, with an eye towards articulating how a History degree and the skills it confers can be valuable in professional settings. Share internship experiences with classmates through short presentations. Discuss any issues or challenges that arose during internship experience. Concurrent enrollment in HISTORY 300 for 2 credits, which includes a discussion section, or previous credit in HISTORY 300 is required.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Workplace - Workplace Experience Course
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and articulate the key differences in content and expectations between pre-professional internships and non-professional employment
Audience: Undergraduate

2. Develop and implement strategies for managing workplace challenges, particularly those related to working as part of a team and interacting with diverse populations
Audience: Undergraduate

3. Articulate the relevance and value of the skill set conferred by the history major to professional and pre-professional work environments
Audience: Undergraduate

HISTORY 302 – HISTORY OF AMERICAN THOUGHT, 1859 TO THE PRESENT
3-4 credits.

Designed for those who are interested in the role of ideas and culture in modern American history. Examine developments in philosophy, science, political theory, social criticism, and the arts in American life from 1859 to the present. Read the works of a number of influential thinkers and writers, as well as explore a variety of intellectual movements, which shaped the cultural worlds of late 19th- and 20th-century Americans. Themes include: the influence of Darwinism on religion; the impact of industrialization on ideas about American society; the revolt against formalism in philosophy, literature, and the social sciences; early twentieth-century conceptions of race, ethnicity, and gender; the responsibility of the intellectual in times of national and global crisis; post-WWII liberalism and existentialism; the rise of postmodernism in the academy and American popular culture, and the persistent contestations over the meaning and scope of American national identity.
Requisites: Sophomore standing or 3 credits in HISTORY or HIST SCI
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and summarize the broad contours of and major issues in American intellectual history
Audience: Undergraduate

2. Identify and illustrate the transnational and transtemporal dimensions of American thought
Audience: Undergraduate

3. Demonstrate the relevance of a historical perspective to contemporary issues
Audience: Undergraduate

4. Judge the context in which sources were created, searching for chronological and other relationships among them, and assessing the sources in light of that knowledge
Audience: Undergraduate

HISTORY 303 – A HISTORY OF GREEK CIVILIZATION
3-4 credits.

From the Bronze Age to the Hellenistic Age. Special emphases may vary with each offering.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

HISTORY 306 – THE UNITED STATES SINCE 1945
3-4 credits.

Political, social, economic, and cultural changes in the U.S. from World War II to the present.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2022

HISTORY 307 – A HISTORY OF ROME
3-4 credits.

Roman civilization from the monarchy through the collapse of the Roman Empire in the west.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

HISTORY/ASIAN/RELIG ST 308 – INTRODUCTION TO BUDDHISM
3-4 credits.

The basic thought, practices and history of Buddhism, including selflessness and relativity, practices of meditation, merit- making and compassion from both local and translocal perspectives. Includes a discussion of Buddhism as a contemporary, North American religion. Not open to students with credit for E ASIAN or LCA 308 prior to Fall 2019.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

HISTORY/MEDIEVAL/RELIG ST 309 – THE CRUSADES: CHRISTIANITY AND ISLAM
3-4 credits.

An examination of the Crusades from both Christian and Islamic perspectives; the historical, social, and religious context and significance of the Crusades for both Christians and Muslims.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

HISTORY/JEWISH 310 – THE HOLOCAUST
3-4 credits.

References to the Holocaust abound in contemporary political debates and in our popular culture. But most people know very little about the history of the Holocaust, despite the mountains of superb historical scholarship that experts in the field have produced over decades of dedicated research. Utilize correspondence, diaries, or other firsthand accounts of Holocaust victims, together with study of the larger events around them, to reconstruct the experiences of ordinary families swept up in the Nazi genocide.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate in-depth knowledge of the Nazi genocide of European Jewry during WWII, including the events, processes, ideas, organizations, and individuals behind these crimes, and an understanding of how the everyday experiences of Holocaust victims limited their options for survival
Audience: Undergraduate

2. Explain the mechanics of how and why the Nazis and their collaborators were able to carry out a program of persecution and ultimately extermination against the Jewish communities of Europe, leading to the murder of an estimated 6 million Jews
Audience: Undergraduate

3. Identify central arguments in historiographical writing; use primary sources to reconstruct historical events; formulate research questions; develop written arguments that illuminate the lives of Holocaust victims and analyze the key events, policies, or sites of the Nazi genocide; support arguments with appropriate sources; and supply appropriate citations
Audience: Undergraduate

HISTORY/ASIAN 319 – THE VIETNAM WARS
3-4 credits.

Explores the prolonged cycle of wars in Vietnam and its neighbors, 1940 to date, with due regard for both local and U.S. perspectives.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

HISTORY/AFROAMER 321 – AFRO-AMERICAN HISTORY SINCE 1900
3-4 credits.

Survey of African American history from 1900 to the present. Topics covered include segregation, the Civil Rights Movement, the political, social and cultural changes of the late 20th century, and the Obama presidency.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Interpret African Americans' lives during the 20th and 21st centuries as well as that of the country at large
Audience: Both Grad & Undergrad

2. Describe the broader social context in which that history has unfolded and continues to evolve
Audience: Both Grad & Undergrad

3. Identify the rich resources for African American research available to students on campus and in archives throughout the country
Audience: Undergraduate

4. Conduct extensive archival research using the methodologies and practices by scholars of African American history
Audience: Graduate

5. Articulate the historical and continuing marginalization of African Americans
Audience: Both Grad & Undergrad

HISTORY/AFROAMER 322 – AFRICAN AMERICAN HISTORY TO 1900
3 credits.

Survey of African American history from its roots in Africa to the end of the 19th century. Topics considered include the slave trade, the political and cultural practices of enslaved communities, forms of resistance, Reconstruction, and systems of segregation.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2016
Learning Outcomes: 1. Recognize the multitude of contributions that people of African descent made to the social, political, and economic development of the United States of America.
Audience: Both Grad & Undergrad

2. Explain the creation, development, and legacies of race-based slavery in the United States.
Audience: Both Grad & Undergrad

3. Describe how race-based discrimination was used to marginalize African Americans socially, politically, and economically, and how Black people fought back against institutional oppression
Audience: Both Grad & Undergrad

4. Use primary sources and secondary peer-reviewed sources to explain and discuss how certain histories have been valued and devalued and how these differences have promulgated disparities in contemporary American society.
Audience: Both Grad & Undergrad

5. Demonstrate critical reading, writing, speaking, and thinking skills, specifically concerning teaching students to harbor healthy skepticism toward knowledge claims.
Audience: Both Grad & Undergrad

6. Contribute as a well-rounded, informed, and educated citizen capable of beginning to address the goals of the Ethnic Studies Requirement, including engendering students' ability to participate in a multicultural society effectively and successfully.
Audience: Undergraduate

7. Apply the primary theories and methods employed by historians of African American history.
Audience: Graduate

HISTORY/HIST SCI 323 – THE SCIENTIFIC REVOLUTION: FROM COPERNICUS TO NEWTON
3 credits.

An introduction to the formative period of modern science, including major ideas and events in the physical and life sciences from Copernicus to Newton.
Requisites: Junior standing or (graduate/professional standing and concurrent enrollment in HIST SCI 623)
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

HISTORY/ENVIR ST 328 – ENVIRONMENTAL HISTORY OF EUROPE
3 credits.

Explores a new approach to a part of the world with a very old history, but one that is now as 'modern' as any. The changing, complex relations between Europeans and their environments from antiquity to the twenty-first century offer instructive comparison with American and current global environmental concerns. Approaching Mediterranean and Western civilizations from an environmental viewpoint also offers fresh perspective on these enduring cultures.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

HISTORY 329 – HISTORY OF AMERICAN CAPITALISM
4 credits.

Survey of political, social, and economic change in the history of American capitalism from the late colonial period to the near-present.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

HISTORY/INTL ST 330 – GLOBAL HISTORY OF HUMANITARIANISM
3-4 credits.

What motivates us to try to alleviate the suffering of people in distant parts of the world? Examine the origins of humanitarian ideas and institutions, and how various humanitarian campaigns have been shaped by geopolitical processes, including the abolition of the slave trade, the spread of missionary Christianity, European imperialism, the Cold War, neoliberalism and the emergence of new media forms. Questions include: who has benefited from various humanitarian aid campaigns throughout history? How have various humanitarian campaigns shaped, and been shaped by, patterns of global inequality? Why have some populations, and not others, been deemed worthy of the world's compassion? Explore the worlds, perspectives and visions of humanitarians through a range of primary sources, including diary entries, political propaganda, memoirs, journalistic reportage, photography and documentary film.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and discuss the ways in which modern humanitarianism has transformed over time
Audience: Undergraduate

2. Compare and contrast different traditions of humanitarian thought and practice
Audience: Undergraduate

3. Explain how humanitarianism is shaped by global histories of imperialism, geopolitics, capitalism
Audience: Undergraduate

4. Locate ourselves and our communities within the broader global history of humanitarian intervention. By identifying how we fit into this uneven global history, we deepen our sense of personal and social responsibility.
Audience: Undergraduate

5. Pose original research questions, analyze primary sources, make evidence-based arguments, and communicate research findings in a clear way.
Audience: Undergraduate

HISTORY/INTL ST 332 – EAST ASIA & THE U.S. SINCE 1899
3-4 credits.

From the Boxer Rebellion, to the dropping of the atomic bombs, to the nuclear stand-off with North Korea, American foreign relations with East Asia during the 20th century were as consequential as they were controversial. Survey the issues and questions that alternately made allies and enemies of these nations: How did the quest for markets influence American policy towards China? How did European imperialism shape Japan's rise? Why did communism seem to offer a more compelling economic and political arrangement to China and North Korea? While squarely rooted in East Asia this course will also explore the questions that united and divided Americans over their nation's foreign policy. Through examining these questions, develop answers and construct their own narrative of the relationship between the United States and East Asia.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and summarize the important features and major periods in the history of US–East Asian Relations
Audience: Both Grad & Undergrad

2. Identify and summarize the major foreign relations objectives of China, Japan, North Korea, South Korea, and the United States during the major historical periods of the 20th century
Audience: Both Grad & Undergrad

3. Explain and evaluate how these societies have viewed each other during periods of conflict and cooperation
Audience: Undergraduate

4. Describe how people-to-people connections have shaped these relationships beyond their governments intensions
Audience: Undergraduate

5. Use historical knowledge to evaluate current trends in the relationships between these states
Audience: Undergraduate

6. Identify and summarize major trends and schools of interpretation in the historiography of US-East Asian relations
Audience: Graduate

7. Become proficient in the form, style, and conventions of an academic book review
Audience: Graduate

HISTORY/ASIAN 335 – THE KOREAS: KOREAN WAR TO THE 21ST CENTURY
3-4 credits.

A historical examination of the Korean War and the politics and society of North Korea and South Korea.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021

HISTORY 336 – CHINESE ECONOMIC AND BUSINESS HISTORY: FROM SILK TO IPHONES
3-4 credits.

Utilizes an historical approach to explore the economic and business history of pre-modern and modern China. Topics addressed include: how people thought about property, labor, and value, money and the banking and financial systems, development of domestic and international markets and trade, major industries, the search for resources, agricultural economy, the connection of law and economy, organizations that affected the economy, systemic changes during the Republic and People's Republic, China's participation in international economic institutions, and more.
Requisites: Sophomore standing or 3 credits in HISTORY, ECON, or POLI SCI
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023

HISTORY/ASIAN 337 – SOCIAL AND INTELLECTUAL HISTORY OF CHINA, 589 AD-1919
3-4 credits.

The culture of the literati in the T'ang; major trends of Neo-Confucianism during the Sung and Ming; the Confucian response to the West in the nineteenth century; the emergence of the modern Chinese intelligentsia and iconoclasm in the early May Fourth period.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

HISTORY 340 – CULTURAL HISTORY OF KOREA
3-4 credits.

The culture and society of Korea have evolved hand in hand with the country's transformation from the Choson dynasty, a relatively isolated Confucian kingdom built on an agrarian economy, to South Korea and North Korea, two modern, industrialized nation-states in the globalized present. Explores key aspects of Korea's great cultural and social transformation from the 15th century to the 21st century. Delves into recent studies on gender history and on the constructed notion of "national culture." Also analyzes primary sources from different historical periods, as well as cinematic representations of Korea's past and present.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2022

HISTORY/ASIAN 341 – HISTORY OF MODERN CHINA, 1800-1949
3-4 credits.

The disintegration of traditional Chinese society under the impact of Western imperialism, the rise of modern Chinese nationalism, and the emergence of modern revolutionary movements and ideologies.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022

HISTORY/ASIAN 342 – HISTORY OF THE PEOPLES REPUBLIC OF CHINA, 1949 TO THE PRESENT
3-4 credits.

The social, economic and political transformation of China under Communism; the role of ideology in contemporary Chinese historical development; the nature of that historical development in the comparative perspective of other post-revolutionary histories.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023

HISTORY 344 – THE AGE OF THE AMERICAN REVOLUTION, 1763-1789
3-4 credits.

Structure of American society, Britain and the Colonies; the revolutionary movement for independence; the war for independence; social, political, and constitutional change.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

HISTORY 345 – MILITARY HISTORY OF THE UNITED STATES
3-4 credits.

The founding and growth of the military establishment, the exercise of the military art, and military policies treated in connection with relevant political, social, and economic factors.
Requisites: Sophomore standing. Not open to students with credit for HISTORY 427 or 428.
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

HISTORY/GEN&WS 346 – TRANS/GENDER IN HISTORICAL PERSPECTIVE
3-4 credits.

Focuses on sex/gender crossing and variation in historical contexts including Japan, South Africa, Europe, the African diaspora, and North America. Considers perspectives of people who themselves passed, crossed, transitioned, transed, or otherwise exceeded their culture's definitions of normative sex/gender. Alongside, consider the ways that dominant social institutions reinforced norms, recognized, tolerated, punished and/or celebrated gender variation. Examine popular culture, medical and legal perspectives, memoir, queer and trans theory, and social movement treatises.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2019

HISTORY/AFROAMER 347 – THE CARIBBEAN AND ITS DIASPORAS
3-4 credits.

Surveys the history of the Caribbean from the 15th century to the present. Emphasizes the importance of colonialism, commodity-based capitalism, globalization, slavery, and forced labor for the modeling of the region's social, economic, cultural, and political structures. Pay particular attention to the resilient, creative and resourceful ways in which Caribbean people have responded to these adverse conditions. Examine the circumstances that have shaped migrations from the region to the United States and Canada during the 20th and 21st centuries. Study how these diasporic communities have created social spaces in these two countries that have remained closely linked to the Caribbean through economic, political, and filial networks.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Identify the historical roots of the racial, political, cultural, and social structures of contemporary Caribbean societies and their diasporas
Audience: Undergraduate

2. Recognize the multiple ethnic and cultural origins of Caribbean communities and the impact these communities had in the modeling of Atlantic and global historical developments
Audience: Undergraduate

3. Analyze and synthesize information, provide evidence-based interpretations about the past, and develop arguments regarding the history of Caribbean societies and their global diasporas
Audience: Undergraduate

4. Identify and analyze within their social, cultural, and economic contexts key historical developments in the history of the Caribbean from the fifteenth century to the present
Audience: Both Grad & Undergrad

5. Analyze the role that social and cultural factors—such as gender, religion, ethnicity, and class, among others—had in shaping Caribbean historical developments
Audience: Both Grad & Undergrad

6. Identify and analyze within the their social, cultural and economic contexts the history of the idea of race as it relates to the history of the Caribbean
Audience: Both Grad & Undergrad

7. Discern the impact of local and global political and economic developments, in the shaping of ideas about racial, ethnic, social, and cultural hierarchies and public policies in Caribbean nations
Audience: Both Grad & Undergrad

8. Understand the different methodological approaches and research strategies that historians, anthropologists, and other scholars have used to examine the histories of the Caribbean from the sixteenth century to the present
Audience: Graduate

HISTORY 348 – FRANCE FROM NAPOLEON TO THE GREAT WAR, 1799-1914
3-4 credits.

Politics, society and culture in nineteenth century France. Emphasis on France's revolutionary heritage and problems of establishing a democratic regime.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

HISTORY 349 – CONTEMPORARY FRANCE, 1914 TO THE PRESENT
3-4 credits.

Social, political, and cultural history of twentieth century France, especially the Great War, the Popular Front, the Vichy Regime, DeGaulle and the Fifth Republic, Mitterrand's socialist experiment, France's changing role in the world and the European Community.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

HISTORY 350 – THE FIRST WORLD WAR AND THE SHAPING OF TWENTIETH-CENTURY EUROPE
3-4 credits.

The experience and legacy of the First World War has been linked to nearly every social, cultural, and political transformation that marked the short century that followed: mobilization and the experience of total war transformed the relations between governments and citizens, between men and women, and between social classes. Europeans experienced death on an unprecedented scale and came to terms with new forms of industrialized warfare, from the use of poison gas to modern practices of genocide. Europeans now learned to live with violence, both during as well as after the war, and found new ways to mourn or remember the dead. Using a wide variety of contemporary sources -- memoirs, essays, poems, or cinematic representations -- situates the upheaval of 1914-1918 within the larger framework of twentieth-century European history.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

HISTORY/GEN&WS 353 – WOMEN AND GENDER IN THE U.S. TO 1870
3-4 credits.

An advanced and comparative study of the roles of gender, class, and race in American history and historiography. Themes include women as agents of social change and as builders of community.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

HISTORY/GEN&WS 354 – WOMEN AND GENDER IN THE U.S. SINCE 1870
3-4 credits.

See 520.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019

HISTORY/CHICLA/LACIS/POLI SCI 355 – LABOR IN THE AMERICAS: US & MEXICO IN COMPARATIVE & HISTORICAL PERSPECTIVE
3 credits.

Provides a critical examination of the history of labor and working people in the Americas, from the colonial era to the present. It focuses on the experience of the United States and Mexico, offering a comparative perspective on their distinct but also shared (and increasingly linked) histories. The seminar proceeds chronologically, highlighting major episodes in the evolution of labor systems in the two countries, beginning with the colonial labor systems implemented by the Spanish and British empires following the European conquest of the Western Hemisphere. Among other topics, we will examine the pivotal role of slavery and other forms of forced labor, the impact of the industrial revolution, the emergence and expansion of corporate capitalism and the labor unrest it provoked in the post-civil war U.S., the role of labor in the Mexican Revolution and its aftermath, the impact of the Great Depression and labor incorporation on the post-WWII social and political order of both countries, the breakdown of that order and the move to neo-liberalism in the 1970s and 1980s, and the emergence of an increasingly integrated North American production system and its consequences for labor and working people on both sides of the US-Mexico border.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2021

HISTORY 357 – THE SECOND WORLD WAR
3-4 credits.

Background and history of World War II. Problems of peacemaking and international organizations; rise of Fascism, National Socialism, and Japanese imperialism; breaking the peace; World War II.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

HISTORY 358 – FRENCH REVOLUTION AND NAPOLEON
3-4 credits.

Explores the French Revolution and the Age of Napoleon. Why did Revolution break out in one of the most powerful and traditional monarchies of Europe? What were the roots of discontent and the sources of revolutionary ideas? Probes the exciting twists and turns of revolutionary politics and the attempt to spread "liberty equality" into ordinary life, even abolishing slavery in response to massive slave revolt in the French colonies. Asks how the French interacted with a transnational revolutionary movement across Europe, the US, and the Atlantic world. Though focused on a specific revolutionary era, we will also reflect on timeless questions: Why is it so difficult to create democracy? Is violence ever justified to overcome oppression and injustice? Finally, why did this experiment in radical democracy also unleash the Terror and launch Napoleon Bonaparte, the politician and general who built an astonishing European Empire? And how did he pull it off for as long as he did?
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

HISTORY 359 – HISTORY OF EUROPE SINCE 1945
3-4 credits.

Political, cultural, and social history of Europe from the Second World War to the present.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

HISTORY/ENGL/RELIG ST 360 – EARLY MEDIEVAL ENGLAND
3 credits.

Introduction to the peoples and cultures of Early Medieval England (c450-c1100), with primary emphasis on texts written in Old English and Latin. Interdisciplinary approach including history, literature, religion, and material culture. Attention to literary genres ranging from elegy to riddles; the development of Christianity; encounters with Romans, Vikings, and Normans; and other political and social concerns. All readings in translation.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Recognize and discuss major forms, techniques, social conditions, values, and genres that have shaped the history of English literature, language, and culture.
Audience: Undergraduate

2. Discern and integrate divergent and contradictory perspectives, identify and question assumptions, and assess evidence and methods related to Early Medieval England.
Audience: Undergraduate

3. Write original, coherent, and compelling arguments about assigned texts and/or objects that push beyond summary to analysis and independent and critical thinking in clear prose that meets expectations for grammatical correctness.
Audience: Undergraduate

HISTORY/CLASSICS/POLI SCI 362 – ATHENIAN DEMOCRACY
3 credits.

Explores key issues in the ideology and practice of Athenian democracy. Examines democratic values, institutions, rhetoric, and sociology in order to provide the basic tools to understand democracy in its ancient context. Engages with a variety of source material (literary, archaeological, epigraphic) in order to develop multiple skills of interpretation. Some questions examined include: What are the key features of Athenian democracy, how did it change over time, and how did it differ from modern democracy? How did the Athenians justify and critique this political system? How did they reconcile citizen egalitarianism with social inequalities of wealth, gender, and status? To what extent were women, foreigners, slaves, or the poor included or excluded from politics? Was Athenian democracy a robust political system or a system in crisis?
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand and use appropriately the specific terminology (names, places, concepts) related to Athenian democracy
Audience: Undergraduate

2. Discuss with appropriate methodological awareness conflicting views expressed in modern scholarship
Audience: Undergraduate

3. Analyze problems relating to the reconstruction of historical concepts in the ancient world with reference to relevant source material
Audience: Undergraduate

4. Critically read and engage with complex academic texts (both ancient sources and modern literature)
Audience: Undergraduate

5. Present knowledge, ideas, and analysis orally (in classroom discussion) and in written formats
Audience: Undergraduate

HISTORY/ASIAN 363 – CHINA AND WORLD WAR II IN ASIA
3-4 credits.

This course is intended to help students understand World War II from the perspective of Asia. The focus is not only on the American and Japanese roles in the war but also on lesser, often overlooked participants such as China, Korea, and Southeast Asia. The course will focus not only on the diplomatic, political, and military situation of wartime Asia, but also on perceptions and experiences of the war from those most heavily affected by it: those experiencing it on the ground. Understanding this war is critical for helping us understand contemporary Asia. The foundations of the Cold War and the post-Cold War world that we live in today were forged on battlefields in mainland China, Burma, small islands in the Pacific, and in the skies over the archipelago of Japan. In order to provide the background and understand the legacies, this course covers an extended time frame, beginning in the 19th century with the arrival of the West in Asia and continues into the 1950s.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2022

HISTORY/INTL ST 366 – FROM FASCISM TO TODAY: SOCIAL MOVEMENTS AND POLITICS IN EUROPE
3-4 credits.

Investigates how everyday people shaped European history and politics, from World War I through today. Takes a comparative and interdisciplinary approach to analyze a range of major social movements in Europe, thinking in detail about what constitutes a social movement in the first place, and what determines its effectiveness. Key topics include the rise and fall of Fascism; the fate of the Communist and Socialist Left in Europe; the role of youth movements as drivers of change; and the constraints imposed on political organizing by both democratic and authoritarian societies. Drawing on a range of texts, songs, and films, investigates how people power has shaped the European state, and vice-versa, from 1922 through today.
Requisites: Sophomore standing or 3 credits in HISTORY
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Refine their ability to read, analyze, and critically engage with primary and secondary sources.
Audience: Undergraduate

2. Craft sophisticated analytical arguments.
Audience: Undergraduate

3. Communicate complex ideas through speech, charitably evaluating opposing viewpoints, and working collaboratively with others.
Audience: Undergraduate

4. Become familiar with the building-blocks of European transnational and international history, and expose students to the study of social movements.
Audience: Graduate

5. Hone hermeneutical skills so as to evaluate and interpret sources more judiciously and charitably.
Audience: Graduate

6. Develop confidence as keen writers, sharp public speakers, and probing analysts of the past and present.
Audience: Graduate

HISTORY/ENVIR ST 369 – THINKING THROUGH HISTORY WITH ANIMALS
3-4 credits.

Explores the history of human relationships with animals around the world with focus on agriculture and hunting, political economic development, human identity, and biological science and conservation.
Requisites: Sophomore standing or 3 credits in HISTORY, GEOG or ENVIR ST
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2019
Learning Outcomes: 1. Analyze the roles of animals in shaping human identity
Audience: Undergraduate

2. Describe and apply key concepts in animal and environmental history to analyze changing patterns of social organization
Audience: Undergraduate

3. Integrate humanities and natural science perspectives to understand the interplay of nature and society in shaping history
Audience: Undergraduate

4. Connect changing relationships among humans and animals to broader processes of economic and cultural development
Audience: Undergraduate

HISTORY/INTL ST 375 — THE COLD WAR - FROM WORLD WAR II TO END OF SOVIET EMPIRE
3-4 credits.

The Cold War was the first event to impact virtually all of humanity and left a lasting legacy that still shapes the current world order. Exploration of its conduct on five continents entails both a diversity of sources (film, fiction, documents, and memoir) and a range of topics (geopolitics, ideology, internationalism, empire, revolution, counterinsurgency, and covert operations). Its half-century history was marked by nuclear-armed stalemate and ideological competition in Europe, cultural politics of repression and generational revolt in America, interplay of anti-colonial nationalism and counterinsurgency in Asia, Africa, and Latin America, and a succession of major wars worldwide in Korea, Vietnam, Angola, and Afghanistan. By adopting an international perspective that carries us beyond the narrow ambit of the Moscow-Washington rivalry, integrate diverse global forces and particular national histories for a fuller understanding of an ever-changing world system.
Requisites: Sophomore standing or 3 credits in HISTORY or INTL ST
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Interpret primary sources
Audience: Undergraduate

2. Develop a refined ability to critically analyze secondary sources
Audience: Undergraduate

3. Merge a considered thesis, operational factors, and empirical evidence into a coherent analytical narrative
Audience: Undergraduate

4. Edit their own prose for both grace and clarity
Audience: Both Grad & Undergrad

5. Develop a perspective on how to incorporate primary sources in undergraduate teaching
Audience: Graduate

6. Develop a foundation for teaching their own world history courses, which are a requirement for job placement in a growing number of colleges and universities
Audience: Graduate

7. Develop a resonant sense of the extraordinary carrying capacity of historical narrative
Audience: Graduate

HISTORY/AMER IND 380 — SOVEREIGNTY AND THE SCHOOLHOUSE
3 credits.

Introduction to the history of American Indian education. Evaluate the relationship between education and sovereignty through a survey of schools including missions, boarding schools, survival schools, tribal colleges, language nests, charter schools, and more.
Requisites: AMER IND 100, HISTORY/AMER IND 190, or graduate/professional standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Identify important concepts in the history of education and American Indian studies to understand how the past has affected present day circumstances regarding inequalities in education in Indian Country and in the U.S.
Audience: Both Grad & Undergrad

2. Evaluate theories of schooling and sovereignty through the interpretation of primary sources related to American Indian education to practice historical empathy toward the cultural perspectives and worldviews of others.
Audience: Both Grad & Undergrad

3. Craft rigorous historical arguments in the form of an original research paper on the history of an American Indian school, and question cultural assumptions and knowledge claims as they relate to race, ethnicity, and sovereignty in education.
Audience: Both Grad & Undergrad

4. Assess the foundational works in the historiography on schooling in Native lives, communities, and nations as part of the field of contemporary Indigenous Studies.
Audience: Graduate

HISTORY/GEN&WS 392 — WOMEN AND GENDER IN MODERN EUROPE
3-4 credits.

An examination of the cultural role of gender and the social, economic, and political activities of women in modern Europe from the 18th to the late 20th centuries.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023

HISTORY/AFROAMER 393 – SLAVERY, CIVIL WAR, AND RECONSTRUCTION, 1848-1877
3-4 credits.

African-American slavery and its impact on mid-19th century social, political, and economic life; the causes, course, and consequences of the Civil War; the rise and fall of postwar Reconstruction and non-racial citizenship; the impact of these histories on contemporary American society.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

HISTORY 400 – UNDERGRADUATE HISTORY SYMPOSIUM
1 credit.

Whatever we do, wherever we go, we are encountering history and reckoning with some consequence radiating out from the past. Designed to awaken us to the myriad ways in which the past is present all around us, and to help cultivate the historian's habits of mind in our everyday experiences. In addition to faculty-led group discussions, centers on intellectual opportunities in Madison such as special lecture series and conversations with UW faculty and outside guests. Themes and topics will vary, depending on the instructor and opportunities for engagement with the wider intellectual community of Madison.
Requisites: Declared in the History undergraduate program, Certificate in History, or 6 credits in HISTORY or HIST SCI
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2022
Learning Outcomes: 1. Prepare to get the most out of a lecture by researching the speaker, reading something related to the topic, and thinking about possible approaches.
Audience: Undergraduate

2. Participate comfortably and appropriately in a formal academic lecture setting.
Audience: Undergraduate

3. Reflect critically on a lecture or event.
Audience: Undergraduate

4. Discuss complex points productively and respectfully.
Audience: Undergraduate

5. Recognize contextual influences on the perspectives and actions of scholars and others, including oneself.
Audience: Undergraduate

6. Cultivate a lifetime sense of curiosity and wonder.
Audience: Undergraduate

HISTORY 401 – PUBLIC HISTORY WORKSHOP
3 credits.

Introduction to the practice of public history. Public historians ground their work in rigorous, academic research with the goal of presenting history in a collaborative and publicly focused manner. These projects come in many forms including exhibits, walking tours, podcasts, documentaries, web projects, and place-based interpretation, to name a few. Learn how academic history gets presented to the public, not only by reading about public history, but by doing it.
Requisites: HISTORY 201 or 3 credits in HISTORY or HIST SCI
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and understand theoretical and methodological underpinnings of public history
Audience: Undergraduate

2. Analyze how research gets presented to the public
Audience: Undergraduate

3. Assess the usefulness of various formats in sharing particular histories with different audiences
Audience: Undergraduate

4. Produce public history projects
Audience: Undergraduate

5. Consider factors that affect the production and reception of public history projects
Audience: Undergraduate

6. Collaborate and share authority with members of the public whose stories are being told
Audience: Undergraduate

7. Identify different specialties of public history and recognize the wide array of employment opportunities and roles in the field
Audience: Undergraduate

HISTORY 403 – IMMIGRATION AND ASSIMILATION IN AMERICAN HISTORY
3-4 credits.

Survey of immigration to the U.S. from colonial times to the present with analyses of the roles of ethnic and racial groups in economics and politics, the reactions of earlier arrivals to their successors, the extent of assimilation and contemporary ethnic and racial consciousness.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2024

HISTORY/RELIG ST 409 – CHRISTIANITY IN THE ATLANTIC WORLD, 1500-1800
3 credits.

Between the late Middle Ages and the era of democratic revolutions Western Christianity saw a series of sweeping changes that altered its global profile and helped form the modern world - examines some of these shifts and their impact. Questions explored include: Why did the Reformations of the 16th century occur and with what effects on people's lives and on early modern societies? What was the relationship between European colonization, the Atlantic slave trade, new theories of race, and the spread of Christianity to the "New World"? How was the Christian religion resisted, received, and reshaped by Native Americans and people of African descent? What sparked movements of reform and renewal - including new Catholic religious orders and the Protestant Evangelical Awakening - and with what consequences for modern Christianity? How did the nature of Christian belief and identity change under the impact of religious conflict, political revolution, and new intellectual movements?
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Identify and explain the significance of key trends, thinkers, and texts in the history of early modern Christianity
Audience: Undergraduate

2. Analyze and evaluate some of the scholarly debates in the field of early modern Christianity
Audience: Undergraduate

3. Interpret complex writings from the past contextually, critically, and empathetically
Audience: Undergraduate

4. Construct strong historical arguments based on evidence and careful reasoning
Audience: Undergraduate

5. Compose clear analytical and argumentative written prose
Audience: Undergraduate

HISTORY 410 – HISTORY OF GERMANY, 1871 TO THE PRESENT
3-4 credits.

Political and social development of Central Europe from the establishment of the German Empire to the post-World War II period.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

HISTORY/RELIG ST 411 – THE ENLIGHTENMENT AND ITS CRITICS
3 credits.

European intellectual history in the 17th and 18th centuries, from the Wars of Religion to the French Revolution. Examines the rise of Enlightenment thought in relation to political and religious conflict, revolutions in science and philosophy, and the emergence of the public sphere. Special attention is paid to the Enlightenment's relationship to religion and to contemporary critiques made of Enlightenment thinking, including those of the early Romantic movement.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

HISTORY/ED POL 412 – HISTORY OF AMERICAN EDUCATION
3 credits.

Examines the history of education in America from the colonization of North America to the present to consider education in its broadest sense - as a process of individual development and cultural transmission. Explores such topics as the rise of common schools in the urban North; the education of Native Americans, immigrants, slaves, and free blacks; the evolution of teacher training (primarily for women); various philosophies of "progressive" school reform; the politics of desegregation, bilingual education, and special education; the articulation between high school and college work; and the evolving federal role in American education.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. demonstrate their knowledge and explain the significance of key actors, events, themes, and ideas relating to the history of American education
Audience: Both Grad & Undergrad

2. interpret and contextualize primary historical sources
Audience: Both Grad & Undergrad

3. identify and evaluate historical arguments in secondary scholarly works
Audience: Both Grad & Undergrad

4. locate, synthesize, and evaluate information from primary and/or secondary sources in order to develop and support their own evidence-based historical interpretations
Audience: Undergraduate

5. locate, synthesize, and evaluate relevant primary historical sources in order to construct evidence-based historical interpretations.
Audience: Graduate

HISTORY 417 – HISTORY OF RUSSIA
3-4 credits.

Origins and evolution of the Russian people and state; political, economic, and social history; foreign relations as they affect domestic policy; from the ninth century to 1800.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021

HISTORY 418 – HISTORY OF RUSSIA
3-4 credits.

Russian political, economic, and social history from 1800 to 1917; foreign relations as they affect domestic policy.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

HISTORY 419 – HISTORY OF SOVIET RUSSIA
3-4 credits.

Major political, economic and social developments in Russia since 1917.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

HISTORY 420 – RUSSIAN SOCIAL AND INTELLECTUAL HISTORY
3-4 credits.

Main currents of Russian social thought in the eighteenth and nineteenth centuries.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022

HISTORY/CHICLA/POLI SCI 422 – LATINO HISTORY AND POLITICS
3 credits.

Students will examine the historical, social, political, economic, and cultural experiences and conditions of Latinos, one of the largest US racial/ethnic minority groups. Course focus is on people who trace their origins to Mexico, the Caribbean, and countries of Latin America.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss the complexity of the Latino population and divergent political agendas of various subgroups.
Audience: Undergraduate

2. Develop an understanding of the historical origins of how Latino social/political movements have emerged and changed.
Audience: Undergraduate

3. Evaluate the role of movements and activists in policy reform and social/political change.
Audience: Undergraduate

4. Examine the impact of the Latino vote on contemporary politics.
Audience: Undergraduate

5. Explore contemporary policy issues affecting the Latino population.
Audience: Undergraduate

HISTORY 424 – THE SOVIET UNION AND THE WORLD, 1917-1991
3-4 credits.

Surveys Soviet foreign relations from 1917-1991, examining the causes, course, and outcome of the Cold War. Topics include: Soviet-US relations, World War II, the Socialist Bloc, espionage, the space race, Sino-Soviet relations, and Soviet intervention in the 'Third World.'
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022

HISTORY/LEGAL ST 426 – THE HISTORY OF PUNISHMENT
3-4 credits.

Examines punishment across a vast range of historical traditions, examining how wrongdoing and punishment have been figured in law, literature, art and philosophy. Examines ancient, medieval and modern traditions.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

HISTORY 427 – THE AMERICAN MILITARY EXPERIENCE TO 1902
3-4 credits.

A survey of American military experience from the 16th century through the development of a nascent American "empire" at the turn of the 19th and 20th centuries, examining the influence of warfare on all aspects of American society.
Requisites: Sophomore standing. Not open to students with credit for HISTORY 345.
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021

HISTORY 428 – THE AMERICAN MILITARY EXPERIENCE SINCE 1899
3-4 credits.

A survey of American military experience in the 20th and 21st centuries, examining the influence of warfare on all aspects of American society.
Requisites: Sophomore standing. Not open to students with credit for HISTORY 345.
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022

HISTORY/ENVIR ST/LEGAL ST 430 – LAW AND ENVIRONMENT: HISTORICAL AND CONTEMPORARY PERSPECTIVES
3 credits.

Explores environmental studies through a focus on law and legal history. Although its main concentration is on U.S. environmental law, the course will begin and end with broader historical and global perspectives. Topics include a survey of English, European, and early American legal approaches to land use, natural resources, and pollution through World War II as well as an examination of the development and practice of contemporary U.S. environmental law and consideration of the recent emergence of international environmental law.
Requisites: Sophomore standing
Course Designation: Gen Ed - Communication Part B
Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze and articulate their own arguments about how social, political, and cultural phenomena shape law and legal systems.
Audience: Both Grad & Undergrad

2. Analyze and articulate their own arguments about the social, political, and cultural impacts of law at the societal and individual levels.
Audience: Both Grad & Undergrad

3. Demonstrate knowledge about how legal ideas and ideologies have changed over time and have shaped law and legal systems.
Audience: Both Grad & Undergrad

4. Demonstrate their abilities to find, interpret, and utilize resources relevant to law and society.
Audience: Both Grad & Undergrad

5. Demonstrate their abilities to analyze information, to write clearly and persuasively, and to construct original arguments.
Audience: Both Grad & Undergrad

6. Analyze the causes of and solutions for the sustainability challenge of the conservation of natural resources, especially insofar as their governance involves and impacts local stakeholders.
Audience: Both Grad & Undergrad

7. Analyze the social, economic, legal, political, and environmental dimensions of the sustainability challenge of regulating and governing biodiversity, clean air and water, and other, larger earth systems (such as climate).
Audience: Both Grad & Undergrad

8. Demonstrate an advanced understanding of the historiography or other scholarly debates that have shaped the study of conservation and environmental law.
Audience: Graduate

HISTORY/SCAND ST 431 – HISTORY OF SCANDINAVIA TO 1815
3 credits.

Political, social, economic, and cultural developments of Scandinavia through the "Viking Age" to the break-up of Sweden-Finland and Denmark-Norway; emphasis on the interplay between social and political forces and institutions and the area's relationship with the rest of Europe.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

HISTORY/SCAND ST 432 – HISTORY OF SCANDINAVIA SINCE 1815
3 credits.

Political, social, economic, and cultural development: political realignments and rise of nationalism, industrialization and rise of liberalism and socialism, democratization, independence struggles and social conflict, evolution of welfare states, World War II and its aftermath.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain the significance of major historical events, figures, processes, and periods in the Nordic region since 1815.
Audience: Both Grad & Undergrad

2. Analyze modern and contemporary Scandinavian culture, politics, and society from an informed historical perspective.
Audience: Both Grad & Undergrad

3. Interpret historical information, engage in discussion and debate, and argue persuasively about significant topics in the Nordic history.
Audience: Both Grad & Undergrad

4. Graduate students will be able to do all of the above with reference to a larger amount of academic scholarship and secondary literature written in both English and the Nordic languages.
Audience: Graduate

HISTORY 434 – AMERICAN FOREIGN RELATIONS, 1901 TO THE PRESENT
3-4 credits.

America's relations with the world, emphasizing the economic, political and ideological elements determining policy.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022

HISTORY/CHICLA 435 – COLONY, NATION, AND MINORITY: THE PUERTO RICANS' WORLD
3 credits.

A historical introduction to the Puerto Rican experience, from island to mainland. Varieties of colonial rule, social institutions, cultural processes, and ethnic and national identity. Migration to the U.S. and social dynamics of stateside communities.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify major trends and debates in the historical studies about Puerto Rico and its global diaspora.
Audience: Both Grad & Undergrad

2. Explain how those who have inhabited the Puerto Rican archipelago have resisted and navigated colonialism.
Audience: Both Grad & Undergrad

3. Compare and contrast Spanish and United States colonialism in Puerto Rico.
Audience: Both Grad & Undergrad

4. Analyze the complex realities of Puerto Rican communities in the archipelago and abroad.
Audience: Both Grad & Undergrad

5. Evaluate colonial violence in present-day Puerto Rico
Audience: Both Grad & Undergrad

6. Analyze the history of Puerto Rico through the lens of three key concepts: la brega, coloniality, and nationhood.
Audience: Both Grad & Undergrad

7. Demonstrate advanced written and analytic skills through engagement with course materials.
Audience: Graduate

HISTORY 450 – MAKING OF MODERN SOUTH ASIA
3-4 credits.

Everything you ever hear about South Asia is true. But the exact opposite is also true. Tradition and modernity, development and stagnation, the past and the future all exist simultaneously, at times in harmony and at other times in conflict with one another. Through an exploration of the political, social and economic history of this region from the 18th century to the present day, learn about the making of modern South Asia and attempt to understand this paradox.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

HISTORY/ASIAN 454 – SAMURAI: HISTORY AND IMAGE
3-4 credits.

Japanese warriors, their ideals, and their images from the tenth century to the present.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

HISTORY/ASIAN 456 – PEARL HARBOR & HIROSHIMA: JAPAN, THE US & THE CRISIS IN ASIA
3-4 credits.

Events leading to the Pearl Harbor attack, the conduct of World War II in the Pacific, the nature of the wartime Japanese state and effects of the war on Japanese society, the dropping of the atomic bombs, and Japan's decision to surrender. The war as an epoch in Japanese history.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2020

HISTORY/ASIAN 458 – HISTORY OF SOUTHEAST ASIA SINCE 1800
3-4 credits.

Effects of the modern Western revolution on the established societies of Southeast Asia through colonial rule and economic and cultural change. Not open to students with credit for LCA 458 prior to Fall 2018.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

HISTORY/LEGAL ST 459 – RULE OF LAW: PHILOSOPHICAL AND HISTORICAL MODELS
3-4 credits.

From the perspectives of history and political theory, examines the multiple meanings of the idea of the rule of idea, and its uses in American history. Explore prominent critiques of the rule of law ideal.
Requisites: Junior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

HISTORY/ENVIR ST/GEOG 460 – AMERICAN ENVIRONMENTAL HISTORY
4 credits.

Survey of interactions among people and natural environments from before European colonization to present. Equal attention to problems of ecological change, human ideas, and uses of nature and history of conservation and environmental public policy.
Requisites: Sophomore standing or 3 credits in HISTORY, GEOG or ENVIR ST
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

HISTORY/ASIAN 463 – TOPICS IN SOUTH ASIAN HISTORY
3 credits.

Topics vary related to the History of South Asia, Eurasia, and the Indian Ocean.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2018

HISTORY/ENVIR ST 465 – GLOBAL ENVIRONMENTAL HISTORY
3-4 credits.

Explores the history of human relationships with the environment on a global scale through analysis of long-term changes, from early civilizations, to the beginnings of global trade, the Industrial Revolution, urbanization, and 20th century technological developments. Offers first-hand historiographical research experience and training in writing for public web audiences.
Requisites: Sophomore standing or 3 credits in HISTORY, GEOG or ENVIR ST
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Define “the Anthropocene” and evaluate different approaches for dating and naming this new “human age”
Audience: Both Grad & Undergrad

2. Analyze the intersections of multiple historical socio-natural processes – such as extraction, colonialism, racism, capitalism, agriculture, industrialization, and modernization—to explain the production of uneven development and environmental crises
Audience: Both Grad & Undergrad

3. Document and analyze aspects of modern life that will be “modern fossils” in the distant future
Audience: Both Grad & Undergrad

4. Explain the importance of historical analysis for understanding contemporary environmental problems
Audience: Both Grad & Undergrad

5. Apply historical methods to analyze how a material object of their choice illustrates a particular interpretation of the Anthropocene
Audience: Both Grad & Undergrad

6. Assess significant works in the historiography of global environmental history and interdisciplinary Anthropocene studies
Audience: Graduate

HISTORY/ECON 466 — THE AMERICAN ECONOMY SINCE 1865
3-4 credits.

Emergence of the large corporation; growth and instability since the mid-nineteenth century; increasing government participation in the economy; the impact of war, depression, discrimination, and international responsibilities.
Requisites: ECON 101 or 111
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Describe critical economic events in American history.
Audience: Undergraduate

2. Discuss the application of fundamental concepts of economics to real-world issues facing the post-Civil-War United States.
Audience: Undergraduate

3. Identify the determinants and consequences of historical economic events, and use them to critique current economic issues.
Audience: Undergraduate

4. Evaluate quantitative claims with a focus on "orders of magnitude" and other practical skills.
Audience: Undergraduate

HISTORY/LEGAL ST 476 — MEDIEVAL LAW AND SOCIETY
3 credits.

Introduction to the central historical developments of law and legal institutions in the European middle ages (400-1500).
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2023

HISTORY/LEGAL ST 477 — HISTORY OF FORENSIC SCIENCE
3 credits.

Examines the diverse paths followed by forensic science (including medical jurisprudence or forensic medicine) in various times and places, focusing on the English-speaking world from the nineteenth century until the present. Explore the many ways that law and science have worked together--or at cross-purposes--to generate and assess evidence at the crime scene, in the lab, in the courtroom, and beyond.
Requisites: Sophomore standing and (LEGAL ST/HISTORY 261, SOC/LEGAL ST 131, or POLI SCI/LEGAL ST 217), or graduate/professional standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

HISTORY/ED POL 478 — COMPARATIVE HISTORY OF CHILDHOOD AND ADOLESCENCE
3 credits.

Examines the growth of modern childhood and adolescent sub-cultures, class differences, literary and pictorial representations, legal and demographic developments, and the growth of educational theories and institutions.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021
Learning Outcomes: 1. Demonstrate their knowledge and explain the significance of key actors, events, themes, and ideas related to the history of childhood and adolescence
Audience: Both Grad & Undergrad

2. Interpret and contextualize primary historical sources
Audience: Both Grad & Undergrad

3. Identify and evaluate information from primary and/or secondary sources in order to develop and locate, synthesize, and evaluate information from primary and/or secondary sources in order to develop and support their own evidence-based historical interpretations
Audience: Undergraduate

4. Locate, synthesize, and evaluate primary historical sources in order to construct evidence-based historical interpretations
Audience: Graduate

HISTORY 500 — READING SEMINAR IN HISTORY
3 credits.

Advanced exploration of selected topics, featuring small group discussion and intensive engagement with historical materials. Topics vary.
Requisites: HISTORY 201 or junior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

HISTORY/HIST SCI/MED HIST 508 — HEALTH, DISEASE AND HEALING II
3-4 credits.

Medicine in Europe from the 18th century to mid-20th century, investigating changes in disease and demography, state interest in health care, the medical professions, and both scientific and alternative medical ideas.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Recognize the utility of humanistic methods for the study of medicine and public health
Audience: Undergraduate

2. Develop critical thinking skills through techniques of close reading and written analysis
Audience: Undergraduate

3. Understand essential developments in the evolving relationship between medicine and public health in modern societies.
Audience: Undergraduate

HISTORY/LEGAL ST 510 — LEGAL PLURALISM
3 credits.

Historical and anthropological perspectives on non-state "law," or systems of rules generated by normative orders that lay beyond the state; case studies include the mafia, Tokyo tuna traders' court, orthodox Jewish diamond merchants, California gold miners' courts, Inuit song dueling.
Requisites: Sophomore standing and (LEGAL ST/HISTORY 261, SOC/LEGAL ST 131, or POLI SCI/LEGAL ST 217), or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

HISTORY/CURRIC/ED POL/JEWISH 515 — HOLOCAUST: HISTORY, MEMORY AND EDUCATION
3 credits.

Explores the ways in which Holocaust history, memory and education are mutually entangled, politically charged and morally complex. Using primarily American sites of memory, critically analyze a variety of representations of the Shoah--in literature, films, memoirs, monuments, museums and classrooms.
Requisites: Junior standing
Course Designation: Gen Ed - Communication Part B
Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022
Learning Outcomes: 1. Examine and question cultural assumptions and knowledge claims about race, ethnicity, and religion
Audience: Both Grad & Undergrad

2. Improve written and oral communication skills by engaging in critical conversations, making presentations, practicing group projects and writing papers
Audience: Both Grad & Undergrad

3. Demonstrate self-awareness and empathy to other worldviews and cultural differences and apply course concepts outside of the classroom by engaging in respectful conversations about race, ethnicity, and religion in our multi-cultural society
Audience: Both Grad & Undergrad

4. Construct and develop a meaningful project around a topic that interests you
Audience: Both Grad & Undergrad

5. Articulate answers to and pose complex questions regarding ethical issues, connecting historical events to present circumstances regarding racial inequalities
Audience: Undergraduate

6. Develop your academic writing by thinking carefully through your ideas and editing your work and your peers'
Audience: Undergraduate

7. Pose and answer complex historical and ethical questions regarding the Holocaust, genocide, their representations and political uses, connecting historical events to present circumstances regarding racial inequalities
Audience: Graduate

8. Develop interpersonal academic skills by editing peers' work
Audience: Graduate

HISTORY/CLASSICS/RELIG ST 517 – RELIGIONS OF THE ANCIENT MEDITERRANEAN
3 credits.

Ancient religions in their political, social and cultural contexts; topics include ritual, literary and artistic representations, religious persecutions, and/or modern approaches to the study of ancient religions. Chronological and geographical focus will vary between Greece, Rome, Judaea and Egypt.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate knowledge of Classical and ancient Near Eastern societies and cultures.
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts in translation and material culture.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

4. Demonstrate knowledge of ancient Mediterranean religions.
Audience: Undergraduate

HISTORY/JEWISH/SOC 518 – ANTISEMITISM IN EUROPEAN CULTURE
3 credits.

Through a critical and interdisciplinary lens, review the history and major theories of modern antisemitism in its past and present-day forms. Read scholarship on antisemitism, as well as canonical antisemitic texts, with attention to geographic, chronological, and cultural contexts. Learn about the origins, major themes, continuities and changes, and surprising endurance of antisemitism. Use historical thinking to understand antisemitism as a major historical problem and to address related contemporary issues with nuance.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the origins and development of antisemitism
Audience: Both Grad & Undergrad

2. Identify different elements and forms of antisemitism
Audience: Both Grad & Undergrad

3. Evaluate the claims in debates about the nature, origins, and development of antisemitism using historical evidence
Audience: Both Grad & Undergrad

4. Use historical evidence to assess the major theories of antisemitism
Audience: Both Grad & Undergrad

5. Critically analyze canonical antisemitic texts and understand classic and recent scholarship on antisemitism
Audience: Both Grad & Undergrad

6. Communicate clearly, effectively, and concisely in class discussions and writing assignments
Audience: Both Grad & Undergrad

7. Apply knowledge of antisemitism to understand it as an ongoing social problem
Audience: Both Grad & Undergrad

8. Develop original historical arguments using primary and secondary sources in discussion, presentations, and writing assignments.
Audience: Graduate

HISTORY/GEN&WS 519 – SEXUALITY, MODERNITY AND SOCIAL CHANGE
3 credits.

A history of sexuality approach to a period of major social, economic, and political change in US history, 1880-1930; medical, legal, and popular discourses shaping urbanization, reform, nationalism and colonialism.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020

HISTORY/JOURN 560 – HISTORY OF U.S. MEDIA
4 credits.

Evolution of the mass media in the United States in the context of political, social, and economic change.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and explain important people, themes, events, and technologies that shaped media history.
Audience: Both Grad & Undergrad

2. Identify and explain historical arguments in secondary literature.
Audience: Both Grad & Undergrad

3. Analyze primary sources and know what questions to ask to be able to do that.
Audience: Both Grad & Undergrad

4. Produce original historical knowledge through research in primary and secondary sources.
Audience: Both Grad & Undergrad

5. Produce research suitable for submission to an academic journal or history magazine.
Audience: Graduate

HISTORY/HIST SCI/MED HIST 564 – DISEASE, MEDICINE AND PUBLIC HEALTH IN THE HISTORY OF LATIN AMERICA AND THE CARIBBEAN
3 credits.

Examines the history of illness and medical practice in Latin America and the Caribbean from the colonial era until the present. Using an interdisciplinary set of sources, students will explore the different meanings of disease, body normativity, medical practice, and ideas about public health across different historical circumstances in the region.
Requisites: Junior standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019
Learning Outcomes: 1. Identify and analyze within their social, cultural and economic contexts key historical issues, and their significance, in the history of healing practices and public health in Latin America from the fifteenth century to the present.
Audience: Both Grad & Undergrad

2. Develop an understanding of the mutually shaping interactions between perceptions of health, illness and medical practices and culture and society in different Latin American historical scenarios.
Audience: Both Grad & Undergrad

3. Analyze the role of social factors -- race, gender, ethnicity, class, and sexual orientation, among others -- in shaping cultural realities related to body normativity, health, medical practice, public health and medical education in Latin America.
Audience: Both Grad & Undergrad

4. Analyze and synthesize information, provide evidence-based interpretations about the past, and develop arguments regarding social and cultural differences related to health and body concepts in different Latin American societies.
Audience: Both Grad & Undergrad

5. Identify the role patients, healthcare providers, institutions and the state played in modeling medical practice, ideas about the body, public health policies, and medical education in Latin America.
Audience: Both Grad & Undergrad

6. Discern the impact of international politics, acting through European and American programs of medical research and humanitarianism, in the shaping of ideas about race, medical hierarchies and public health policies in Latin American and Caribbean nations.
Audience: Both Grad & Undergrad

7. Understand the different methodological approaches and research strategies that historians, anthropologists, and other scholars have used to examine the histories of the medicine in Latin America from the sixteenth century to the present.
Audience: Graduate

HISTORY/SCAND ST 577 – CONTEMPORARY SCANDINAVIA: POLITICS AND HISTORY
3-4 credits.

Social, economic, and ideological changes, institutions, and movements and their relationships with the political processes and structures in the Nordic states.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2020

HISTORY 600 – ADVANCED SEMINAR IN HISTORY
3 credits.

Development and application of advanced research skills to a specific historical topic. Intensive writing and small group discussion results in a project demonstrating original or creative analysis of primary and secondary sources.
Requisites: HISTORY 201 or HIST SCI 211
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Accelerated Honors (!)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

HISTORY 601 – HISTORICAL PUBLISHING PRACTICUM
3 credits.

Hands-on instruction and experience in historical publishing. Discussion of the nature of historical research and writing.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize the varieties of historical publishing (including print journals, research articles, popular articles, blogs, podcasts, websites) and analyze how they are changing.
Audience: Undergraduate

2. Develop skills in publishing and web software
Audience: Undergraduate

3. Critically evaluate and rank scholarly research articles
Audience: Undergraduate

4. Collaborate with an author on editing their manuscript
Audience: Undergraduate

5. Collaborate with an editorial team through a combination of initiative and cooperative means and make decisions collectively
Audience: Undergraduate

6. Develop writing skills in informal or popular history
Audience: Undergraduate

HISTORY 607 – THE AMERICAN IMPACT ABROAD: THE HISTORICAL DIMENSION
3 credits.

Analysis of diplomatic, economic, cultural, and social interaction of Americans with foreign peoples and nations.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

HISTORY/ED POL 612 – HISTORY OF STUDENT ACTIVISM FROM THE POPULAR FRONT TO BLACK LIVES MATTER
3 credits.

Explore the history of student activism in the United States, with an emphasis on the experiences racial/ethnic minority youths who have been marginalized or discriminated against. What motivated students to become politically active, and what forms did their activism take? How did student activism vary across time and space and from one group of activists to another? Why did some students become activists while others did not? What role did education and educational institutions play in their activism? What impact have student activists had, and what do their histories reveal about the capacity and mechanisms for achieving racial equity in particular and for affecting social, political, and economic change more broadly?
Requisites: Junior standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop an awareness of History's Impact on the Present
Audience: Both Grad & Undergrad

2. Develop an ability to Recognize and Question Assumptions
Audience: Both Grad & Undergrad

3. Develop consciousness of Self and Other
Audience: Both Grad & Undergrad

4. Develop capacity for Effective Participation in a Multicultural Society
Audience: Both Grad & Undergrad

5. Identify and discuss the significance of key actors, events, themes, and historiographical debates relating to the history of student activism in the modern United States
Audience: Both Grad & Undergrad

6. Identify and evaluate historical arguments in secondary scholarly works
Audience: Both Grad & Undergrad

7. Interpret and contextualize primary historical sources
Audience: Both Grad & Undergrad

8. Synthesize information from primary and secondary sources in order to develop and support their own evidence-based historical interpretations.
Audience: Both Grad & Undergrad

9. Synthesize information from secondary sources in order to develop and support evidence-based historical interpretations and historiographical analyses.
Audience: Graduate

HISTORY/ED POL 622 – HISTORY OF RADICAL AND EXPERIMENTAL EDUCATION IN THE US AND UK
3 credits.

Examines the comparative history of radical and experimental education in the United States and United Kingdom since 1800. It focuses on the social, cultural, and intellectual history of diverse educational experiments, including experiments related to socialism, abolitionism, anarchism, and religious fundamentalism.
Requisites: Junior standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2020
Learning Outcomes: 1. Demonstrate understanding of the course content: both the broad themes and specific cases we'll study in the history of radical and experimental education in the US and UK.
Audience: Both Grad & Undergrad

2. Demonstrate the ability to think historically: to determine historical significance; to evaluate evidence; to identify continuity and change; to assess cause and consequence; to demonstrate understanding of contextualization and periodization; to take historical perspectives; and to critically assess the moral dimensions of history.
Audience: Both Grad & Undergrad

3. Identify, analyze, and critique historical arguments (as presented by our authors and classmates).
Audience: Both Grad & Undergrad

4. Develop original historical arguments using primary and secondary sources (in class discussion and in our informal and formal writing assignments).
Audience: Graduate

5. Communicate historical knowledge, interpretations, and arguments clearly in writing, discussion, and oral presentations.
Audience: Both Grad & Undergrad

HISTORY/AFROAMER 628 – HISTORY OF THE CIVIL RIGHTS MOVEMENT IN THE UNITED STATES
3 credits.

Civil rights history from 1930-1970. Legal, historical and economic origins of the civil rights movement. Study of the movement's impact on United States culture, politics, and international relations.
Requisites: Junior standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

HISTORY/ART HIST/JOURN/L I S 650 – HISTORY OF BOOKS AND PRINT CULTURE IN EUROPE AND NORTH AMERICA
3 credits.

History of books and print culture in the West from ancient times to the present. Focus on the influence of reading and writing on social, cultural, and intellectual life. Methodologies, theories, and sources for study of book and print culture history.
Requisites: Graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

HISTORY/ED POL 665 – HISTORY OF THE FEDERAL ROLE IN AMERICAN EDUCATION
3 credits.

Examines the history of federal aid to education from 1776 to the present, with heavy emphasis on the post-World War II period. Explores the federal role in public education in the Early Republic and during Reconstruction; Traces the evolution of federal policies concerning racial desegregation, compensatory education for low-income students, bilingual education, and special education for the disabled. Critically reflect on the tradition of "local control," policy implementation and evaluation, accountability, block grants, interest groups and lobbies; nationally standardized testing, and the different goals assigned to public schooling in the United States (e.g., social integration/inclusion, individual academic achievement, etc.).
Requisites: Junior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2018
Learning Outcomes: 1. Demonstrate an understanding of diverse historical and qualitative social-science theories, epistemologies, and methodologies related to education research.
Audience: Both Grad & Undergrad

2. Develop a researchable question and design an historical or qualitative social-science research project on some aspect of education policy, past or present.
Audience: Both Grad & Undergrad

3. Gain experience conducting a field-based and/or archival research project and presenting their research in a thesis.
Audience: Both Grad & Undergrad

4. Write clearly and compellingly for diverse audiences about complex topics in educational history and policy.
Audience: Both Grad & Undergrad

5. Understand professional standards for conducting scholarship ethically and responsibly.
Audience: Undergraduate

6. Understand professional standards for conducting scholarship ethically and responsibly and conducting historical research related to their specific research inquiry and project.
Audience: Graduate

HISTORY/SOC 670 – CAPITALISM, SOCIALISM, AND DEMOCRACY IN AMERICA SINCE 1890
3-4 credits.

Political institutional arrangements which have emerged since 1890 and how they have influenced social and economic policies implemented since the Second World War. Why the working class has been politically weak in America; policy consequences of this weakness.
Requisites: Junior standing and (SOC 181, SOC/C&E SOC 140, 210, 211, HISTORY 102 or 109), or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

HISTORY 680 – HONORS THESIS COLLOQUIUM
2 credits.

Colloquium for honors thesis writers. Students must be concurrently enrolled in HISTORY 681 or 682, or HIST SCI 681 or 682, and be declared in an Honors program.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

HISTORY 681 – SENIOR HONORS THESIS
1-3 credits.

Mentored independent research and thesis writing on an original topic for honors. Students must be concurrently enrolled in HISTORY 680 and be declared in an Honors program.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025

HISTORY 682 – SENIOR HONORS THESIS
1-3 credits.

Mentored independent research and thesis writing on an original topic for honors. Requires completion of HISTORY 681. Must be concurrently enrolled in HISTORY 680.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025

HISTORY 690 – THESIS COLLOQUIUM
2 credits.

Colloquium for thesis writers. Students must be concurrently enrolled in HISTORY 691 or 692.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

HISTORY 691 – SENIOR THESIS
1-3 credits.

Mentored independent research and writing on an original topic. Students must be concurrently enrolled in HISTORY 690.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

HISTORY 692 – SENIOR THESIS
1-3 credits.

Mentored research and writing on an original topic. Requires completion of HISTORY 691. Must be concurrently enrolled in HISTORY 690.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

HISTORY 698 – DIRECTED STUDY
1-4 credits.

Directed study under the supervision of a faculty member. Graded on a Cr/N basis.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

HISTORY 699 – DIRECTED STUDY
1-4 credits.

Directed study under the supervision of a faculty member. Graded on a lettered basis.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

HISTORY 700 – PROSEMINAR: TRADITIONAL & EARLY MODERN CHINESE INTELLECTUAL HISTORY
3 credits.

The major problems of historical interpretations in Chinese intellectual history from the classical period to 1840 on the basis of English translations of primary sources and English-language secondary sources. Topics vary.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

HISTORY 701 – HISTORY IN A GLOBAL PERSPECTIVE
1 credit.

Introduction to the ways of thinking characteristic of historical study and to the questions and methods that motivate the research fields in which department faculty work. Foundational instruction for PhD and History of Science, Medicine, and Technology PhD taken during the first semester of those programs.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

HISTORY 703 – HISTORY AND THEORY
3 credits.

Explorations of the role of theory in historical research and writing. Content varies.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

HISTORY 704 – TOPICS IN CONTEMPORARY HISTORY
3 credits.

Studies two or more nations or defined regions through a comparison of a single theme or set of themes in their history.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2019

HISTORY 705 – TOPICS IN GLOBAL HISTORY
3 credits.

Examines the significance of a particular historical phenomenon from the perspective of its importance world-wide.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

HISTORY 706 – TOPICS IN TRANSNATIONAL HISTORY
3 credits.

Examines the significance of a particular event, phenomenon or question across national borders and in terms of the history of nation-state formation.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

HISTORY 707 – PROSEMINAR IN EARLY MODERN EUROPEAN HISTORY, 1500-1789
3 credits.

Readings and/or research on the social, cultural, and political history of France from the late seventeenth century through the French Revolution.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2020

HISTORY 710 – PROFESSIONAL DEVELOPMENT SEMINAR
3 credits.

Topics in professional development for historians with an emphasis on building skills that are valuable both inside and outside the academy, such as managing the writing process, teaching college history, or communicating historical research to a broad, nonspecialist audience. Content varies.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

HISTORY/AFROAMER/ED POL 712 – EDUCATION AND THE CIVIL RIGHTS MOVEMENT
3 credits.

Explores the historical relationship between education and the African American freedom struggle from the early twentieth century to the present. Topics include school segregation, desegregation, and resegregation; high school and college student activism; Black Power; civil rights protest strategies and tactics, and the role of the federal government.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

HISTORY/ED POL 713 – HISTORY OF HIGHER EDUCATION IN EUROPE AND AMERICA
3 credits.

Development of colleges, universities, and higher learning in Europe and America.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2019
Learning Outcomes: 1. Demonstrate an understanding of diverse historical theories, epistemologies, and methodologies related to education research
Audience: Graduate

2. Develop a researchable question and design an historical research project on some aspect of education policy, past or present
Audience: Graduate

3. Gain experience conducting an archival research project and presenting their research in a thesis
Audience: Graduate

4. Write clearly and compellingly for diverse audiences about complex topics in educational history
Audience: Graduate

5. Apply professional standards for conducting scholarship ethically and responsibly
Audience: Graduate

HISTORY 725 – SEMINAR IN EAST ASIAN HISTORY
1-3 credits.

Major problems of historical interpretation in the early modern and recent histories of China, Japan, and Korea. Topics and periods of emphasis vary each year.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

HISTORY 730 – PROSEMINAR IN LATIN AMERICAN HISTORY
1-3 credits.

Historical literature of significant topics in Latin American history. The colonial period, Brazilian history, and Spanish-America in the national period.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2020

HISTORY/L I S 734 – INTRODUCTION TO ARCHIVES AND RECORDS MANAGEMENT
3 credits.

An introduction to the archives profession and basic theory and practice of archives and records administration, including the uses of primary sources in research, appraisal, access, and preservation.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

HISTORY 752 – SEMINAR IN TRANSNATIONAL GENDER HISTORY
3 credits.

Themes in Gender and Women's History within a transnational context.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

HISTORY 753 – SEMINAR-COMPARATIVE WORLD HISTORY
1-3 credits.

Topics significant for the histories of Latin America, Africa, Islamic core, South Asia and Southeast Asia. A single topic chosen each semester for a series of comparative essays by seminar members.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

HISTORY 755 – PROSEMINAR IN SOUTHEAST ASIAN HISTORY
1-3 credits.

Introductory seminar in modern Southeast Asian history; work mostly in English-language sources.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

HISTORY/ANTHRO/ART HIST/DS/LAND ARC 764 – DIMENSIONS OF MATERIAL CULTURE
4 credits.

This course introduces students to the interdisciplinary field of material culture studies. It is intended for students interested in any professional endeavor related to material culture, including careers in museums, galleries, historical societies, historic preservation organizations, and academic institutions. During the semester, students have varied opportunities to engage with and contemplate the material world to which people give meaning and which, in turn, influences their lives. Sessions combine in some way the following: presentations from faculty members and professionals who lecture on a phase of material culture related to his/her own scholarship or other professional work; discussion of foundational readings in the field; visits to collections and sites on campus and around Madison; discussion of readings assigned by visiting presenters or the professors; and exams and short papers that engage material culture topics.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

HISTORY 790 – PROSEMINAR: EMPIRE AND COLONIALISM IN SOUTH ASIA
3 credits.

Designed to develop historiographic command of colonial and postcolonial South Asian history as a teaching and research field. Carefully explores the master narratives or "schools" of historiography of South Asia, and analyzes the erasures as well as the normative theoretical and archival axes around which the sub-field has developed. Topics include pre-colonial modes of representing the past; the social, cultural and economic turns in colonial and nationalist historiography; legal and environmental historiographical methods; South Asia in the world/global South Asia.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Acquire a critical understanding of the major debates and scholarly trends in South Asian history.
Audience: Graduate

2. Master several approaches to historiographic analysis.
Audience: Graduate

3. Develop the scholarly apparatus for comparative and critical study of South Asia by writing historiographical essays.
Audience: Graduate

4. Create an undergraduate survey course in South Asian history and develop the tools to guide undergraduate student research on colonial and postcolonial South Asia.
Audience: Graduate

HISTORY 800 – RESEARCH SEMINAR IN HISTORY
3 credits.

Introduction to the life of a professional historian, to different styles and methods of history. Opportunity to present one's findings in a conference-type setting. Structured to support completion of the research paper requirement for the History MA, regardless of specialty.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

HISTORY/CLASSICS 801 – SEMINAR-ANCIENT HISTORY
1-3 credits.

Special problems in Greek and Roman history.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022

HISTORY/FRENCH/GERMAN/POLI SCI/SOC 804 – INTERDISCIPLINARY WESTERN EUROPEAN AREA STUDIES SEMINAR
3 credits.

Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

HISTORY 805 – SEMINAR-MEDIEVAL HISTORY
1-3 credits.

Topics in Medieval history.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

HISTORY/JOURN 808 – MASS COMMUNICATION HISTORY
3 credits.

Intensive reading and discussion designed to introduce literature of mass communication.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

HISTORY 845 – SEMINAR-CENTRAL EUROPEAN HISTORY
1-3 credits.

Modern German history and the history of Central Europe.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2022

HISTORY 850 – SMR-HIST OF THE SOVIET UNION & MODERN HIST OF E CENTRAL EUROPE
1-3 credits.

Development of the Soviet Union since 1917 and the political and diplomatic history of the nations lying between Russia and Germany.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2020

HISTORY 854 – SEMINAR IN MODERN CHINESE HISTORY
1-3 credits.

Chinese history in the nineteenth and twentieth centuries, with emphasis on intellectual history and the history of Chinese Communism.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

HISTORY 855 – SEMINAR IN JAPANESE HISTORY
1-3 credits.

Research seminar in Japanese history. Focus varies each year.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

HISTORY/ASIAN 857 – SEMINAR-HISTORY OF INDIA (SOUTH ASIA)
1-3 credits.

Emphasis upon handling of research problems. Focus upon methods, resources, intellectual approaches, and changing interpretations.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2018

HISTORY 861 – SEMINAR-THE HISTORY OF AFRICA
1-3 credits.

Research studies in aspects of African history with emphasis on field research techniques and interpretation of non-archival data.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

HISTORY 868 – SEMINAR IN MODERN FRENCH HISTORY
1-3 credits.

Social, political, and cultural history of France, 1800 to the present.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2020

HISTORY 891 – PROSEMINAR IN MODERN EUROPEAN HISTORY
1-3 credits.

History of Europe since 1500.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2022

HISTORY 900 – INTRODUCTION TO HISTORY FOR U.S. HISTORIANS
3 credits.

A survey of U.S. history by period and field with extensive discussion on how to plan a successful career as a historian. Designed to introduce masters and doctoral graduate students in the United States History field of study to the U.S. history faculty members.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

HISTORY 901 – STUDIES IN AMERICAN HISTORY
1-3 credits.

Reading seminar in American history. Topics and periods of emphasis vary.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

HISTORY/ED POL 903 – HISTORY OF EDUCATION OF MULTICULTURAL AMERICA
3 credits.

Selected topics, issues and themes concerning the history of education of various groups of people of color in the United States, as well as selected issues, topics and themes focusing on immigration and ethnicity.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022
Learning Outcomes: 1. Identify and discuss the significance of key actors, events, themes, and historiographical debates relating to the history of education in multicultural America
Audience: Graduate

2. Identify, analyze, and evaluate historical arguments in secondary scholarly works
Audience: Graduate

3. Interpret and contextualize primary historical sources
Audience: Graduate

4. Locate synthesize, and evaluate information from secondary sources and/or primary sources in order to develop and support evidence-based historical and historiographical interpretations
Audience: Graduate

HISTORY/ED POL 906 – PROSEMINAR ON THE HISTORY OF EDUCATION
3 credits.

Reading in European or American educational history.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024
Learning Outcomes: 1. Demonstrate an understanding of diverse historical theories,epistemologies, and methodologies relevant to historical research.
Audience: Graduate

2. Develop a researchable question and design a project on some aspect of the history of childhood/adolescence.
Audience: Graduate

3. Gain experience using primary and secondary sources in historical research.
Audience: Graduate

4. Write clearly and compellingly for diverse audiences.
Audience: Graduate

5. Demonstrate understanding of professional standards for conducting scholarship ethically and responsibly.
Audience: Graduate

HISTORY/ED POL 907 – SEMINAR-HISTORY OF EDUCATION
1-3 credits.

Studies in European and American educational history.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022
Learning Outcomes: 1. Identify and discuss the significance of key actors, events, themes, and historiographical debates pertaining to the history of education
Audience: Graduate

2. Identify, analyze, and evaluate historical arguments in secondary scholarly works
Audience: Graduate

3. Interpret and contextualize primary historical sources
Audience: Graduate

4. Locate, synthesize, and evaluate information from primary and secondary sources in order to develop and support evidence-based historical and historiographical interpretations
Audience: Graduate

HISTORY 910 – HISTORY OF COLONIAL NORTH AMERICA
3 credits.

The history of North America from the fifteenth through eighteenth centuries, with the primary focus on Anglo-America.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

HISTORY 936 – THE HISTORY OF WOMEN AND GENDER IN THE U.S., TO 1870
3 credits.

Surveys key theoretical work and secondary literature on the history of women and gender in the United States to 1870.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023

HISTORY/GEN&WS 938 – HISTORY OF SEXUALITY
3 credits.

Using sexuality as a category of historical analysis, examines historiographical, methodological, and theoretical contributions to understanding all aspects of the past.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023

HISTORY 940 – SEMINAR-AMERICAN HISTORY 1900-1945
3 credits.

Readings and research on United States History, 1900-1945.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

HISTORY 943 – RACE & NATIONALISM: COMPARATIVE & THEORETICAL PERSPECTIVES
3 credits.

Historical intersections of race and nationalisms. Explores questions of the origin of race and nationalisms, the position and status of a variety of nationalisms and anti-colonial nationalisms; and the contemporary debates over postmodernism, postindustrialism, postcolonialism, and multiculturalism.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

HISTORY 951 – SEMINAR-INTELLECTUAL HISTORY OF AMERICA
1-3 credits.

Readings on the intellectual history of the United States/North America.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

HISTORY 952 – SEMINAR IN COMPARATIVE HISTORY
2-3 credits.

Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

HISTORY 958 – SEMINAR-AMERICAN MILITARY HISTORY
1-3 credits.

Readings on U.S. military history.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

HISTORY/A A E/ANTHRO/C&E SOC/GEOG/LACIS/POLI SCI/PORTUG/SOC/SPANISH 982 – INTERDEPARTMENTAL SEMINAR IN THE LATIN-AMERICAN AREA
1-3 credits.

Interdisciplinary inquiry in Latin American society and culture.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

HISTORY/AFRICAN/ANTHRO/ECON/GEOG/POLI SCI 983 — INTERDEPARTMENTAL SEMINAR IN AFRICAN STUDIES TOPICS
3 credits.

Interdisciplinary inquiry in African societies and cultures.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Develop in-depth knowledge in a sub-field of specialization within African studies
Audience: Graduate

2. Acquire and demonstrate understanding of major theories, approaches, concepts, currently informing African studies
Audience: Graduate

3. Understand your process of learning and possess the capacity to intentionally seek, evaluate, and learn from information, and to recognize and reduce bias in thinking.
Audience: Graduate

4. Gain firm knowledge of existing research in African studies
Audience: Graduate

5. Develop and improve speaking, readings, listening, and writing skills
Audience: Graduate

6. Write and speak across disciplinary boundaries
Audience: Graduate

7. Analyze texts from various theoretical and critical perspectives
Audience: Graduate

HISTORY 990 — RESEARCH AND THESIS
1-9 credits.

Independent research and writing of a thesis under the supervision of a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

HISTORY 999 — INDEPENDENT WORK
1-6 credits.

Directed study under the supervision of a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

HISTORY OF SCIENCE (HIST SCI)

HIST SCI/ENVIR ST/HISTORY 125 — GREEN SCREEN: ENVIRONMENTAL PERSPECTIVES THROUGH FILM
3 credits.

From Teddy Roosevelt's 1909 African safari to the Hollywood blockbuster King Kong, from the world of Walt Disney to The March of the Penguins, cinema has been a powerful force in shaping public and scientific understanding of nature throughout the twentieth and twenty-first century. How can film shed light on changing environmental ideas and beliefs in American thought, politics, and culture? And how can we come to see and appreciate contested issues of race, class, and gender in nature on screen? Explore such questions and come to understand the role of film in helping to define the contours of past, present, and future environmental visions in the United States, and their impact on the real world struggles of people and wildlife throughout the world.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

HIST SCI/HISTORY/MED HIST 132 — BEES, TREES, GERMS, AND GENES: A HISTORY OF BIOLOGY
3 credits.

How did today's biology emerge out of the diverse traditions of agriculture and natural history (bees and trees), biomedicine and molecular biology (germs and genes), which stretch back into the eighteenth century? Examines classic texts and "game-changers" in the history of biology, putting them into broader scientific and social contexts to see how these different ways of knowing intertwined, competed, and yielded novel approaches to the study of life that still shape today's life sciences.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025

HIST SCI 133 — BIOLOGY AND SOCIETY, 1950 - TODAY
3 credits.

From medical advancements to environmental crises and global food shortages, the life sciences are implicated in some of the most pressing social issues of our time. Explores events in the history of biology from the mid-twentieth century to today, and examines how developments in this science have shaped and are shaped by society. Investigates the origins of the institutions, technologies, and styles of practice that characterize contemporary biology, such as the use of mice as "model organisms" for understanding human diseases. Examines biological controversies such as the introduction of genetically modified plants into the food supply. Explores how biological facts and theories have been and continue to be used as a source for understanding ourselves.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Develop an appreciation for the ways in which the institutions, practices, and ways of thinking associated with contemporary biology are specific to a particular place and time, and have changed over time
Audience: Undergraduate

2. Identify and state the significance of key people and events in the recent history of biology
Audience: Undergraduate

3. Understand key theoretical frameworks for describing interactions between biology and society, and be able to apply these frameworks to new empirical cases
Audience: Undergraduate

4. Identify and evaluate the strength of the arguments and evidence used in an academic paper
Audience: Undergraduate

5. Extrapolate complex arguments to new contexts and assess how new information would change the argument
Audience: Undergraduate

HIST SCI 150 — THE DIGITAL AGE
3 credits.

An introduction to the history of the computer from the 1940s to the present day, major developments in computer science and technology in their historical contexts, and recent trends in computing and society. We learn about machines, but emphasize the study of people: the institutions, scientists, workers, and social movements that invented, facilitated, and transformed digital technology in the 20th and early 21st century.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Identify key technological developments, periods, and themes in the history of computing
Audience: Undergraduate

2. Analyze primary cultural and technical sources from the history of technology in the 20th century
Audience: Undergraduate

3. Engage ongoing developments in computer science and digital technology with historical and critical perspective
Audience: Undergraduate

4. Write and speak conscientiously about digital technology's effects in society
Audience: Undergraduate

5. Recognize factors that contribute to technological change
Audience: Undergraduate

HIST SCI 160 – ENGINEERING INEQUALITY: TECHNOLOGY AND INEQUITY THROUGHOUT HISTORY
3-4 credits.

Offers an introduction to the history of technology centered around the relationship between technology and various forms of social inequality. Addresses: 1) how gendered, racial, and class-based disparities have shaped the history of technology; 2) how forms of engineered inequity have intersected with state-building, colonial projects, environmental degradation, and revolutionary programs; 3) how technology has been implicated in attempts to imagine a more just society. Introduces central themes and concepts in the histories of science, medicine, and especially technology. Examines case-studies that are transnational in scope and move chronologically from the 17th century to the present. Also gives significant attention to histories of technology that originated outside of the U.S. and Europe.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2022
Learning Outcomes: 1. Identify and summarize key concepts in the history of technology
Audience: Undergraduate

2. Utilize historical methods and techniques and apply these to analyze primary sources including print media, visual art, film, web-based content, and technical materials
Audience: Undergraduate

3. Apply concepts from the history of technology to relevant present-day issues in engineering and technology policy
Audience: Undergraduate

4. Produce original arguments that demonstrate critical thinking skills and draw on course concepts, arguments specifically about the role of technology—as a collection of material, social, and political practices—and technological change in the contemporary world
Audience: Undergraduate

HIST SCI/HISTORY 171 – HISTORY OF MEDICINE IN FILM
3-4 credits.

Considers the social and cultural history of 20th and early 21st century American medicine through the depiction of health care practitioners and health care systems in Hollywood movies. View films that featured medicine, doctors, nurses, patients, and hospitals. Using these films as primary sources, seek to place these representations into a broader social and cultural context. Evaluate the extent to which popular understandings of medicine, health, and healing as portrayed in the films corresponded to actual practices of medicine and medical research at the time the films were first screened for mass audiences.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2019
Learning Outcomes: 1. Identify key developments, actors, ideas, and institutions in the broad history of American medicine in the 20th century.
Audience: Undergraduate

2. Speak and write critically about primary and secondary historical sources by examining diverse interpretations of past events and ideas in their historical contexts.
Audience: Undergraduate

3. Ask analytic questions about the ways in which films express both cultural ideals and cultural anxieties about medicine within the constraints of "literary" genres: drama, horror, comedy, romance, tragedy and thriller.
Audience: Undergraduate

4. Understand that, in addition to the deliberate choices of plot-lines, locations and character development, films reveal a great deal about what was taken for granted at the time of each film's production: gender and race relations, physicians' paternalism and patients' autonomy, medical technology and expectations for care and cure; ethical and professional norms for medical research and decision making in patient care.
Audience: Undergraduate

HIST SCI 201 – THE ORIGINS OF SCIENTIFIC THOUGHT
3 credits.

Emergence of scientific method and scientific modes of thought out of ancient philosophical and religious traditions; the impact of ancient science on medieval Christendom; the origins and development of the Copernican-Newtonian world view.
Requisites: Not open to students with credit for ILS 201 or HIST SCI/HISTORY 323
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

HIST SCI 202 – THE MAKING OF MODERN SCIENCE
3 credits.

Major trends and developments in the sciences from the 17th century to the early 20th century. Emphasis on those with broad cultural and social implications.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

HIST SCI/ASTRON 206 – HISTORY OF ASTRONOMY AND COSMOLOGY
3 credits.

The development of astronomical knowledge and cosmological views from the earliest times to the present, viewed in their social, philosophical, and technological contexts.
Requisites: None
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2024
Learning Outcomes: 1. Discuss the history of modern astronomy, with an emphasis on tracing how our current conception of the universe has developed.
Audience: Undergraduate

2. Describe the ancient background to western European astronomy, the role of astronomy in the scientific revolution of the 16th and 17th centuries, the development of modern astrophysics, and Wisconsin's contributions to modern astronomy.
Audience: Undergraduate

3. Engage actively and critically with primary historical sources, including Galileo's Siderius Nuncius, through reading, writing, discussion, and examination of rare books.
Audience: Undergraduate

4. Evaluate historical subjects and works in their own contexts while also appreciating their significance for our own world view.
Audience: Undergraduate

5. Demonstrate some familiarity with astronomical instruments, observatories, and technologies through actual use, visits, and class demonstrations.
Audience: Undergraduate

HIST SCI 211 – THE HISTORIAN'S CRAFT: SCIENCE, MEDICINE, AND TECHNOLOGY
3-4 credits.

Conduct original historical research in the fields of history of science, medicine, or technology and convey the results to others. Become historical detectives through engagement with archival materials and disciplinary methodologies in the histories of science, medicine and technology; practice defining important historical questions, collecting and analyzing evidence, presenting original conclusions, and contributing to ongoing discussions. Confer individually with and receive feedback from instructors to improve skills of historical analysis and communication in written and other formats. May not be repeated for credit.
Requisites: Satisfied Communications A requirement. Not open to students with credit for HISTORY 201
Course Designation: Gen Ed - Communication Part B
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Ask Questions: develop the habit of asking questions, including questions that may generate new directions for historical research.
Audience: Undergraduate

2. Find Sources: learn the logic of footnotes, bibliographies, search engines, libraries, and archives, and consult them to identify and locate source materials.
Audience: Undergraduate

3. Evaluate Sources: determine the perspective, credibility, and utility of source materials.
Audience: Undergraduate

4. Develop and Present an Argument: use sources appropriately to create, modify, and support tentative conclusions and new questions.
Audience: Undergraduate

5. Plan Further Research: draw upon preliminary research to develop a plan for further investigation.
Audience: Undergraduate

6. Communicate Findings Effectively: make formal and informal, written and oral presentations tailored to specific audiences.
Audience: Undergraduate

HIST SCI/MED HIST 212 – BODIES, DISEASES, AND HEALERS: AN INTRODUCTION TO THE HISTORY OF MEDICINE
3 credits.

A survey of different conceptions of how the body as a site of sickness has been understood from Antiquity to contemporary medicine. Includes consideration of the origins and evolution of public health, the changing social role of healers, and the emergence of the modern "standardized" body in health and illness.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025

HIST SCI/ENVIR ST 213 – GLOBAL ENVIRONMENTAL HEALTH: AN INTERDISCIPLINARY INTRODUCTION
3 credits.

Provides an introduction to the intersections of health and environment on a global scale. Exposes students to a range of problems in global environmental health, including climate change, disease ecology, and the globalization of disease.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize the utility of humanistic methods for the study of global environmental health
Audience: Undergraduate

2. Develop critical thinking skills through techniques of close reading and written analysis
Audience: Undergraduate

3. Understand essential developments in the evolving relationship between the environment and public health on a global scale.
Audience: Undergraduate

4. Explain the social, economic, and/or environmental dimensions of the sustainability challenge(s) of global health issues in developing and industrialized countries
Audience: Undergraduate

5. Describe the social, economic, and environmental dimensions of climate change, agriculture, and the built environment and identify potential tradeoffs and interrelationships among these dimensions at a level appropriate to the course.
Audience: Undergraduate

HIST SCI 218 – HISTORY OF TWENTIETH CENTURY AMERICAN MEDICINE
3 credits.

Introduction to the development of the modern American medical care system.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify the social, cultural, and political factors that have shaped the health care system and health institutions in 20th century America.
Audience: Undergraduate

2. Analyze the changing interactions of patients, physicians, nurses, and other health care personnel over the last century.
Audience: Undergraduate

3. Describe how the experience of illness was transformed in the 20th century, and the changing role of technologies, pharmaceuticals, and medical research.
Audience: Undergraduate

4. Understand the ways in which assumptions about race, gender, and socio-economic factors affect the experience of illness and health outcomes over the long twentieth century.
Audience: Undergraduate

HIST SCI 222 – TECHNOLOGY AND SOCIAL CHANGE IN HISTORY
3 credits.

Topics in the history of technology. Themes include the social basis of technical change, the impact of technology on everyday life, and ethical issues in technology in the last four centuries.
Requisites: Sophomore standing or 3 credits in HISTORY or HIST SCI
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2020
Learning Outcomes: 1. Identify and summarize key concepts in the history of technology
Audience: Undergraduate

2. Utilize historical methods and techniques and apply these to analyze primary sources including print media, visual art, film, web-based content, and technical materials
Audience: Undergraduate

3. Apply concepts from the history of technology to relevant present-day issues in engineering and technology policy
Audience: Undergraduate

4. Produce original arguments that demonstrate critical thinking skills and draw on course concepts, arguments specifically about the role of technology—as a collection of material, social, and political practices—and technological change in the contemporary world
Audience: Undergraduate

HIST SCI 250 – SPECIAL TOPICS IN HISTORY OF SCIENCE (INTRODUCTORY)
3 credits.

Special topics in the history of science, medicine, and technology.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2024

HIST SCI/AFROAMER 275 – SCIENCE, MEDICINE, AND RACE: A HISTORY
3-4 credits.

Surveys the medical and scientific constructions of categories of race, placing the development of racial theories in a broad social and political context. Pays particular attention to the importance of racial science in slavery and colonialism.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Identify and analyze within their social, cultural and economic contexts key historical issues, and their significance, in the history of the idea of race as it relates to scientific and medical developments.
Audience: Undergraduate

2. Develop an understanding of the mutually shaping interactions between ideas about race and perceptions of social hierarchy, health, illness and medical and anthropological categories.
Audience: Undergraduate

3. Analyze the role of social factors like gender and class, among others, in shaping cultural realities related to race and body normativity.
Audience: Undergraduate

4. Identify the role that scientists, physicians, patients, healthcare providers, scientific institutions and the state play in modeling, ideas about race.
Audience: Undergraduate

5. Discern the impact of programs of global science as they intersect with international politics in the shaping of ideas about human rights, ethnicity, and race.
Audience: Undergraduate

HIST SCI 280 – HONORS SEMINAR: STUDIES IN SCIENCE, TECHNOLOGY, MEDICINE
3 credits.

Intensive exploration of issues in the history of science. Emphasis on developing critical thinking about science through formal and informal writing.
Requisites: Satisfied Communications A requirement and declared in an Honors program
Course Designation: Gen Ed - Communication Part B
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2023

HIST SCI 286 – HONORS SEMINAR: STUDIES IN SCIENCE, TECHNOLOGY, MEDICINE
3 credits.

Intensive exploration of issues in the history of science. Emphasis on developing critical thinking about science through discussion of readings and written exercises.
Requisites: Declared in an Honors program
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2019

HIST SCI/AGROECOL 301 – (HORTI)CULTURAL ROOTS: HUMAN HISTORIES OF PLANTS AND SCIENCE
4 credits.

Dig into the history of plant sciences to understand why plants and humans have the relationships they do today. Focus on the experiences of Indigenous Americans and People of Color to understand the roots of inequities in horticulture, agriculture, and other plant sciences. Practice skills as a translator of science and history through engagement with scientific publications, library resources, and archival materials. Define important societal questions, collect and analyze evidence, present original conclusions, and contribute to ongoing discussions about the relationship of people and plants.
Requisites: Satisfied Communications A requirement
Course Designation: Gen Ed - Communication Part B
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Compare and contrast plant-human systems in multiple historical contexts with an emphasis on the impact of racism
Audience: Undergraduate

2. Produce written and spoken work that incorporates critical reading, logical thinking, and use of evidence that is appropriate to the plant sciences
Audience: Undergraduate

3. Recognize ethnic, racial, and religious minorities' historical and ongoing marginalization in horticulture, agriculture, botany, and other plant-related disciplines
Audience: Undergraduate

4. Effectively participate in a multicultural society through written and spoken contributions to ongoing discussions
Audience: Undergraduate

5. Translate current research into a written and spoken format that is relevant and understandable to a public audience and scholars in other disciplines
Audience: Undergraduate

6. Apply core library resources to research and communication about human-plant systems
Audience: Undergraduate

HIST SCI/ECON 305 – DEVELOPMENT OF ECONOMIC THOUGHT
3-4 credits.

Development of economic thought from the middle ages to the present; emphasis on major schools of thought including Classical, Marxian, Neo-Classical, and Keynesian schools.
Requisites: (ECON 101 and 102) or (ECON 102 and A A E 101 or 215 prior to Fall 2024) or ECON 111
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Describe the evolution of the methodology of economics.
Audience: Undergraduate

2. Explain what Adam Smith wrote and what he did not write.
Audience: Undergraduate

3. Discuss the dual role of economics as a social science and as an art (moral philosophy).
Audience: Undergraduate

HIST SCI/HISTORY 323 – THE SCIENTIFIC REVOLUTION: FROM COPERNICUS TO NEWTON
3 credits.

An introduction to the formative period of modern science, including major ideas and events in the physical and life sciences from Copernicus to Newton.
Requisites: Junior standing or (graduate/professional standing and concurrent enrollment in HIST SCI 623)
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

HIST SCI/MED HIST/RELIG ST 331 – SCIENCE, MEDICINE AND RELIGION
3 credits.

Introduction to the study of religion, science, and medicine. Focus on how religion, science, and medicine have shaped practices of knowledge production and meaning making with respect to human life, by considering theories of human history and racial progress; how logics of contagion structure human relationships and communal boundaries; the variety of ways of understanding and caring for bodies; and the place of humans within broader ecologies.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. read and interpret critically primary and secondary source texts about religion, science, and medicine
Audience: Both Grad & Undergrad

2. access and utilize a variety of resources and methods for critical inquiry and research in religious studies, history of science and medicine, and science and religion
Audience: Both Grad & Undergrad

3. categorize, analyze, and compare core concepts in religious studies, the history of science and medicine, and science and religion, such as the conflict thesis; knowledge production; creation/evolution; eugenics; race; gender; embodiment; care; health/healing; capitalism; and progress narratives
Audience: Both Grad & Undergrad

4. identify, evaluate, and interpret the interrelationships and impact of religious and and scientific worldviews as related to health, bodies and communities
Audience: Both Grad & Undergrad

5. perform textual analysis, primary source research and synthesis of scholarly ideas, in persuasive writing, oral communication, active listening, and with critical empathy
Audience: Both Grad & Undergrad

6. create conversations about complex topics that seek academic excellence, honesty, and integrity
Audience: Both Grad & Undergrad

7. engage with the academic literature on religion, science, and medicine that is pertinent to the student's specific research area and apply it to facilitate original primary source analysis
Audience: Graduate

HIST SCI 343 – THE DARWINIAN REVOLUTION
3 credits.

Scientific, social, religious and related dimensions of the evolution hypothesis from predarwinian speculation and Darwin's own work to later support, criticism and continuing investigation. Coverage reaches into the twentieth century.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020

HIST SCI 350 – SPECIAL TOPICS IN THE HISTORY OF SCIENCE
2-3 credits.

Readings/discussion of varying topics in History of Science, Medicine, and Technology.
Requisites: Sophomore standing or 3 credits in HIST SCI
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

HIST SCI 360 – HEALTH INEQUALITIES IN THE LONG 20TH CENTURY
3 credits.

Analyze historical factors impacting healthcare cost, access, and services with focus on social determinants of health in the United States across the long 20th century. Evaluate current state of the field through literature reviews and conversations with guest lecturers. Apply historical analysis in consideration of current disparities in health resources. Produce original research project and policy proposal at intersection of public health, medical history, and health law and policy.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Analyze changing concepts, measurements, and markers of health across time and place.
Audience: Undergraduate

2. Understand contemporary challenges in addressing healthcare disparities drawing upon historical context and the development of research norms and practices in the field.
Audience: Undergraduate

3. Articulate informed, well-researched arguments, and situate within the context of the field.
Audience: Undergraduate

4. Conduct and present original research, analyze and synthesize findings to others.
Audience: Undergraduate

HIST SCI/S&A PHM 401 – HISTORY OF PHARMACY
2 credits.

Pharmaceutical field, from antiquity to modern medical care; professional; structuring in principal countries of the West.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Outline the key theoretical issues in the history of medicine and pharmacy
Audience: Undergraduate

2. Explain the relationship, using models of change, between medicines, pharmacy practice, and society
Audience: Undergraduate

3. Assess critically the historiographies of the history of medicine and pharmacy
Audience: Undergraduate

4. Evaluate the reputations of pharmacy practices, organizations, and key actors
Audience: Undergraduate

5. Communicate effectively conclusions regarding the history of medicines and pharmacy
Audience: Undergraduate

6. Apply historical understandings to contemporary issues regarding pharmacy, drug regulation, and political conflicts
Audience: Undergraduate

HIST SCI 404 – A HISTORY OF DISEASE
3-4 credits.

What is disease? Who decides? What are the consequences of labeling a behavior a disease? Can disease be a tool of liberation? Can disease be an instrument of oppression? How do race, class, and gender affect our understandings of and experiences with illness? How have diseases shaped American history? Illustrates the various ways disease operates in America and examines the role of disease on at least four levels--political, social, cultural, and personal--to demonstrate that diseases are not merely bodily afflictions; they are also participants in the body politic. Each disease covered is chosen to illustrate a different point about the social and cultural lives of disease in the history of the United States. Though diseases are covered in a chronological fashion, this coverage is not meant as a narrative history of disease.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Recognize how diseases and responses to diseases have shaped elements of American society and analyze the claim that disease is socially constructed
Audience: Undergraduate

2. Discover and analyze how politics and diseases have intersected in American history
Audience: Undergraduate

3. Describe and analyze how patients have shaped the medical responses, personal reactions and social meanings of disease
Audience: Undergraduate

4. Recognize and describe how race, class, and gender have influenced the experience, meaning, and understanding of disease
Audience: Undergraduate

5. Develop research skills to perform primary source historical research and analyze primary sources to develop a historical argument
Audience: Undergraduate

6. Recognize and describe general trends in the history and the historiography of disease
Audience: Graduate

7. Write a book review suitable for publication in historical journals
Audience: Graduate

8. Identify and analyze historical arguments in historical monographs
Audience: Graduate

9. Sharpen historical research skills and deepen analysis of primary sources in the service of an argument
Audience: Graduate

HIST SCI/MATH 473 – HISTORY OF MATHEMATICS
3 credits.

An historical survey of the main lines of mathematical development.
Requisites: Consent of instructor
Course Designation: Breadth - Either Humanities or Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall and state the formal definitions of the mathematical objects and their properties used in various mathematical topics throughout history (e.g., content from number theory, analysis, algebra, etc.).
Audience: Undergraduate

2. Use such definitions to argue that a mathematical object does or does not have the condition of being a particular type or having a particular property in the context of these topics.
Audience: Undergraduate

3. Recall and state the standard theorems from these topics, and recall the arguments for these theorems and the underlying logic of their proofs.

Audience: Undergraduate

4. Prove or disprove statements related to the above definitions, properties, and theorems using techniques of mathematical argument (direct methods, indirect methods, constructing examples and counterexamples, induction, etc.).
Audience: Undergraduate

5. Convey arguments in oral and written forms using English and appropriate mathematical terminology, notation, and grammar.
Audience: Undergraduate

6. Explain mathematical ideas and describe their historical contexts.
Audience: Undergraduate

HIST SCI/HISTORY/MED HIST 508 – HEALTH, DISEASE AND HEALING II
3-4 credits.

Medicine in Europe from the 18th century to mid-20th century, investigating changes in disease and demography, state interest in health care, the medical professions, and both scientific and alternative medical ideas.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Recognize the utility of humanistic methods for the study of medicine and public health
Audience: Undergraduate

2. Develop critical thinking skills through techniques of close reading and written analysis
Audience: Undergraduate

3. Understand essential developments in the evolving relationship between medicine and public health in modern societies.
Audience: Undergraduate

HIST SCI/MED HIST 509 – THE DEVELOPMENT OF PUBLIC HEALTH IN AMERICA
3 credits.

Health problems in the U.S. from the colonial period to the twentieth century; efforts made toward their solutions.
Requisites: Junior standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Identify major historical trends in the history of public health in the United States.
Audience: Undergraduate

2. Understand the tensions between individual rights and population health as they have played out in the past.
Audience: Undergraduate

3. Analyze the social, political, and cultural factors that have influenced societal responses to epidemics and pandemics in American history.
Audience: Undergraduate

4. Develop critical thinking skills by engaging with both primary sources and secondary texts to understand how historians have written the history of public health.
Audience: Undergraduate

5. Evaluate the ways in which understanding the past history of public health can shape policy making in the present.
Audience: Undergraduate

HIST SCI/GEOSCI 514 – HISTORY OF GEOLOGIC THOUGHT
3 credits.

Major concepts from earliest to modern times.
Requisites: GEOSCI 204 or graduate/professional standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

HIST SCI/AFROAMER/MED HIST 523 – RACE, AMERICAN MEDICINE AND PUBLIC HEALTH
3 credits.

Provides historical perspectives on current dilemmas facing black patients and health care professionals.
Requisites: Junior standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify key developments, actors, ideas, and institutions in the broad history of race, medicine and public health in America between 1700 and 2000.
Audience: Both Grad & Undergrad

2. Analyze and write critically about primary and secondary historical sources by examining diverse interpretations of past events and ideas in their historical contexts.
Audience: Both Grad & Undergrad

3. Evaluate the ways in which ideas about race and assumptions about the meaning of racial difference influenced the care patients of color received and how they experienced their illnesses and injuries.
Audience: Both Grad & Undergrad

4. Understand how conceptions of race profoundly influenced the medical and nursing professions, as well as medical institutions (dispensaries, hospitals, and blood donation centers).
Audience: Both Grad & Undergrad

5. Evaluate the different methodological approaches historians have used to analyze the multiple histories of race, medicine, and public health in the United States in the last two centuries.
Audience: Graduate

HIST SCI/ENGL/MED HIST 525 – HEALTH AND THE HUMANITIES
3 credits.

Explores how a humanistic perspective can broaden our understanding of health and medicine. Specifically, we will examine the role of language and culture in the creation and circulation of biomedical knowledge; our lived experiences with illness (physical and mental); the intricate intersections of race, gender, sexuality, disability and medicine; the political dimensions of diagnosis, disease, and epidemics, and the role that fiction, creative non-fiction, comics, and film play in shaping our experiences with health and medicine as health care providers and as patients. The course does not assume any background in science or medicine. One of our recurrent topics, in fact, will be to consider how non-experts interact with medicine and its technical vocabularies. Although the primary objective of the course is to understand the cultural, social, and political dimensions of health and medicine, a secondary objective is for students to become more savvy patients and, for the few students who might emerge on the other side of the stethoscope one day, more well rounded health care professionals.
Requisites: Declared in the Health and the Humanities certificate
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

HIST SCI/GEN&WS/MED HIST 531 – WOMEN AND HEALTH IN AMERICAN HISTORY
3 credits.

Women as patients and as health professionals in America from the colonial period to the present.
Requisites: Sophomore standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

HIST SCI/GEN&WS/MED HIST 532 – THE HISTORY OF THE (AMERICAN) BODY
3 credits.

This course demonstrates that human bodies have social and cultural histories. It will highlight the social values placed on different bodies, the changing social expectations bodies create, and the role of science and medicine in creating the cultural meanings of bodies.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023

HIST SCI/GEN&WS 537 — CHILDBIRTH IN THE UNITED STATES
3 credits.

Using a reproductive justice framework, analyze contexts, experiences, practices, ideologies, and historiographies of childbirth in the United States from roughly the 17th century to the present, with the heaviest emphasis on the 20th and 21st century. Examines the ways that colonization, genocide, enslavement, racism, capitalism, heterosexism, patriarchy, and ableism have shaped all of these aspects of childbirth. Inquire how key movements and groups resisting some of these forms of oppression have had the power to reshape birth, as well as locating in birth a source of transformational power.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

HIST SCI/MED HIST/POP HLTH 553 — INTERNATIONAL HEALTH AND GLOBAL SOCIETY
3 credits.

Major problems in international health from 1750 to the present. Focus on disease epidemiology and ecology; political economy of health; migration; quarantine; race, ethnicity, and health care; international health research; cross-cultural healing; mental and maternal health; growth of international health organizations.
Requisites: Junior standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Recognize the utility of humanistic methods for the study of modern international health
Audience: Undergraduate

2. Develop critical thinking skills through techniques of close reading and written analysis
Audience: Undergraduate

3. Understand essential developments in the evolving relationship between global history, politics, and public health on a global scale.
Audience: Undergraduate

HIST SCI 555 — UNDERGRADUATE SEMINAR IN HISTORY OF SCIENCE
3 credits.

Advanced research in History of Science.
Requisites: HISTORY 201 or 3 Credits in HIST SCI
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2021

HIST SCI/HISTORY/MED HIST 564 — DISEASE, MEDICINE AND PUBLIC HEALTH IN THE HISTORY OF LATIN AMERICA AND THE CARIBBEAN
3 credits.

Examines the history of illness and medical practice in Latin America and the Caribbean from the colonial era until the present. Using an interdisciplinary set of sources, students will explore the different meanings of disease, body normativity, medical practice, and ideas about public health across different historical circumstances in the region.
Requisites: Junior standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019
Learning Outcomes: 1. Identify and analyze within their social, cultural and economic contexts key historical issues, and their significance, in the history of healing practices and public health in Latin America from the fifteenth century to the present.
Audience: Both Grad & Undergrad

2. Develop an understanding of the mutually shaping interactions between perceptions of health, illness and medical practices and culture and society in different Latin American historical scenarios.
Audience: Both Grad & Undergrad

3. Analyze the role of social factors -- race, gender, ethnicity, class, and sexual orientation, among others -- in shaping cultural realities related to body normativity, health, medical practice, public health and medical education in Latin America.
Audience: Both Grad & Undergrad

4. Analyze and synthesize information, provide evidence-based interpretations about the past, and develop arguments regarding social and cultural differences related to health and body concepts in different Latin American societies.
Audience: Both Grad & Undergrad

5. Identify the role patients, healthcare providers, institutions and the state played in modeling medical practice, ideas about the body, public health policies, and medical education in Latin America.
Audience: Both Grad & Undergrad

6. Discern the impact of international politics, acting through European and American programs of medical research and humanitarianism, in the shaping of ideas about race, medical hierarchies and public health policies in Latin American and Caribbean nations.
Audience: Both Grad & Undergrad

7. Understand the different methodological approaches and research strategies that historians, anthropologists, and other scholars have used to examine the histories of the medicine in Latin America from the sixteenth century to the present.
Audience: Graduate

HIST SCI/ENGL/MED HIST 599 – DIRECTED STUDY IN HEALTH AND THE HUMANITIES
1 credit.

Offers students enrolled in the Health and the Humanities certificate an opportunity to conduct independent research under the guidance of a faculty member. It allows students who have enrolled in or completed a Health and the Humanities Capstone an opportunity to go into greater depth on a topic covered in the capstone course. In consultation with a faculty member, students will design a project that builds on lessons learned or work completed as part of their capstone experience.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2020
Learning Outcomes: 1. Design scholarly research questions based on their knowledge of the existing literature
Audience: Undergraduate

2. Conduct original primary research by identifying, accessing, and interpreting appropriate sources
Audience: Undergraduate

3. Effectively convey the results of their research through writing or other creative media
Audience: Undergraduate

4. Work independently and manage a large project through to completion
Audience: Undergraduate

HIST SCI 623 – STUDIES IN EARLY MODERN SCIENCE
1 credit.

Advanced readings in primary and secondary literature of the history of the 16th-17th century European science, with emphasis on current historiographic issues.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

HIST SCI 681 – SENIOR HONORS THESIS
3 credits.

Honors thesis on topics in History of Science, Medicine, and Technology.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

HIST SCI 682 – SENIOR HONORS THESIS
3 credits.

Honors thesis on topics in History of Science, Medicine, and Technology. Continuation of HIST SCI 681.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

HIST SCI 691 – SENIOR THESIS
3 credits.

Senior thesis on topics in History of Science, Medicine, and Technology.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2007

HIST SCI 692 – SENIOR THESIS
3 credits.

Senior thesis on topics in History of Science, Medicine, and Technology. Continuation of HIST SCI 691.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2008

HIST SCI 698 – DIRECTED STUDY
1-3 credits.

Directed study under the supervision of a faculty member on topics in History of Science, Medicine, and Technology. Graded on a Cr/N basis.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

HIST SCI 699 – DIRECTED STUDY
1-3 credits.

Directed study under the supervision of a faculty member on topics in History of Science, Medicine, and Technology. Graded on a lettered basis.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2017

HIST SCI 720 – PROSEMINAR: HISTORIOGRAPHY AND METHODS
3 credits.

Philosophies, methods, and sources in the history of science, and their relations to the current state of scholarship.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

HIST SCI 903 – SEMINAR: MEDIEVAL, RENAISSANCE, AND 17TH CENTURY SCIENCE
3 credits.

Readings and/or research on the history of medieval, Renaissance, and/or 17th-century science. Topics vary.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

HIST SCI 907 – SEMINAR: HISTORY OF TECHNOLOGY
3 credits.

Research and readings on a topic of current interest in history of technology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023

HIST SCI 909 – HISTORY OF BIOLOGY AND MEDICINE
3 credits.

Readings and/or research on the history of biology and medicine. Topics vary.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022

HIST SCI 911 – SEMINAR-EIGHTEENTH CENTURY SCIENCE
3 credits.

Readings and/or research on the history of science in the 18th century. Topics vary.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

HIST SCI/MED HIST 919 – GRADUATE STUDIES IN MEDICAL HISTORY
3 credits.

Analyzes the scientific and social aspects of the development of modern medicine and public health in Europe and America.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024
Learning Outcomes: 1. Apply, analyze, or evaluate advanced theories, concepts, or methods in Medical History
Audience: Graduate

HIST SCI 921 – SEMINAR-SPECIAL TOPICS
3 credits.

Readings and/or research on the history of science, medicine, and technology. Topics vary.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

HIST SCI 990 – RESEARCH AND THESIS
1-3 credits.

Independent research and writing of a thesis under the supervision of a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

HIST SCI 999 – INDEPENDENT WORK
1-3 credits.

Directed study under the supervision of a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

HUMAN DEVELOPMENT AND FAMILY STUDIES (HDFS)

HDFS 174 – INTRODUCTION INTO CULTURAL DIVERSITY OF FAMILIES
3 credits.

An introduction to racially and culturally diverse families with application to personal life. Focuses on structural factors impacting all families, such as demographic, economic, and historic trends, which illuminate the similarities and distinctions among and within racial and ethnic groups.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate understanding of diversity of family structures, roles, and relationships.
Audience: Undergraduate

2. Demonstrate understanding of concepts (race, ethnicity, minority, etc.) essential to the discourse on family diversity.
Audience: Undergraduate

3. Identify historical and current social experiences and relate those to family dynamics of diverse cultural groups.
Audience: Undergraduate

4. Communicate differences between stereotyping and generalizations about culturally diverse families, while also acknowledging within-group diversity.
Audience: Undergraduate

5. Reflect upon your own family, and broaden your exposure to other kinds of family experiences.
Audience: Undergraduate

HDFS 253 – HUMAN DEVELOPMENT & FAMILY STUDIES LEADERSHIP SYMPOSIUM
1 credit.

Provides detailed examination of careers in Human Ecology and the fields of human development and family studies (HDFS). High level leaders working in a variety of professions related to the HDFS major will present as guest speakers (e.g., counseling, school psychology, family life education, early childhood education, child life, social work, health care, occupational therapy).
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

HDFS 262 – DEVELOPMENT OF THE YOUNG CHILD
3 credits.

A basic foundation for understanding development from conception through middle childhood. Theoretical foundations, research findings, and practical applications.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe physical, cognitive, and social development from conception through middle childhood.
Audience: Undergraduate

2. Recognize the ways in which biological processes lead to similarities and differences in physical, cognitive, and social development.
Audience: Undergraduate

3. Identify the ways in which environmental factors lead to similarities and differences in physical, cognitive, and social development.
Audience: Undergraduate

4. Explain how child development research is conducted
Audience: Undergraduate

5. Apply developmental science to improve the lives of children.
Audience: Undergraduate

HDFS 263 – DEVELOPMENT FROM ADOLESCENCE TO OLD AGE
3 credits.

A basic foundation for understanding development from adolescence through old age. Theoretical foundations, research findings, and practical applications.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe change in physical, cognitive, and socioemotional development from adolescence through old age
Audience: Undergraduate

2. Gain knowledge of individual differences in developmental change across the lifespan
Audience: Undergraduate

3. Identify biological, psychological, and social mechanisms related to developmental change
Audience: Undergraduate

4. Discuss how biological, psychological, and social mechanisms interact in a dynamic and reciprocal fashion to shape develop across the lifespan
Audience: Undergraduate

5. Identify policy and intervention pathways for promoting optimal health and well-being from adolescence through old age
Audience: Undergraduate

HDFS 299 – INDEPENDENT STUDY
1-3 credits.

Directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2006

HDFS 345 – ECOLOGY OF CHILD HEALTH AND WELL-BEING
3 credits.

The physical and mental health and well-being of infants and children are strongly influenced by child- and family-facing service professionals from across a variety of professions. Through a socioecological and multidisciplinary lens, examines both conceptual models and real-world applications ranging along a continuum from individual-level clinical interventions to systems-level public health approaches of influencing infant and child physical and mental health and well-being.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Discuss childhood as a function of the social, economic, political, historical, artistic, and scientific environments and systems children exist in and around.
Audience: Undergraduate

2. Apply the concepts of Relational Health and infant and child mental health in the context of practice, projects, and policy.
Audience: Undergraduate

3. Apply theoretical and research findings to real-world clinical settings through the context of child- and family-facing service professions.
Audience: Undergraduate

4. Evaluate how the flourishing and thriving of children is affected through individual-level interactions, programs, and policies and gain basic skills in advocating for children's health and well-being.
Audience: Undergraduate

5. Develop criteria for high-quality, everyday shared activities and what these bring to relational health, cognitive development, and educational success, and incorporate such criteria into service delivery models.
Audience: Undergraduate

HDFS 425 – RESEARCH METHODS IN HUMAN DEVELOPMENT AND FAMILY STUDIES
3 credits.

Basics of research design used in studying family studies and individual development over the life course. Quantitative and qualitative research designs, participatory action research, and evaluation research, how research informs intervention and prevention programs.
Requisites: HDFS 262, ED PSYCH 320, PSYCH 460, or HDFS 263
Repeatable for Credit: No
Last Taught: Fall 2025

HDFS 462 – INFANT/TODDLER DEVELOPMENT & GROUP CARE
3 credits.

Developmental milestones from conception up to 36 months of age. Exploration of child care, including access and quality of care, as major influences on the development of young children and families in the US. Observation of infant development in real-time and evaluation of child care program quality.
Requisites: HDFS 262 (or HDFS 362 prior to Fall 2023), ED PSYCH 320, or PSYCH 460
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and recognize the major milestones of infant development in each of the following domains: physical, motor, social-emotional, cognitive, and language and objectively observe infant development in "real time."
Audience: Undergraduate

2. Illustrate the cultural influences on the ways families choose to care for infants and toddlers and describe the major philosophical approaches to group care.
Audience: Undergraduate

3. Identify factors that influence the disproportionally high infant and maternal mortality rates in the U.S. based on demographic factors such as race, ethnicity, socioeconomic status, and region.
Audience: Undergraduate

4. Identify the main components of high-quality infant care programs and articulate how high-quality infant/toddler care has the potential to positively affect the developmental outcomes of children, the lives of families, and society overall.
Audience: Undergraduate

5. Use an observational rating scale to measure the quality of an infant/toddler group care setting and critique the rating scale based on knowledge of factors that have been shown to promote optimal developmental outcomes in young children.
Audience: Undergraduate

6. Identify ecological influences that affect the availability of affordable, high quality infant care for families in the U.S.
Audience: Undergraduate

7. Recognize the benefits of inclusive practice for infants and toddlers with disabilities, special needs, challenging behavior, or mental health challenges in the group care setting and identify supports needed by the field to successfully employ these inclusive practices.
Audience: Undergraduate

HDFS 464 – PLAY-DEVELOPMENT AND ROLE ACROSS THE LIFESPAN
3 credits.

The role and function of play (and playfulness) in promoting development across the lifespan.
Requisites: HDFS 262 (or HDFS 362 prior to Fall 2023), ED PSYCH 320, or PSYCH 460
Repeatable for Credit: No
Last Taught: Fall 2025

HDFS/CNSR SCI 465 – FAMILIES & POVERTY
3 credits.

Introduction to research at the intersection of family and poverty studies. Learn how family behaviors vary by socioeconomic status; how romantic relationships, childbearing, and childrearing may be implicated in poverty; what the consequences of poverty are for family functioning and children; and about the role of policy in influencing families and poverty.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Ability to consider and evaluate how children, adults, and families affect and are affected by policies, media, or other social institutions.
Audience: Undergraduate

2. Demonstrate applied professional skills by practicing working effectively with others.
Audience: Undergraduate

3. Demonstrate professional speaking skills through giving an oral presentation.
Audience: Undergraduate

4. Demonstrate scientific reasoning/critical thinking skills through engaging in critical evaluation of research articles, websites, programs, or policies.
Audience: Undergraduate

5. Knowledge of family and community diversity.
Audience: Undergraduate

HDFS 469 – FAMILY AND COMMUNITY INFLUENCES ON THE YOUNG CHILD
3 credits.

Interaction of child in socialization settings, especially the family; socialization processes in the social system of child-family-community.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025

HDFS 471 – PARENT - CHILD RELATIONS
3 credits.

Parents' interaction with their children, programs for parents, and parents' interactions with other institutions.
Requisites: HDFS 262, ED PSYCH 320, PSYCH 460, or HDFS 263
Repeatable for Credit: No
Last Taught: Fall 2025

HDFS 474 – RACIAL ETHNIC FAMILIES IN THE U.S.
3 credits.

Examines the diversity of family life and human development across and within racial ethnic groups in the United States as shaped by race, ethnicity, culture, biculturalism, and the social contexts of history, economics, immigration, and socio-political conditions.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Repeatable for Credit: No
Last Taught: Fall 2025

HDFS 501 – SPECIAL TOPICS
1-3 credits.

Specialized subject matter of current interest.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

HDFS 516 – STRESS AND RESILIENCE IN FAMILIES ACROSS THE LIFESPAN
3 credits.

Examines family stress and resilience across the life cycle from psychological, sociological, and biosocial perspectives. Explores research relating to normative and non-normative family stress and resiliency factors. Topics include parenting, poverty, violence, work-family balance, aging, health and wellness and others.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Critically evaluate internal family processes, including parenting and parent-child relations, couples and family relationships across generations and family health and well-being (e.g., mental health, substance abuse, wellness, child maltreatment)
Audience: Undergraduate

2. Apply various theories, models, and perspectives on family stress and resilience across the lifespan to their understanding of families in stress and crisis
Audience: Undergraduate

3. Apply research and application of these models to specific contemporary topics relevant to individual and family functioning, including risk and resiliency processes
Audience: Undergraduate

4. Evaluate current issues and areas of investigation in the field of family stress and resilience and their application to 'real world' challenges
Audience: Undergraduate

HDFS 517 – COUPLE RELATIONSHIPS
3 credits.

Romantic relationships are universally desired, and individuals around the globe agree about what successful intimacy entails: we all want to be loved, supported, and cared for by partners we hold in high esteem. Nevertheless, intimate relationships can be difficult to form and maintain. Explore a range of theoretical perspectives and methodologies to understand how it is that intimate relationships develop, thrive, or deteriorate over time. Connect intimate relationship science to real life experiences.
Requisites: Sophomore standing
Repeatable for Credit: No
Last Taught: Fall 2025

HDFS 535 – A FAMILY PERSPECTIVE IN POLICYMAKING
3 credits.

Explore the relationship between family functioning and public/private policies at the local, state and federal levels; analyze the consequences of issues, policies or programs on family well-being; and, examine roles for professionals in influencing policy development.
Requisites: Junior standing
Repeatable for Credit: No
Last Taught: Spring 2025

HDFS 592 – RESEARCH EXPERIENCE IN HUMAN DEVELOPMENT AND FAMILY STUDIES
1-3 credits.

Research experience under the supervision of a faculty member in Human Development and Family Studies.
Requisites: Consent of instructor
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

HDFS 601 – INTERNSHIP
1-8 credits.

A supervised internship providing hands-on training in a professional experience in human development and family studies related fields.
Requisites: Consent of instructor
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

HDFS/COM ARTS/JOURN 616 – MASS MEDIA AND YOUTH
3 credits.

Children's and adolescents' use of mass media and mass media effects on them. Particular attention is given to changes in comprehension and other cognitive activities that give insights into media use and effects.
Requisites: JOURN 202, COM ARTS 325, HDFS 262 (or HDFS 362 prior to Fall 2023), ED PSYCH 320, PSYCH 460, LSC 251, or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain how children and youth process media
Audience: Undergraduate

2. Compare/contrast the impact of different types of media content on development
Audience: Undergraduate

3. Explain how individual differences moderate the impact of media on development
Audience: Undergraduate

4. Describe moderating effects of the context in which media use occurs
Audience: Undergraduate

5. Read, interpret, evaluate, and discuss social scientific reports of findings in this area
Audience: Undergraduate

6. Synthesize and interpret research in this area for a lay audience
Audience: Undergraduate

7. Explain with nuance how children and youth process media
Audience: Graduate

8. Compare/contrast the impact of different types and formats of media content on development, with reference to key developmental milestones
Audience: Graduate

9. Explain how individual differences and social contexts moderate the impact of media uses and interpretations on development
Audience: Graduate

10. Synthesize and interpret research in this area and identify a research gap for future work
Audience: Graduate

HDFS 650 – PARENT EDUCATION AND SUPPORT PROGRAMS
3 credits.

The purposes, contexts, and implementation of parenting support and education programs are studied. Some sections may include a service learning component.
Requisites: HDFS 262 (or HDFS 362 prior to Fall 2023), ED PSYCH 320, or PSYCH 460
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

HDFS 662 – ADVANCED STUDY OF THE YOUNG CHILD
3 credits.

Research literature and current theories; topics of individual interest.
Requisites: HDFS 262 (or HDFS 362 prior to Fall 2023), ED PSYCH 320, or PSYCH 460
Repeatable for Credit: No
Last Taught: Fall 2022

HDFS 663 – DEVELOPMENTAL AND FAMILY ASSESSMENT
3 credits.

Introduction to the process of family-focused developmental assessment with infants and young children, including family interviewing, taking developmental histories, observing children, and developmental screening.
Requisites: HDFS 262 (or HDFS 362 prior to Fall 2023), ED PSYCH 320, PYSCH 460, or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

HDFS 664 – PROSEMINAR: HUMAN DEVELOPMENT AND FAMILY STUDIES
1-3 credits.

Survey and introduction to children and families.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

HDFS 680 – SENIOR HONORS THESIS
2-4 credits.

Individual study in honors as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023

HDFS 690 – SENIOR THESIS
2 credits.

Individual study as arranged with a faculty member.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

HDFS 699 – INDEPENDENT STUDY
1-6 credits.

Directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

HDFS/ED PSYCH 725 – THEORY AND ISSUES IN HUMAN DEVELOPMENT
3 credits.

This course covers both classic and contemporary theories, providing students with a firm grounding in the theoretical perspectives that have shaped and are shaping understandings of human development across the life-span. The course explores the historical roots of contemporary perspectives and examines the development of theoretical conceptualizations both within and across theoretical perspectives.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

HDFS/COUN PSY/ED PSYCH 726 – ETHNIC AND RACIAL DIVERSITY IN SOCIAL DEVELOPMENT
3 credits.

Review of empirical and theoretical research on ethnic/racial diversity in social development across childhood, adolescence and early adulthood with emphasis on implications for counseling and school psychology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021

HDFS 761 – CHILDHOOD AND THE FAMILY: PRENATAL THROUGH PRE-ADOLESCENCE
3 credits.

Research and theories about development from the prenatal period to middle childhood, emphasizing a relational approach and contemporary research (both content and methods). Explores diversity in early development in the US and internationally.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Describe change in physical, cognitive, and psychosocial development from conception through middle childhood, particularly in the family context.
Audience: Graduate

2. Identify biological, psychological, and social mechanisms related to developmental change.
Audience: Graduate

3. Discuss how biological, psychological, and social mechanisms interact in a dynamic and reciprocal fashion to shape early human development.
Audience: Graduate

4. Think critically about human development research, including how research methods, content, findings, and theories impact understanding of early human development and relate to contexts.
Audience: Graduate

5. Apply knowledge of early human development to identify policy and intervention pathways for promoting optimal health and well-being from conception through middle childhood.
Audience: Graduate

HDFS 763 – AGING AND THE FAMILY: ADOLESCENCE THROUGH LATER LIFE
3 credits.

Examines physical, cognitive, and socioemotional development from adolescence through late life, emphasizing development in context. Covers developmental theory, research, and applications across life stages, including death and dying, with emphasis on relational approaches. Addresses individual, family, historical, and cultural influences on human development.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe change in physical, cognitive, and socioemotional development from adolescence through old age, particularly in the family context
Audience: Graduate

2. Examine individual differences in developmental change across the lifespan
Audience: Graduate

3. Identify biological, psychological, and social mechanisms related to developmental change
Audience: Graduate

4. Discuss how biological, psychological, and social mechanisms interact in a dynamic and reciprocal fashion to shape development across the lifespan
Audience: Graduate

5. Identify policy and intervention pathways for promoting optimal health and well-being from adolescence through old age
Audience: Graduate

HDFS 765 – FAMILIES & POVERTY
3 credits.

Introduction to research on families and poverty. Learn how family behaviors vary by socioeconomic status; how romantic relationships, childbearing, and childrearing may be implicated in poverty; what the consequences of poverty are for family functioning and children; and about the role of policy in influencing families and poverty.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

HDFS 766 – CURRENT TOPICS IN HUMAN DEVELOPMENT AND FAMILY STUDIES
1-3 credits.

Specialized subject matter of current interests. Literature, research, and current trends, with implications for teaching, parent education, and other professions.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

HDFS 818 – ATTACHMENT THEORY AND RELATIONSHIPS ACROSS THE LIFESPAN
3 credits.

Examines parent-child and intimate relationships using attachment theory and research (and critiques of this approach), focusing on relationships formed in infancy and across the lifespan.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

HDFS 865 – FAMILY THEORY I (SURVEY)
3 credits.

A survey of the current theories and models used in family research and theory development. Focuses on structure-functional, interactional, developmental, systems, and exchange theory in relation to family research and application.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

HDFS 869 – ADVANCED SEMINAR IN FAMILY STRESS AND COPING
3 credits.

Emphasis on theoretical explanations of family stress from various levels of analysis--individual, social network, family, community, and larger social context. Considers sources of stress and how families experience, respond to, cope with, and resolve stress.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

HDFS 872 – BRIDGING THE GAP BETWEEN RESEARCH AND ACTION
3 credits.

Addresses the critical skills and methods needed to gather and apply research-based knowledge and theory to human development and family studies. Strategies for conducting research relevant to social policy, programs, and the general public will be discussed as well as techniques for communicating research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

HDFS/ED PSYCH/NURSING/SOC WORK 880 – PREVENTION SCIENCE
3 credits.

Theoretical, empirical and practical foundation for prevention science as it relates to the prevention of human social problems. Research and evaluation methods, program design strategies, best practices and policy as they relate to the field of prevention are also examined.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

HDFS/ED PSYCH/NURSING/SOC WORK 881 – CAPSTONE SEMINAR IN PREVENTION SCIENCE
1 credit.

An opportunity to meet with prevention professionals and scholars from across campus and the community to explore current and emerging issues of prevention research and professional practice. Students must complete HDFS/ED PSYCH/NURSING/SOC WORK 880 before taking this course.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

HDFS 990 – RESEARCH AND THESIS
1-12 credits.

Individual study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

HDFS 999 – INDEPENDENT STUDY
1-3 credits.

Directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

HUMAN ONCOLOGY (H ONCOL)

H ONCOL/MED PHYS 410 – RADIOBIOLOGY
2-3 credits.

Effects of ionizing radiations of living cells and organisms, including physical, chemical, and physiological bases of radiation cytotoxicity, mutagenicity, and carcinogenesis; lecture and lab.
Requisites: Graduate/professional standing or (PHYSICS 202 or 208 and ZOOLOGY/BIOLOGY/BOTANY 152 or 153)
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Gain an understanding of the physical, chemical and molecular basis of the action of radiation on biological systems
Audience: Both Grad & Undergrad

2. Describe the radiobiological principles forming the basis for the use of radiation as a cancer therapy
Audience: Both Grad & Undergrad

3. Understand the potential deleterious short and longer-term effects of radiation on normal tissues and organs and on the whole body
Audience: Both Grad & Undergrad

4. Describe how chemotherapy and molecularly targeted agent can alter response of biological systems to radiation.
Audience: Both Grad & Undergrad

5. Understand the principles of radiation protection
Audience: Graduate

H ONCOL/B M E/MED PHYS/PHYSICS 501 – RADIATION PHYSICS AND DOSIMETRY
3 credits.

Interactions and energy deposition by ionizing radiation in matter; concepts, quantities and units in radiological physics; principles and methods of radiation dosimetry.
Requisites: (PHYSICS 323, 449 and MATH 320) or graduate/professional standing or declared in Medical Physics VISP
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use the physics of microscopic structures of nucleus, nuclear decay, electronic structure of atoms to calculate nuclear decay lifespan and solid state energy band structure
Audience: Both Grad & Undergrad

2. Calculate the radiation power spectrum for an accelerating charge particle under different physical conditions
Audience: Both Grad & Undergrad

3. Calculate cross-sections for the following interaction processes between photons and matter: Rayleigh scattering, photoelectric effect, Compton scattering, and pair production
Audience: Both Grad & Undergrad

4. Calculate the scattering cross-section of Coulomb scattering and energy transfer cross-section in collisions processes and radiative energy loss processes
Audience: Both Grad & Undergrad

5. Calculate radiation dose for both external photon beams, neutron beams, and charged particle beams
Audience: Both Grad & Undergrad

6. Identify open research topics in radiation imaging, radiation therapy, and radiation protection fields
Audience: Graduate

H ONCOL 681 – SENIOR HONORS THESIS IN HUMAN ONCOLOGY 1
3-4 credits.

Independent research in the area of human oncology including biology, medical physics, or clinical oncology. A written thesis is required in the final semester.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025

H ONCOL 682 – SENIOR HONORS THESIS IN HUMAN ONCOLOGY 2
3-4 credits.

Independent research in the area of human oncology including biology, medical physics, or clinical oncology. A written thesis is required in the final semester.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2024

H ONCOL 691 – SENIOR THESIS IN HUMAN ONCOLOGY 1
3-4 credits.

Independent research in the area of human oncology including biology, medical physics, or clinical oncology. A written thesis is required in the final semester.
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Fall 2023

H ONCOL 692 – SENIOR THESIS IN HUMAN ONCOLOGY 2
3-4 credits.

Independent research in the area of human oncology including biology, medical physics, or clinical oncology. A written thesis is required in the final semester.
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Spring 2024

H ONCOL 699 – INDEPENDENT STUDY IN HUMAN CANCER BIOLOGY
1-3 credits.

Tutorial lab/library research and study. Opportunity for learning in depth without a thesis requirement.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

H ONCOL 750 – MULTI-DISCIPLINARY PATIENT-ORIENTED RESEARCH PRESENTATION SKILLS SEMINAR
1 credit.

Learn to value the contributions of oral presentations in developing your career, in convincing audiences of the results of your research, or gaining approval of your proposed research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Understand components of high quality oral presentations and commonly made mistakes
Audience: Graduate

2. Provide constructive feedback to presenters
Audience: Graduate

3. Apply consistent format for oral presentations
Audience: Graduate

H ONCOL 910 – INDEPENDENT READING AND RESEARCH FOR FOURTH YEAR MEDICAL STUDENTS
2-8 credits.

Independent research under the direct supervision of Human Oncology faculty. Each student's research project is individualized to meet student research goals within context of faculty research needs.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Formulate a hypothesis or specific objective if study does not involve hypothesis generating research
Audience: Graduate

2. Conduct a thorough literature review of the specific research question
Audience: Graduate

3. Select and apply statistical methodologies appropriate for the proposed analyses
Audience: Graduate

4. Interpret results correctly and in context of previous findings from literature review
Audience: Graduate

H ONCOL 911 – TUMOR IMMUNOLOGY AND CANCER IMMUNOTHERAPY
2 credits.

Gain a greater understanding of the basic and translational science that is fueling the ongoing immuno-oncology revolution in cancer care. Explore the tumor-immune microenvironment and modern approaches to cancer immunotherapy. Evaluate pertinent primary literature in this arena and exposure to the technological resources (e.g. flow cytometry, clinical pathology, cell therapeutics infrastructure) that are critical to implementing immunotherapies in the clinic. Tumor board attendance will highlight the clinical reasoning and toxicity management in the clinical use of immunotherapies for cancer treatment.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate understanding of innate and adaptive immune interactions with tumors
Audience: Graduate

2. Apply understanding of immunology to understand immunotherapeutic approaches in cancer
Audience: Graduate

3. Compare and contrast therapeutic mechanisms of diverse immunotherapies
Audience: Graduate

4. Demonstrate knowledge of the patterns and rates of response to immunotherapies among distinct cancers
Audience: Graduate

5. Demonstrate understanding of immunotherapy toxicities and approaches to treating these
Audience: Graduate

6. Apply and adapt understanding of tumor immunology and current immunotherapies to devise a proposal for next generation approach to cancer immunotherapy
Audience: Graduate

H ONCOL 912 – CHALLENGES IN ONCOLOGY: APPLICATION OF MODERN BIOLOGY AND TECHNOLOGY TO CLINICAL CANCER CARE
2 credits.

Radiation therapy has been used in treatment of cancer and other diseases for over 100 years. Gain a comprehensive overview of how modern technology allows us to precisely target the tumor while maintaining the function of normal tissues (i.e. the physics and biology underlying the use of radiation therapy). Develop a strong foundational knowledge of basic oncology principles, begin to understand the biology and physics underlying radiation oncology treatments, interpret dose/volume histograms and normal-tissue complication probabilities, understand the role of modern imaging in the workup, treatment, and follow-up of cancer patients, and be able to discuss the major financial issues associated with various treatment modalities. It is anticipated that students will incorporate these concepts, knowledge, experiences, and evidence in their future clinical practice.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge of fundamental principles of oncology
Audience: Graduate

2. Demonstrate understanding of how physics and biology shape modern radiation oncology
Audience: Graduate

3. Perform treatment simulations, target identification, normal tissues using four-dimensional imaging studies
Audience: Graduate

H ONCOL 922 – RADIATION ONCOLOGY
2-4 credits.

Oncology-focused topics including staging, prognosis, and treatment approaches to different cancers. Different radiation modalities, treatment machines, and treatment planning. Opportunity to see patients in clinic and observe procedures (brachytherapy), under direct supervision by residents and attending physicians.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Prepare for consults.
Audience: Graduate

2. Improve skills in physical examination.
Audience: Graduate

3. Make a concise, yet thorough presentation to the attending, including your own assessment and plan
Audience: Graduate

4. Describe the staging of neoplastic diseases.
Audience: Graduate

5. Practice decision-making involved in the work-up and treatment planning of oncologic patients.
Audience: Graduate

6. Describe the uses of different types of ionizing radiation in cancer treatment.
Audience: Graduate

7. Demonstrate understanding of the use of radiation toward sparing normal tissues.
Audience: Graduate

8. Observe and participate as allowed in procedures.
Audience: Graduate

H ONCOL 990 – RESEARCH IN HUMAN CANCER BIOLOGY
1-12 credits.

Graduate thesis research.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

INDUSTRIAL AND SYSTEMS ENGINEERING (I SY E)

I SY E 1 – COOPERATIVE EDUCATION PROGRAM
1 credit.

Work experience which combines classroom theory with practical knowledge of operations to provide students with a background upon which to base a professional career in industry.
Requisites: Sophomore standing
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and respond appropriately to real-life engineering ethics cases relevant to co-op work
Audience: Undergraduate

2. Synthesize and apply appropriate technical education to real world technical work
Audience: Undergraduate

3. Communicate effectively in writing and speaking with a range of audiences in the workplace, including those without disciplinary expertise
Audience: Undergraduate

4. Develop professional and transferable habits like time management skills, collaborative problem-solving skills, and research skills for learning new information
Audience: Undergraduate

I SY E 191 – THE PRACTICE OF INDUSTRIAL ENGINEERING
2 credits.

An introduction to industrial engineering subject matter areas, problem types, and design/analysis approaches, techniques, and methodologies. Special emphasis on formulation and design alternatives for problem solving.
Requisites: None
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Define and explain common industrial engineering terminology
Audience: Undergraduate

2. Give examples of career opportunities in industrial engineering
Audience: Undergraduate

3. List the focus areas in industrial engineering and give a brief explanation of how each area uses industrial engineering principles
Audience: Undergraduate

4. Give examples of problems in each area of industrial engineering
Audience: Undergraduate

5. Identify professional and academic development resources available to industrial engineering students
Audience: Undergraduate

6. Investigate an open-ended industrial engineering problem and think critically about how to solve it
Audience: Undergraduate

7. Analyze small datasets using Microsoft Excel
Audience: Undergraduate

I SY E 210 – INTRODUCTION TO INDUSTRIAL STATISTICS
3 credits.

Introduction to basic probability and statistical tools and methods from an industrial application perspective. Random variables and probability distributions; descriptive statistics; point estimates. Perform hypothesis testing, construct confidence intervals, and understand design of experiments in the context of motivating case studies. Regression and correlation analysis. Focus on applying statistical methods and tools to solve engineering problems. Use of Microsoft Excel to interpret and analyze data.
Requisites: (MATH 211, 217, or 221) or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate the importance of statistics in engineering applications
Audience: Undergraduate

2. Summarize and describe data using descriptive statistics and graphical methods
Audience: Undergraduate

3. Perform basic statistical analysis on datasets
Audience: Undergraduate

4. Design simple experiments with data for the purpose of statistical analysis
Audience: Undergraduate

5. Use Excel to describe, analyze, graph, and interpret data
Audience: Undergraduate

6. Apply linear and multiple regression techniques
Audience: Undergraduate

7. Apply experiment and analysis techniques to areas of engineering such as Statistical Process Control
Audience: Undergraduate

8. Apply basic probability concepts such as random variables, independence, and probability distributions
Audience: Undergraduate

I SY E 312 – DATA MANAGEMENT AND ANALYSIS FOR INDUSTRIAL ENGINEERS
3 credits.

Fundamentals of data management and analysis. Formulating and solving real industrial engineering problems with appropriate data managing and modeling strategies. Fundamental industrial database management strategies, data preprocessing, visualization and modeling techniques; industrial database management and analysis techniques using leading programming software (MySQL and R).
Requisites: (I SY E 210, E C E 331, MATH/STAT 309, STAT 311, or 324) or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge of fundamental industrial database management strategies
Audience: Undergraduate

2. Apply data preprocessing, visualization, and modeling techniques
Audience: Undergraduate

3. Apply industrial database management techniques using structured query language (SQL)
Audience: Undergraduate

4. Use leading programming software to perform data regression analysis
Audience: Undergraduate

5. Create and solve a real-life industrial data analytics problem, and present results effectively to audience
Audience: Undergraduate

I SY E 313 – ENGINEERING ECONOMIC ANALYSIS
3 credits.

Financial accounting principles and cost systems, interpretation and use of accounting reports and supplemental information for engineering economic analyses, consideration of cost-volume-profit analyses, use of discounted cash flow techniques, flexible budgeting, transfer pricing, and capital budgeting.
Requisites: (MATH 217, 221, or concurrent enrollment), graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply discounted cash-flow analysis to evaluate proposed capital investments
Audience: Undergraduate

2. Recognize, formulate, and analyze cash-flow models
Audience: Undergraduate

3. Explain model results to managers and other non-specialist decision makers
Audience: Undergraduate

I SY E 315 – PRODUCTION PLANNING AND CONTROL
3 credits.

Techniques and applications of control concepts in the design of inventory, production, quality, and project-planning systems; use of the computer as a component in such systems.
Requisites: (I SY E 210, E C E 331, MATH/STAT 309, STAT 311, 324, 371, MATH/STAT 431, 531, or concurrent enrollment), graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe and apply fundamental principles and methodologies relevant to planning, design, operation, and control of production planning and control systems
Audience: Undergraduate

2. Describe and explain how organizational strategy drives operations management approaches and supply chain decisions
Audience: Undergraduate

3. Develop a portfolio of analytical tools and skills related to production planning and control and operations management
Audience: Undergraduate

4. Recognize situations in production system environments that suggest the use of appropriate quantitative methods to assist in decision-making
Audience: Undergraduate

5. Apply skills and tools to reduce waste and to increase productivity and quality in manufacturing and service organizations
Audience: Undergraduate

I SY E 320 – SIMULATION AND PROBABILISTIC MODELING
3 credits.

Analysis of stochastic systems using both analytic methods and computer simulation. Empirical and theoretical models of arrival and service processes. State spaces and state transition probabilities. Simulation of queuing and manufacturing systems. Continuous time Markov analysis of manufacturing systems. Simulation project management, testing and emerging trends.
Requisites: (MATH/STAT 309, STAT 311, MATH/STAT 431, 531 or concurrent enrollment) and (I SY E 210, E C E 331, STAT/MATH 310, STAT 312, 324, 371, or concurrent enrollment) and (MATH 320, 340, or concurrent enrollment), or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply knowledge of math, science, and engineering principles to model real stochastic systems
Audience: Undergraduate

2. Identify, formulate, and solve problems using appropriate data analytic and simulation approaches
Audience: Undergraduate

3. Understand and apply probabilistic modeling techniques such as Markov Chains and queueing theory to study stochastic systems
Audience: Undergraduate

4. Apply statistical methods to analyze stochastic behaviors of the systems
Audience: Undergraduate

5. Apply simulation software to model the process and evaluate performance measures of the systems
Audience: Undergraduate

I SY E 321 – SIMULATION MODELING LABORATORY
1 credit.

Computer exercises involving generation and analysis of random variables, spreadsheet models of queuing systems, use of simulation software packages. Project.
Requisites: Concurrent enrollment in I SY E 320
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply knowledge of math, science, and engineering principles to model real stochastic systems
Audience: Undergraduate

2. Identify, formulate, and solve problems using appropriate data analytic and simulation approaches
Audience: Undergraduate

3. Understand and apply probabilistic modeling techniques such as Markov Chains and queueing theory to study stochastic systems
Audience: Undergraduate

4. Apply statistical methods to analyze stochastic behaviors of the systems
Audience: Undergraduate

5. Apply simulation software to model the process and evaluate performance measures of the systems
Audience: Undergraduate

I SY E 323 – OPERATIONS RESEARCH-DETERMINISTIC MODELING
3 credits.

Basic techniques for modeling and optimizing deterministic systems with emphasis on linear programming. Computer solution of optimization problems. Applications to production, logistics, and service systems.
Requisites: MATH 222 and (MATH 340, 341 or 375), or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Write an algebraic formulation of an optimization model that captures the main decision elements of practical problems
Audience: Undergraduate

2. Use an algebraic modeling language to solve an optimization model
Audience: Undergraduate

3. Model logical constraints using binary decision variables
Audience: Undergraduate

4. Understand the basic ideas behind algorithms for solving linear programming and discrete optimization problems
Audience: Undergraduate

I SY E 348 – INTRODUCTION TO HUMAN FACTORS ENGINEERING LABORATORY
1 credit.

Hands on experience applying concepts discussed in I SY E/PSYCH 349. Complete a small three-part design project. Learn how to measure light, sound, anthropometric, and psychophysiological data, and then apply these measurements to product and workplace design challenges.
Requisites: Declared in Industrial Engineering and concurrent enrollment in I SY E/PSYCH 349, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize the strengths and limits of human perceptual, cognitive and physical abilities and their implications for system design
Audience: Undergraduate

2. Describe human factors tools, techniques and methods commonly used to design and improve system performance
Audience: Undergraduate

3. Evaluate and recommend work and task designs based on human factors and ergonomic principle
Audience: Undergraduate

4. Define the ethical application of human factors in designing products and processes
Audience: Undergraduate

I SY E/PSYCH 349 – INTRODUCTION TO HUMAN FACTORS
3 credits.

Conveys the importance of considering human capabilities and limits in system design and operation. This includes understanding human characteristics from the cognitive, physical, and psychosocial perspectives. Implications of these characteristics are explored through understanding the needs of people, designing to support these needs, and evaluating systems to ensure they serve the intended purpose. Case studies are used to identify the human role in accidents and to identify design improvements. Application domains include consumer product design, human-computer interaction, workplace safety, and complex systems such as healthcare delivery.
Requisites: (I SY E 210, E C E 331, MATH/STAT 309, 431, STAT 311, 324, 371, MATH 531, PSYCH 210, or C&E SOC/SOC 360, or concurrent registration), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize the strengths and limits of human perceptual, cognitive and physical abilities and their implications for system design
Audience: Undergraduate

2. Describe human factors tools, techniques and methods commonly used to design and improve system performance
Audience: Undergraduate

3. Evaluate and recommend work and task designs based on human factors and ergonomic principles
Audience: Undergraduate

4. Define the ethical application of human factors in designing products and processes
Audience: Undergraduate

I SY E 350 – INDUSTRIAL ENGINEERING DESIGN I
3 credits.

Introduction to the tools needed for advanced design courses through experiential learning and hands-on opportunities to conduct experiments, take relevant measurements, analyze real-world data, design systems, and to make and test prototypes of designs.
Requisites: Declared in Industrial Engineering, (COMP SCI 200, 220, 300, 301, 302, or placement into COMP SCI 300), (I SY E 210, MATH/STAT 309, 431, MATH 531, STAT 311 or 324) and I SY E 315
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply basic industrial engineering design methods
Audience: Undergraduate

2. Use appropriate industrial and systems engineering design tools forestablishing solutions to open-ended problems
Audience: Undergraduate

3. Select the appropriate methods to utilize in order to collect real-world data
Audience: Undergraduate

4. Observe and collect data relevant to an industrial engineering problem
Audience: Undergraduate

I SY E 389 – HONORS IN RESEARCH
1-3 credits.

Undergraduate honors research projects supervised by faculty members.
Requisites: Declared in Industrial Engineering Honors in Research
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2013
Learning Outcomes: 1. Conduct and report on independent industrial engineering research
Audience: Undergraduate

2. Independently develop industrial engineering research questions
Audience: Undergraduate

3. Appropriately utilize online and library resources
Audience: Undergraduate

I SY E 412 – FUNDAMENTALS OF INDUSTRIAL DATA ANALYTICS
3 credits.

Provides an understanding of the fundamentals of using data analytics to make data-driven decisions. Emphasizes applying techniques to industrial engineering problems. Focuses on formulating and solving real industrial problems with the appropriate modeling strategies and analytics principles for better decision making.
Requisites: (I SY E 210, E C E 331, STAT 311, 324, MATH/STAT 309, 431, or MATH 531), graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply fundamental knowledge of industrial data analytics concepts, problems, and techniques
Audience: Undergraduate

2. Integrate data analytics techniques with industrial and systems engineering domain knowledge to appropriately formulate problem statements and facilitate decision making
Audience: Undergraduate

3. Implement software programming skills to perform data analysis
Audience: Undergraduate

4. Apply industrial data analytics methods and tools to solve real-world industrial engineering problems
Audience: Undergraduate

I SY E 415 – INTRODUCTION TO MANUFACTURING SYSTEMS, DESIGN AND ANALYSIS
3 credits.

Introduction to the technologies, processes and systems of modern discrete part manufacturing. Emphasis on development of an understanding of the behavior of integrated systems.
Requisites: I SY E 315, member of Engineering Guest Students, or graduate/professional standing
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Distinguish advantages and disadvantages for a range of manufacturing processes
Audience: Undergraduate

2. Select an appropriate manufacturing process when given information such as part design, material, and production quantity
Audience: Undergraduate

3. Use terminology that relates to manufacturing systems design and analysis
Audience: Undergraduate

4. Examine manufacturing system performance by applying analytical techniques such as line balancing, manufacturing system benchmarking, inventory models, and queuing formulas
Audience: Undergraduate

5. Utilize computer-aided design and manufacturing software to display part geometry and create toolpaths for a CNC program
Audience: Undergraduate

I SY E 417 – HEALTH SYSTEMS ENGINEERING
3 credits.

Introduction to the application of industrial engineering methods to the analysis and improvement of health care delivery. Exploration of common problems of decision making and control in health care. Examination of social, regulatory and economic factors unique to health care.
Requisites: I SY E 320 and 349, graduate/professional standing, or member of Engineering Guest Students, or declared in Clinical and Community Outcomes Capstone Certificate
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe and explain the purpose of the various components that make-up many health systems including public health agencies (e.g., CDC), hospital systems, emergency medical services (e.g., 9-1-1), healthcare providers, and health insurance
Audience: Undergraduate

2. Identify problems within health systems that may be amenable to industrial engineering tools
Audience: Undergraduate

3. Apply industrial systems engineering concepts and tools (e.g., regression, queueing theory, simulation, cost-benefit analysis, and machine learning) to specific problems in healthcare
Audience: Undergraduate

I SY E/COMP SCI/MATH 425 – INTRODUCTION TO COMBINATORIAL OPTIMIZATION
3 credits.

Focuses on optimization problems over discrete structures, such as shortest paths, spanning trees, flows, matchings, and the traveling salesman problem. We will investigate structural properties of these problems, and we will study both exact methods for their solution, and approximation algorithms.
Requisites: (MATH 320, 340, 341, or 375) or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and use the structural properties of combinatorial optimization problems
Audience: Undergraduate

2. Apply algorithms for the solution -exact or approximate- of a combinatorial optimization problem
Audience: Undergraduate

3. Explain why the algorithms studied are correct and understand their running time
Audience: Undergraduate

I SY E 445 – ENGINEERING SUPPLY CHAIN MANAGEMENT FOR LOGISTICS
3 credits.

Concepts from optimization, stochastics, and statistics to model different problems in the context of logistics decision making. Application of engineering design principles in combination with mathematical modeling techniques to solve problems in supply chain design, planning, execution, and transportation.
Requisites: (I SY E 210, MATH/STAT 310, STAT 312, 324, or 340) and (I SY E 323 or I SY E/COMP SCI/E C E 524), graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Learning Outcomes: 1. Explain common supply chain management terminology and concepts used in industry settings
Audience: Undergraduate

2. Evaluate supply chain strategies and policies based on the two key drivers of supply chains: cost efficiency and responsiveness
Audience: Undergraduate

3. Apply mathematical modeling of inventory management, transportation, and network design problems to real world settings
Audience: Undergraduate

4. Design holistic supply chain strategies drawing from multiple mathematical models to successfully meet business goals
Audience: Undergraduate

I SY E 450 – INDUSTRIAL ENGINEERING DESIGN II
3 credits.

Team-based project experience to address a real-world design challenge posed by an external organization. Collaboration with the project client to design a new system or process, or redesign an existing one, by integrating and applying appropriate Industrial and Systems Engineering knowledge, methodologies and tools for problem definition and analysis; idea generation; solution development, evaluation and justification; and implementation planning and impact assessment.
Requisites: Senior standing only, I SY E 313, 320, 323, 350, and PSYCH/ I SY E 349
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Employ design thinking, and engage the client in the creative process for problem space exploration and idea generation
Audience: Undergraduate

2. Utilize a structured modeling, analysis and decision#making framework to design a new system or process, or re#design an existing one
Audience: Undergraduate

3. Choose, synthesize and effectively utilize appropriate ISyE methods, concepts, engineering standards, and modeling and analysis tools in all facets of the project lifecycle
Audience: Undergraduate

4. Adjust and be flexible with design strategy and adapt it suitably to address unanticipated issues during project execution
Audience: Undergraduate

5. Hone skills in teamwork, oral and written communication, and project management
Audience: Undergraduate

I SY E 468 – INTRODUCTION TO INDUSTRIAL ENGINEERING RESEARCH
1 credit.

An introduction to the practice of conducting research in industrial engineering, literature reviews, identifying gaps in existing work, writing a research proposal.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Conduct a literature review
Audience: Undergraduate

2. Identify gaps in existing research
Audience: Undergraduate

3. Describe characteristics of a good research question
Audience: Undergraduate

4. Write a proposal to address an open research question
Audience: Undergraduate

5. Describe some current active research areas in industrial engineering
Audience: Undergraduate

I SY E 478 – RESEARCH AND BEYOND IN INDUSTRIAL ENGINEERING
1 credit.

An introduction of skills required for successful research in graduate school. Preparing for graduate thesis writing, applying for graduate school, presenting research in a variety of ways. How to foster mental health and work-life balance.
Requisites: I SY E 468
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Prepare materials for graduate program applications, such as a personal statement
Audience: Undergraduate

2. List key elements of research ethics and common pitfalls in different types of research
Audience: Undergraduate

3. Make a poster summarizing completed and/or in-progress work
Audience: Undergraduate

4. Give a technical presentation summarizing completed and/or in-progress work
Audience: Undergraduate

5. Critique technical research presentations
Audience: Undergraduate

6. List strategies for maintaining healthy work-life balance in graduate school
Audience: Undergraduate

I SY E 489 – HONORS IN RESEARCH
1-3 credits.

Undergraduate honors research projects supervised by faculty members.
Requisites: Declared in Industrial Engineering Honors in Research
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Conduct and report on independent industrial engineering research
Audience: Undergraduate

2. Independently develop industrial engineering research questions
Audience: Undergraduate

3. Appropriately utilize online and library resources
Audience: Undergraduate

I SY E/M E 510 – FACILITIES PLANNING
3 credits.

Introduction to plant location theory and analysis of models of plant location; models for determining plant size and time phasing; line balancing models; techniques for investigating conveyor and other material handling problems; and models of plant layout.
Requisites: I SY E 315, (I SY E 323 or E C E/COMP SCI/I SY E 524) and I SY E/PSYCH 349, or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify, formulate, and solve facilities layout problems by applying principles of engineering and mathematics
Audience: Both Grad & Undergrad

2. Apply engineering design to produce facilities design solutions that meet specified needs with consideration of productivity, safety, and economic factors
Audience: Both Grad & Undergrad

3. Utilize computer software to study and illustrate the operation of a manufacturing system
Audience: Both Grad & Undergrad

4. Collaborate with a team to develop solutions to engineering problems and communicate findings effectively
Audience: Both Grad & Undergrad

5. Demonstrate ability to lead a facilities planning project integrating quantitative techniques and management tools
Audience: Graduate

I SY E/M E 512 – INSPECTION, QUALITY CONTROL AND RELIABILITY
3 credits.

Inspection data for quality control; sampling plans for acceptance inspection; charts for process control. Introduction to reliability models and acceptance testing.
Requisites: (STAT/MATH 309, STAT 311, 224, 324, or STAT/MATH 431), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply statistical process control analysis for measuring and controlling quality
Audience: Undergraduate

2. Recognize, formulate, and analyze univariate continuous and discrete control charts
Audience: Undergraduate

3. Use Minitab to perform basic statistical process control analysis
Audience: Undergraduate

4. Communicate the results of the statistical process control analysis to management and other non-specialist users of engineering analyses
Audience: Undergraduate

5. Recognize, formulate, and analyze advanced continuous control charts
Audience: Graduate

6. Perform process capability and measurement system capability analysis

Audience: Graduate

I SY E 515 – ENGINEERING MANAGEMENT OF CONTINUOUS PROCESS IMPROVEMENT
3 credits.

Addresses the role of the industrial engineer as a "manager" of continuous improvement in design and production processes. Provides modern tools and techniques for planning and managing team projects, integrating the concepts of total quality, data based decision making, and resource management.
Requisites: Senior standing and INTEREGR 397 (formerly E P D 397) or concurrent enrollment, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe and explain the nature of and tools for change management and continual process improvement
Audience: Both Grad & Undergrad

2. Experience the role of the industrial and systems engineer as a “manager" of continual process improvement
Audience: Both Grad & Undergrad

3. Work effectively on a team-based experiential project focused on process design, analysis, and resource management and integrating the concepts of continual improvement, customer focus, and teamwork
Audience: Both Grad & Undergrad

4. Implement technical skills and processes, often with a non-technical workforce
Audience: Both Grad & Undergrad

5. Apply problem solving and management/planning tools for effectively defining problems, feasible alternative solutions, and measurable goals in a “real world” environment
Audience: Both Grad & Undergrad

6. Identify the impact of organizational and cultural influences on the planning and implementation of change
Audience: Both Grad & Undergrad

7. Demonstrate ability to lead an industry-based team project integrating contemporary change management frameworks and considering organizational culture
Audience: Graduate

I SY E 516 – INTRODUCTION TO DECISION ANALYSIS
3 credits.

Overview of modeling techniques and methods used in decision analysis, including multiattribute utility models, decision trees, and Bayesian models. Psychological components of decision making are discussed. Elicitation techniques for model building are emphasized. Practical applications through real world model building are described and conducted.
Requisites: (STAT/MATH 309, STAT 311, or STAT/MATH 431), graduate/professional standing, member of Engineering Guest Students, or declared in Capstone Certificate in Artificial Intelligence for Engineering Data Analytics
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize the types of problems that decision analysis can and cannot solve
Audience: Both Grad & Undergrad

2. Structure decision problems by identifying the relevant values, objectives, attributes, decisions, uncertainties, consequences, and trade-offs
Audience: Both Grad & Undergrad

3. Represent aspects of a decision problem graphically or mathematically
Audience: Both Grad & Undergrad

4. Determine the optimal decision, using mathematical techniques as appropriate
Audience: Both Grad & Undergrad

5. Identify which parameters have the most impact on the result
Audience: Both Grad & Undergrad

6. Explain the results of a decision analysis to managers and other non-specialists
Audience: Both Grad & Undergrad

7. Articulate mathematical foundations of decision problems
Audience: Graduate

I SY E 517 – DECISION MAKING IN HEALTH CARE
3 credits.

Introduction to the use of decision sciences in health-care. Conceptual understanding of medical decision making and its tools including decision trees, sensitivity analysis, Markow (decision) processes, and Monte Carlo simulations with examples from the current medical literature.
Requisites: (STAT/MATH 309, STAT 311, or STAT/MATH 431) and (I SY E 323 or E C E/COMP SCI/I SY E 524), or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain how decision sciences are used in the health-care industry
Audience: Both Grad & Undergrad

2. Describe concepts related to medical decision making and cost-effectiveness analysis
Audience: Both Grad & Undergrad

3. Apply technical skills in decision analysis including the creation and evaluation of decision trees, the use of sensitivity analysis, and the use of Markov processes and Monte Carlo simulation
Audience: Both Grad & Undergrad

4. Incorporate specific patient preferences into medical decision models through the use of utility analysis
Audience: Both Grad & Undergrad

5. Identify and apply an advanced decision analytical modeling framework to solve medical decision making problems
Audience: Graduate

I SY E/COMP SCI/DS 518 – WEARABLE TECHNOLOGY
3 credits.

Gives students hands-on experience in building wearable computing platforms. Designed for students who have a background in textiles and apparel design, computer science, engineering or media arts. By the completion of the course students will have fundamental knowledge of electronic circuitry, programming, and "maker skills".
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022

I SY E 520 – QUALITY ASSURANCE SYSTEMS
3 credits.

Introduces engineers to applications of total quality concepts and tools to develop, implement, and maintain an effective quality assurance system in a manufacturing or service organization. Emphasis is on documentation development, team-based improvement strategies, and international quality standards.
Requisites: Junior standing and I SY E 315, or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe and apply the basic elements of quality and environmental management systems, including the requirements and certification process of international standards such as ISO 9001 and ISO 14001 and industry-specific applications of these standards
Audience: Both Grad & Undergrad

2. Apply concepts and tools in the development, implementation, and maintenance of effective quality and environmental management systems in manufacturing and service organizations, including various approaches for management system documentation structure
Audience: Both Grad & Undergrad

3. Describe and explain strategic and competitive considerations in management system implementation and maintenance, including risk-based thinking and continual improvement
Audience: Both Grad & Undergrad

4. Develop and apply auditing techniques and skills
Audience: Both Grad & Undergrad

5. Demonstrate ability to synthesize and apply requirements for quality and environmental management considering organizational strategy, culture and constraints
Audience: Graduate

I SY E 521 – MACHINE LEARNING IN ACTION FOR INDUSTRIAL ENGINEERS
3 credits.

Principles, algorithms, and industrial engineering applications of machine learning. Predictive analytics, with a focus on combining data and models to improve decision-making. Methods include: statistics, linear regression, logistic regression, regularization, over-fitting, clustering, classification and regression trees, boosting, bagging, deep learning, and neural networks. Applications areas include: healthcare, transportation, and the public sector.
Requisites: (COMP SCI 200, 220, or place into COMP SCI 300), (I SY E 323 or I SY E/COMP SCI/E C E 524), and (I SY E 210, STAT 311, 324, STAT/MATH 309, or 431), grad/prof standing, member of Engr Guest Stdnts, or declared in Capstone Cert in AI for Engr Data Analytics
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify problems amenable to machine learning and the techniques required to solve those problems (regression vs. classification, regularization, bagging vs. boosting, etc.)
Audience: Both Grad & Undergrad

2. Apply appropriate analytical models to solve problems and improve decision-making using Python
Audience: Both Grad & Undergrad

3. Effectively communicate findings through both oral and written formats

Audience: Both Grad & Undergrad

4. Demonstrate an understanding of how industrial engineering techniques (e.g., optimization) are used to train machine learning models
Audience: Graduate

I SY E/COMP SCI/E C E 524 — INTRODUCTION TO OPTIMIZATION
3 credits.

Introduction to mathematical optimization from a modeling and solution perspective. Formulation of applications as discrete and continuous optimization problems and equilibrium models. Survey and appropriate usage of basic algorithms, data and software tools, including modeling languages and subroutine libraries.
Requisites: (COMP SCI 200, 220, 300, 301, 302, 310, or placement into COMP SCI 300) and (MATH 320, 340, 341, or 375) or graduate/professional standing
Course Designation: Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Engage in topics about "optimization in practice".
Audience: Undergraduate

2. Use and analyze the results of state of the art optimization software.
Audience: Undergraduate

3. Use the GAMS modeling system and Jupyter notebooks (in conjunction with elementary Python) or Julia and JUMP.
Audience: Undergraduate

4. Design good models for realistic applications in engineering and the sciences.
Audience: Undergraduate

5. Develop a "commercial strength" application of optimization technology.
Audience: Undergraduate

I SY E/COMP SCI/MATH/STAT 525 — LINEAR OPTIMIZATION
3 credits.

Introduces optimization problems whose constraints are expressed by linear inequalities. Develops geometric and algebraic insights into the structure of the problem, with an emphasis on formal proofs. Presents the theory behind the simplex method, the main algorithm used to solve linear optimization problems. Explores duality theory and theorems of the alternatives.
Requisites: MATH 320, 340, 341, 375, or 443 or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use linear programming to formulate real world decision problems.
Audience: Both Grad & Undergrad

2. Apply algorithms to solve linear programming problems and demonstrate their correctness.
Audience: Both Grad & Undergrad

3. Combine different proving techniques explored in class in an original way to show new results.
Audience: Graduate

I SY E/COMP SCI 526 – ADVANCED LINEAR PROGRAMMING
3 credits.

Review of linear programming. Polynomial time methods for linear programming. Quadratic programs and linear complementarity problems and related solution techniques. Solution sets and their continuity properties. Error bounds for linear inequalities and programs. Parallel algorithms for linear and quadratic programs.
Requisites: STAT/COMP SCI/I SY E/MATH 525 and (COMP SCI 200, 220, 300, 301, 302, 310, or placement into COMP SCI 300) or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2020
Learning Outcomes: 1. Use the theory of linear programming to prove general duality results
Audience: Undergraduate

2. Apply the concept of complementarity
Audience: Undergraduate

3. Analyze and develop algorithms for solving optimization and equilibrium problems
Audience: Undergraduate

4. Apply decomposition methods and other advanced algorithms for the solution of optimization and equilibrium problems
Audience: Undergraduate

5. Understand economic concepts and how they relate to optimization and equilibria
Audience: Undergraduate

6. Extend theory of linear programming into the framework of conic programming
Audience: Undergraduate

I SY E/PSYCH 549 – HUMAN FACTORS ENGINEERING
3 credits.

Analysis and design of man-machine systems using human performance models and data. Emphasis on systems involving communication and control. Projects using digital and analog computer simulation techniques for system design.
Requisites: I SY E/PSYCH 349, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Explain the topics involved in cognitive human factors and design implications of these concepts
Audience: Both Grad & Undergrad

2. Describe the interactions between human operators and system components including the environment, technology, and organizations
Audience: Both Grad & Undergrad

3. Discuss different human factors perspectives regarding human error and limitations of human performance, especially as these relate to memory, decision-making, action selection, and workload and stress
Audience: Both Grad & Undergrad

4. Identify barriers and limitations to memory and how these must be accounted for in design of systems and displays
Audience: Both Grad & Undergrad

5. Articulate the role of simulation and modeling in system design involving human operators
Audience: Both Grad & Undergrad

6. Use cognitive engineering analysis methods to complete a detailed analysis of a real incident or accident including outlining each layer and component of system failure and proposing possible redesign solutions
Audience: Graduate

I SY E 552 – HUMAN FACTORS ENGINEERING DESIGN AND EVALUATION
3 credits.

Evaluation, analysis, and design recommendations for improving human performance and productivity in applied settings. Collection of instrument-based and user survey data. Emphasis on ergonomics, human factors and sociotechnical systems engineering approaches and problems. Design project required.
Requisites: I SY E/PSYCH 349 and INTEREGR 397 (formerly E P D 397) or concurrent enrollment or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020
Learning Outcomes: 1. Apply observation and interview skills to understand customer needs and system interactions
Audience: Both Grad & Undergrad

2. Translate observation and interview data into models of customer requirements and system constraints
Audience: Both Grad & Undergrad

3. Communicate model content to the customer and to marketing, engineering, management, and other members of the design team
Audience: Both Grad & Undergrad

4. Translate work models into aesthetically appealing and functional design concepts and prototypes
Audience: Both Grad & Undergrad

5. Evaluate and iterate prototype designs into a system that satisfies customer requirements
Audience: Both Grad & Undergrad

6. Design a user study to resolve a design issue, such as the choice of opt-in or opt-out default
Audience: Graduate

I SY E 555 – HUMAN PERFORMANCE AND ACCIDENT CAUSATION
3 credits.

A systems view of accident causation, with emphasis on the human performance limitations important in industrial and other accidents. Models of causation, data collection systems, economic evaluation, and safety programs. Small group projects.
Requisites: I SY E/PSYCH 349, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the rules and regulations governing accident investigations in different industries including transportation and healthcare
Audience: Both Grad & Undergrad

2. Describe the standard process for conducting an accident investigation
Audience: Both Grad & Undergrad

3. Describe basic accident investigation tools, methods and techniques
Audience: Both Grad & Undergrad

4. Discuss different human factors perspectives regarding the underlying causes of errors and accidents
Audience: Both Grad & Undergrad

5. Identify different approaches for redesigning systems to improve safety

Audience: Both Grad & Undergrad

6. Utilize accident investigation methods and tools to analyze a major accident to determine causes and corrective actions
Audience: Graduate

I SY E 557 – HUMAN FACTORS ENGINEERING FOR HEALTHCARE SYSTEMS
3 credits.

Introduction to the application of Human Factors Engineering theory and methods to the analysis and improvement of healthcare delivery systems.
Requisites: PSYCH/I SY E 349, or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Explain Human Factors Engineering theories and methods as they pertain to the evaluation and design of healthcare sociotechnical systems
Audience: Both Grad & Undergrad

2. Select and critically evaluate the utility of key Human Factors Engineering concepts and tools for assessing and modeling healthcare delivery challenges in sociotechnical systems
Audience: Both Grad & Undergrad

3. Identify the impact of changes to the healthcare sociotechnical system at the individual and organizational level
Audience: Both Grad & Undergrad

4. Apply a Human Factors Engineering-based sociotechnical system approach to evaluate and design interaction between users and information technologies
Audience: Both Grad & Undergrad

5. Demonstrate the use of Human Factors Engineering techniques in solving healthcare delivery problems within the organizational, social, and physical contexts in information system design
Audience: Both Grad & Undergrad

6. Demonstrate ability to independently evaluate Human Factors Engineering research in healthcare
Audience: Graduate

I SY E 562 – HUMAN FACTORS OF DATA SCIENCE AND MACHINE LEARNING
3 credits.

An examination of the "human side" of data science. Issues of bias, fairness, trust, and understandability. Unique characteristics of behavioral data, such as representative sampling, human adaptation, and grouped data. Practical skills in behavioral data analytics with a focus on important conceptual, design, and ethical issues specific to behavioral data. Survey of machine learning techniques including supervised learning, unsupervised learning, reinforcement learning, deep learning, and text analysis. Methods are contextualized through engineering case studies.
Requisites: (I SY E 210, E C E 331, MATH/STAT 310, STAT 312, or 340), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Consider human values and behavior in developing and using machine learning models
Audience: Both Grad & Undergrad

2. Apply a human-centered design process to data and algorithm-intensive products
Audience: Both Grad & Undergrad

3. Describe the basic elements of machine learning and their limits
Audience: Both Grad & Undergrad

4. Analyze a case study of machine learning deployed by a company and discuss strengths and limits of the deployment using the concepts of the course.
Audience: Graduate

I SY E/B M E 564 – OCCUPATIONAL ERGONOMICS AND BIOMECHANICS
3 credits.

Introduces engineers how to design manufacturing and industrial operations in which people play a significant role, so that human capabilities are maximized, physical stress is minimized, and workload is optimized. Examples and topics emphasize industrial applications.
Requisites: PSYCH/I SY E 349 or B M E 315, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Evaluate jobs, equipment, tools, products, and environments, in which people play a significant role, for health and safety hazards and the risk of injuries and illnesses
Audience: Both Grad & Undergrad

2. Devise how to reduce or eliminate physical stresses and the risk of injuries and illnesses in jobs, equipment, tools, products, and environments

Audience: Both Grad & Undergrad

3. Design jobs, workspaces and products for a diverse work population, to accommodate the variability of human dimensions strength, endurance, and physical capacity to do work
Audience: Both Grad & Undergrad

4. Design jobs equipment, tools, products, and environments so that human capabilities are maximized, physical stress is minimized, and workload is optimized
Audience: Both Grad & Undergrad

5. Identify fundamental physiological principles and biomechanical theories that are germane to the evaluation, design and reduction or elimination of stresses and strain in jobs, equipment, tools, products, and environments
Audience: Graduate

I SY E/E C E 570 – ETHICS OF DATA FOR ENGINEERS
3 credits.

Introduction to ethical issues in data engineering and principled solutions. Algorithmic fairness (individual fairness, group fairness, counterfactual fairness), differential privacy and its applications, and robustness.
Requisites: (I SY E 521, 562, M E/COMP SCI/E C E 532, or 539) and (E C E 331, MATH/STAT 309, STAT 311, MATH 331, or STAT/MATH 431), or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the importance of ethical data science/engineering
Audience: Both Grad & Undergrad

2. Identify challenges of trustworthy data use in engineering such as fairness, privacy, and robustness
Audience: Both Grad & Undergrad

3. Apply the definitions of trustworthy data engineering to real-world datasets
Audience: Both Grad & Undergrad

4. Analyze the data analysis pipelines and evaluate the trustworthiness of their outcomes
Audience: Both Grad & Undergrad

5. Create proper data analysis pipelines with ethical considerations
Audience: Both Grad & Undergrad

6. Implement cutting-edge techniques to enhance the fairness, privacy, and robustness of data analysis processes
Audience: Graduate

7. Conduct independent research on emerging challenges in ethical data engineering
Audience: Graduate

I SY E/N E 574 – METHODS FOR PROBABILISTIC RISK ANALYSIS OF NUCLEAR POWER PLANTS
3 credits.

Methods for risk and reliability analysis of engineered systems, particularly as applied in the nuclear power industry. Fault trees and event trees, Bayesian data analysis, probabilistic risk management. Some familiarity with nuclear plant safety systems is helpful, but not required.
Requisites: (STAT/MATH 309, STAT 311, 224, 324, or STAT/MATH 431), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Correctly apply methods of fault tree, event-tree, data, and uncertainty analysis to evaluate potential risks of engineering systems
Audience: Both Grad & Undergrad

2. Recognize, formulate, and analyze risks of engineered systems
Audience: Both Grad & Undergrad

3. Explain the results of risk analysis to managers and other non-specialist decision-makers
Audience: Graduate

I SY E 575 – INTRODUCTION TO QUALITY ENGINEERING
3 credits.

Introduction to statistically based quality improvement methods useful in industrial settings; observational methods and design of experiments; experimentation to discover influential factors and to analyze sources of variation; robust products.
Requisites: (I SY E 210, MATH/STAT 310, STAT 312 or concurrent enrollment), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Design experiments for various phases of engineering work, including new product design and development, process development, manufacturing process improvement, and health systems design and improvement
Audience: Both Grad & Undergrad

2. Analyze the results of experiments conducted at different phases of engineering work
Audience: Both Grad & Undergrad

3. Apply data analysis skills in statistical methodologies, graphical displays, and visual and inferential interpretations
Audience: Both Grad & Undergrad

4. Work effectively in an experiential project focused on applying appropriate statistical tools and techniques
Audience: Both Grad & Undergrad

5. Explain the eight phases of Six Sigma and apply these steps to a wide range of actual situations
Audience: Both Grad & Undergrad

6. Demonstrate ability to synthesize applications of statistical methodologies via analysis of current literature and case studies
Audience: Graduate

I SY E 601 – SPECIAL TOPICS IN INDUSTRIAL ENGINEERING
1-3 credits.

In various areas. Sample topics: "Simulation" and "Systems Design".
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2020

I SY E 602 – SPECIAL TOPICS IN HUMAN FACTORS
3 credits.

Various special topics in human factors engineering. Course topic may vary from semester to semester. Different versions of this course may be offered in same semester.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and describe key theories, concepts, and methods in human factors engineering
Audience: Both Grad & Undergrad

2. Apply key theories, concepts, and methods in human factors engineering, using appropriate tools, processes, and/or software
Audience: Both Grad & Undergrad

3. Apply, analyze, or evaluate advanced theories, concepts, or methods in human factors engineering
Audience: Graduate

I SY E 603 – SPECIAL TOPICS IN ENGINEERING ANALYTICS AND OPERATIONS RESEARCH
1-3 credits.

Various special topics in engineering analytics and operations research, such as machine learning, data management and analysis, optimization, etc.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and describe key theories, concepts, and methods in engineering analytics and operations research
Audience: Both Grad & Undergrad

2. Apply key theories, concepts, and methods in engineering analytics and operations research, using appropriate tools, processes, and/or software
Audience: Both Grad & Undergrad

3. Apply, analyze, or evaluate advanced theories, concepts, or methods in engineering analytics and operations research
Audience: Graduate

I SY E 604 – SPECIAL TOPICS IN MANUFACTURING AND SUPPLY CHAIN MANAGEMENT
1-3 credits.

Various special topics in manufacturing systems and supply chain management, such as digital manufacturing technologies, Internet of Things (IoT), supply chain, etc.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and describe key theories, concepts, and methods in manufacturing and supply chain management
Audience: Both Grad & Undergrad

2. Apply key theories, concepts, and methods in manufacturing and supply chain management, using appropriate tools, processes, and/or software
Audience: Both Grad & Undergrad

3. Apply, analyze, or evaluate advanced theories, concepts, or methods in manufacturing and supply chain management
Audience: Graduate

I SY E 605 – COMPUTER INTEGRATED MANUFACTURING
3 credits.

An introduction to computer-integrated design and manufacturing with a focus on manufacturing process planning. Emphasis on concurrent engineering principles, manufacturing process engineering, computer-aided process planning, NC programming, and CAM integration. Course provides experience with CAM software and NC machines.
Requisites: I SY E 315, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Identify and formulate manufacturing process and system level problems by applying principles of engineering and mathematics
Audience: Both Grad & Undergrad

2. Design the geometry of a mechanical component and develop computer code needed to fabricate the component
Audience: Both Grad & Undergrad

3. Apply principles of engineering and mathematics to solve process- and system-level problems such as setting process parameters and evaluating the system performance
Audience: Both Grad & Undergrad

4. Demonstrate ability to combine different modeling and analysis methods explored in the class for manufacturing processes and systems to achieve strategies for performance improvement
Audience: Graduate

I SY E 606 – SPECIAL TOPICS IN HEALTHCARE SYSTEMS ENGINEERING
1-3 credits.

Various special topics in healthcare systems engineering, such as human factors in healthcare settings, operations research applied to healthcare, etc.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Identify and describe key theories, concepts, and methods in healthcare systems engineering
Audience: Both Grad & Undergrad

2. Apply key theories, concepts, and methods in healthcare systems engineering, using appropriate tools, processes, and/or software
Audience: Both Grad & Undergrad

3. Apply, analyze, or evaluate advanced theories, concepts, or methods in healthcare systems engineering
Audience: Graduate

I SY E/PHARMACY 608 – SAFETY AND QUALITY IN THE MEDICATION USE SYSTEM
3 credits.

Addresses the problems of medication errors and quality in health care, problem resolutions, methods of assessment, and intervention implementation and quality management.
Requisites: Declared in Doctor of Pharmacy program with third year standing
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize types, sources, and contributors to error within the medication use system.
Audience: Undergraduate

2. Explain the influence of work systems and human factors on the development of safe processes for improving safety within the medication use system.
Audience: Undergraduate

3. Apply tools for identifying, analyzing, and anticipating errors within the medication use system (e.g., error reporting systems, root cause analysis, failure modes and effects analysis) and use these to develop safer processes.
Audience: Undergraduate

4. Describe characteristics of healthcare settings that contribute to improved quality and how pharmacists can influence the characteristics.
Audience: Undergraduate

5. Explain how quality indicators are developed, measured, and monitored in the US healthcare system.
Audience: Undergraduate

6. Describe and apply economic evaluation and pharmacoeconomic principles to evaluate pharmacy programs and drug products.
Audience: Undergraduate

I SY E 612 – INFORMATION SENSING AND ANALYSIS FOR MANUFACTURING PROCESSES
3 credits.

Focuses on the sensing and multivariate data modeling and analysis techniques for monitoring, diagnosis, and quality improvement of manufacturing processes. The techniques introduced can find wide applications in health care, financial engineering, service industry applications, human factors, etc.
Requisites: I SY E/M E 512, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Perform data analysis and propose quality improvement plans
Audience: Both Grad & Undergrad

2. Develop, implement, and interpret advanced control charts for monitoring continuous and discrete quality characteristics and multivariate systems
Audience: Both Grad & Undergrad

3. Implement appropriate data reduction and data processing methods in statistical process control
Audience: Both Grad & Undergrad

4. Apply methods and tools to a real problem-solving experience via a course project
Audience: Graduate

I SY E 615 – PRODUCTION SYSTEMS CONTROL
3 credits.

An intermediate to advanced course stressing the application of recent operations research techniques to production planning, scheduling and inventory control.
Requisites: I SY E 315, 320, and 323 and (STAT/MATH 310, STAT 312 or STAT/MATH 431), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply knowledge of math, science, and engineering principles to solve manufacturing, service, business, or societal operations problems
Audience: Both Grad & Undergrad

2. Identify, formulate, and solve manufacturing and service operations problems using appropriate data and analytics approaches
Audience: Both Grad & Undergrad

3. Identify opportunities and apply engineering solutions for system productivity and quality improvement
Audience: Both Grad & Undergrad

4. Apply the techniques, skills, and tools for engineering practice, such as modeling, design, simulation, and management
Audience: Both Grad & Undergrad

5. Apply advanced skills and tools for analysis, control and optimization of manufacturing and service systems operations
Audience: Graduate

I SY E 618 – QUALITY ENGINEERING AND QUALITY MANAGEMENT
3 credits.

Strategic quality planning, change management, problem identification and solving, process improvement, and performance evaluation. Business and decision-making skills related to quality systems and process improvement.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Work effectively on a team-based experiential project focused on process design, analysis, and resource management and integrating the concepts of continual improvement, customer focus, and teamwork
Audience: Graduate

2. Apply problem solving and management/planning tools for effectively defining problems, feasible alternative solutions, and measurable goals in a real-world environment
Audience: Graduate

3. Demonstrate ability to lead an industry-based team project integrating contemporary change management frameworks and considering organizational culture
Audience: Graduate

4. Apply the basics of Factorial Design of Experiments (DOE) as a statistical tool for continuous process improvement
Audience: Graduate

I SY E 620 – SIMULATION MODELING AND ANALYSIS
3 credits.

Introduction to simulation modeling and analysis techniques with application to production, logistics, service, and other systems. Emphasis on model building, application of basic statistical data analysis, and the use of simulation for design, evaluation, and improvement of such systems. Introduction to available software. Case studies.
Requisites: (COMP SCI 200, 220, 300, 301, 302, or placement into COMP SCI 300) and (STAT 224, 312, 324, or STAT/MATH 310), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Identify the major capabilities and limitations of discrete-event simulation for modeling types of systems that industrial engineers commonly encounter
Audience: Both Grad & Undergrad

2. Model and run discrete-event simulation in practical situations
Audience: Both Grad & Undergrad

3. Identify the main assumptions underlying simulation models, and what can happen when these assumptions do not hold
Audience: Both Grad & Undergrad

4. Apply the results of the modeling process to management and other non-specialist users of engineering analyses
Audience: Both Grad & Undergrad

5. Apply experimental design or data analytics for systems comparison and output analysis of the simulation models
Audience: Both Grad & Undergrad

6. Apply simulation input/output techniques to model complicated stochastic systems such as manufacturing production systems and health care systems
Audience: Graduate

I SY E 624 – STOCHASTIC MODELING TECHNIQUES
3 credits.

Techniques for modeling systems in which uncertainty is an essential factor. Emphasizes why, how and when techniques can or cannot be applied, rather than their mathematical derivation. Case studies and/or examples from such areas as logistics, production, and service industries.
Requisites: (STAT/MATH 309, 311, or STAT/MATH 431) and (MATH 320, 340, 341, or 375), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and interpret basic concepts of probability, including random variables, and conditional probability, expectation, and variance
Audience: Both Grad & Undergrad

2. Analyze probability models such as the Markov chains, the exponential distribution, Poisson processes, and queuing models
Audience: Both Grad & Undergrad

3. Identify, formulate, and develop solution techniques for problems that can be modeled by stochastic models in various domains (engineering, computer science, supply chains, healthcare systems, operations research)

Audience: Both Grad & Undergrad

4. Recognize how and when to apply each type of probability model
Audience: Both Grad & Undergrad

5. Formulate mathematical formulations and apply proof techniques
Audience: Graduate

I SY E 625 – LOGISTICS SYSTEMS DESIGN
3 credits.

Practical methods for the planning, design and evaluation of complex logistics and distribution systems. Modeling techniques and solution approaches that reduce cumbersome details of logistics systems into models with a manageable number of parameters and decision variables. It shows how the solutions to these models are interpreted into optimal rules that guide the operation, design or planning process. Practical methods for the planning, design and evaluation of complex logistics and distribution systems. Modeling techniques and solution approaches that reduce cumbersome details of logistics systems into models with a manageable number of parameters and decision variables. It shows how the solutions to these models are interpreted into optimal rules that guide the operation, design or planning process. Builds on knowledge of introductory programming such as Python, Matlab, or R.
Requisites: (I SY E 323 or E C E/COMP SCI/I SY E 524) and (I SY E 210, E C E 331, MATH/STAT 310, STAT 312, 324, or 340), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Identify decision problems for typical logistics systems
Audience: Both Grad & Undergrad

2. Establish optimization models for typical logistics systems
Audience: Both Grad & Undergrad

3. Use multiple methods to solve logistics system models
Audience: Both Grad & Undergrad

4. Explain the insights of solutions and apply them in realistic situations
Audience: Graduate

I SY E/MATH/OTM/STAT 632 – INTRODUCTION TO STOCHASTIC PROCESSES
3 credits.

Topics include discrete-time Markov chains, Poisson point processes, continuous-time Markov chains, and renewal processes. Applications to queueing, branching, and other models in science, engineering and business.
Requisites: (STAT/MATH 431, 309, STAT 311 or MATH 531) and (MATH 320, 340, 341, 375, 421 or 531) or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall and state the formal definitions of the mathematical objects and their properties for stochastic processes (e.g., discrete space Markov chains, Poisson processes, renewal processes, branching processes, etc.).
Audience: Both Grad & Undergrad

2. Use such definitions to argue that a mathematical object does or does not have the condition of being a particular type or having a particular property (e.g., irreducibility, aperiodicity, recurrence, transience, the Markov property, etc.).
Audience: Both Grad & Undergrad

3. Recall and state the standard theorems of stochastic processes. (e.g., laws of large numbers for Markov chains, existence of limiting/stationary distributions, law of large numbers for renewal processes, etc.) and recall the arguments for these theorems and the underlying logic of their proofs.

Audience: Both Grad & Undergrad

4. Construct mathematical arguments related to the above definitions, properties, and theorems, including the construction of examples and counterexamples.
Audience: Both Grad & Undergrad

5. Convey arguments in oral and written forms using English and appropriate mathematical terminology, notation and grammar.
Audience: Both Grad & Undergrad

6. Model simple real life situations by means of discrete-space stochastic processes and calculate probabilities associated with those processes.
Audience: Both Grad & Undergrad

7. Identify applications of course content in current areas of research.
Audience: Graduate

I SY E/M E 641 – DESIGN AND ANALYSIS OF MANUFACTURING SYSTEMS
3 credits.

Covers a broad range of techniques and tools relevant to the design, analysis, development, implementation, operation and control of modern manufacturing systems. Case studies assignments using industry data will be used to elaborate the practical applications of the theoretical concepts.
Requisites: I SY E 315, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify suitable analysis techniques to investigate processes related to manufacturing, planning, engineering or office operations within a manufacturing firm
Audience: Both Grad & Undergrad

2. Perform analysis to describe, predict and analyze behavior of a manufacturing system to meet desired managerial and economic objectives for a real-world or realistic manufacturing systems improvement project/case study
Audience: Both Grad & Undergrad

3. Develop recommendations that will improve manufacturing system performance (e.g. reduce flow time, increase throughput)
Audience: Both Grad & Undergrad

4. Collaborate effectively in teams to develop solutions to engineering problems and communicate findings effectively
Audience: Both Grad & Undergrad

5. Reflect on personal strengths and weaknesses with respect to team leadership and project management
Audience: Graduate

I SY E/M E 643 – PERFORMANCE ANALYSIS OF MANUFACTURING SYSTEMS
3 credits.

Examines the state of the art in the use of stochastic network theory to develop performance models of modern manufacturing systems.
Requisites: (I SY E 624 or STAT/I SY E/MATH/OTM 632) and (COMP SCI 200, 220, 300, 301, 302, 400, or placement into COMP SCI 300), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021
Learning Outcomes: 1. Model a variety of manufacturing problems as stochastic models using Markov Chain and Process theory
Audience: Both Grad & Undergrad

2. Identify the basic assumptions underlying stochastic models and understand what can happen when these assumptions do not hold
Audience: Both Grad & Undergrad

3. Apply queueing theory to model manufacturing systems
Audience: Both Grad & Undergrad

4. Apply the line balancing method for assembly systems design
Audience: Both Grad & Undergrad

5. Perform cost analysis for manufacturing systems
Audience: Both Grad & Undergrad

6. Apply the analytical approaches of performance analysis for manufacturing systems to real industry cases
Audience: Both Grad & Undergrad

7. Apply advanced Markov process method to solve complicated performance evaluation problems encountered in manufacturing production systems
Audience: Graduate

I SY E 645 – ENGINEERING MODELS FOR SUPPLY CHAINS
3 credits.

Provides an overview of engineering fundamentals behind supply chains. Topics covered will include modeling and design of multi-stage production distribution systems, multi-echelon inventory models, theory of supply chain contracts, value of flexibility and information sharing in supply chains.
Requisites: I SY E 323 and I SY E 415, or graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Apply multiple forecasting methods for customer demand
Audience: Undergraduate

2. Identify and apply multiple inventory management models
Audience: Undergraduate

3. Identify the limitation of models and tune them for realistic cases
Audience: Undergraduate

4. Create and present reports for realistic inventory management policy
Audience: Undergraduate

5. Demonstrate ability to lead a team project to optimize realistic supply chain decisions with analytical tools and numerical simulation
Audience: Undergraduate

I SY E 649 – INTERACTIVE DATA ANALYTICS
3 credits.

A cognitive engineering approach to human-computer interaction and data visualization in particular. Includes a four-part description of effective visualization: design intent, data and application domain, representation and interface features, and human limits and capabilities. The philosophical perspective, scientific basis, and practical tools for effective data visualization and visual analytics. Data processing and how to create static graphs as well as web-based interactive visualizations using the statistical language R.
Requisites: I SY E/PSYCH 349 and (I SY E 210, E C E 331, MATH/STAT 310, STAT 312, 324, or 340), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Approach visualization as a design process, using the critical response process and paper prototypes
Audience: Both Grad & Undergrad

2. Design visualizations for different audiences and different purposes
Audience: Both Grad & Undergrad

3. Use the concepts of abstraction and aggregation to translate raw data into meaningful information
Audience: Both Grad & Undergrad

4. Use the flexibility of the grammar of graphics to craft graphs for effective communication
Audience: Both Grad & Undergrad

5. Develop replicable data analyses and visualizations with R and RShiny
Audience: Both Grad & Undergrad

6. Create specialized data analytic visualizations such as time series decompositions and ROC curves
Audience: Graduate

I SY E/PSYCH 653 – ORGANIZATION AND JOB DESIGN
3 credits.

Design of productive organizations and people's roles within them. Issues including boundary location, organizational decision levels, autonomous work groups, implementation and diffusion. Roles of the union. Case studies.
Requisites: I SY E/PSYCH 349, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Apply the work system model
Audience: Both Grad & Undergrad

2. Apply a variety of models and theories of job and organization design to answer questions such as, "What makes for a good job?" and "What makes for a bad job?"
Audience: Both Grad & Undergrad

3. Apply interview and survey methods for analyzing jobs
Audience: Both Grad & Undergrad

4. Identify approaches to implement job redesign
Audience: Both Grad & Undergrad

5. Identify societal trends related to job design
Audience: Both Grad & Undergrad

6. Identify similarities and differences between various models and theories of job and organization design
Audience: Graduate

I SY E/B M E 662 – DESIGN AND HUMAN DISABILITY AND AGING
3 credits.

Design of products for persons with physical, sensory or cognitive impairments is covered as well as the design of standard mass market products. Interdisciplinary teams explore specific disabilities, then design a standard mass market product in competition with each other.
Requisites: Junior standing or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain the access and usability issues that users with physical, sensory, or cognitive impairments due to age or permanent or temporary disability might experience when interacting with everyday products and environmental designs
Audience: Both Grad & Undergrad

2. Apply human factors principles of universal design to describe redesign solutions for common products and environmental designs to improve accessibility for all users
Audience: Both Grad & Undergrad

3. Identify barriers to access for users based on specific disabilities
Audience: Both Grad & Undergrad

4. Articulate common misconceptions and biases related to users with disabilities and use various data sources to discuss the reality of designing for users with disabilities or impairments
Audience: Both Grad & Undergrad

5. Identify usability issues for mass-market products and environmental designs using universal design and basic access principles
Audience: Both Grad & Undergrad

6. Propose methods for improving accessibility and usability using universal design and basic access principles
Audience: Both Grad & Undergrad

7. Articulate how social, institutional, and organizational structures and insufficiently designed systems and environments disadvantage various user groups, with special focus on aging and disabled users
Audience: Graduate

I SY E 699 – ADVANCED INDEPENDENT STUDY
1-5 credits.

Under faculty supervision.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Conduct and report on graduate-level industrial engineering research
Audience: Graduate

2. Independently develop industrial engineering research questions
Audience: Graduate

3. Appropriately utilize online and library resources
Audience: Graduate

I SY E 702 – GRADUATE COOPERATIVE EDUCATION PROGRAM
1-2 credits.

Work experience that combines classroom theory with practical knowledge of operations to provide students with a background on which to develop and enhance a professional career. The work experience is tailored for MS students from within the U.S. as well as eligible international students.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and respond appropriately to real-life engineering ethics cases relevant to co-op work
Audience: Graduate

2. Synthesize and apply appropriate technical education to real world technical work
Audience: Graduate

3. Communicate effectively in writing and speaking with a range of audiences in the workplace, including those without disciplinary expertise
Audience: Graduate

4. Develop professional and transferable habits like time management skills, collaborative problem-solving skills, and research skills for learning new information
Audience: Graduate

I SY E/POP HLTH 703 – QUALITY OF HEALTH CARE: EVALUATION AND ASSURANCE
1-3 credits.

Implementation, oversight, and management of quality-oriented activities in health care settings. Overview of current and historical activities, approaches, and issues confronting health care related to quality assessment, assurance, and improvement.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2018
Learning Outcomes: 1. Understand and communicate the conceptualization and measurement of quality of healthcare and patient safety.
Audience: Graduate

2. Illustrate basic concepts and methods in quality improvement as applied to current issues in healthcare.
Audience: Graduate

3. Demonstrate an understanding of the diverse perspectives that can be used to address quality and safety issues in different healthcare organizations.
Audience: Graduate

I SY E/C&E SOC/N E/SOC 708 – SOCIETAL RISK MANAGEMENT OF TECHNOLOGICAL HAZARDS
3 credits.

Issues involved in decision-making regarding technological risks and risk management in areas such as nuclear power, hazardous waste disposal, and pollution control. Risk perception and cognitive biases; risk analysis and decision analysis; political issues in risk management; regulatory mechanisms; and risk communication. Selected case studies.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020

I SY E/COMP SCI 719 – STOCHASTIC PROGRAMMING
3 credits.

Stochastic programming is concerned with decision making in the presence of uncertainty, where the eventual outcome depends on a future random event. Topics include modeling uncertainty in optimization problems, risk measures, stochastic programming algorithms, approximation and sampling methods, and applications. Students are strongly encouraged to have knowledge of linear programming (e.g., MATH/COMP SCI/I SY E/STAT 525) and probability and statistics (e.g., MATH/STAT 431). Knowledge of integer optimization (MATH/COMP SCI/I SY E 728) is helpful, but not required.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Learn the terms, basic capabilities, and limitations of stochastic programming models
Audience: Graduate

2. Formulate stochastic programming models
Audience: Graduate

3. Implement the algorithms used to solve stochastic programming problems
Audience: Graduate

4. Learn principles of decomposition algorithms for solving large-scale optimization problems
Audience: Graduate

I SY E/INFO SYS 722 – COMPUTER-BASED DATA MANAGEMENT
3 credits.

Use, control and administration of centralized and distributed data bases. Topics include the definition, design, creation, revision, interrogation, update, security and integrity of data bases.
Requisites: Graduate/professional standing and INFO SYS 371
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2020

I SY E/COMP SCI 723 – DYNAMIC PROGRAMMING AND ASSOCIATED TOPICS
3 credits.

General and special techniques of dynamic programming developed by means of examples. Shortest-path algorithms. Deterministic equipment replacement models. Resource allocation problem. Traveling-salesman problem. Knapsack problem. Analysis of inventory systems. General stochastic formulations. Markovian decision processes. Students are strongly encouraged to have knowledge of mathematical optimization (e.g., COMP SCI/I SY E/MATH/STAT 525, I SY E 623, COMP SCI/I SY E/MATH/STAT 726), knowledge of analysis (e.g., MATH/STAT 431 or 521) and programming ability (e.g., COMP SCI 200 or 301)
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify basic components, such as the state space, of a dynamic program
Audience: Graduate

2. Formulate and solve dynamic programs under different performance criteria such as finite horizon discounted reward/cost criteria
Audience: Graduate

3. Apply dynamic programming tools and concepts in `traditional' industrial engineering applications such as supply chain, manufacturing, and healthcare
Audience: Graduate

I SY E/COMP SCI/MATH/STAT 726 – NONLINEAR OPTIMIZATION I
3 credits.

Theory and algorithms for nonlinear optimization, focusing on unconstrained optimization. Line-search and trust-region methods; quasi-Newton methods; conjugate-gradient and limited-memory methods for large-scale problems; derivative-free optimization; algorithms for least-squares problems and nonlinear equations; gradient projection algorithms for bound-constrained problems; and simple penalty methods for nonlinearly constrained optimization. Students are strongly encouraged to have knowledge of linear algebra and familiarity with basic mathematical analysis.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

I SY E/COMP SCI 727 – CONVEX ANALYSIS
3 credits.

Convex sets in finite-dimensional spaces: relative interiors, separation, set operations. Convex functions: conjugacy, subdifferentials and directional derivations, functional operations, Fenchel-Rockafellar duality. Applications to operations research and related areas. Students taking this course are strongly encouraged to have had a course in basic analysis (e.g. MATH 521) and a course in linear algebra (e.g., MATH 340).
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

I SY E/COMP SCI/MATH 728 – INTEGER OPTIMIZATION
3 credits.

Introduces optimization problems over integers, and surveys the theory behind the algorithms used in state-of-the-art methods for solving such problems. Special attention is given to the polyhedral formulations of these problems, and to their algebraic and geometric properties. Applicability of Integer Optimization is highlighted with applications in combinatorial optimization. Key topics include: formulations, relaxations, polyhedral theory, cutting planes, decomposition, enumeration. Students are strongly encouraged to have knowledge of Linear Programming (e.g., MATH/COMP SCI/I SY E/STAT 525), including algorithms, duality and polyhedral theory.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe and explain the basics of polyhedral theory, which consists in the study of systems of linear inequalities both from an algebraic and a geometric point of view
Audience: Graduate

2. Define perfect formulations and identify what properties are desirable in an integer programming formulation of a problem
Audience: Graduate

3. Explain how valid inequalities can be used as cutting planes to strengthen integer programming formulations
Audience: Graduate

I SY E/M H R 729 – BEHAVIORAL ANALYSIS OF MANAGEMENT DECISION MAKING
3 credits.

Examination of behavioral science literature dealing with the processes by which individuals, small groups and organizations make decisions. Understanding decision-making behavior in order to improve managerial performance; modeling decision-making processes for systems design and theory building purposes. Knowledge of statistics strongly encouraged such as STAT 301.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022
Learning Outcomes: 1. Evaluate behavioral science literature on individual, group, and organizational decision-making
Audience: Graduate

2. Apply decision-making models to improve managerial performance, system design, and theory development
Audience: Graduate

3. Identify key challenges in behavioral decision-making and their implications for leadership and policy
Audience: Graduate

I SY E/COMP SCI/MATH 730 – NONLINEAR OPTIMIZATION II
3 credits.

Theory and algorithms for nonlinearly constrained optimization. Relevant geometric concepts, including tangent and normal cones, theorems of the alternative, and separation results. Constraint qualifications. Geometric and algebraic expression of first-order optimality conditions. Second-order optimality conditions. Duality. Nonlinear programming algorithms: merit functions and filters; interior-point, augmented Lagrangian, and sequential quadratic programming algorithms.
Requisites: STAT/COMP SCI/I SY E/MATH 726
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022

I SY E 790 – MASTER'S RESEARCH AND THESIS
1-9 credits.

Directed Master's-level research projects as arranged with instructor.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate an ability to formulate, analyze, and independently solve advanced industrial engineering problems
Audience: Graduate

2. Communicate research results in writing and/or technical presentations
Audience: Graduate

I SY E 823 – SPECIAL TOPICS IN OPERATIONS RESEARCH
1-3 credits.

Subjects vary.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2021
Learning Outcomes: 1. Apply advanced operations research tools to solve a variety of industrial engineering problems
Audience: Graduate

2. Analyze rigorously the methods used in operations research
Audience: Graduate

I SY E/PSYCH 854 – SPECIAL TOPICS IN ORGANIZATION DESIGN
1-3 credits.

Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2020
Learning Outcomes: 1. Apply advanced organizational design tools to solve a variety of industrial engineering problems
Audience: Graduate

2. Analyze rigorously the methods used in organizational design
Audience: Graduate

I SY E/PSYCH 859 – SPECIAL TOPICS IN HUMAN FACTORS ENGINEERING
1-3 credits.

Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

I SY E/POP HLTH 875 – COST EFFECTIVENESS ANALYSIS IN HEALTH AND HEALTHCARE
3 credits.

Basic ideas and tools of cost effectiveness analysis as applied in evaluating medical technologies. Addresses special problems and methods in assessing diagnostic technologies, including ROC analysis, and in measuring health for technology assessment. Uses "classical" and current journal literature.
Requisites: SOC/POP HLTH 797 and POP HLTH/B M I 552
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply basic concepts of economic analysis to the assessment of medical technologies and healthcare interventions more broadly
Audience: Graduate

2. Examine health outcomes on a range from objective measures of physical systems to subjective preference-based measures of health utility and describe the benefits and limitations of using quality-adjusted life years (QALYs) as a health outcome measure
Audience: Graduate

3. Explain why we seek to obtain estimates of the "opportunity cost" of using health care resources, describe the process of "costing" in economic assessments of medical technologies and identify useful sources of information for obtaining cost information (and their limitations)
Audience: Graduate

4. Describe how primary data from randomized controlled trials and observational studies can be designed to assess medical technologies and explain the advantages and disadvantages of different designs in terms of their internal and external validity and decision-relevance
Audience: Graduate

5. Describe how evidence from secondary data can be integrated using meta-analysis and decision-analytic modeling methods to assess medical technologies and demonstrate basic ability to design and execute simple decision tree and Markov models for cost-effectiveness analysis
Audience: Graduate

I SY E 890 – PRE-DISSERTATOR'S RESEARCH
1-9 credits.

Directed PhD-level research projects as arranged with faculty advisor.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate an ability to formulate, analyze, and independently solve advanced industrial engineering problems
Audience: Graduate

2. Communicate research results in writing and/or technical presentations
Audience: Graduate

I SY E 961 – GRADUATE SEMINAR IN INDUSTRIAL ENGINEERING
1-3 credits.

Topics vary.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and describe modern challenges in industrial engineering
Audience: Graduate

I SY E 990 – RESEARCH AND THESIS
1-6 credits.

Directed PhD-level research projects as arranged with faculty advisor.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate an ability to formulate, analyze, and independently solve advanced industrial engineering problems
Audience: Graduate

2. Communicate research results in writing and/or technical presentations
Audience: Graduate

I SY E 999 – ADVANCED INDEPENDENT STUDY
1-6 credits.

Under faculty supervision.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2022
Learning Outcomes: 1. Conduct and report on graduate-level industrial engineering research
Audience: Graduate

2. Independently develop industrial engineering research questions
Audience: Graduate

3. Appropriately utilize online and library resources
Audience: Graduate

INFORMATION SYSTEMS (INFO SYS)

INFO SYS 322 – INTRODUCTION TO DATABASES
3 credits.

Introduction to database management systems with a focus on relational databases. Covers designing, creating, populating, managing, and retrieving data from databases. SQL will be used with a focus on querying for business applications and intelligence, data retrieval for summary reports, and data visualization. Offers a brief introduction to non-relational databases for business applications.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Implement data modeling and relationships in relational database management systems.
Audience: Undergraduate

2. Use Create, Read, Update and Delete (CRUD) operations in SQL-like databases.
Audience: Undergraduate

3. Query, create reports and use data visualization for business intelligence.
Audience: Undergraduate

4. Identify how professionals use and interact with databases in the workplace.
Audience: Undergraduate

INFO SYS 352 – DIGITAL STRATEGY
3 credits.

Focus on the economic and technical concepts behind emerging information systems. Industry cases covering platforms, online markets, artificial intelligence, and business analytics. Caters to interests in technology consulting.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize emerging technologies in information systems and their underlying economic concepts.
Audience: Undergraduate

2. Analyze industry examples of corporate strategies to best adopt, implement, maintain and grow investments in digitization.
Audience: Undergraduate

3. Communicate the technical, social, and economic implications of digital technology investment effectively.
Audience: Undergraduate

4. Identify and evaluate reliable information and data sources for advances in digital technologies.
Audience: Undergraduate

INFO SYS 365 – CONTEMPORARY TOPICS
1-3 credits.

Exploration of subject areas possibly to be introduced into the business curriculum.
Requisites: Sophomore standing or declared in undergraduate Business Exchange program
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

INFO SYS 371 – TECHNOLOGY OF COMPUTER-BASED BUSINESS SYSTEMS
3 credits.

Focus is on developing applications and business information systems on the web using a variety of programming languages and tools. Emphasis on deployment as well as design concepts.
Requisites: COMP SCI 301 or 220
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate principles of professional quality web page development and deployment.
Audience: Undergraduate

2. Apply mechanisms of web page development including front end presentation, access control for an application back-end, and the management of information exchange.
Audience: Undergraduate

3. Articulate how to use computer technologies to link business data and decision needs to web-based system design.
Audience: Undergraduate

INFO SYS 423 – DIGITAL PLATFORM ANALYTICS
3 credits.

An introduction to data analysis procedures covering topics including: data collection, pre-processing, analysis, and presentation. Content covers important data analysis concepts, such as structured and unstructured data. Learn about supervised, unsupervised learning methods and advanced analytics topics, such as text mining, recommendation systems, and algorithm bias.
Requisites: None
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize and apply fundamental data analysis procedures, including data collection, pre-processing, analysis, and presentation.
Audience: Undergraduate

2. Analyze structured and unstructured data in a variety of contexts.
Audience: Undergraduate

3. Develop supervised and unsupervised data mining skills, including linear regression, logistics regression, decision tree, KNN, K-means, and simple text mining techniques.
Audience: Undergraduate

4. Evaluate data analysis frontiers, including recommendation systems, data ethics, privacy, and algorithm bias.
Audience: Undergraduate

INFO SYS 424 – SYSTEMS ANALYSIS AND DESIGN
3 credits.

Applied principles and techniques of information systems development including requirements identification and analysis, process and data modeling, team communication and collaboration, and system testing.
Requisites: INFO SYS 322 (422 prior to Fall 2023) and INFO SYS 371
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate how to manage data, model information, and apply appropriate information technology to create effective business solutions
Audience: Undergraduate

2. Demonstrate how to use computer technologies to analyze business problems and processes
Audience: Undergraduate

3. Describe the Systems Development Life Cycle (SDLC) as a comprehensive project management framework for the analysis, design, and implementation of computer-based solutions
Audience: Undergraduate

4. Design and implement computer-based information systems which support business operations, decision-making, and planning
Audience: Undergraduate

5. Develop proficiency in project management and communication skills for the management of information systems
Audience: Undergraduate

INFO SYS/I SY E 722 – COMPUTER-BASED DATA MANAGEMENT
3 credits.

Use, control and administration of centralized and distributed data bases. Topics include the definition, design, creation, revision, interrogation, update, security and integrity of data bases.
Requisites: Graduate/professional standing and INFO SYS 371
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2020

INFO SYS 723 – TEXT ANALYTICS AND BUSINESS APPLICATION
3 credits.

An introduction to text mining and natural language processing for business applications. Provides an overview of text data and steps to make it usable and approaches for making text data useful in descriptive and predictive analytics applications. Topics include representation approaches, topic modeling, and an overview of key applications of natural language processing, such as chatbots and recommender systems.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Retrieve, assemble, and clean text data for use in analytics applications.
Audience: Graduate

2. Utilize text representation approaches, including the bag of words and Term Frequency - Inverse Document Frequency (TF-IDF), for visualizing text data.
Audience: Graduate

3. Build classification and regression models using features created from text data.
Audience: Graduate

4. Utilize Latent Dirichlet Application (LDA) for topic modeling in the context of a business application.
Audience: Graduate

INFO SYS 765 – CONTEMPORARY TOPICS
1-3 credits.

Exploration of subject areas possibly to be introduced into the business curriculum.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

INTEGRATED ARTS (INTEGART)

INTEGART 110 – THE STUDIO SEMINAR: MAPPING YOUR CREATIVE PRACTICE
1 credit.

Residents of The Studio: Creative Arts Community engage in an interdisciplinary hands-on approach to the creative arts and gain familiarity with the wide variety of arts disciplines on campus.
Requisites: Member of The Studio: Creative Arts Community
Repeatable for Credit: No
Last Taught: Fall 2025

INTEGART 112 – THE STUDIO PRESENTS
1 credit.

The residents of The Studio: Creative Arts Community engage in an interdisciplinary, hands-on experience of creative arts and professional practice, including developing and showing their original work in the local community.
Requisites: Member of The Studio: Creative Arts Community
Repeatable for Credit: No
Last Taught: Spring 2025

INTEGART 310 – INTERDISCIPLINARY ARTIST IN RESIDENCE STUDIO
1-3 credits.

Guest artists will offer interdisciplinary studio courses on topics appropriate to their specializations. See go.wisc.edu/artsresidency for information on specific residencies.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

INTEGART 312 – INTERDISCIPLINARY ARTIST IN RESIDENCE LECTURE
1-3 credits.

Guest artists will offer interdisciplinary courses on topics appropriate to their specializations. see go.wisc.edu/artsresidency for information on specific residencies. Requisites vary according to topic
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2018

INTEGART 330 – SPECIAL TOPICS IN INTEGRATED ARTS
1-3 credits.

Specialized subject matter in the areas of interdisciplinary or integrated arts. Requisite varies according to topic.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2021

INTEGART 610 – INTERDISCIPLINARY ARTIST IN RESIDENCE STUDIO
1-3 credits.

Guest artists will offer interdisciplinary studio courses on topics appropriate to their specializations. See go.wisc.edu/artsresidency for information on specific residencies.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2021

INTEGART 612 – INTERDISCIPLINARY ARTIST IN RESIDENCE LECTURE
1-3 credits.

Guest artists will offer interdisciplinary lecture courses on topics appropriate to their specializations. See go.wisc.edu/artsresidency for information on specific residencies.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2018

INTEGART/M H R 632 – INTRODUCTION TO ARTS ENTREPRENEURSHIP
3 credits.

An overview and foundation in preparation for developing, launching, or advancing innovative projects in arts, culture, design, and humanities. Learn the unique contexts and challenges of creative careers. Develop creative project goals while gaining an understanding of the nature and structure of arts entrepreneurship in a variety of sectors - for-profit, nonprofit, government, and hybrid.
Requisites: Sophomore standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize and equitable entrepreneurship opportunities in arts and cultural expression through projects, partnerships, initiatives, and organizations.
Audience: Both Grad & Undergrad

2. Assess challenges and opportunities in the arts and cultural sector and develop them into project business plans.
Audience: Both Grad & Undergrad

3. Analyze case studies that lead to the discovery, acquisition, and alignment of key resources necessary for a concept's success (time, money, space, equipment, talent.)
Audience: Graduate

4. Communicate and present a clear and compelling project plan which includes narrative, budget, marketing plan, fund development plan, and the accompanying strategies in written and spoken form.
Audience: Both Grad & Undergrad

5. Evaluate a project's outcomes in ways that consider equity, inclusivity, and diversity as a measure of current and future success.
Audience: Both Grad & Undergrad

6. Illustrate acquired skills and learning by creating a web-based professional portfolio with work samples.
Audience: Both Grad & Undergrad

INTEGART/M H R 636 – ENTREPRENEURSHIP IN ARTS & CULTURAL ORGANIZATIONS
3 credits.

Become familiar with basic entrepreneurship principles and value proposition design techniques in social entrepreneurship settings with attention to the perspective of arts and cultural organizations. Content includes business model development, customer-driven innovation, lean startup practices, organizational capacity for entrepreneurial action, team performance, the structure of alliances and partnerships and funding mechanisms in the sector.
Requisites: Junior standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and describe the key elements of a value proposition canvas
Audience: Both Grad & Undergrad

2. Articulate the role of mission statements in social-purpose organizations, implications of entity choices, and sources of funding for nonprofit and related organizations in the arts and cultural space
Audience: Both Grad & Undergrad

3. Identify and analyze business models used in the creative economy across nonprofit and social-purpose organizations
Audience: Both Grad & Undergrad

4. Define the design thinking problem-solving approach and outline key elements of the process
Audience: Both Grad & Undergrad

5. Apply appropriate research methods (ethnographic versus market research) and invoke related tools (literature reviews, observational note-taking, etc.) to help test hypothesis in the development of new products/services for arts and cultural organizations
Audience: Both Grad & Undergrad

6. Analyze arguments about the role of entrepreneurial action and funding for arts and cultural organizations in the context of other disciplinary approaches in the visual and performing arts, design, and related fields
Audience: Graduate

7. Design a value proposition canvas for an entrepreneurial cultural/creative organization in the Madison community that will inform product/service development for a distinct customer segment.
Audience: Both Grad & Undergrad

8. Rapidly test emergent ideas in the field with (potential) customers using a design thinking approach that includes creation of "prototypes" (storyboards, role play, 3D printed objects, etc.) and interpretation of results
Audience: Both Grad & Undergrad

9. Make connections between the world of ideas and concepts with day-to-day issues and concerns in cultural/creative organizations. Where possible, encourage/highlight/expose new connection points (e.g., "I never thought of it that way...")
Audience: Both Grad & Undergrad

10. Develop teamwork, written and oral communication skills
Audience: Both Grad & Undergrad

INTEGRATED LIBERAL STUDIES (ILS)

ILS 109 – EXPLORING INTERDISCIPLINARY STUDIES IN LITERATURE
3 credits.

Explore the social, historical, and political contexts of literature and literary analysis from an interdisciplinary perspective.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Identify methods of literary study
Audience: Undergraduate

2. Recognize the principles of literary analysis
Audience: Undergraduate

3. Develop an introductory understanding of how the study of literature relates to other academic disciplines (such as sociology, history and/or political science)
Audience: Undergraduate

4. Develop an introductory understanding of how the study of literature relates to the study of other cultural artifacts (such as film)
Audience: Undergraduate

5. Think critically about the complexities of one's own culture compared with larger global communities
Audience: Undergraduate

6. Develop an appreciation of the complexities of the interpretative process within historical and cultural contexts
Audience: Undergraduate

ILS 110 – EXPLORING INTERDISCIPLINARY STUDIES IN THE HUMANITIES
3-4 credits.

An introductory seminar that explores how people make meaning across times, cultures, media, and disciplines.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and explain how people make meaning across times, cultures, media, and disciplines at an elementary level
Audience: Undergraduate

2. Critically analyze diverse approaches to how people make meaning in past and present at an elementary level.
Audience: Undergraduate

3. Begin to recognize and synthesize diverse types of knowledge and disciplinary approaches to how people make meaning.
Audience: Undergraduate

ILS/ENVIR ST 126 — PRINCIPLES OF ENVIRONMENTAL SCIENCE
4 credits.

Relates principles of environmental science to our daily activities, with an eye to sustainability, conservation, and systems thinking. Introduces science as a process of inquiry and discovery rather than just a pre-established set of facts. Topics relate to energy, water, and land use, and include food, electric power, materials, buildings, transportation, and waste.
Requisites: None
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply foundational principles of Environmental Science to practices such as sustainability, conservation, and systems thinking
Audience: Undergraduate

2. Practice science as a process of inquiry and discovery, using the UW-Madison campus as a living laboratory
Audience: Undergraduate

3. Connect campus systems to wider environmental issues relating to energy, water, land use, and waste
Audience: Undergraduate

4. Analyze sustainability issues and practices using a systems-based approach
Audience: Undergraduate

5. Explain the social, economic, and environmental dimensions of the sustainability challenges of operating a large public research institution
Audience: Undergraduate

ILS 153 — WAYS OF KNOWING IN THE SCIENCES
4 credits.

Introduces science as a process of inquiry and discovery, not as a pre-established set of facts. Emphasizes hands-on learning in both laboratory and lecture environments with small group work and interactive discussion.
Requisites: None
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and explain how scientists make sense of the natural world.
Audience: Undergraduate

2. Identify and evaluate the use of evidence-based arguments in science, including quantitative, spatial, and statistical thinking.
Audience: Undergraduate

3. Critically analyze what science is and what it is not.
Audience: Undergraduate

4. Demonstrate the ability to recognize sloppy, or fake, science on the basis of logical reasoning.
Audience: Undergraduate

5. Distinguish between scientific ways of knowing and other ways of knowing.
Audience: Undergraduate

6. Explain how science interacts with economics, social norms, culture, politics, and religion, all of which affects both the trajectories and public perceptions of scientific inquiry.
Audience: Undergraduate

7. Recognize the role of, and need for, scientific knowledge in human flourishing.
Audience: Undergraduate

ILS 198 — DIRECTED STUDY
1-3 credits.

Individual mentored study with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2009

ILS 199 – DIRECTED STUDY
1-3 credits.

Individual mentored study with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2015

ILS 200 – CRITICAL THINKING AND EXPRESSION
3 credits.

Explores the three modes of argument and expression: verbal, visual, numerical. Engages in critical thinking about how these modes are structured and used. Practice in, and interpretation of, the three modes.
Requisites: Satisfied Communications A requirement
Course Designation: Gen Ed - Communication Part B
Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and explain how people think critically and analytically across times, cultures, media, and disciplines.
Audience: Undergraduate

2. Critically analyze diverse approaches to how people communicate in written and oral modes.
Audience: Undergraduate

3. Apply critical and analytical thinking to written and oral modes of communication.
Audience: Undergraduate

4. Recognize and evaluate diverse types of critical thought across many different modes of expression, including written, oral, artistic, and mass media.
Audience: Undergraduate

ILS 201 – WESTERN CULTURE: SCIENCE, TECHNOLOGY, PHILOSOPHY I
3 credits.

Western science and technology in the making. Major developments viewed in philosophical and social context, from antiquity to 17th century.
Requisites: Not open to students with credit for HIST SCI 201.
Course Designation: Breadth - Natural Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and explain critical developments in how the natural world has been analyzed and understood across premodern and early modern times and cultures.
Audience: Undergraduate

2. Identify and explain how science and its history have served a wide range of purposes in the premodern and early modern periods.
Audience: Undergraduate

3. Recognize and evaluate how premodern and early modern science has been deeply shaped by its historical, social, cultural, intellectual, and material contexts.
Audience: Undergraduate

4. Interpret and evaluate historical sources to construct persuasive arguments concerning science and its history in the premodern and early modern periods.
Audience: Undergraduate

ILS 202 – WESTERN CULTURE: SCIENCE, TECHNOLOGY, PHILOSOPHY II
3 credits.

Western science and technology in the making. Major developments viewed in philosophical and social context from the 17th to early twentieth century.
Requisites: Not open to students with credit for HIST SCI 202 or 404
Course Designation: Breadth - Natural Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and explain critical developments in how the natural world has been analyzed and understood in early modern and modern periods and cultures.
Audience: Undergraduate

2. Identify and explain how science and its history have served a wide range of purposes in early modern and modern periods.
Audience: Undergraduate

3. Recognize and evaluate how early modern and modern science has been deeply shaped by its historical, social, cultural, intellectual, and material contexts.
Audience: Undergraduate

4. Interpret and evaluate historical sources to construct persuasive arguments concerning science and its history in the early modern and modern periods.
Audience: Undergraduate

ILS 203 – WESTERN CULTURE: LITERATURE AND THE ARTS I
3 credits.

The development of literature and the arts in the ancient and medieval world, including Akhenaton's Egypt, Homer's Troy, Euripides' Athens, Virgil's Rome, and Dante's Florence. Literature and art in the context of society and ideas.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate an understanding of major cultures, events, art, and literature within the ancient and premodern history of the Mediterranean world and the Near East.
Audience: Undergraduate

2. Demonstrate skills in critical reading, thinking, and communication about literature, art, and culture.
Audience: Undergraduate

3. Evaluate and critique the historical conditions that shape your own worldview through the humanistic study of ancient and premodern cultures.
Audience: Undergraduate

4. Demonstrate critical acumen, cultural sensitivity, empathy, curiosity, and intellectual grounding through the study of ancient and premodern art, literature, and culture..
Audience: Undergraduate

ILS 204 – WESTERN CULTURE: LITERATURE AND THE ARTS II
3-4 credits.

The development of literature and the arts from the Renaissance to the modern period, including such figures as Shakespeare and Michelangelo through T.S. Eliot and Picasso. Literature and art in the context of society and ideas.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze and evaluate early modern and modern art and literature in relation to the cultures that produced them.
Audience: Undergraduate

2. Demonstrate an understanding of historical and contemporary interpretations of early modern and modern art and literature.
Audience: Undergraduate

3. Demonstrate an understanding of the way that culture shapes the form, content, interpretation, and reception of art and literature.
Audience: Undergraduate

4. Critically evaluate both the contributions and shortcomings of "Western" culture and its history.
Audience: Undergraduate

5. Analyze, evaluate, and integrate multi-disciplinary approaches to human endeavor.
Audience: Undergraduate

ILS 205 – WESTERN CULTURE: POLITICAL, ECONOMIC, AND SOCIAL THOUGHT I
3 credits.

The development of Western political, economic and social thought, from its origins in classic Greece and the Judaeo-Christian tradition, through Rome and the Medieval period, to the Renaissance and Reformation.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Identify and explain critical developments in the history of western social, economic, and political thought from antiquity through the Middle Ages.
Audience: Undergraduate

2. Interpret and evaluate ideas and arguments from western social, economic, and political thought from antiquity through the Middle Ages.
Audience: Undergraduate

3. Recognize and evaluate how ancient and medieval social, economic, and political thought interacted with its historical context.
Audience: Undergraduate

ILS 206 – WESTERN CULTURE: POLITICAL, ECONOMIC, AND SOCIAL THOUGHT II
3 credits.

The development of Western political, economic and social thought from the Reformation to the present day: the origins, logic and evolution of liberalism, Marxism, and organic conservatism as the principal systems of thought of the modern age.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Identify and explain critical developments in the history of western social, economic, and political thought from the Renaissance through the 19th or 20th centuries.
Audience: Undergraduate

2. Interpret and evaluate ideas and arguments from western social, economic, and political thought from the Renaissance through the 19th or 20th centuries.
Audience: Undergraduate

3. Recognize and evaluate how Renaissance and modern, economic, and political thought interacted with its historical context.
Audience: Undergraduate

ILS/RELIG ST 234 – GENRES OF WESTERN RELIGIOUS WRITING
3 credits.

Explores literary forms through which religions originating in western culture convey ideas. Focuses on Jewish, Christian, Muslim and related religious texts.
Requisites: Satisfied Communications A requirement
Course Designation: Gen Ed - Communication Part B
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Identify and explain significant genres of religious writing.
Audience: Undergraduate

2. Identify ways in which written religious expressions are employed and deployed across various contexts and themes, such as pluralism, authority, race, identity, and violence.
Audience: Undergraduate

3. Demonstrate proficiency in close reading, interpretation, and written and oral analysis
Audience: Undergraduate

4. Demonstrate proficiency in categorizing, analyzing, and comparing diverse systems of value and belief in a variety of contexts.
Audience: Undergraduate

ILS 253 – LITERATURE AND SOCIETY
3 credits.

Representative episodes in the interaction of literature and society, organized either around a set of social institutions and their literary connections or around a set of literary forms and their social connections.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze literary works from an interdisciplinary perspective with an emphasis on their interaction with society, including social institutions.
Audience: Undergraduate

2. Identify and explain historical and cultural developments in the interrelationship between literature and society.
Audience: Undergraduate

3. Demonstrate an understanding of how literature and society interact.
Audience: Undergraduate

4. Critically assess literary representations of society and its institutions.
Audience: Undergraduate

ILS 254 – LITERATURE AND SCIENCE
3 credits.

Examination of the interactions between science, technology, and literature.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024
Learning Outcomes: 1. Analyze literary and dramatic works from an interdisciplinary perspective with an emphasis on the role and place of the scientific content therein.
Audience: Undergraduate

2. Identify and explain developments in the history of science and their relationship to and place in literary and dramatic works.
Audience: Undergraduate

3. Demonstrate an understanding of how literature, art, and science interact.
Audience: Undergraduate

4. Critique literary and dramatic representations of scientific issues.
Audience: Undergraduate

5. Formulate creative responses to scientific ideas and their representation in dramatic and literary works.
Audience: Undergraduate

ILS/ENVIR ST 255 — INTRODUCTION TO SUSTAINABILITY SCIENCE
4 credits.

Explore the foundations of sustainability using the UW-Madison campus as a living laboratory. Ground your feet on the UW-Madison campus and ask questions about the energy we use, the food we eat, the air we breathe, the land we occupy, the goods we purchase, and the waste we create. A blend of environmental sciences and studies. Use principles of chemistry, physics, and biology to understand the dynamics of our human and earth systems, but also explore societal issues like public health and social justice, all through the context of sustainability and the UW-Madison campus community.
Requisites: None
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify drivers of climate change and describe effects both locally and globally
Audience: Undergraduate

2. Explain sustainability as depicted in models of the Triple Bottom Line
Audience: Undergraduate

3. Explain the sustainability challenges of operating a large public research institution, making connections from local to national and global contexts
Audience: Undergraduate

4. Analyze top-down versus bottom-up approaches to addressing sustainability issues on our campus and in the wider world
Audience: Undergraduate

5. Describe the intersection of sustainability goals with issues relating to communities of color and First Nations communities, particularly in Dane County and Wisconsin
Audience: Undergraduate

6. Value the human and natural capital necessary to sustain our life support systems on this planet
Audience: Undergraduate

ILS 275 — SPECIAL TOPICS IN INTEGRATED LIBERAL STUDIES
3 credits.

Interdisciplinary themes and issues from the Integrated Liberal Studies (ILS) program.
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2018
Learning Outcomes: 1. Identify and explain how people make meaning across times, cultures, media, and disciplines at an intermediate level.
Audience: Undergraduate

2. Critically analyze diverse approaches to how people make meaning in past and present at an intermediate level.
Audience: Undergraduate

3. Recognize and synthesize diverse types of knowledge and disciplinary approaches to how people make meaning at an intermediate level.
Audience: Undergraduate

ILS 298 — DIRECTED STUDY
1-3 credits.

Individual mentored study with a faculty member, at the intermediate level.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No

ILS 299 — DIRECTED STUDY
1-3 credits.

Individual mentored study with a faculty member, at the intermediate level.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

ILS/LITTRANS/SCAND ST 321 – HUMANS AND OTHER ANIMALS IN NORDIC LITERATURE AND FILM
3 credits.

Engage with major questions in the field of animal studies while studying a variety of Nordic texts that center the animal, including novels, tales, and feature and documentary films. Through fiction, film, and theory, tackle questions such as: What distinguishes humans from animals? Can humans speak for animals, and should they try? And, what can Nordic literature and film teach us about humans and other animals in the Anthropocene?
Requisites: Satisfied Communications A requirement or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Identify and critically engage with major questions in the field of animal studies in a Nordic context in class discussion, in writing assignments, and on exams.
Audience: Both Grad & Undergrad

2. Interpret film and literature in their cultural and historical contexts in class discussion, in writing assignments, and on exams.
Audience: Both Grad & Undergrad

3. Analyze literature and film in multiple genres--including novels, tales, and feature and documentary films--in formal papers.
Audience: Both Grad & Undergrad

4. Synthesize, interpret, and respond to current scholarship in the fields of Nordic literary studies, film studies, and animal studies in formal papers.
Audience: Graduate

ILS/ITALIAN 350 – ROME: LUST FOR GLORY
3-4 credits.

Examines the development of Rome, "the Eternal City," and its continuing presence as both a metaphoric and physical focal point of Italian artistic and cultural sensibilities. Outline the development of Rome's authoritative or "mythical" status in literature, art, architecture and film, beginning in the Augustan era and arriving to today, focusing on significant moments in the creation and expansion of the actual city and its cultural influence in the late-Middle Ages, the Renaissance, the era of the Risorgimento (Unification of Italy), and the rise of Fascism. Develop ability to think critically about how the diverse material productions of writers (historians, playwrights, poets), painters, sculptors, architects, philosophical thinkers, and later filmmakers of the periods covered reflect one another and reflect the ideas and ideologies of their age.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate knowledge of Roman society and culture in both Antiquity, the Pre-Modern, and Modern Eras.
Audience: Undergraduate

2. Examine, analyze, and interpret texts in translation and material culture.
Audience: Undergraduate

3. Critique Roman society and culture throughout the periods under review and compare them to other societies and cultures and to each other.
Audience: Undergraduate

ILS/POLI SCI 363 – LITERATURE AND POLITICS
3-4 credits.

Interactions between literature and politics, and the role of literature more generally in the functioning of the political systems. Not open to students with credit for POLI SCI 570 prior to fall 2017
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Understand how literary writing affects political consciousness.
Audience: Undergraduate

2. Explore how literary works represent and negotiate political questions in writing.
Audience: Undergraduate

3. Encourage students of literature to read and think politically.
Audience: Undergraduate

ILS/ITALIAN/LITTRANS/POLI SCI 365 – MACHIAVELLI AND HIS WORLD
3 credits.

Introduces students to the major works of Machiavelli through the close reading of his writings in cultural and historical contexts. Discussion and targeted writing assignments will aim at cultivating in students 1) a broad understanding of Machiavelli's principal intellectual attitudes, 2) a deeper understanding of his literary sensibility, and 3) the ability to articulate controversies and complexities surrounding his thought.
Requisites: Satisfied Communications A requirement
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop a broad understanding of Machiavelli's principal intellectual attitudes.
Audience: Undergraduate

2. Cultivate a deep understanding of Machiavelli's literary sensibility.
Audience: Undergraduate

3. Articulate controversies and complexities surrounding Machiavelli's political thought.
Audience: Undergraduate

ILS/LACIS 367 – THE LITERATURE OF MIGRATION AND THE MIGRANT EXPERIENCE IN THE AMERICAS
3 credits.

Explores literature to understand representations and experiences of migration within the United States, and in the Americas more broadly, over time and across cultures. Focusing on literature and employing historical and psychoanalytic interpretive approaches, critically analyze artistic and literary representations of the migrant experience. Topics include: the relationships between literature, art, and migration; the role of migrants in constructing the United States; the role of art and literature in the empowerment of marginalized groups. Analyze literary texts in their contexts using tools of literary analysis and express ideas about literary texts and art from a critical perspective.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Evaluate literature in its relationship to migration by means of various communicative, deliberative, and persuasive argumentation.
Audience: Undergraduate

2. Identify in literature historical patterns of migration within the US and the Americas and their importance to understand current national culture and tensions.
Audience: Undergraduate

3. Understand through literature concepts and theories and apply them to the interpretation of literature across cultures.
Audience: Undergraduate

4. Recognize, analyze, and evaluate in literature the intersections between culture and other socially meaningful categories, such as race, class, gender, identity, ethnicity, disability, and sexuality as they are represented within literature .
Audience: Undergraduate

ILS 369 – MAGICAL REALISM AND POSTMODERNITY
3 credits.

Examines the concept of magical realism and its cultural implications. Provides a critical framework for evaluating literature, art and movies and engaging in basic research, particularly when it comes to narrative analysis. Pays particular attention to the Latin-American boom, a time of big writers and big literature that presses the limits between fiction and reality, modernity and postmodernity.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Identify the role of history in Latin American cultures and demonstrate its importance for understanding those cultures.

Audience: Undergraduate

2. Demonstrate awareness of the ways in which Latin American culture is found in various geographic settings.
Audience: Undergraduate

3. Recognize, analyze, and evaluate the intersections between culture and other socially meaningful categories, such as race, class, gender identity, ethnicity, disability, and sexuality as they appear within literary and artistic practices.
Audience: Undergraduate

4. Evaluate literature, art, and movies connected to "Magical Realism" by means of various communicative, deliberative, and persuasive modes.
Audience: Undergraduate

5. Demonstrate an understanding of the historical moment that we inhabit and the way in which some Latin American artists analyze it and express it.
Audience: Undergraduate

6. Identify, explain, and critically analyze the making of meaning in "Magical Realism."
Audience: Undergraduate

ILS 371 – INTERDISCIPLINARY STUDIES IN THE ARTS AND LITERATURE
3-4 credits.

Selected interdisciplinary topics in literature and art with emphasis on social, historical and political contexts.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and explain how people make social, cultural, historical, and political meaning in literature and art.
Audience: Undergraduate

2. Critically analyze diverse approaches to how people make social, cultural, historical, and political meaning through literature and art.
Audience: Undergraduate

3. Recognize and synthesize diverse types of knowledge and disciplinary approaches to how people make social, cultural, historical, and political meaning in literature and art.
Audience: Undergraduate

ILS 372 – INTERDISCIPLINARY STUDIES IN THE SOCIAL SCIENCES
3 credits.

Interdisciplinary analysis of selected topics in the social sciences.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024
Learning Outcomes: 1. Identify and explain how people make social, cultural, historical, and political meaning in the social sciences.
Audience: Undergraduate

2. Critically analyze diverse approaches to how people make social, cultural, historical, and political meaning in the social sciences.
Audience: Undergraduate

3. Recognize and synthesize diverse types of knowledge and disciplinary approaches to how people make social, cultural, historical, and political meaning in the social sciences.
Audience: Undergraduate

ILS 373 – INTERDISCIPLINARY STUDIES IN THE HUMANITIES
3-4 credits.

Interdisciplinary analysis of selected topics in the humanities.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and explain how people make social, cultural, historical, and political meaning in the humanities.
Audience: Undergraduate

2. Critically analyze diverse approaches to how people make social, cultural, historical, and political meaning through the humanities.
Audience: Undergraduate

3. Recognize and synthesize diverse types of knowledge and disciplinary approaches to how people make social, cultural, historical, and political meaning in literature and art.
Audience: Undergraduate

ILS 400 – CAPSTONE INTEGRATION SEMINAR
3 credits.

Capstone experience seminar for Integrated Liberal Studies (ILS) students.
Requisites: Junior standing and declared in Certificate in Integrated Liberal Studies
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize and synthesize arguments, concepts, and approaches to how people make meaning in light of humanistic and social scientific inquiry.
Audience: Undergraduate

2. Formulate new questions about and integrate new approaches to how people make meaning in light of humanistic and social scientific inquiry.
Audience: Undergraduate

3. Analyze arguments, concepts, and approaches to how people make meaning in light of humanistic and social scientific inquiry.
Audience: Undergraduate

4. Articulate and assess the value of a liberal education in light of humanistic and social scientific arguments, concepts, and approaches.
Audience: Undergraduate

ILS/JEWISH/SOC 423 – MODERN JEWISH THOUGHT
3 credits.

How do Jews fit into the modern world? While the "Jewish Question" initially referred to debates about Jewish emancipation (the struggle for equal citizenship and social integration that started with the French Revolution), it later served to describe modern Jewish political and social thought about the identity, place, and role of the Jews in the modern world. Beginning in the late 19th century, as cultural assimilation, economic impoverishment in eastern Europe, and rising antisemitism sowed doubts about the viability of emancipation and traditionalism alike, Jewish thinkers proposed new answers to the Jewish question. Learn about some of the major answers they debated, including revolutionary universalistic utopias (socialism and Communism), various forms of Jewish nationalism, hyphenated identities, cultural pluralism, and cosmopolitanism. Work to contextualize these ideas historically while also considering whether and how they remain relevant to the present.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Engage with major figures, ideas, and debates in the social and political thought of Jews about the “Jewish Question” from the late 19th century until the mid-20th century
Audience: Undergraduate

2. Understand these ideas in relation to the historical contexts in which they were produced
Audience: Undergraduate

3. Enter into a dialogue with past thinkers, critically assessing whether and how their ideas may remain relevant to the changed circumstances of the present
Audience: Undergraduate

ILS/POLI SCI 463 – DECEPTION AND POLITICS
3-4 credits.

Deception and truth telling as matters of fundamental political concern. Writers ranging from Plato to John Rawls have grappled with the problem of deception and truth-telling in politics. Flattery, hypocrisy, lying as a matter of state, lying as a matter of policy: philosophical explorations of these and related phenomena are the central focus.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explore deception – and truth telling – as matters of fundamental political concern.
Audience: Undergraduate

2. Examine flattery, hypocrisy, lying as a matter of state, and lying as a matter of policy: philosophical explorations of these and related phenomena are at the center of this course.
Audience: Undergraduate

3. Explore writers ranging from Plato to John Rawls and how they have grappled with the problem of deception and truth-telling in politics.
Audience: Undergraduate

ILS 490 – RESEARCH IN INTEGRATED LIBERAL STUDIES
2-3 credits.

Provides opportunities to pursue advanced research in integrated liberal studies.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2021

ILS 681 – UNDERGRADUATE HONORS THESIS
3 credits.

Individual study for juniors or seniors completing theses for honors as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No

ILS 682 – UNDERGRADUATE HONORS THESIS
3 credits.

Individual study for juniors or seniors completing theses for honors as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No

ILS 691 – UNDERGRADUATE THESIS
3 credits.

Individual study for juniors or seniors completing theses as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2008

ILS 692 – UNDERGRADUATE THESIS
3 credits.

Individual study for juniors or seniors completing theses as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2009

INTEGRATED SCIENCE (INTEGSCI)

INTEGSCI 100 – EXPLORING BIOLOGY
2 credits.

A first-year course focused on the core concepts in biology (evolution; transformation of energy and matter; information exchange and storage; structure and function; systems biology), professions in biology, and the foundational skills and knowledge needed for successful academic and post-graduate careers in biology.
Requisites: First year students or first year transfer students only
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and describe the five core concepts of biology (Evolution (E), Pathways and Transformations of Energy and Matter (PTEM), Information Flow, Exchange, and Storage (IFES), Structure and Function (SF), and Systems (S)).
Audience: Undergraduate

2. Apply the biology core concepts from molecular to ecological scales.
Audience: Undergraduate

3. Gain skills in scientific thinking, including asking questions, interpreting data, evaluating claims, communicating science, and reading scientific literature.
Audience: Undergraduate

4. Appreciate the importance of diversity and inclusion in science, including how a diversity o individuals promotes a richer understanding of science and makes scientific research more equitable.
Audience: Undergraduate

5. Identify how biologists contribute to society and how the people of WI are impacted by biology.
Audience: Undergraduate

6. Explore the breadth of careers related to biology.
Audience: Undergraduate

7. Become familiar with campus resources and opportunities to help you thrive as a STEM student at UW-Madison.
Audience: Undergraduate

INTEGSCI 110 – BIOHOUSE SEMINAR: BIOLOGY FOR THE 21ST CENTURY
1 credit.

Focused on developing skills in cooperative learning with peers and visiting scientists; integrating information across disciplines; communicating science; careers in biology; and, illustrating how biology can help solve society's pressing issues.
Requisites: Member of BioHouse Residential Learning Community
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the breadth of biology and describe where biology can be studied at UW-Madison.
Audience: Undergraduate

2. Describe how biology impacts your life and how it can improve society.
Audience: Undergraduate

3. Describe the meaning and importance of integration across disciplines and scales in biology.
Audience: Undergraduate

4. Understand the importance of effectively communicating scientific information to non-scientists.
Audience: Undergraduate

5. Identify your current interest(s) in biology and how you can get involved as an undergraduate.
Audience: Undergraduate

INTEGSCI 140 – EXPLORING SERVICE IN STEM
1 credit.

A discussion-based seminar introducing first-year STEM students to the world of public service from the perspective of both the university and its community partners. Classroom activities and direct campus and off-campus experiences are included. Service opportunities include STEM outreach, sustainability, and public health. Involves approximately 1 hour per week of public service.
Requisites: First Year Students only
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop awareness of and access to service opportunities within STEM
Audience: Undergraduate

2. Develop awareness of the relationship between the university and the community
Audience: Undergraduate

3. Develop reflective approaches to public service and community engagement.
Audience: Undergraduate

4. Explore the interactions of STEM, scientists and engineers, and society
Audience: Undergraduate

5. Recognize and honor diversity and cultural context
Audience: Undergraduate

INTEGSCI 150 – EXPLORING RESEARCH IN STEM
1 credit.

Offers an overview of the research process and opportunities to build skills in reading scientific literature. Understand different approaches to science and to be flexible in thinking about gathering evidence or solving problems. Supports articulation of research interests, identifying potential research mentors, and writing professional emails to secure research opportunities. Explore STEM careers and pathways that can come from engaging in research.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Read scientific literature efficiently and understand what information can be found in each section of a primary research article.
Audience: Undergraduate

2. Identify your personal research interests and find faculty members whose research interests align with yours.
Audience: Undergraduate

3. Write professional emails to potential research mentors.
Audience: Undergraduate

4. Identify disparities between majority and minority group participation in STEM careers and articulate strategies to reduce the disparities.
Audience: Undergraduate

5. Explore STEM careers and learn about the pathways to pursue those careers.
Audience: Undergraduate

INTEGSCI 230 – EXPLORING PEER LEADERSHIP IN STEM
2 credits.

Provides current and potential peer leaders the opportunity to reflect on and think critically about their personal goals, identities, and experiences that inform their development as a peer leader. Increase awareness and develop practical skills to promote inclusion and success for students with diverse identities, and learn how to connect students with campus and community resources.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe relevance of personal identities to experiences in higher education and STEM
Audience: Undergraduate

2. Identify strategies to promote inclusion for students with diverse identities, including identities that are underrepresented in STEM and higher education
Audience: Undergraduate

3. Develop peer leadership skills and relate them to the UW-Madison Leadership Framework
Audience: Undergraduate

4. Connect students with campus and community resources to support their success
Audience: Undergraduate

5. Apply knowledge and skills to be able to effectively lead your peers in various STEM contexts on campus
Audience: Undergraduate

6. Reflect on personal goals, strengths, experiences, and identities to inform your ongoing development as a student leader
Audience: Undergraduate

INTEGSCI 240 – SERVICE WITH YOUTH IN STEM
2 credits.

Teaches students about community engagement experiences, focusing on building community partnerships, understanding organizational missions and community needs, assessment of informal science outreach experiences, and issues related to scientific literacy and access to science.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop leadership skills & recognize their application to multiple contexts.
Audience: Undergraduate

2. Develop competencies to work in an after-school setting with children and adult staff from a variety of cultures and backgrounds.
Audience: Undergraduate

3. Effectively facilitate the scientific thought process in a way that is age/developmentally appropriate.
Audience: Undergraduate

4. Develop and understand personal scientific identity.
Audience: Undergraduate

5. Connect community experience to personal perspectives through reflection.
Audience: Undergraduate

INTEGSCI 260 — ENTERING RESEARCH PART 1
1 credit.

Seminar course for sophomore or transfer students to begin independent research in science, technology, engineering or mathematics. Taken concurrently with 1-3 research credits with faculty member. Supports independent research experience.
Requisites: None
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Explore the roles, responsibilities, and relationships that make for a successful research experience.
Audience: Undergraduate

2. Define an independent research project with your mentor.
Audience: Undergraduate

3. Create a poster presentation to communicate research project findings.

Audience: Undergraduate

4. Develop your science communication skills through reading, writing, and presenting research.
Audience: Undergraduate

5. Engage in a community of undergraduate researchers at UW-Madison.
Audience: Undergraduate

6. Discuss importance of equity and inclusion in research contexts.
Audience: Undergraduate

INTEGSCI 299 — INDEPENDENT STUDY
1-3 credits.

Provides academic credit for research, library, and/or laboratory work under direct guidance of a faculty or instructional academic staff member. Students are responsible for arranging the work and credits with the supervising instructor.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

INTEGSCI 320 — INTERNSHIP
1-3 credits.

Provides academic credit for skill development in authentic contexts in science education including service, peer mentoring, and leadership. See class notes for additional information.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

INTEGSCI 330 — PRACTICUM IN STEM PEER LEADERSHIP
1-2 credits.

Application of leadership, mentoring, and communication skills. Includes engagement in leadership experience to support STEM student success as well as activities to enhance participants' leadership development.
Requisites: INTEGSCI 230
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply and refine leadership and mentorship skills to effectively support their STEM peers on campus#
Audience: Undergraduate

2. Apply strategies to promote inclusion for all students, including students with identities that are underrepresented in STEM and higher education#
Audience: Undergraduate

3. Assess student needs and connect students with campus and community resources to support their success and belonging#
Audience: Undergraduate

4. Describe how peer leader knowledge and skills relate to the UW-Madison Leadership Framework and to personal goals#
Audience: Undergraduate

5. Reflect on the significance of peer leadership and their personal development as a leader#
Audience: Undergraduate

INTEGSCI 340 – SERVICE WITH YOUTH IN STEM II
2 credits.

Applies communication skills and social awareness issues in ways that enable students to work with increasing levels of independence in building and maintaining community relationships compared to INTEGSCI 240. Includes a lab section applied to lecture experiences to prepare for work with children in elementary after-school science clubs and to focus on different styles of communication. The multi-disciplinary focus of the after-school lessons develops connections between students' field of study and others within STEM. In the service learning component, students apply academic knowledge through science education and outreach experiences in a community-focused and culturally sensitive way. Students work with underrepresented students in the Madison metropolitan area in elementary after-school science clubs, and are expected to critically reflect on the ties between their academic and community partnerships, and differences between campus and community culture.
Requisites: INTEGSCI 240
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. communicate and collaborate with adult after-school staff members from a variety of cultures and backgrounds.
Audience: Undergraduate

2. independently design informal educational science experiences for youth.
Audience: Undergraduate

3. assess appropriate strategies for designing developmentally appropriate science lessons.
Audience: Undergraduate

4. describe the importance of communication and distinctions between informal and technical communication.
Audience: Undergraduate

5. critically reflect on experiences in the community and connect these experiences broadly to service learning, scientific literacy, and cultural context.
Audience: Undergraduate

INTEGSCI 341 – SERVICE WITH YOUTH IN STEM PRACTICUM
1 credit.

Apply communication, cultural competency, and leadership skills to work with community partners in a service learning practicum. Work with underrepresented students in the Madison metropolitan area in elementary after-school science clubs, and critically reflect on the ties between their academic and community partnerships, and differences between campus and community culture. Work with different community partners than they did in previous Service with Youth in STEM courses. This practicum combines the service experience with an in-class component to prepare to provide opportunities to critically reflect upon the ties between academic preparation and community partnerships, and on their experiences in varied community settings.
Requisites: INTEGSCI 340
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Encourage interaction between scientists and community members from a variety ages and backgrounds
Audience: Undergraduate

2. Experience working with community organizations that have different missions and serve different populations than students' previous participation in community relationships
Audience: Undergraduate

3. Continue to develop mutually beneficial relationships between the University and the community
Audience: Undergraduate

4. Deepen their understanding of diverse social factors that impact youth development, participation, and education
Audience: Undergraduate

5. Critically reflect on experiences in the community and connect these experiences broadly to service learning, cultural context, and similarities and differences in working with different community groups
Audience: Undergraduate

INTEGSCI 375 – SPECIAL TOPICS IN INTEGRATED SCIENCE
1-3 credits.

This course examines various special topics in science or science education. See class notes for additional information. Requisites vary by topic
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

INTEGSCI 605 – SCIENTIFIC TEACHING FOR TAS
1 credit.

The goal of this course is to arm Teaching Assistants with survival skills in scientific teaching through theory, practice, and learning community. We will work together to learn the core themes of scientific teaching (active learning, assessment, and diversity) and apply them, in real time, to the courses in which the TAs are concurrently teaching. This course is open to graduate students only.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Explain the core ideas of Scientific Teaching (active learning, assessment, and diversity) and how they benefit instructors and students.
Audience: Graduate

2. Develop community with colleagues around interest and shared experience in teaching.
Audience: Graduate

3. Reflect on TA role and how TAs support student learning and success.
Audience: Graduate

4. Apply evidence-based and inclusive instructional practices in teaching.
Audience: Graduate

INTEGSCI 640 – PUBLIC SERVICE IN STEM
1 credit.

Discusses the fundamentals of public service and civic engagement in the STEM (science, technology, engineering, and math) disciplines grounded in evidence-based knowledge and research. Provides an overview of the core pathways of public service, the knowledge required to effectively initiate and cultivate community partnerships, and the skills necessary to reflect upon personal experiences with community engagement activities. Fosters understanding of the broader impacts in STEM fields and prepares students to begin specializing in a specific pathway and develop relationships with a community partner.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop knowledge, skills, and values that support their engagement with the community from a scholarly perspective.
Audience: Graduate

2. Develop an ethical and sustainable approach to building community relationships.
Audience: Graduate

3. Build reflective process and metacognitive skills into community engagement practices to inform personal development.
Audience: Graduate

4. Develop community as a cohort around shared interest and experience in community engagement.
Audience: Graduate

5. Identify and critique ways that STEM and society interact in diverse contexts.
Audience: Graduate

6. Develop a personal approach to creating a culturally responsive, inclusive environment in campus and community spaces.
Audience: Graduate

INTEGSCI 650 – COLLEGE SCIENCE TEACHING
1-2 credits.

Fundamental principles for teaching college-level science courses, with an emphasis on research-based and inclusive approaches. Learn core themes of scientific teaching (active learning, assessment, and diversity) and connect them to practical strategies for designing and implementing courses in their discipline in the future. Develop competence and confidence as college science teachers.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain the core ideas of Scientific Teaching (active learning, assessment, and diversity) and how they benefit instructors and students.
Audience: Graduate

2. Design and implement instructional units for college courses based on Scientific Teaching principles.
Audience: Graduate

3. Find and utilize resources to support teaching and learning.
Audience: Graduate

4. Apply reflective practice and metacognitive skills to inform personal teaching development.
Audience: Graduate

5. Develop community with colleagues around interest and shared experience in teaching.
Audience: Graduate

INTEGSCI 660 – RESEARCH MENTOR TRAINING PRACTICUM
1 credit.

Practicum course for graduate, post-doctoral or senior undergraduate students to be taken concurrently while mentoring an undergraduate engaged in an independent research experience.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Explore multiple strategies for effective mentoring with case studies, discussions, and readings.
Audience: Undergraduate

2. Compare mentor and mentee goals, and craft a statement of your mentoring philosophy.
Audience: Undergraduate

3. Explore time-management strategies, and discuss relevant issues as they come up.
Audience: Undergraduate

4. Collaborate and problem-solve with a group of peers.
Audience: Undergraduate

INTEGSCI 675 – SPECIAL TOPICS
1-3 credits.

This course examines various special topics in science or science education. See Class Notes for additional information.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

INTEGSCI 699 – INDEPENDENT STUDY
1-3 credits.

Provides academic credit for advanced research, library, and/or laboratory work under direct guidance of a faculty member. Students are responsible for arranging the work and credits with the supervising faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

INTEGSCI 740 – COMMUNITY RELATIONSHIPS AND MATERIALS DEVELOPMENT IN STEM PUBLIC SERVICE
1 credit.

Provides opportunities for practical application of public service knowledge. Discusses development of a workplan for long-term projects, provides strategies to initiate community partnerships, and fosters development of materials for use in a community-based practicum. Includes time to work intensively on acquiring pathway-specific knowledge and skills and opportunities to practice, problem-solve, and support cohort members within and across public service pathways.
Requisites: INTEGSCI 640
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Apply their knowledge of approaches to community partnerships to the development of personal and organizational relationships
Audience: Graduate

2. Develop pathway-specific materials in collaboration with peers and community partners that appropriately engage stakeholders in STEM, are inclusive, and grounded in evidence
Audience: Graduate

3. Develop pathway-specific knowledge, skills, and attitudes
Audience: Graduate

INTEGSCI 750 – INSTRUCTIONAL MATERIALS DESIGN FOR COLLEGE SCIENCE TEACHING
1 credit.

Designed to provide a practical application of pedagogical knowledge through the development of instructional materials for use in a university science education context. The process will be based around cohorts of participants working together to identify learning objectives, and create evidence-based assessments and learning experiences to target those objectives. This course is required for Scientific Teaching Fellows Program participants.
Requisites: INTEGSCI 650
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

INTEGSCI 840 – MENTORED PRACTICUM IN STEM PUBLIC SERVICE
1 credit.

Develops community-engagement in STEM (science, technology, engineering, and math) through a mentored public service experience. Provides opportunities to refine and implement skills necessary to work with a community partner to implement and evaluate a project that is mutually beneficial in process and product. Places emphasis on professional development within a selected pathway (direct service, community engaged teaching, policy and governance, or social entrepreneurship/corporate social responsibility). Includes time to meet within specialized pathways and as a full cohort throughout the implementation of the practicum experience.
Requisites: INTEGSCI 740
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Conduct an effective public service practicum in their public service pathway of specialization
Audience: Graduate

2. Develop and exhibit a sense of professional identity as a community engagement professional
Audience: Graduate

3. Strengthen civic leadership and advocacy skills
Audience: Graduate

4. Reflect on the practicum experience and use this experience to inform future community engagement
Audience: Graduate

INTEGSCI 850 – MENTORED PRACTICUM IN COLLEGE SCIENCE TEACHING
1 credit.

Continues the development of graduate student's skills in teaching and learning college science courses by providing a mentored, independent teaching experience. Participants will have the opportunity to see how theories of learning and teaching play out in real instructional settings by implementing instructional activities and then evaluating the outcomes of those activities on the basis of student artifacts. A particular emphasis will be placed on participants creating an inclusive learning environment for teaching diverse student populations. The course also provides participants with frameworks for teaching and managing their own courses, should they pursue academic positions after graduate school. This course is required for Scientific Teaching Fellows Program participants.
Requisites: INTEGSCI 750
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

INTERDISCIPLINARY COURSES (C A L S) (INTER-AG)

INTER-AG 1 – COOPERATIVE EDUCATION PROGRAM
1 credit.

Full-time work experience which combines classroom theory with practical knowledge of operations to provide students with a background upon which to base a professional career.
Requisites: Consent of instructor
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Apply classroom knowledge to authentic work experiences
Audience: Undergraduate

INTER-AG 117 – GREENHOUSE ROOTS SEMINAR
1 credit.

Challenges Greenhouse residents to think deeply about themselves and their place in the social and biophysical communities of which they are a part. Reflect on the meaning(s) of "sustainability" and consider how lifestyle and career choices impact other people and the environment. Discover the deep history of sustainability in Wisconsin and learn more about current sustainability initiatives on the UW-Madison campus and in the greater Madison Area. Introduces resources, skills, and knowledge that support a successful transition to college.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, for 2 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss the concept of sustainability in the context of complex interactions among humans and between humans and the non-human world from a variety of perspectives
Audience: Undergraduate

2. Describe the attributes of a healthy, mutually beneficial relationship with the place they live in and the members of their community
Audience: Undergraduate

3. Assess, articulate, and acknowledge personal skills, abilities, and growth areas in the pursuit of sustainability
Audience: Undergraduate

4. Integrate intellectual concepts and values-based knowledge to formulate a personalized approach to sustainability
Audience: Undergraduate

5. Identify UW-Madison programs, resources, and services that will support their academic studies and co-curricular involvement
Audience: Undergraduate

INTER-AG 140 – CALS QUICKSTART: FOUNDATIONS
1 credit.

Gain exposure to the College of Agricultural and Life Sciences (CALS) and UW-Madison, including resources and opportunities available as well as the foundational skills necessary for a successful transition to campus. Modules focus on your personal, academic, and professional development. Reflect on your goals and engage with peers to develop a roadmap for your own Wisconsin Experience.
Requisites: None
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Articulate your strengths and reflect on how they manifest across different aspects of your academic, personal, and professional experience
Audience: Undergraduate

2. Understand core campus values and the purpose of a liberal education and relate these concepts to real-life examples
Audience: Undergraduate

3. Gain a baseline understanding of social identity and ways to expand your perspective/develop empathy for identities outside your own
Audience: Undergraduate

4. Explore the CALS Priority Themes and understand how many academic and career pathways can converge around a singular theme
Audience: Undergraduate

5. Develop strategies to anticipate and successfully navigate any college transition-related challenges you may face
Audience: Undergraduate

6. Apply knowledge of campus resources and opportunities to set attainable goals for your first-year and beyond
Audience: Undergraduate

INTER-AG 155 – ISSUES IN AGRICULTURE, ENVIRONMENT, AND LIFE SCIENCES
1 credit.

Explore important issues in the application of science that cut across all majors in the College of Agricultural and Life Sciences, and that are critical for society in coming decades. Develop academic skills and explore majors and careers.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify resources and services available through CALS and UW-Madison
Audience: Undergraduate

2. Describe skills of a successful college student, such as organizational and study skills, critical thinking skills, appropriate interactions with peers/instructors, etc.
Audience: Undergraduate

3. Reflect on academic, career, and personal goals
Audience: Undergraduate

4. Discuss complex issues related to agriculture, environment, and life sciences with peers and instructors, considering multiple evidence-based perspectives
Audience: Undergraduate

INTER-AG 175 – WISE SEMINAR
1 credit.

Women in Science and Engineering (WISE) learning community seminar, with speakers drawn from all fields of math, science, and engineering on campus. Learn about research on campus and discuss the impact of research on daily life.
Requisites: Member of Women in Science & Engineering (WISE) Residential Learning Community
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, for 2 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify resources and services available through CALS, the College of Engineering, and UW-Madison
Audience: Undergraduate

2. Apply the skills of a successful college student, including the ability to engage in professional conversations with peers, instructors, and successful female scientists and engineers
Audience: Undergraduate

3. Reflect on academic, career, and personal goals while building a supportive community with your WISE peers
Audience: Undergraduate

4. Identify resources and strategies that will support your long-term professional success, such as building a strong professional resume and acquiring job search skills
Audience: Undergraduate

5. Discuss complex issues faced by women in science, technology, and engineering
Audience: Undergraduate

6. Identify the ways in which gender can affect career and work goals
Audience: Undergraduate

7. Reflect on the role of diversity, equity and inclusion at the University of Wisconsin
Audience: Undergraduate

INTER-AG/INTER-LS 250 – UNDERGRADUATE RESEARCH EXPERIENCE
1-3 credits.

Participation in research or creative endeavor led by faculty or instructional staff. May include participation in research discussion groups, critiques of readings, and preparation of written or oral reports.
Requisites: Member of Undergraduate Research Scholars Program
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

INTER-AG 288 – INTRODUCTORY CALS HONORS SEMINAR
1 credit.

Learn the basics of being a researcher: the scientific community (papers, etiquette, grants), ethics, career options, using the scientific literature, and preparation of research proposals.
Requisites: Declared in a College of Agricultural and Life Sciences (CALS) Honors program
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and connect with research opportunities across disciplines in the College of Agricultural and Life Sciences (CALS)
Audience: Undergraduate

2. Describe the structure and expectations of undergraduate research at UW-Madison
Audience: Undergraduate

3. Demonstrate scientific literacy and critical reading skills by finding, analyzing, and interpreting primary and secondary research articles
Audience: Undergraduate

4. Communicate scientific ideas effectively to different audiences, including peers, mentors, and the general public, using appropriate formats and strategies
Audience: Undergraduate

INTER-AG 321 – STUDY ABROAD PRE-DEPARTURE SEMINAR
1 credit.

Explores topics and issues related to a specific theme and region or country of the world, ensuring a foundation of knowledge and understanding for the hands-on experiences as part of an instructor-led study abroad program.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Explain cultural theories, stumbling blocks to intercultural communication, and demonstrate new knowledge and attitudes to successfully complete a study abroad experience.
Audience: Undergraduate

2. Describe your home and host culture, people, and places.
Audience: Undergraduate

3. Prepare for living, traveling, and studying in a new environment.
Audience: Undergraduate

4. Demonstrate an understanding of culture shock and reflect on ways of managing the effects.
Audience: Undergraduate

5. Explain successful practices to remain healthy and ensure safety while abroad.
Audience: Undergraduate

INTER-AG 340 – CAREER AND LEADERSHIP DEVELOPMENT FOR INTERNS
1 credit.

Career development process including: the job search, resume and cover letter writing, networking, inclusive workplaces, and conflict resolution. Synthesize internship experience and peers' internship experiences within the larger context of personal and professional goals, strengths, and values.
Requisites: Consent of instructor
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Synthesize and reflect on internship experience, as well as relate that experience to peers, in an effort to better understand new areas of work, and potential career interests
Audience: Undergraduate

2. Articulate personal and professional goals based on the internship experience.
Audience: Undergraduate

3. Relate the role of interests, skills, strengths, values, and experiences to the career decision-making process.
Audience: Undergraduate

4. Create and tailor professional writing related to the job search process.
Audience: Undergraduate

INTER-AG 375 – SPECIAL TOPICS
1-4 credits.

Topics of current interest to undergraduates.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2019

INTER-AG 388 – CALS HONORS - FUNDAMENTALS OF RESEARCH SEMINAR
1 credit.

Introduction and exploration of the fundamentals of research: scientific process, utilization of scientific literature, and preparation of research proposals. Provides an environment external to the student's research experience that will help them grow as researchers.
Requisites: INTER-AG 288
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply the scientific method and formulate research questions effectively.
Audience: Undergraduate

2. Effectively read and objectively critique a published scientific article.
Audience: Undergraduate

3. Develop and write a research proposal.
Audience: Undergraduate

INTER-AG 397 – INTERNATIONAL INTERNSHIP OR RESEARCH IN THE SCIENCES
1-6 credits.

Provides an area equivalency for science internship or research taken on UW-Madison approved study abroad programs. Current enrollment in a UW-Madison study abroad program.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Apply concepts learned in coursework to authentic professional/research situations
Audience: Undergraduate

2. Identify and reflect on how concepts learned in coursework apply to specific research or internship settings and situations
Audience: Undergraduate

INTER-AG/NUTR SCI 421 – GLOBAL HEALTH FIELD EXPERIENCE
1-4 credits.

Specialized educational experiences that address a broad range of global health topics through interdisciplinary approaches to health and include participation in applied public health activities or service learning projects with communities and partner organizations.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Collaborate and communicate effectively with diverse colleagues and local partners.
Audience: Undergraduate

2. Respectfully engage with different cultures or populations.
Audience: Undergraduate

3. Articulate the importance of interdisciplinary approaches to global health and/or sustainable development.
Audience: Undergraduate

4. Demonstrate knowledge on a specific global health issue, community, and location.
Audience: Undergraduate

INTER-AG 488 – HONORS RESEARCH SEMINAR
1 credit.

Development and evaluation of undergraduate research proposals, discussion of best practices for gaining admission to graduate programs and identifying effective mentors, exploration of career opportunities for research in the public and private sectors, and interaction with seniors who have successfully completed the CALS Honors in Research program.
Requisites: INTER-AG 388
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop a competitive research proposal and convey its scientific merit and broader impact to scientific reviewers and funding agencies
Audience: Undergraduate

2. Find strong graduate programs and identify effective faculty mentors, such that they can develop as young scientists and realize their career goals
Audience: Undergraduate

3. Overcome the fear of failure and avoid common pitfalls, such that they can achieve professional success and work-life balance in their future endeavors
Audience: Undergraduate

4. Evaluate the pros and cons of various types of research careers, including academic institutions, federal laboratories, corporate research and development settings, and startup companies
Audience: Undergraduate

5. Develop an outline for the senior honors thesis, including research plan and timeline
Audience: Undergraduate

INTER-AG 681 – SENIOR HONORS THESIS
2-4 credits.

First semester of individual study for undergraduate students in a CALS Honors program completing a thesis, as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply classroom knowledge to develop research proposal
Audience: Undergraduate

2. Assess state of research in a field of study and develop research questions or hypotheses
Audience: Undergraduate

3. Translate research questions into research design
Audience: Undergraduate

INTER-AG 682 – SENIOR HONORS THESIS
2-4 credits.

Second semester of individual study for undergraduate students in a CALS Honors program completing a thesis, as arranged with a faculty member. INTER-AG 681
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply classroom knowledge to research
Audience: Undergraduate

2. Use research methods to answer questions or hypotheses developed in INTER-AG 681
Audience: Undergraduate

3. Write a research thesis
Audience: Undergraduate

INTERDISCIPLINARY COURSES (ENGINEERING) (INTEREGR)

INTEREGR 130 – INTRODUCTION TO MECHANICS AND APPLICATIONS IN ENGINEERING
1 credit.

Introduction to mechanics and applications in engineering, including introduction to free body diagrams, spatial awareness, and how to use vectors in engineering applications.
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Correctly use basic mathematics concepts that are applied to introductory mechanics and connect math to conceptual physical understanding
Audience: Undergraduate

2. Practice 3D spatial awareness/reasoning
Audience: Undergraduate

3. Apply problem-solving strategies to physical problems, including evaluating engineering problem solving approaches.
Audience: Undergraduate

4. Demonstrate group problem solving skills through assessment of peers' ideas and work, discussion of alternate approaches, and explanation of solutions
Audience: Undergraduate

5. Effectively communicate problem solving processes and results through writing and diagrams.
Audience: Undergraduate

INTEREGR 140 – SUCCESS IN ENGINEERING ACADEMICS
1 credit.

Learn and practice evidence-based strategies for success as an engineering student. Topics include study skills, time management, career exploration, academic writing, academic reading comprehension, motivation and self-directed learning.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Practice evidence based learning strategies (such as elaboration, recall, spaced practice)
Audience: Undergraduate

2. Develop and implement time-management techniques
Audience: Undergraduate

3. Practice problem solving strategies
Audience: Undergraduate

4. Identify the tools for being a successful engineering student
Audience: Undergraduate

INTEREGR 150 – DIRECTED STUDIES IN ENGINEERING FOUNDATION COURSES
0 credits.

Directed study through College of Engineering Supplementary Instruction program. Group discussion and problem-solving coaching to enhance understanding of physics and its applications to engineering.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

INTEREGR 170 – DESIGN PRACTICUM
3 credits.

Introduction to design via the invention, fabrication and testing of a device that solves a problem proposed by a real world client. Information retrieval techniques, specification writing, methods for enhancing creativity, analysis techniques, scheduling, selection methodologies, cost estimating, sustainability in design, shop safety, engineering ethics, opportunities for engineering students (ie, study abroad, internships, co-ops), major exploration, fabrication equipment and techniques, and oral and written communication.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Learn the fundamentals of the engineering design process and then apply them in a laboratory setting by working on a novel, client-based, hands-on engineering challenge.
Audience: Undergraduate

2. Develop individual learning and cooperative teamwork skills through conduct of independent research and collaborative problem solving in a team setting.
Audience: Undergraduate

3. Promote diversity and inclusiveness through exercises designed to create multicultural awareness of, and respect for, individual differences in experience, learning style, and academic interests.
Audience: Undergraduate

4. Effect professional development through team-building activities, practice in personal and professional communication, leadership, project management, and engineering ethics.
Audience: Undergraduate

5. Utilize academic research, creativity, innovation, fabrication, testing, and design iteration to develop effective decision-making and problem-solving skills.
Audience: Undergraduate

6. Practice effective technical communication skills through maintaining a design notebook, giving oral presentations, and writing a technical report.
Audience: Undergraduate

7. Participate in COE shop training to obtain the basic skills required for prototype fabrication and as a prerequisite for more advanced training in subsequent design courses.
Audience: Undergraduate

8. Develop professional teaching and leadership skills in junior and senior engineering student assistants through peer-mentoring and training activities during the course.
Audience: Undergraduate

9. Define engineering and learn the fundamentals of the engineering design process
Audience: Undergraduate

10. Major exploration and self reflection
Audience: Undergraduate

11. Learn pertinent information to maximize success as an engineering student
Audience: Undergraduate

INTEREGR 200 – PROFESSIONAL ORIENTATION
1 credit.

Introduction to career development and career-related competencies for engineers.
Requisites: Freshmen, Sophomores, or Juniors only
Repeatable for Credit: No
Learning Outcomes: 1. Integrate understanding of the career development process into exploration of engineering disciplines and professional goals
Audience: Undergraduate

2. Explore the transition from student to professional utilizing the design thinking framework
Audience: Undergraduate

3. Identify and articulate skills and career goals
Audience: Undergraduate

4. Create/develop a professional profile
Audience: Undergraduate

5. Develop professional awareness of employer needs by identifying key leadership and career readiness skills employers look for across a wide range of industries
Audience: Undergraduate

INTEREGR 275 – TECHNICAL PRESENTATIONS
2 credits.

Principles and theory of effective oral technical presentations. Provides a framework for applying the principles in professional settings common to the engineering profession. Preparation, delivery, and evaluation of oral presentation on technical subjects, analysis of professional "real-world" technical presentations, survey of presentation technology, self-analysis including listening and non-verbal skills, and practice of group discussion and interview skills.
Requisites: Sophomore standing
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Present technical concepts and information to a general audience without oversimplifying or losing technical complexity
Audience: Undergraduate

2. Deliver a compelling technical presentation
Audience: Undergraduate

3. Develop a compelling argument about a unique research question
Audience: Undergraduate

4. Conduct relevant and credible research to enhance presentation value
Audience: Undergraduate

5. Design well-organized, informative, clear, engaging visuals that enhance but do not dominate the presentation
Audience: Undergraduate

6. Anticipate or identify audience expectations and concerns and to address them appropriately in your presentation
Audience: Undergraduate

7. Work in teams to prepare and practice discussing cases in engineering ethics
Audience: Undergraduate

INTEREGR 303 – APPLIED LEADERSHIP COMPETENCIES IN ENGINEERING
3 credits.

Introduction to basic leadership theories and perspectives; application of said theories to real-life experiences (both engineering and otherwise) through reflections, course discussion, readings, and experiential education in their local communities. Social Change Model of Leadership Development and Servant Leadership theory, viewed through an Applied Critical Leadership Theory lens.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the leadership role that engineering professionals play in service to a breadth of social, political, environmental, economic, and global issues
Audience: Undergraduate

2. Apply and reflect on the "Seven C's" of the Social Change Model through engaging as servant leaders in a stewardship service project
Audience: Undergraduate

3. Apply teamwork and leadership skills necessary to embrace individual differences and help groups collaborate on shared aims and values
Audience: Undergraduate

4. Identify and describe one's own individual strengths, and be able to identify and honor the strengths in others
Audience: Undergraduate

5. Communicate comfortably and professionally with peers, practicing engineers, and adult professionals
Audience: Undergraduate

6. Reflect upon and understand one's own responsibility to strive for self-awareness, empathy, authenticity, vulnerability, and curiosity when working on leadership skill attainment
Audience: Undergraduate

7. Utilize a critical race perspective to address leadership challenges found in personal and professional experiences to achieve change in response to power, domination, access, and achievement imbalances
Audience: Undergraduate

INTEREGR 397 – ENGINEERING COMMUNICATION
3 credits.

Communication for engineering, science, and technology; theory and practice in planning, preparing, and critiquing reports, proposals, and workplace correspondence; persuasive argumentation, ethical decision-making strategies, multidisciplinary communication skills, research strategies, collaborative work; oral presentations.
Requisites: Satisfied Communications A requirement and junior or senior standing only
Course Designation: Gen Ed - Communication Part B
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify a focused technical project, then research, organize, draft, apply feedback, develop, and revise technical writing and presentations for a multidisciplinary, professional audience
Audience: Undergraduate

2. Retrieve, identify, and analyze credible research that can help develop and inform a technical problem
Audience: Undergraduate

3. Identify and describe contexts for engineering projects that address relevant social, ethical, environmental, economic, and political impacts
Audience: Undergraduate

4. Apply moral theories and professional codes to effectively analyze problems in engineering ethics and arrive at defensible actions
Audience: Undergraduate

5. Contribute to a team through creating a collaborative and inclusive environment, establishing goals, planning tasks, and meeting objectives
Audience: Undergraduate

INTEREGR 413 – CURRENT ISSUES IN INTERNATIONAL ENGINEERING
1 credit.

Provides a comparative examination and analysis of global trends and regional variations for engineering concepts, standards and practices. Using organizational case studies, the course will describe and analyze multi-national engineering operations and summarize best practices and caveats.
Requisites: Declared in International Engineering Certificate
Repeatable for Credit: No
Last Taught: Fall 2025

INTEREGR 477 – TOOLS FOR PROTOTYPING AND MANUFACTURING
1-3 credits.

Tools for prototyping and manufacturing physical objects along with some of the underlying theory for how the tools work. Tools include 3D printers, 3D scanners, thermoformers, CNC routers, welders, wood saws, mills, lathes, laser cutters, waterjets, machine tools, general electronics, microcontrollers and Virtual Reality.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Implement prototyping as a design methodology that incorporates making, critical reflection, and iteration.
Audience: Both Grad & Undergrad

2. Use rapid prototyping and machining equipment and techniques safely.
Audience: Both Grad & Undergrad

3. Employ a set of prototyping techniques and approaches for concept development.
Audience: Both Grad & Undergrad

4. Work independently and collaboratively to generate a portfolio of hands-on projects using the various tools.
Audience: Both Grad & Undergrad

5. Apply engineering principles and equipment theory to troubleshoot while operating equipment.
Audience: Both Grad & Undergrad

6. Describe the current roles of the rapid prototyping and machining techniques in industry and research.
Audience: Graduate

INTEREGR 601 – TOPICS IN INTERDISCIPLINARY ENGINEERING
1-3 credits.

Interdisciplinary topics of special interest to undergrad and grad students in engineering.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

INTEREGR 797 – IMPROV TO IMPROVE SCIENCE COMMUNICATION AND TEACHING
1 credit.

Use improvisational activities and techniques to improve teaching and communicating about science, technology, engineering or math with a variety of audiences in both formal and informal settings.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Create a learning community
Audience: Graduate

2. Demonstrate the basics of improvisation
Audience: Graduate

3. Use physicality and emotion to enhance communication
Audience: Graduate

4. Think and speak creatively to improve explanations of complex concepts
Audience: Graduate

5. Apply improvisation techniques to multiple teaching, presentation experiences, and professional experiences
Audience: Graduate

INTEREGR 941 – COLLABORATIVE CAPSTONE II
3 credits.

Explore chosen opportunity area through prototyping, user testing, and iteration. Creation of final, high resolution design, with communication and launch plan for startup, product or service. Practice behaviors of design thinking - ethics, critique, and storytelling.
Requisites: INTER-HE 940
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply an iterative design thinking process on an interdisciplinary team.
Audience: Graduate

2. Generate creative ideas through structured brainstorming sessions.
Audience: Graduate

3. Develop and fabricate rapid prototypes using a wide range of techniques (physical, digital, etc.) to bring their ideas into reality as quickly as possible and obtain feedback.
Audience: Graduate

4. Deliver a clear, thoughtful design with evidence showing it is desirable, feasible, and viable.
Audience: Graduate

5. Communicate effectively, both visually and orally.
Audience: Graduate

6. Demonstrate constructive collaboration behaviors– creative critique, balancing independent work with group work, and knowing when to get an outside opinion.
Audience: Graduate

INTERDISCIPLINARY COURSES (L & S) (INTER-LS)

INTER-LS 101 – FIRST-YEAR SEMINAR IN THE BIOLOGICAL SCIENCES
3 credits.

Interdisciplinary topics in the biological sciences for first-year students.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023

INTER-LS 102 – FIRST-YEAR SEMINAR IN THE HUMANITIES
3 credits.

Interdisciplinary topics in the humanities for first-year students.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

INTER-LS 103 – FIRST-YEAR SEMINAR IN LITERATURE
3 credits.

Interdisciplinary topics in literature for first-year students.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022

INTER-LS 106 – FIRST-YEAR SEMINAR IN THE SOCIAL SCIENCES
3 credits.

Interdisciplinary topics in the social sciences for first-year students.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023

INTER-LS 107 – FIRST-YEAR SEMINAR IN THE SOCIAL SCIENCES AND NATURAL SCIENCES
3 credits.

Interdisciplinary topics in the social and natural sciences for first-year students.
Requisites: None
Course Designation: Breadth - Either Social Science or Natural Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

INTER-LS 110 – FIRST-YEAR SEMINAR IN THE HUMANITIES AND SOCIAL SCIENCES
3 credits.

Interdisciplinary topics in the humanities and social sciences for first-year students.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2018

INTER-LS 121 – APPROACHES TO CRITICAL THINKING AND WRITING
3 credits.

Focus on learning to argue and express one's ideas. Learn how to construct a thesis that convinces through evidence. The arts provide an inevitable jumping-off point for critical judgments.
Requisites: Member of Summer Collegiate Experience (SCEP)
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2019

INTER-LS 130 – CRC FIRST-YEAR SEMINAR: FOUNDATIONS OF A LIBERAL ARTS EDUCATION
1 credit.

Explores multiple dimensions of a liberal arts education and its value in today's world. Introduces University resources and promotes community building inside the residence hall and across campus. Engage directly with faculty from diverse fields on campus and with others in the Chadbourne Residence Hall.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Formulate an individual understanding of the liberal arts.
Audience: Undergraduate

2. Explore, analyze, and evaluate conceptions of the liberal arts.
Audience: Undergraduate

3. Participate in reasoned, well-organized, and sustained discussions.
Audience: Undergraduate

4. Understand problems and issues in their social, cultural, and historical contexts.
Audience: Undergraduate

5. Engage in personal and cultural self-criticism and problem solving.
Audience: Undergraduate

6. Design and create a project that demonstrates depth of knowledge and mastery of a research topic.
Audience: Undergraduate

INTER-LS 139 – BELONG, EXPLORE, BECOME: DISCOVERING YOUR UW PATHS
1 credit.

Examine self, community, and the liberal arts education while progressing through a major exploration framework - critically engage with the concepts of belonging and transitions, and explore questions of identity, community, and connectedness; explore UW schools/colleges, departments, majors, opportunities and resources; make connections between coursework and lived experiences outside of class to strengthen strategic exploration. Using readings, discussions, in-class activities, and out-of-class assignments, proceed through a framework with the goal of developing knowledge, confidence, and tools to navigate the University's opportunities and resources.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and summarize the core elements of belongingness.
Audience: Undergraduate

2. Analyze and critique in a scholarly manner material related to college student transitions.
Audience: Undergraduate

3. Identify and meaningfully engage in learning opportunities that explore interests.
Audience: Undergraduate

4. Employ reflective practices to appraise own skills and monitor self-defined goals.
Audience: Undergraduate

5. Design and create a project that demonstrates depth of knowledge and mastery of strategic exploration.
Audience: Undergraduate

6. Examine and meaningfully engage with component parts of a liberal arts education.
Audience: Undergraduate

INTER-LS 144 – SUCCESS IN YOUR MATH COURSE
1 credit.

Introduction to research-based best practices for success in college-level math courses. Practical application in the areas of study skills, goal setting, time management, and notetaking; hands-on practice with problem-solving strategies.
Requisites: Concurrent enrollment in MATH 96 or 112
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define and set SMART (Specific, Measurable, Attainable, Realistic, and Timely) Goals.
Audience: Undergraduate

2. Analyze feedback provided on math assessments accurately.
Audience: Undergraduate

3. Describe and use effective study skill strategies for college-level math courses.
Audience: Undergraduate

4. Articulate and practice the philosophy underlying Growth Mindset.
Audience: Undergraduate

5. Demonstrate effective notetaking strategies and concept map construction.
Audience: Undergraduate

6. Apply problem solving strategies to relevant content questions.
Audience: Undergraduate

INTER-LS 145 – HOW TO SUCCEED IN COLLEGE
1 credit.

Introduction to current research on learning and guides how to apply that knowledge in your academic experience and course work. Covers research and its practical application in the areas of study skills, time management, academic writing, motivation, and self-direction. Promotes strong foundational skills to succeed at a higher education institution.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate and practice self-regulated learning
Audience: Undergraduate

2. Interpret rubrics, assignments, and feedback accurately
Audience: Undergraduate

3. Describe and use effective strategies for college-level knowledge acquisition
Audience: Undergraduate

4. Articulate and practice introductory college-level skills used in writing academic papers and reports
Audience: Undergraduate

5. Identify necessary steps to undertake long-term projects, and develop actionable plans to ensure that projects are completed on time and accurately
Audience: Undergraduate

INTER-LS 158 — SPARK SEMINAR
1 credit.

Introduction to community-engaged research. Connects to UW-Madison partnerships and programs sparked by a commitment to addressing specific community needs. Examines how research programs are designed, with an emphasis on programs that build on team diversity and interdisciplinarity to bring the Wisconsin Idea to life. Engages with current research projects to learn how campus innovations and collaborative problem-solving benefit community partners.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, for 2 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the concept of interdisciplinarity and describe the potential benefits of this approach.
Audience: Undergraduate

2. Exemplify interdisciplinary thinking by recognizing and comparing varying characteristics of evidence, research methods, and research outcomes at the university level.
Audience: Undergraduate

3. Identify key components of community-engaged research.
Audience: Undergraduate

4. Explain ethical considerations of community-engaged research at institutions like the University of Wisconsin-Madison.
Audience: Undergraduate

5. Evaluate the transition from high school to university life through personal and cultural analysis, reflection, and problem-solving.
Audience: Undergraduate

INTER-LS 210 — L&S CAREER DEVELOPMENT: TAKING INITIATIVE
1 credit.

Interdisciplinary course in career development that connects the liberal arts and sciences degree to academic and career preparation, practical job skills, goal-setting, critical thinking and reflection. Designed for second year students, but open to all students.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

INTER-LS 215 — COMMUNICATING ABOUT CAREERS
3 credits.

Explores the meaning and value of a liberal arts and sciences education for careers in the global, technological, and multicultural workplace of the 21st century. Through a series of individual and collaborative research and communication assignments, learn to critically analyze the career and education implications of a diverse and digital workplace, and to critically reflect on strengths and values to prepare to connect college work with lifelong career success. Practice academic skills of analyzing scholarly articles, constructing written essays, presenting formal speeches, and crafting digital presentations, as well as career skills of building resumes, writing cover letters, using social networking tools, and interviewing.
Requisites: Satisfied Communications A requirement
Course Designation: Gen Ed - Communication Part B
Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand, evaluate, and communicate arguments about the nature of work in contemporary global, digital, and multicultural society, with respect to a specific target career community.
Audience: Undergraduate

2. Develop and communicate a compelling personal career narrative about your path through a liberal arts and sciences education, with respect to a specific target career community.
Audience: Undergraduate

INTER-LS/INTER-AG 250 — UNDERGRADUATE RESEARCH EXPERIENCE
1-3 credits.

Participation in research or creative endeavor led by faculty or instructional staff. May include participation in research discussion groups, critiques of readings, and preparation of written or oral reports.
Requisites: Member of Undergraduate Research Scholars Program
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

INTER-LS 257 – BRADLEY PEER MENTOR COURSE
2 credits.

Provides training and support for Peer Mentors of the Bradley Learning Community. Helps improve leadership and facilitation skills for Peer Mentors, whose primary service obligations include co-facilitating a section of the Bradley Roundtable seminar and arranging programming for the Bradley Learning Community. Introduces new techniques for working with small groups. Special attention will be paid to the research on the developmental and academic needs of first-year college students Encourages students to develop their professional skills. Serves as an opportunity for guided reflection, as part of the community-based learning model.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, for 2 number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Develop leadership skills and initiative.
Audience: Undergraduate

2. Improve oral communication skills through reasoned, well-organized and sustained discussions of important issues or questions, including the ability to explain and evaluate different or opposing perspectives evenhandedly and dispassionately.
Audience: Undergraduate

3. Examine questions and make decisions with consideration for the cultural perspectives and worldviews of others and self-critical appreciation of cultural and personal values.
Audience: Undergraduate

4. Make connections among diverse subject areas and modes of thinking.
Audience: Undergraduate

5. Apply the major areas of knowledge to the solution of individual and community problems.
Audience: Undergraduate

6. Improve group facilitation skills.
Audience: Undergraduate

7. Study and understand the developmental needs of first-year college students.
Audience: Undergraduate

8. Understand civic responsibility and the impact of their community engagement upon themselves and the residents.
Audience: Undergraduate

INTER-LS 260 – INTERNSHIP IN THE LIBERAL ARTS AND SCIENCES
1 credit.

Earn academic credit connected to your work experience with outside internships, regardless of your major. Using online tools, collaboratively analyze and discuss internships with respect to the goals of a liberal arts and sciences education.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Workplace - Workplace Experience Course
Repeatable for Credit: Yes, for 3 number of completions
Last Taught: Fall 2025

INTER-LS 300 – TOPICS IN TEACHING AND LEARNING IN THE LETTERS, ARTS, AND SCIENCES
3 credits.

Reflect on principles of liberal education, and apply those principles to your own learning experiences.
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2020
Learning Outcomes: 1. Understand and apply principles of liberal education to the student's own learning experience
Audience: Undergraduate

2. Demonstrate the ability to reflect upon and communicate with others about a liberal education.
Audience: Undergraduate

INTER-LS 301 – METHODS IN THE APPLIED SOCIAL SCIENCES
3 credits.

Gain a broad understanding of the diverse areas of social science research from various disciplinary perspectives, through a series of lectures, readings, and essay assignments. Includes problem definition, evidence gathering, data analysis, and results presentation.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Identify and explain diverse methods of social science research from various disciplinary perspectives
Audience: Undergraduate

2. Examine and describe how social scientists gather evidence, analyze data and present results
Audience: Undergraduate

INTER-LS 302 – PROBLEMS IN THE APPLIED SOCIAL SCIENCES
3 credits.

Gain an in-depth understanding of one particular application area of social science research through a series of lectures, readings, and essay assignments. Includes problem definition, evidence gathering, data analysis, and results presentation.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, for 2 number of completions
Last Taught: Spring 2024
Learning Outcomes: 1. Outline one particular application area of social science research -- a contemporary issue or problem -- from a focused set of disciplinary perspectives
Audience: Undergraduate

2. Describe and define a social issue or problem
Audience: Undergraduate

3. Examine how social scientists gather evidence and analyze data and present results
Audience: Undergraduate

INTER-LS 315 – PARADIGMS AND PROCESS IN ACADEMIC INQUIRY
2 credits.

Designed specifically for the research fellow, provides a structure for thinking about research that avoids reducing research to a single mode of thought and practice, and is thus inclusive of the range of approaches to research reflected in INTER-LS/INTER-AG 250. Will address specific topics that relate to the day-to-day activities of doing research, and addresses issues of what does it mean to think like a researcher, to act like a researcher, to talk like a researcher?
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

INTER-LS 601 – APPLIED SOCIAL SCIENCES PROBLEM PROPOSAL
3 credits.

Select a particular application area of social science research -- a contemporary issue or problem area related to one's own career or community experiences and goals-- through a series of readings, group discussions, research activities, and writing assignments. Design a research review project that will summarize and analyze the most promising social science research paths to a solution of this issue or problem. Key steps include: problem definition, literature review, and thesis development.
Requisites: INTER-LS 301 and 302
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Gain an in-depth understanding of the applied research review process in the social sciences
Audience: Undergraduate

2. Define a contemporary problem area in the social sciences
Audience: Undergraduate

3. Conduct a literature review of recent and relevant social science research
Audience: Undergraduate

4. Develop a thesis about the potential trajectory and impact of that research
Audience: Undergraduate

INTER-LS 602 – APPLIED SOCIAL SCIENCES PROBLEM ANALYSIS
3 credits.

Build on previous work in a particular application area of social science research -- a contemporary issue or problem area related to one's own career or community experiences and goals -- through a series of readings, group discussions, research activities, and writing assignments. Complete a research review project that will summarize and analyze the most promising social science research paths to a solution of this issue or problem. Key steps include: organization of findings, equity/diversity analysis, and final narrative presentation.
Requisites: INTER-LS 601
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Describe the applied research review process
Audience: Undergraduate

2. Gather and organize recent research findings around a contemporary problem area
Audience: Undergraduate

3. Evaluate that research with respect to equity and diversity issues
Audience: Undergraduate

4. Assemble a narrative about the potential trajectory and impact of that research
Audience: Undergraduate

INTER-LS 700 – PUBLIC HUMANITIES: THEORIES, METHODS, CASES
3 credits.

Introduction to a range of methods, theories, and cases that represent the emerging field of the public humanities. Explore the range of opportunities that exist outside of academia. Focus on the limits, audiences, and outcomes of research in the humanities, including the possibility of translational research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020

INTERDISCIPLINARY COURSES (SOHE) (INTER-HE)

INTER-HE 201 – BELONGING, PURPOSE AND THE ECOLOGY OF HUMAN HAPPINESS: ECOYOU
3 credits.

This course explores the art and science of purposeful living by integrating academic knowledge with issues real and relevant to students' lives including: identity and belonging; happiness, purpose and meaning; self-awareness and self-presentation; romantic, peer and family relationships; material culture, consumer behavior and financial well-being; and connections to community, culture, and society. From the microbes that inhabit our guts to political revolutions sparked by a tweet, human lives are embedded in an ecology of complex, interdependent systems. Using the lens of Human Ecology, you will address "big questions" like: How am I connected to others and to larger systems? What brings happiness and works for the "greater good" in human lives? An overarching goal of the course is to help you understand yourself as embedded in the web of ever-evolving interconnected networks, an "EcoYou." Human Ecology is a systems approach to studying and understanding relationships between humans and their everyday environments; it is a civic and socially conscious orientation that is committed to understanding and improving the quality of human lives. Human Ecology is inherently interdisciplinary drawing on research, theories and methods from diverse fields such as sociology, psychology, anthropology, economics, public health, biology, and art and design.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

INTER-HE 202 – SOHE CAREER & LEADERSHIP DEVELOPMENT
1 credit.

Provides an introduction to leadership development, career development, and career readiness competencies.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025

INTER-HE 301 – SPECIAL TOPICS IN HUMAN ECOLOGY
1-3 credits.

Specialized subject matter of current interest.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

INTER-HE 601 – INTERNSHIP
3 credits.

Develop career-readiness skills while applying academic knowledge in a workplace setting.
Requisites: INTER-HE 202 and junior standing
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: Yes, for 2 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Develop relationships with co-workers and supervisors working as a team member through varied experiences while improving interpersonal relationships
Audience: Undergraduate

2. Enhance knowledge of the industry's systems and procedures, including adapting to changing market trends and technology
Audience: Undergraduate

3. Reinforce educational and career goals while preparing for transition from student to a professional in the workplace
Audience: Undergraduate

4. Explore career opportunities within a company/organization and industry through real-world situations
Audience: Undergraduate

5. Develop professional competencies in written and oral communication
Audience: Undergraduate

INTER-HE/ELPA 770 – COMMUNITY, OPPORTUNITY, AND JUSTICE
3 credits.

Critical examination of school-community engagement and collaboration. Examines theory and practice of mutually beneficial collaboration in diverse education settings, including leadership issues in collaborative settings, and facilitators and inhibitors to effective collaboration.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

INTER-HE 792 – THEORIES AND PERSPECTIVES IN HUMAN ECOLOGY
1-2 credits.

Explore the multidisciplinary theories and perspectives that inform ecological thinking and the lens of the School of Human Ecology. Gain a clear understanding of the human ecological perspective, as it presents in SoHE; the benefits and challenges of applying this lens to research, policy, and outreach; and how your work fits within the larger human ecological perspective. Furthermore, develop skills and discover resources supporting cross-disciplinary communication and collaboration.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define "human ecology" in a way that is personally significant and contextualizes your work
Audience: Graduate

2. Describe several cross-cutting perspectives that link definitions of human ecology across fields and disciplines (content areas)
Audience: Graduate

3. Integrate perspectives into a human ecological framework relevant to your work and professional goals
Audience: Graduate

4. Employ a human ecological perspective in framing questions and critically evaluating issues
Audience: Graduate

5. Evaluate the benefits and challenges of approaching your work with a human ecological lens
Audience: Graduate

6. Articulate your emerging identity as a human ecologist
Audience: Graduate

INTER-HE 793 – RESEARCH METHODS
3 credits.

Basic techniques: questionnaires, interviews, behavioral observation, sampling, experimental designs and data analysis using computer. Learn to write a research proposal with literature review.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

INTER-HE 801 – SPECIAL TOPICS IN HUMAN ECOLOGY
1-3 credits.

Special Topics in Human Ecology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

INTER-HE 815 – PROFESSIONAL SKILLS FOR COMMUNITY LEADERS AND PRACTITIONERS
1 credit.

Special topics related to applied work and professional skill development in Human Ecology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

INTER-HE 940 – COLLABORATIVE CAPSTONE I
3 credits.

Begin the collaborative design thinking process by exploring current state, empathizing with users, and defining opportunity areas for design. Specifically - find and frame a challenge, break it down to get started, conduct ethnographic and inspiration research, synthesize research findings into themes, insights and opportunities, visualize opportunities with frameworks and concepts, and compile evidence for desirability, feasibility and viability. Practice behaviors of design thinking - ethics, critique, and storytelling.
Requisites: Declared in the MS Design + Innovation
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Apply an iterative design thinking process on an interdisciplinary team.
Audience: Graduate

2. Frame a challenge at an appropriate level for design exploration.
Audience: Graduate

3. Empathize with a broad range of stakeholders to understand needs through the ethnographic method.
Audience: Graduate

4. Synthesize raw learnings into opportunities for design.
Audience: Graduate

5. Communicate effectively, both visually and orally.
Audience: Graduate

6. Demonstrate constructive collaboration behaviors– creative critique, balancing independent work with group work, and knowing when to get an outside opinion.
Audience: Graduate

INTER-HE 980 – CAPSTONE SEMINAR
1-3 credits.

Facilitates and supports completion of a capstone project. Gain feedback from peers and the instructor; set goals and provides structure for timely and successful project completion; covers skills and knowledge to support students in the next stage of their careers, after graduate school.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 2 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate key issues in using and communicating about research in applied settings.
Audience: Graduate

2. Plan and carry out a capstone project demonstrating their substantive knowledge and analytic skills in the human ecology field.
Audience: Graduate

3. Communicate the results of their capstone project to both academic and non-academic audiences.
Audience: Graduate

INTERNATIONAL ACADEMIC PROGRAMS – STUDY ABROAD (STDYABRD)

STDYABRD 100 – TOPICS IN BIOLOGICAL SCIENCE
1-6 credits.

Biological science course taken on UW-Madison resident study abroad program for which there is no departmental equivalent. Current enrollment in a UW-Madison study abroad program
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

STDYABRD 106 – TOPICS IN HUMANITIES
1-6 credits.

Humanities course taken on a UW-Madison resident study abroad program for which there is no departmental equivalent. Current enrollment in a UW-Madison study abroad program
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

STDYABRD 116 – TOPICS IN LITERATURE
1-6 credits.

Literature course taken on a UW-Madison resident study abroad program for which there is no departmental equivalent. Current enrollment in a UW-Madison study abroad program
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

STDYABRD 125 – TOPICS IN NATURAL SCIENCE
1-6 credits.

Natural science course taken on UW-Madison resident study abroad program for which there is no departmental equivalent. Current enrollment in a UW-Madison study abroad program
Requisites: None
Course Designation: Breadth - Natural Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

STDYABRD 130 – TOPICS IN PHYSICAL SCIENCE
1-6 credits.

Physical science course taken on UW-Madison resident study abroad program for which there is no departmental equivalent. Current enrollment in a UW-Madison study abroad program
Requisites: None
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

STDYABRD 136 – TOPICS IN SOCIAL SCIENCE
1-6 credits.

Social science course taken on a UW-Madison resident study abroad program for which there is no departmental equivalent. Current enrollment in a UW-Madison study abroad program
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

STDYABRD 145 – TOPICS IN SOCIAL AND NATURAL SCIENCE
1-6 credits.

Social/natural science course taken on a UW-Madison resident study abroad program for which there is no departmental equivalent. Current enrollment in a UW-Madison study abroad program
Requisites: None
Course Designation: Breadth - Either Social Science or Natural Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

STDYABRD 150 – TOPICS IN HUMANITIES AND NATURAL SCIENCE
1-6 credits.

Humanities/natural science course taken on a UW-Madison resident study abroad program for which there is no departmental equivalent. Current enrollment in a UW-Madison study abroad program
Requisites: None
Course Designation: Breadth - Either Humanities or Natural Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

STDYABRD 155 – TOPICS IN BIOLOGICAL AND SOCIAL SCIENCE
1-6 credits.

Biological/social science course taken on a UW-Madison resident study abroad program for which there is no departmental equivalent. Current enrollment in a UW-Madison study abroad program
Requisites: None
Course Designation: Breadth - Either Biological Science or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

STDYABRD 161 – TOPICS IN HUMANITIES AND SOCIAL SCIENCE
1-6 credits.

Humanities/social science course taken on a UW-Madison resident study abroad program for which there is no departmental equivalent. Current enrollment in a UW-Madison study abroad program
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

STDYABRD 170 – INTERDIVISIONAL TOPICS
1-6 credits.

Course taken on a UW-Madison resident study abroad program for which there is no departmental or breadth equivalent. Current enrollment in a UW-Madison study abroad program
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

STDYABRD 176 – INTERDIVISIONAL TOPICS
1-6 credits.

Course taken on a UW-Madison resident study abroad program for which there is no departmental or breadth equivalent. Current enrollment in a UW-Madison study abroad program
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions

STDYABRD 190 — FIRST SEMESTER FOREIGN LANGUAGE
3-6 credits.

Foreign language course taken on a Madison resident study abroad program in a language not taught at UW-Madison. Current enrollment in a UW-Madison study abroad program and prior approval by IAP in consultation with a related foreign language department.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Perform elementary everyday communicative functions in the target language orally and in writing, at the first-semester level.
Audience: Undergraduate

2. Recognize the relationship between culture and language use
Audience: Undergraduate

3. Identify common traits and distinctive features of the target culture
Audience: Undergraduate

STDYABRD 195 — SECOND SEMESTER FOREIGN LANGUAGE
3-6 credits.

Foreign language course taken on a Madison resident study abroad program in a language not taught at UW-Madison. Does not award retrocredit. Current enrollment in a UW-Madison study abroad program and prior approval by IAP in consultation with a related foreign language department. Enrollment in this course presumes students have completed a first-semester course in the language or placed directly into the course.
Requisites: None
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2013
Learning Outcomes: 1. Perform elementary everyday communicative functions in the target language orally and in writing, at the second-semester level.
Audience: Undergraduate

2. Recognize the relationship between culture and language use.
Audience: Undergraduate

3. Identify common traits and distinctive features of the target culture
Audience: Undergraduate

STDYABRD 290 — THIRD SEMESTER FOREIGN LANGUAGE
3-6 credits.

Foreign language course taken on a Madison resident study abroad program in a language not taught at UW-Madison. Does not award retrocredit. Current enrollment in a UW-Madison study abroad program and prior approval by IAP in consultation with a related foreign language department. Enrollment in this course presumes students have completed a second-semester course in the language or placed directly into the course.
Requisites: None
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Perform intermediate everyday communicative functions in the target language orally and in writing, at the third-semester level.
Audience: Undergraduate

2. Recognize the relationship between culture and language use.
Audience: Undergraduate

3. Identify common traits and distinctive features of the target culture
Audience: Undergraduate

STDYABRD 295 — FOURTH SEMESTER FOREIGN LANGUAGE
3-6 credits.

Foreign language course taken on a Madison resident study abroad program in a language not taught at UW-Madison. Does not award retrocredit. Current enrollment in a UW-Madison study abroad program and prior approval by IAP in consultation with a related foreign language department. Enrollment in this course presumes students have completed a third-semester course in the language or placed directly into the course.
Requisites: None
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2013
Learning Outcomes: 1. Perform intermediate everyday communicative functions in the target language orally and in writing, at the fourth-semester level.
Audience: Undergraduate

2. Recognize the relationship between culture and language use.
Audience: Undergraduate

3. Identify common traits and distinctive features of the target culture
Audience: Undergraduate

STDYABRD 300 – TOPICS IN BIOLOGICAL SCIENCE
1-6 credits.

Biological science course taken on UW-Madison resident study abroad program for which there is no departmental equivalent. Current enrollment in a UW-Madison study abroad program
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2008

STDYABRD 306 – TOPICS IN HUMANITIES
1-6 credits.

Humanities course taken on a UW-Madison resident study abroad program for which there is no departmental equivalent. Current enrollment in a UW-Madison study abroad program
Requisites: None
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2008

STDYABRD 316 – TOPICS IN LITERATURE
1-6 credits.

Literature course taken on a UW-Madison resident study abroad program for which there is no departmental equivalent. Enrollment in a UW-Madison resident study abroad program
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

STDYABRD 325 – TOPICS IN NATURAL SCIENCE
1-6 credits.

Natural science course taken on UW-Madison resident study abroad program for which there is no departmental equivalent. Current enrollment in a UW-Madison study abroad program
Requisites: None
Course Designation: Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

STDYABRD 330 – TOPICS IN PHYSICAL SCIENCE
1-6 credits.

Physical science course taken on UW-Madison resident study abroad program for which there is no departmental equivalent. Current enrollment in a UW-Madison study abroad program
Requisites: None
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

STDYABRD 336 – TOPICS IN SOCIAL SCIENCE
1-6 credits.

Social science course taken on a UW-Madison resident study abroad program for which there is no departmental equivalent. Current enrollment in a UW-Madison study abroad program
Requisites: None
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

STDYABRD 345 – TOPICS IN SOCIAL AND NATURAL SCIENCE
1-6 credits.

Social/natural science course taken on a UW-Madison resident study abroad program for which there is no departmental equivalent. Current enrollment in a UW-Madison study abroad program
Requisites: None
Course Designation: Breadth - Either Social Science or Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

STDYABRD 350 – TOPICS IN HUMANITIES AND NATURAL SCIENCE
1-6 credits.

Humanities/natural science course taken on a UW-Madison resident study abroad program for which there is no departmental equivalent. Current enrollment in a UW-Madison study abroad program
Requisites: None
Course Designation: Breadth - Either Humanities or Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

STDYABRD 355 – TOPICS IN BIOLOGICAL AND SOCIAL SCIENCE
1-6 credits.

Biological/social science course taken on a UW-Madison resident study abroad program for which there is no departmental equivalent. Current enrollment in a UW-Madison study abroad program
Requisites: None
Course Designation: Breadth - Either Biological Science or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

STDYABRD 361 – TOPICS IN HUMANITIES AND SOCIAL SCIENCE
1-6 credits.

Humanities/social science course taken on a UW-Madison resident study abroad program for which there is no departmental equivalent. Current enrollment in a UW-Madison study abroad program
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

STDYABRD 370 – INTERDIVISIONAL TOPICS
1-6 credits.

Course taken on a UW-Madison resident study abroad program for which there is no departmental or breadth equivalent. Current enrollment in a UW-Madison study abroad program
Requisites: None
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

STDYABRD 376 – INTERDIVISIONAL TOPICS
1-6 credits.

Course taken on a UW-Madison resident study abroad program for which there is no departmental or breadth equivalent. Current enrollment in a UW-Madison study abroad program
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions

STDYABRD 380 – TOPICS IN BIOLOGICAL SCIENCE
1-6 credits.

Biological science course taken on UW-Madison resident study abroad program for which there is no departmental equivalent. Current enrollment in a UW-Madison study abroad program and permission of the LS Honors Program
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions

STDYABRD 381 – TOPICS IN HUMANITIES
1-6 credits.

Humanities course taken on a UW-Madison resident study abroad program for which there is no departmental equivalent. Current enrollment in a UW-Madison study abroad program and permission of the LS Honors Program
Requisites: None
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions

STDYABRD 382 – TOPICS IN LITERATURE
1-6 credits.

Literature course taken on a UW-Madison resident study abroad program for which there is no departmental equivalent. Current enrollment in a UW-Madison study abroad program and permission of the LS Honors Program
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions

STDYABRD 383 – TOPICS IN NATURAL SCIENCE
1-6 credits.

Natural science course taken on UW-Madison resident study abroad program for which there is no departmental equivalent. Current enrollment in a UW-Madison study abroad program and permission of the LS Honors Program
Requisites: None
Course Designation: Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions

STDYABRD 384 – TOPICS IN PHYSICAL SCIENCE
1-6 credits.

Physical science course taken on UW-Madison resident study abroad program for which there is no departmental equivalent. Current enrollment in a UW-Madison study abroad program and permission of the LS Honors Program
Requisites: None
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions

STDYABRD 385 – TOPICS IN SOCIAL SCIENCE
1-6 credits.

Social science course taken on a UW-Madison resident study abroad program for which there is no departmental equivalent. Current enrollment in a UW-Madison study abroad program and permission of the LS Honors Program
Requisites: None
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions

STDYABRD 386 – TOPICS IN SOCIAL AND NATURAL SCIENCE
1-6 credits.

Social/natural science course taken on a UW-Madison resident study abroad program for which there is no departmental equivalent. Current enrollment in a UW-Madison study abroad program and permission of the LS Honors Program
Requisites: None
Course Designation: Breadth - Either Social Science or Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions

STDYABRD 387 – TOPICS IN HUMANITIES AND NATURAL SCIENCE
1-6 credits.

Humanities/natural science course taken on a UW-Madison resident study abroad program for which there is no departmental equivalent. Enrollment in a UW-Madison resident study abroad program permission of the LS Honors Program
Requisites: None
Course Designation: Breadth - Either Humanities or Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions

STDYABRD 388 – TOPICS IN BIOLOGICAL AND SOCIAL SCIENCE
1-6 credits.

Biological/social science course taken on a UW-Madison resident study abroad program for which there is no departmental equivalent. Current enrollment in a UW-Madison study abroad program and permission of the LS Honors Program
Requisites: None
Course Designation: Breadth - Either Biological Science or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions

STDYABRD 389 – TOPICS IN HUMANITIES AND SOCIAL SCIENCE
1-6 credits.

Humanities/social science course taken on a UW-Madison resident study abroad program for which there is no departmental equivalent. Current enrollment in a UW-Madison study abroad program and permission of the LS Honors Program
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions

STDYABRD 390 – FIFTH SEMESTER FOREIGN LANGUAGE
3-6 credits.

Foreign language course taken on a Madison resident study abroad program in a language not taught at UW-Madison. Current enrollment in a UW-Madison study abroad program and prior approval by IAP in consultation with a related foreign language department
Requisites: None
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

STDYABRD 393 – SIXTH SEMESTER FOREIGN LANGUAGE
3-6 credits.

Foreign language course taken on a Madison resident study abroad program in a language not taught at UW-Madison. Current enrollment in a UW-Madison study abroad program
Requisites: None
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

STDYABRD 500 – TOPICS IN BIOLOGICAL SCIENCE
1-6 credits.

Biological science course taken on UW-Madison resident study abroad program for which there is no departmental equivalent. Current enrollment in a UW-Madison study abroad program
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

STDYABRD 506 – TOPICS IN HUMANITIES
1-6 credits.

Humanities course taken on a UW-Madison resident study abroad program for which there is no departmental equivalent. Current enrollment in a UW-Madison study abroad program
Requisites: None
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

STDYABRD 516 – TOPICS IN LITERATURE
1-6 credits.

Literature course taken on a UW-Madison resident study abroad program for which there is no departmental equivalent. Current enrollment in a UW-Madison study abroad program
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

STDYABRD 525 – TOPICS IN NATURAL SCIENCE
1-6 credits.

Natural science course taken on UW-Madison resident study abroad program for which there is no departmental equivalent. Current enrollment in a UW-Madison study abroad program
Requisites: None
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

STDYABRD 530 – TOPICS IN PHYSICAL SCIENCE
1-6 credits.

Physical science course taken on UW-Madison resident study abroad program for which there is no departmental equivalent. Current enrollment in a UW-Madison study abroad program
Requisites: None
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

STDYABRD 536 – TOPICS IN SOCIAL SCIENCE
1-6 credits.

Social science course taken on a UW-Madison resident study abroad program for which there is no departmental equivalent. Current enrollment in a UW-Madison study abroad program
Requisites: None
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

STDYABRD 545 – TOPICS IN SOCIAL AND NATURAL SCIENCE
1-6 credits.

Social/natural science course taken on a UW-Madison resident study abroad program for which there is no departmental equivalent. Current enrollment in a UW-Madison study abroad program
Requisites: None
Course Designation: Breadth - Either Social Science or Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

STDYABRD 550 – TOPICS IN HUMANITIES AND NATURAL SCIENCE
1-6 credits.

Humanities/natural science course taken on a UW-Madison resident study abroad program for which there is no departmental equivalent. Current enrollment in a UW-Madison study abroad program
Requisites: None
Course Designation: Breadth - Either Humanities or Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

STDYABRD 555 – TOPICS IN BIOLOGICAL AND SOCIAL SCIENCE
1-6 credits.

Biological/social science course taken on a UW-Madison resident study abroad program for which there is no departmental equivalent. Current enrollment in a UW-Madison study abroad program
Requisites: None
Course Designation: Breadth - Either Biological Science or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

STDYABRD 561 – TOPICS IN HUMANITIES AND SOCIAL SCIENCE
1-6 credits.

Humanities/social science course taken on a UW-Madison resident study abroad program for which there is no departmental equivalent. Current enrollment in a UW-Madison study abroad program
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

STDYABRD 570 – INTERDIVISIONAL TOPICS
1-6 credits.

Course taken on a UW-Madison resident study abroad program for which there is no departmental or breadth equivalent. Current enrollment in a UW-Madison study abroad program
Requisites: None
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

STDYABRD 576 – INTERDIVISIONAL TOPICS
1-6 credits.

Course taken on a UW-Madison resident study abroad program for which there is no departmental or breadth equivalent. Current enrollment in a UW-Madison study abroad program
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions

INTERNATIONAL BUSINESS (INTL BUS)

INTL BUS 200 – INTERNATIONAL BUSINESS
3 credits.

Technology, privatization, deregulation and other government policies, and growth of a mass culture are among the factors that drive global business today. Introduction to the key concepts necessary to understand the functioning of global markets and the inherent issues managers face in planning and executing international business strategies for products, services and investments.
Requisites: (ECON 101, 102, or 111); or declared in undergraduate Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand how intercultural differences can affect consumption behaviors and firm management.
Audience: Undergraduate

2. Articulate the politics of trade at the national and supranational level and explain the tools by which government intervention is used to impact trade and investment.
Audience: Undergraduate

3. Explain the role of institutions such as the IMF, World Bank and WTO in facilitating trade and investment.
Audience: Undergraduate

4. Describe at a foundational level foreign currency risks and the international monetary system.
Audience: Undergraduate

5. Evaluate the benefits and costs of various foreign entry strategies, including direct foreign investment.
Audience: Undergraduate

INTL BUS/FRENCH 313 – PROFESSIONAL COMMUNICATION AND CULTURE IN THE FRANCOPHONE WORLD
3 credits.

Study and analysis of the culture and sociology of professional environments in the French and Francophone worlds, including government, international organizations, NGO's and business. Students develop communication skills through interactive teaching methods in multimedia labs.
Requisites: FRENCH 228 or 311
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

INTL BUS/FRENCH 314 – CONTEMPORARY ISSUES IN BUSINESS, GOVERNMENT AND NGOS
3 credits.

Cultural study of contemporary Francophone Africa, focusing on issues in government, organizations and enterprise. Exploration of cultural and professional relations between Francophone Africa and France, the European Union, and the United States.
Requisites: FRENCH 228, 311, or INTL BUS/FRENCH 313
Course Designation: Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand current events in French-speaking Africa.
Audience: Undergraduate

2. Recognize the ways in which those phenomena are understood, discussed and represented in other major Francophone regions (like Quebec, Mali, Morocco, France, and other regions), as well as in the United States.
Audience: Undergraduate

3. Conceptualize and apply transferrable skills acquired in a liberal arts education to French-related international business and non-profit careers.
Audience: Undergraduate

4. Apply the fundamentals of intercultural communication with a personal profile and “pitch,” in both English and French, to network more effectively.

Audience: Undergraduate

5. Enhance oral and written communication skills, in both languages, applicable to networking and job-seeking situations.
Audience: Undergraduate

INTL BUS/GEN BUS 320 – INTERCULTURAL COMMUNICATION IN BUSINESS
3 credits.

Develops awareness and knowledge of cultural influences on business. Focuses on various attitudes toward work, time, material possession, business, and the relationship of these attitudes to different social, religious, philosophical, and educational backgrounds of business people from cultures around the world.
Requisites: Sophomore standing or declared in the Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025

INTL BUS/SPANISH 329 – SPANISH FOR BUSINESS
3 credits.

Spanish lexicon and linguistic style for management, banking, accounting, capital investment, personnel and office systems, production of goods and services, marketing, finance, and import/export; includes translation and interpretive activities.
Requisites: SPANISH 311
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

INTL BUS/GEN BUS 340 – CULTURE AND COMMUNICATION IN WESTERN EUROPE
3 credits.

Learn how to adapt writing, speaking, and nonverbal behavior to effectively communicate in a Western European context (e.g. Germany, France, United Kingdom, Italy, and Spain). Examine issues such as cultural attitudes toward authority, time, gender, and race, as well as the religious and philosophical values that support those attitudes. Explore frameworks for understanding a national culture's influence on communication and learn how to apply that to practical use.
Requisites: None
Repeatable for Credit: No

INTL BUS 349 – GLOBAL IMMERSION EXPERIENCE IN INTERNATIONAL BUSINESS
1-2 credits.

Participation in a global immersion experience (short term study abroad) in International Business. Enrollment in a UW-Madison resident study abroad program.
Requisites: None
Repeatable for Credit: Yes, for 8 number of completions
Learning Outcomes: 1. Demonstrate personal and leadership qualities that help achieve success in global enterprise.
Audience: Undergraduate

INTL BUS 350 – GLOBAL IMMERSION IN INTERNATIONAL BUSINESS
1-2 credits.

In preparation for immersion into the unique international business dynamics of another country, explore the nation's political, social and cultural environment; market research and entry opportunities; the investment climate. Travel requirements, such as a valid passport, may apply to the immersion experience component.
Requisites: Consent of instructor
Repeatable for Credit: Yes, for 8 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Examine local and regional cultures and societies, including using socio-economic frameworks.
Audience: Undergraduate

2. Understand how globalization is shaping the local economy, and how the local economy in turn impacts globalization.
Audience: Undergraduate

3. Transfer international business theory to professional practice.
Audience: Undergraduate

4. Demonstrate personal and leadership qualities that help achieve success in global enterprise.
Audience: Undergraduate

INTL BUS 365 – CONTEMPORARY TOPICS
1-3 credits.

A course for the exploration of subject areas possibly to be introduced into the business curriculum.
Requisites: Sophomore standing or declared in undergraduate Business Exchange program
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

INTL BUS 399 – READING AND RESEARCH-INTERNATIONAL BUSINESS
1-6 credits.

Individual work suited to the needs of undergraduate students may be arranged both during regular sessions and the intersession periods.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2012

INTL BUS/M H R 403 – GLOBAL ISSUES IN MANAGEMENT
3 credits.

Focuses on the strategic management required in global business. Topics include environmental analysis, global strategy, and subsidiary control. The aim of the course is to develop special skills that are required to manage international firms.
Requisites: Sophomore standing. Not open to graduate/professional students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze the key drivers of globalization and their impact on organizational strategy, structure, and culture in global settings.
Audience: Undergraduate

2. Evaluate the role of cultural differences in facilitating or hindering organizational success and recommend strategies for effective leadership across cultures.
Audience: Undergraduate

3. Apply global human resource and corporate social responsibility practices to improve organizational productivity and sustainability in a global economy.
Audience: Undergraduate

4. Assess country, competitor, market, and consumer data to develop and refine management and marketing plans that allows a company to gain a sizeable market share and achieve strong financial performance for its operations in another country.
Audience: Undergraduate

INTL BUS/MARKETNG 420 – GLOBAL MARKETING STRATEGY
3 credits.

Structure of foreign trading; commercial facilities available to exporters and importers; application of economic analysis in marketing decisions; contemporary trends in international economy affecting foreign trade policies and practices.
Requisites: (MARKETNG 300 and sophomore standing) or declared in the Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize and analyze the impact of government intervention on trade and investment at national and transnational levels.
Audience: Undergraduate

2. Explain the role of the US in the global economy considering changes in demographics, technology, government intervention, trade, and resource scarcity.
Audience: Undergraduate

3. Identify challenges faced by global marketers due to differences in legal systems, laws, jurisdiction, and enforcement of property rights, including ethical considerations.
Audience: Undergraduate

4. Conduct cultural research to prepare for negotiations with potential suppliers, distributors, and consumers.
Audience: Undergraduate

5. Develop proposals that adapt a firm's international business strategy based on evaluations of how risk, culture, and macro- and national-level economic factors influence foreign national and sub-national environment.

Audience: Undergraduate

INTL BUS/FINANCE 445 – MULTINATIONAL BUSINESS FINANCE
3 credits.

Application of financial theory to the operations of multinational firms; survey of the international financial environment; determinants of international portfolio and direct investment capital flows; management of foreign exchange position and hedging strategies; evaluation of foreign investment projects (multinational capital budgeting); international financial structure decisions; multinational credit institutions and capital markets; taxation of international business.
Requisites: (FINANCE 305, 325, 330, and ECON/FINANCE 320), or declared in undergraduate Business Exchange program
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate the knowledge and technical skills needed to be the treasurer of an international firm
Audience: Undergraduate

2. Apply methods to measure, manage and analyze the effects posed by exchange rate risk to the income statement and balance sheet of a firm
Audience: Undergraduate

3. Evaluate foreign investment decisions
Audience: Undergraduate

4. Articulate the choices and challenges faced by managers when sourcing funds in the global capital markets, and in making complex foreign investment decisions
Audience: Undergraduate

INTL BUS 450 – STUDY ABROAD IN INTERNATIONAL BUSINESS
1 credit.

Engage in activities that aim to translate and integrate the study abroad experience. Build international business and global competencies while connecting with others engaged in an immersion experience.
Requisites: Declared in Certificate in International Business
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Build international business and related global competencies through a structured examination of the host country.
Audience: Undergraduate

2. Integrate the study abroad experience into personal and professional career readiness goals.
Audience: Undergraduate

INTL BUS/A A E/ECON 462 – LATIN AMERICAN ECONOMIC DEVELOPMENT
3 credits.

A historico-institutional analysis of development problems in the principal Latin American countries, with attention to differentiation of national growth patterns and alternative development strategies.
Requisites: A A E 101 (215 prior to Fall 2024), ECON 101, or 111
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Demonstrate mastery of the language of international development economics
Audience: Undergraduate

2. Develop proficiency in an array of concepts from primary product exports to conditional cash transfers to migration and remittances to corruption and civil conflict.
Audience: Undergraduate

3. Examine how markets and distinct development strategies and processes provide different opportunities and returns for the rich and the poor, urban and rural, latino and indigenous peoples, large and small countries, and so on.
Audience: Undergraduate

4. Explain the strengths and weaknesses of contending theories of economic development.
Audience: Undergraduate

5. Apply contending theories to markets, state policies, social initiatives, and historical experiences in Latin American countries.
Audience: Undergraduate

INTL BUS/FINANCE 745 – MULTINATIONAL BUSINESS FINANCE
2-3 credits.

Theory of business finance as applied to the operations of multinational firms; financial analysis and control of foreign investment decisions; working capital management; multinational credit institutions and capital markets; special accounting problems and trends in international monetary affairs.
Requisites: FINANCE 700
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate the knowledge and skills needed as a senior financial officer of an international firm.
Audience: Graduate

2. Understand how the international economic and financial environment and the exchange rates affect financial decisions by firms.
Audience: Graduate

3. Apply the methods used to measure, manage and analyze the effects posed by exchange rate uncertainty to the income statement and balance sheet of a firm.
Audience: Graduate

4. Articulate the choices and challenges faced by managers when sourcing funds in the global capital markets, and in making complex foreign investment decisions
Audience: Graduate

INTL BUS 765 – CONTEMPORARY TOPICS
1-4 credits.

Exploration of advanced subject areas possibly to be introduced into the business curriculum.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

INTL BUS 766 – GLOBAL BUSINESS MANAGEMENT
2 credits.

Focuses on the acquisition of knowledge and the development of skills over a broad range of issues related to global management. The overall goal is to improve global competence by discussing: why organizations "go global;" global business venture options; the impact of foreign business activities on host countries; how to conduct a "CAGE" analysis; how to identify and mitigate global risks; issues related to CSR and corruption for foreign business activity; the role of labor codes; ways to manage a global work force; the role of "global cadres;" and the roles and management of expatriates. Country/region knowledge explored will encompass Asia, Africa, South America, and Europe.
Requisites: Declared in Business: General Management, MBA
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Illustrate the CAGE (Culture, Administrative, Global, Economic issues) analysis for global business
Audience: Graduate

2. Summarize the reasons for global strategies and the complexities and challenges involved in developing and implementing them
Audience: Graduate

3. Explain why host countries choose to host foreign business and the costs and benefits associated with doing business with international companies
Audience: Graduate

4. Critically assess potential strategies, benefits and the unique risks of doing business internationally
Audience: Graduate

5. Contrast the management of a global workforce vs a domestic workforce; including staffing and management of international employees
Audience: Graduate

6. Outline the changing nature of global business with regards to managing ethical concerns, questions of corruption, and varying standards of conduct between the organization and host nation
Audience: Graduate

INTL BUS 767 – GLOBAL LEARNING EXPERIENCE
2 credits.

Visit host countries to improve global competence by discussing and experiencing key issues for US organizations doing business in the host countries. A key component will be the integration, in a global context, of the knowledge and skills from the MBA coursework in marketing, finance, international business, operations, economics, accounting, strategy, and leadership. The techniques learned and practiced can be used in the future to competently research and understand global business issues for any part of the world.
Requisites: Declared in Business: General Management, MBA
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Outline and manage legal, political, economic, technological, social and regulatory risks of host countries
Audience: Graduate

2. Profile and evaluate a company doing business in the host countries
Audience: Graduate

3. Apply insights from NGOs, Domestic, Western, multinational corporations doing business in the geographic region to the companies doing business in the host countries
Audience: Graduate

4. Analyze a retail product segment in country 2 and compare that segment to the United States
Audience: Graduate

INTL BUS 780 – BUSINESS IN THE GLOBAL ECONOMY
2 credits.

Exploration of the forces, frameworks, and institutions that drive the global economy and the inherent issues managers face in planning and executing international business strategies. Topics include the history of globalization, global market dynamics, political economy, trade policies, cross-cultural management, and strategic decision-making in a global context.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Articulate the politics of trade at the national and supranational level and explain the tools governments use to impact trade and investment flows.
Audience: Graduate

2. Explain how the forces of risk, culture, and macro- and national-level economic factors impact firm strategy when products and services go across national borders.
Audience: Graduate

3. Explain the role of institutions such as the International Monetary Fund (IMF), World Bank, and the World Trade Organization (WTO) in facilitating trade and investment.
Audience: Graduate

4. Describe the fundamentals of foreign currency risk and the international monetary system.
Audience: Graduate

5. Analyze and evaluate the benefits and costs of various foreign entry strategies, including direct foreign investment.
Audience: Graduate

INTL BUS 799 – READING AND RESEARCH-INTERNATIONAL BUSINESS
1-6 credits.

Individual work suited to the needs of graduate students may be arranged both during regular sessions and the intersession periods.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2011

INTERNATIONAL STUDIES (INTL ST)

INTL ST 101 – INTRODUCTION TO INTERNATIONAL STUDIES
3-4 credits.

Introduces the field of international studies, and performs an interdisciplinary examination of the cultural, political, economic, and social patterns that have defined the modern world.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

INTL ST 110 – INTERNATIONAL LEARNING COMMUNITY GENERAL SEMINAR
1 credit.

Promotes understanding of international and cross-cultural issues and encourages collaborative learning between students, faculty, and staff of the International Learning Community (ILC).
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Make connections across national and cultural borders
Audience: Undergraduate

2. Synthesize knowledge about different times and places to arrive at nuanced views of global issues
Audience: Undergraduate

3. Demonstrate oral communication skills through reasoned, well-organized and sustained discussions of important issues or questions, including the ability to explain and evaluate different or opposing perspectives evenhandedly and dispassionately.
Audience: Undergraduate

INTL ST/HISTORY 146 – A GLOBAL HISTORY OF NOW
3-4 credits.

An introduction to key historical events, movements, and systems that have shaped our present moment. Examines the relationship between empire-building and anti-colonial movements from the late 18th century to the current day. Focuses on the political, economic, and social/cultural dimensions of major global history themes, such as colonialism, capitalism, and revolution.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop a historical understanding of imperialism and decolonization since 1800
Audience: Undergraduate

2. Formulate arguments about change over time, and think critically about how narratives about the past are constructed
Audience: Undergraduate

3. Refine the ability to recognize and question assumptions
Audience: Undergraduate

4. Determine what constitutes reliable and valid evidence
Audience: Undergraduate

5. Interpret, compare, and contrast primary sources
Audience: Undergraduate

6. Improve writing and public speaking skills
Audience: Undergraduate

7. Acquire awareness of history's impact on the present
Audience: Undergraduate

INTL ST 210 – INTERNATIONAL LEARNING COMMUNITY LANGUAGE SEMINAR
1 credit.

Promotes understanding of international and cross-cultural issues and related vocabulary in the target language and encourages collaborative learning between students, faculty, and staff of the International Learning Community (ILC).
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize and use vocabulary related to course topic.
Audience: Undergraduate

2. Synthesize knowledge about different times and places to arrive at nuanced views of global issues.
Audience: Undergraduate

3. Demonstrate communication skills in the target language through reasoned, well-organized and sustained discussions of important issues or questions, including the ability to explain and evaluate different or opposing perspectives evenhandedly and dispassionately.
Audience: Undergraduate

INTL ST/ANTHRO/FOLKLORE/LINGUIS 211 – GLOBAL LANGUAGE ISSUES
3 credits.

Focuses on language and its culture, example topics include: extinction and revival, language and nationhood, how widely and deeply languages differ, language and worldview, writing systems and literacy, language discrimination and inequality.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Identify ways that geographic, social, and political events, movements, and trends shape the sociolinguistic context of the world's languages
Audience: Undergraduate

2. Demonstrate an understanding of subfields of global sociolinguistic inquiry, including language contact, variation, change, and death; language revitalization; the intersections of language, race, and ethnicity; the intersections of language and gender, and sexuality
Audience: Undergraduate

3. Critically evaluate specific examples of language use in a variety of linguistic and cultural contexts
Audience: Undergraduate

4. Design and conduct a sociocultural linguistic research project, including: identify a research question; collect appropriate resources and data; conduct data analysis and interpretation; draw conclusions, and summarize results
Audience: Undergraduate

INTL ST 212 – WISCHOLARS: WISCONSIN INTERNATIONAL SCHOLARS PROGRAM SEMINAR
1 credit.

Discussion of international events and topics designed specifically for Wisconsin International Scholars (WISc) Program participants, geared toward fostering leadership skills.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

INTL ST/ED POL 220 – HUMAN RIGHTS AND EDUCATION
3 credits.

Explores questions related to human rights and education, from the individual to the global level; from the abstract to the practical: What does it mean to be human? How do we learn to be human? What rights mark a human being? Do all human have rights? If they have a right to education, do they have a right to a particular kind of education? Can one global education and human rights model best meet the needs of our incredibly diverse global population? Can the global human rights framework improve current educational, national, social, and economic inequities? How so? How does education as a human right relate to human rights education? and who should decide the answers to these questions, and how? Investigates the tensions and boundaries of the human rights framework to reduce social inequality through methodological inquires in educational case studies, including: educational inequality; victims of the war on drugs; working children's rights; and climate change.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop awareness of the diversity of historical, political-economic, social and cultural meanings of 'human,' including the ethical imperatives and the exclusionary practices underlying them.
Audience: Undergraduate

2. Be familiar with global Human Rights frameworks and institutions, and develop a critical appreciation of their potential as well as limitations in particular sociocultural contexts.
Audience: Undergraduate

3. Develop a critical understanding of educational experiences in terms of Human Rights.
Audience: Undergraduate

4. Read and produce academic texts; more specifically: summaries, personal narratives, expository texts, and persuasive papers.
Audience: Undergraduate

INTL ST/HISTORY/LACIS 242 – MODERN LATIN AMERICA
3-4 credits.

A broad overview of Latin American history in the modern period, since independence but with a primary focus on the twentieth century. Particular emphasis will be placed on the socioeconomic, cultural, and political structures and processes that shaped and continue to influence life in Latin America. Key issues such as colonialism, nationalism, democracy, and revolution will be examined critically in light of broad comparative themes in Latin American and world history. Among the topics to be explored in detail will be the Mexican and Cuban revolutions, populism and dictatorship, socialism and neoliberalism, and drugs and migration.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2021
Learning Outcomes: 1. Describe the contours of Latin American history in the period since independence
Audience: Undergraduate

2. Apply and use key concepts relevant to Latin American history, such as imperialism, inequality, populism, socialism, neoliberalism
Audience: Undergraduate

3. Read for a dedicated purpose across different genres and forms of writing
Audience: Undergraduate

4. Apply historical reasoning to understand the origins of present-day issues
Audience: Undergraduate

5. Communicate effectively through presentations, discussion, and written work
Audience: Undergraduate

INTL ST 266 – INTRODUCTION TO THE MIDDLE EAST
3 credits.

An interdisciplinary introduction to the diverse cultures, geography, history, modern states, politics, societies, and economies of the Middle East. A special emphasis placed on Islam as a religion and Muslim peoples.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

INTL ST 275 – LEAD WITH LANGUAGES: PUTTING LANGUAGE SKILLS TO WORK
1 credit.

Whether you developed your language abilities at home, abroad, or in an educational setting, learn how to leverage your language skills to maximize potential employment opportunities. Develop an understanding of transferable skills unique to language learners and work toward articulating these skills for resume, cover letter, networking, and interviewing exercises. Connect your enthusiasm for learning languages with your personal interests, skills, and abilities to begin exploring career pathways. Learn from peers, alumni, and other guest speakers with language majors and multilingual backgrounds who have succeeded in a variety of careers.
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop understanding of demand for multilingual talent in a variety of career fields and become familiar with institutions/organizations/companies supporting language and career connections.
Audience: Undergraduate

2. Identify personal strengths and interest areas related to language skills and utilize campus resources, alumni contacts, and informational interviewing to explore career options.
Audience: Undergraduate

3. Learn how to articulate and emphasize language and intercultural skills to improve upon online presence, resume, cover letter, and interviewing opportunities.
Audience: Undergraduate

4. Articulate orally and in writing skills and abilities for self-promotion through direct connection of classroom activity to real world job opportunities.
Audience: Undergraduate

INTL ST/AFRICAN 302 – ARABIC LITERATURE AND CINEMA
3 credits.

An introduction to the most significant topics of contemporary Arabic literature and cinema. Discuss the legacy of colonialism, repressive nature of post-independence regimes, discourses on nationalism, religion vs. secularization, gender relations, representation of cultural otherness, and the Arab Springs. Materials will be drawn from a variety of cultural forms including literature, film, music, and performance; and scholarship, exploring the social, cultural, political, and economic contexts in which texts and films are written and exhibited.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize canonical authors and texts, historical forms, genres, and structures, and recognize aesthetic and cultural concerns among Arabic language authors and filmmakers of the 20th and 21st centuries, within their social, cultural and political contexts.
Audience: Undergraduate

2. Demonstrate—in writing, discussion, and presentations—an engagement with literary texts and movies with an eye to aesthetic genres, tendencies, and techniques.
Audience: Undergraduate

3. Discuss cultural texts from various theoretical and critical perspectives, formulate ideas and make connections between literary/cultural concepts and themes.
Audience: Undergraduate

4. Analyze the complex ways culture relates to individual choice, values, ideas, and the human experience across cultures.
Audience: Undergraduate

5. Value people and groups whose traditions and beliefs differ from our own.
Audience: Undergraduate

6. Communicate effectively through essays, oral presentations, and discussion, to share knowledge, wisdom, and values with others.
Audience: Undergraduate

7. Analyze contemporary political and cultural realities globally from multi-disciplinary perspectives.
Audience: Undergraduate

8. Understand the social, political, economic and cultural forces and conditions that have given rise to the unity and diversity of the Arab world.
Audience: Undergraduate

INTL ST 310 – INTERNATIONAL LEARNING COMMUNITY SEMINAR
1-3 credits.

Addresses various international, cross-cultural and language topics of interest to the residents of the International Learning Community.
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023

INTL ST/GEOG 311 – THE GLOBAL GAME: SOCCER, POLITICS, AND IDENTITY
3-4 credits.

Soccer (or football) is played in almost every part of the world. Soccer will be used as a lens through which to think critically about a range of issues within our own societies and around the world. This includes examining the relationship between European imperialism and the globalization of soccer in the early 20th century; thinking about who gets to play (and who gets paid) across different contexts; and analyzing how soccer is both globally networked and intensely local in its passions and rivalries. Draws from a range of perspectives on soccer, from those who consider it to be an opium for the masses to those who see it as a vehicle for positive social change, in order to illuminate some of the big questions facing the world today.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Identify and describe the ways that soccer shapes societies and vice-versa.
Audience: Undergraduate

2. Demonstrate an understanding of different theoretical approaches to studying soccer.
Audience: Undergraduate

3. Analyze sites in which soccer can be a vehicle for contesting political and cultural injustices.
Audience: Undergraduate

4. Apply course insights to broader debates about globalization, identities, and inequalities.
Audience: Undergraduate

INTL ST/GEOG 315 – UNIVERSAL BASIC INCOME: THE POLITICS BEHIND A GLOBAL MOVEMENT
3 credits.

Should all individuals in society receive a regular transfer of cash from the state without any strings attached? If that question had been posed fifteen years ago, it would likely have been dismissed as unrealistic, undesirable, or just plain crazy. In recent years, however, the idea of introducing a universal basic income [UBI] has gained a lot of traction around the world. Growing inequalities, financial crises, fears about jobs being automated, and the COVID-19 pandemic have all helped to put UBI on the political map. But where did the idea come from? How is it traveling to different parts of the world? And on what grounds do different advocates justify their claims? Address these questions and more by exploring the history, philosophy, and political economy of UBI from a range of perspectives. Ongoing UBI experiments from different parts of the world will also be examined.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Describe the histories and philosophies that have shaped UBI claims.
Audience: Undergraduate

2. Differentiate UBI from other forms of social assistance.
Audience: Undergraduate

3. Compare and contrast different schools of thought regarding UBI.
Audience: Undergraduate

4. Evaluate evidence from recent and ongoing UBI experiments.
Audience: Undergraduate

5. Produce your own arguments about UBI.
Audience: Undergraduate

INTL ST 320 – CONTEMPORARY ISSUES IN INTERNATIONAL STUDIES
1-4 credits.

Addresses various contemporary international, cross-cultural, and interdisciplinary issues.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

INTL ST/POLI SCI 325 – SOCIAL MOVEMENTS AND REVOLUTIONS IN LATIN AMERICA
3-4 credits.

An introduction to the major empirical and theoretical themes in the study of social movements and politics in Latin America. While it is impossible to cover every theoretical approach or Latin American case during the semester, the course should give students the tools to begin to think critically about where and why people engage in collective action. We will develop and hone these tools through thinking about Latin American cases, paying specific attention to revolutions, social movements, and riots. The course is designed in three parts. It begins by exposing students to the dominant theoretical paradigms in the study of contentious politics as well as some prominent critiques. The course then turns to empirical themes in Latin American revolutions, challenging students to use and question the theoretical tools to which they have already been exposed. The final part of the course looks to social movements in Latin America. Cases will focus on challenges to dictatorships, identity-based movements, and resistance to globalization.
Requisites: Sophomore standing and (POLI SCI 120, 140 or INTL ST 101) or (POLI SCI 103 or 106 taken prior to Fall 2017)
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

INTL ST/HISTORY 330 – GLOBAL HISTORY OF HUMANITARIANISM
3-4 credits.

What motivates us to try to alleviate the suffering of people in distant parts of the world? Examine the origins of humanitarian ideas and institutions, and how various humanitarian campaigns have been shaped by geopolitical processes, including the abolition of the slave trade, the spread of missionary Christianity, European imperialism, the Cold War, neoliberalism and the emergence of new media forms. Questions include: who has benefited from various humanitarian aid campaigns throughout history? How have various humanitarian campaigns shaped, and been shaped by, patterns of global inequality? Why have some populations, and not others, been deemed worthy of the world's compassion? Explore the worlds, perspectives and visions of humanitarians through a range of primary sources, including diary entries, political propaganda, memoirs, journalistic reportage, photography and documentary film.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and discuss the ways in which modern humanitarianism has transformed over time
Audience: Undergraduate

2. Compare and contrast different traditions of humanitarian thought and practice
Audience: Undergraduate

3. Explain how humanitarianism is shaped by global histories of imperialism, geopolitics, capitalism
Audience: Undergraduate

4. Locate ourselves and our communities within the broader global history of humanitarian intervention. By identifying how we fit into this uneven global history, we deepen our sense of personal and social responsibility.
Audience: Undergraduate

5. Pose original research questions, analyze primary sources, make evidence-based arguments, and communicate research findings in a clear way.
Audience: Undergraduate

INTL ST/HISTORY 332 – EAST ASIA & THE U.S. SINCE 1899
3-4 credits.

From the Boxer Rebellion, to the dropping of the atomic bombs, to the nuclear stand-off with North Korea, American foreign relations with East Asia during the 20th century were as consequential as they were controversial. Survey the issues and questions that alternately made allies and enemies of these nations: How did the quest for markets influence American policy towards China? How did European imperialism shape Japan's rise? Why did communism seem to offer a more compelling economic and political arrangement to China and North Korea? While squarely rooted in East Asia this course will also explore the questions that united and divided Americans over their nation's foreign policy. Through examining these questions, develop answers and construct their own narrative of the relationship between the United States and East Asia.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and summarize the important features and major periods in the history of US–East Asian Relations
Audience: Both Grad & Undergrad

2. Identify and summarize the major foreign relations objectives of China, Japan, North Korea, South Korea, and the United States during the major historical periods of the 20th century
Audience: Both Grad & Undergrad

3. Explain and evaluate how these societies have viewed each other during periods of conflict and cooperation
Audience: Undergraduate

4. Describe how people-to-people connections have shaped these relationships beyond their governments intensions
Audience: Undergraduate

5. Use historical knowledge to evaluate current trends in the relationships between these states
Audience: Undergraduate

6. Identify and summarize major trends and schools of interpretation in the historiography of US-East Asian relations
Audience: Graduate

7. Become proficient in the form, style, and conventions of an academic book review
Audience: Graduate

INTL ST/ED POL 335 – GLOBALIZATION AND EDUCATION
3 credits.

Discuss the ways education is inextricably linked to global political, economic, and social contexts. Reflect on both scholarly research and popular conceptions of market, society and schools in different geographic and cultural contexts. Approach globalization from a context-sensitive, place-based approach, rather than abstract, predictive method through interdisciplinary analysis. Explore the concept of globalization across disciplinary frameworks including anthropology, geography, and history. Provides critical analysis to understand the challenges facing education in a globalization era, to build stronger commitment to helping address those challenges, and a set of skills for researching and writing about them. Examine the following "problem-spaces": globalization and migration; globalization and race; global testing and assessment; marketization of education; global city development and higher education; youth culture and globalization.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. demonstrate an understanding of the social, cultural, and/or historical contexts of education policy
Audience: Undergraduate

2. examine education policy from multiple theoretical perspectives (e.g., historical, ethical/philosophical, economic/political, etc.)
Audience: Undergraduate

3. analyze education policy issues from diverse perspectives related to race, class, and/or gender, and other forms of social difference
Audience: Undergraduate

4. Recognize and apply principles of socially responsible and ethical research
Audience: Undergraduate

INTL ST/HISTORY 366 – FROM FASCISM TO TODAY: SOCIAL MOVEMENTS AND POLITICS IN EUROPE
3-4 credits.

Investigates how everyday people shaped European history and politics, from World War I through today. Takes a comparative and interdisciplinary approach to analyze a range of major social movements in Europe, thinking in detail about what constitutes a social movement in the first place, and what determines its effectiveness. Key topics include the rise and fall of Fascism; the fate of the Communist and Socialist Left in Europe; the role of youth movements as drivers of change; and the constraints imposed on political organizing by both democratic and authoritarian societies. Drawing on a range of texts, songs, and films, investigates how people power has shaped the European state, and vice-versa, from 1922 through today.
Requisites: Sophomore standing or 3 credits in HISTORY
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Refine their ability to read, analyze, and critically engage with primary and secondary sources.
Audience: Undergraduate

2. Craft sophisticated analytical arguments.
Audience: Undergraduate

3. Communicate complex ideas through speech, charitably evaluating opposing viewpoints, and working collaboratively with others.
Audience: Undergraduate

4. Become familiar with the building-blocks of European transnational and international history, and expose students to the study of social movements.
Audience: Graduate

5. Hone hermeneutical skills so as to evaluate and interpret sources more judiciously and charitably.
Audience: Graduate

6. Develop confidence as keen writers, sharp public speakers, and probing analysts of the past and present.
Audience: Graduate

INTL ST/A A E 373 – GLOBALIZATION, POVERTY AND DEVELOPMENT
3 credits.

Addresses the process of globalization -- trade, international capital flows, labor migration and remittances, and aid -- from the perspective of developing economies and the development process.
Requisites: A A E 101 (215 prior to Fall 2024), ECON 101, 102, or 111
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop an informed perspective on economic drivers of globalization over the past 30 years and the links between globalization, economic development and poverty in low-income countries.
Audience: Undergraduate

2. Gain familiarity with ongoing debates concerning economic policy in developing countries and the role of international institutions in influencing those decisions.
Audience: Undergraduate

3. Learn multiple sources of information regarding economic circumstances of poverty-vulnerable countries.
Audience: Undergraduate

4. Use Excel and other computational tools to analyze and interpret large, multi-dimensional datasets.
Audience: Undergraduate

5. Demonstrate competence in writing about economic issues through reflections on topic reading assignments and in academic style in two longer writing assignments.
Audience: Undergraduate

INTL ST/A A E 374 – THE GROWTH AND DEVELOPMENT OF NATIONS IN THE GLOBAL ECONOMY
3 credits.

This course explores the roles of markets, states, and civil institutions, using economic theory, computer simulations, and historical experience to better understand the forces that shape the wealth and well-being of nations and people around the world.
Requisites: A A E 101 (215 prior to Fall 2024), ECON 101, 102, or 111
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Evaluate the importance of economic growth and globalization in the process of economic development of nations.
Audience: Undergraduate

2. Understand how economic theory and data can help identify and measure factors contributing to economic growth and the effects of globalization.
Audience: Undergraduate

3. Assess the historical and recent evolution of economic growth and globalization over time and across countries.
Audience: Undergraduate

4. Understand the role of policy and its effects on economic growth, globalization, and on the process of economic development.
Audience: Undergraduate

5. Demonstrate basic economic and statistical literacy for evaluating economic growth and globalization.
Audience: Undergraduate

6. Explain the social, economic, and/or environmental dimensions of the sustainability challenges of economic growth and globalization.
Audience: Undergraduate

7. Describe the social, economic, and environmental dimensions of economic growth and globalization and identify potential tradeoffs and interrelationships among these dimensions at a level appropriate to the course.
Audience: Undergraduate

INTL ST/HISTORY 375 – THE COLD WAR - FROM WORLD WAR II TO END OF SOVIET EMPIRE
3-4 credits.

The Cold War was the first event to impact virtually all of humanity and left a lasting legacy that still shapes the current world order. Exploration of its conduct on five continents entails both a diversity of sources (film, fiction, documents, and memoir) and a range of topics (geopolitics, ideology, internationalism, empire, revolution, counterinsurgency, and covert operations). Its half-century history was marked by nuclear-armed stalemate and ideological competition in Europe, cultural politics of repression and generational revolt in America, interplay of anti-colonial nationalism and counterinsurgency in Asia, Africa, and Latin America, and a succession of major wars worldwide in Korea, Vietnam, Angola, and Afghanistan. By adopting an international perspective that carries us beyond the narrow ambit of the Moscow-Washington rivalry, integrate diverse global forces and particular national histories for a fuller understanding of an ever-changing world system.
Requisites: Sophomore standing or 3 credits in HISTORY or INTL ST
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Interpret primary sources
Audience: Undergraduate

2. Develop a refined ability to critically analyze secondary sources
Audience: Undergraduate

3. Merge a considered thesis, operational factors, and empirical evidence into a coherent analytical narrative
Audience: Undergraduate

4. Edit their own prose for both grace and clarity
Audience: Both Grad & Undergrad

5. Develop a perspective on how to incorporate primary sources in undergraduate teaching
Audience: Graduate

6. Develop a foundation for teaching their own world history courses, which are a requirement for job placement in a growing number of colleges and universities
Audience: Graduate

7. Develop a resonant sense of the extraordinary carrying capacity of historical narrative
Audience: Graduate

INTL ST 401 – TOPICS IN GLOBAL SECURITY
3-4 credits.

Contemporary issues in international studies in global security.
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

INTL ST 402 – TOPICS IN POLITICS AND POLICY IN THE GLOBAL ECONOMY
3-4 credits.

Contemporary issues in international studies in politics and policy.
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

INTL ST 403 – TOPICS IN CULTURE IN THE AGE OF GLOBALIZATION
3-4 credits.

Contemporary issues in international studies in global culture.
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

INTL ST 405 – TOPICS IN HUMAN RIGHTS AND HUMANITARIANISM
3-4 credits.

Contemporary issues in international studies in human rights and humanitarianism.
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Summarize contemporary discourse around issues related to human rights and humanitarianism.
Audience: Undergraduate

2. Engage in significant debates pertaining to human rights and humanitarianism.
Audience: Undergraduate

3. Analyze ongoing human rights and humanitarian issues, various kinds of human rights violations, and efforts to uphold human rights.
Audience: Undergraduate

4. Apply situated, contextual knowledge about international human rights to humanitarianism concerns
Audience: Undergraduate

5. Explain the relevance of an interdisciplinary and nuanced approach to human rights and humanitarianism advocacy issues.
Audience: Undergraduate

INTL ST/POLI SCI 431 – CONTENTIOUS POLITICS
3-4 credits.

Social movements, revolutions, and riots continually shape and re-shape the world around us. The course will evaluate and apply dominant theoretical approaches to understanding contention through careful attention to empirical cases throughout the world.
Requisites: Sophomore standing and POLI SCI 140 or INTL ST 101 (or POLI SCI 103 taken prior to fall 2017) or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Examine how social movements, revolutions, and riots continually shape and re-shape the world around us.
Audience: Undergraduate

2. Evaluate and apply dominant theoretical approaches to understanding contention in politics.
Audience: Undergraduate

3. Study empirical cases of contentious politics throughout the world.
Audience: Undergraduate

4. Assess the state of a body of scholarly literature related to course themes, identify gaps in that literature, and formulate an original research question in the context of those gaps.
Audience: Graduate

INTL ST/POLI SCI 434 – THE POLITICS OF HUMAN RIGHTS
3-4 credits.

Examines the origins and development of human rights in international politics. The course discusses what human rights are, international human rights movements, the international search for justice after mass crimes, and international humanitarian intervention. Not open to students with credit for POLI SCI 317 prior to fall 2017
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Analyze the meaning of human rights in international politics.
Audience: Undergraduate

2. Examine the origins and development of human rights in international politics.
Audience: Undergraduate

3. Explore international human rights movements.
Audience: Undergraduate

4. Discuss the international search for justice after mass crimes.
Audience: Undergraduate

5. Assess the state of a body of scholarly literature related to course themes, identify gaps in that literature, and formulate an original research question in the context of those gaps.
Audience: Graduate

INTL ST/POLI SCI 439 – THE COMPARATIVE STUDY OF GENOCIDE
3-4 credits.

Examines the phenomenon of genocide in the modern world. The class covers the concept of genocide, theories of why genocide occurs, and particular cases in the 20th and 21st centuries. Not open to students with credit for POLI SCI 318 prior to fall 2017
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2021
Learning Outcomes: 1. Examine genocide in the modern world.
Audience: Undergraduate

2. Study theories of why genocide occurs.
Audience: Undergraduate

3. Examine particular cases in the 20th and 21st centuries.
Audience: Undergraduate

4. Assess the state of a body of scholarly literature related to course themes, identify gaps in that literature, and formulate an original research question in the context of those gaps.
Audience: Graduate

INTL ST 501 – STUDY ABROAD TOPICS IN GLOBAL SECURITY
1-6 credits.

Equivalency for study abroad with topics on global security. Enrollment in a UW-Madison Study Abroad program
Requisites: None
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

INTL ST 502 – STUDY ABROAD TOPICS IN POLITICS AND POLICY IN THE GLOBAL ECONOMY
1-6 credits.

Equivalency for study abroad with topics on global economy. Enrollment in a UW-Madison Study Abroad program
Requisites: None
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

INTL ST 503 – STUDY ABROAD TOPICS IN CULTURE IN THE AGE OF GLOBALIZATION
1-6 credits.

Equivalency for study abroad with topics on global culture. Enrollment in a UW-Madison Study Abroad program
Requisites: None
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

INTL ST 504 – STUDY ABROAD TOPICS IN GLOBAL ENVIRONMENT
1-6 credits.

Equivalency for study abroad with topics on global commons. Enrollment in a UW-Madison Study Abroad program
Requisites: None
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

INTL ST 520 – STUDY ABROAD TOPICS IN INTERNATIONAL STUDIES
1-6 credits.

Equivalency for study abroad international internships. Enrollment in a UW-Madison Study Abroad program
Requisites: None
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

INTL ST 523 – INTERNATIONAL INTERNSHIP
1-3 credits.

Equivalency for study abroad with topics on international studies. Enrollment in a UW-Madison Study Abroad program
Requisites: None
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No

INTL ST/GEN&WS 535 – WOMEN'S GLOBAL HEALTH AND HUMAN RIGHTS
3 credits.

A human rights approach to global women's health to provide an overview of health issues within the context of a woman's life cycle. It will pay special attention to the socio-cultural and economic factors that play a role in determining women's access to quality basic health care.
Requisites: Sophomore standing
Course Designation: Breadth - Either Biological Science or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

INTL ST 601 – TOPICS IN GLOBAL SECURITY
1-4 credits.

Treatment of topics in global security.
Requisites: Sophomore standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

INTL ST 602 – TOPICS IN POLITICS AND POLICY IN THE GLOBAL ECONOMY
1-4 credits.

Treatment of topics in international political economy and policy studies.
Requisites: Sophomore standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

INTL ST 603 – TOPICS IN CULTURE IN THE AGE OF GLOBALIZATION
1-4 credits.

Treatment of topics in in culture in the age of globalization.
Requisites: Sophomore standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

INTL ST 605 – ADVANCED TOPICS IN HUMAN RIGHTS AND HUMANITARIANISM
3 credits.

Treatment of advanced contemporary topics in Human Rights and Humanitarianism.
Requisites: Junior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Situate contemporary understandings of and responses to human rights issues within broader historical and political processes.
Audience: Undergraduate

2. Critically engage with theoretical arguments and empirical material through reading, writing, and group-discussion.
Audience: Undergraduate

3. Apply situated, contextual knowledge about international human rights and humanitarianism concerns to ongoing human rights and humanitarian issues and various kinds of human rights violations.
Audience: Undergraduate

4. Demonstrate and exercise a nuanced understanding and approach to human rights and humanitarianism advocacy issues.
Audience: Undergraduate

5. Implement independent research skills.
Audience: Undergraduate

INTL ST 620 – TOPICS IN INTERNATIONAL STUDIES
1-4 credits.

Treatment of topics in international studies.
Requisites: Sophomore standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

INTL ST 681 – SENIOR HONORS THESIS
3 credits.

Mentored individual research and study for students completing a thesis in an Honors program
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2023

INTL ST 682 – SENIOR HONORS THESIS
3 credits.

Mentored individual research and study for students completing a thesis in an Honors program
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2024

INTL ST 691 – SENIOR THESIS
3 credits.

Mentored individual research and study for students completing a senior thesis
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023

INTL ST 692 – SENIOR THESIS
3 credits.

Mentored individual research and study for students completing a senior thesis.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

INTL ST 699 – DIRECTED STUDY
1-4 credits.

Advanced directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

INTL ST 720 – GLOBAL STUDIES SEMINAR
3 credits.

An interdisciplinary survey of the major approaches to the study of globalization. Become familiarized with key theories, issues, and debates, as well as methodological tools. Topics will include global economy, environment, health, culture, media, development, labor, governance, civil society, science, technology, and geography.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

ITALIAN (FRENCH AND ITALIAN) (ITALIAN)

ITALIAN 100 – ITALIAN LANGUAGE ABROAD I
1-4 credits.

First semester Italian language course taken on a study abroad program for which there is no equivalent on this campus. Enrollment in a UW-Madison resident study abroad program
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No

ITALIAN 101 – FIRST SEMESTER ITALIAN
4 credits.

Oral practice and conversation, grammar, reading, vocabulary building, and study of Italian cultures.
Requisites: Not open to students with credit for ITALIAN 181
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ITALIAN 102 – SECOND SEMESTER ITALIAN
4 credits.

Oral practice and conversation, grammar, reading, vocabulary building, and study of Italian cultures.
Requisites: ITALIAN 101 or 181
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ITALIAN 103 – ITALIAN LANGUAGE ABROAD II
1-4 credits.

Second semester Italian language course taken on a study abroad program for which there is no equivalent on this campus. Enrollment in a UW-Madison resident study abroad program
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No

ITALIAN 150 – RACE, ETHNICITY, AND THE ITALIAN AMERICANS
3 credits.

What does it mean to be Italian American? Must those who identify as such choose one identity over the other? How are they viewed by society? As Italian, American, or some undefinable other? Explore the history of Italian immigration to the United States and its effects on both the ethnic group and the hosting country, as recounted in literature and film both by those who experienced it firsthand and their descendants. Italians fleeing from racism and poverty in Italy found racial, religious, and cultural discrimination. Working toward "whiteness," Italian Americans traded off their own "Italian-ness" while clinging to aspects of it in the hope to preserve parts of their identity. They forged strong bonds with African American, Jewish, and other marginalized communities, in a relationship of understanding but also of tension and rivalry. Focuses on specific literary texts paired with textbook readings that provide their historical and social background.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Identify and discuss the factors surrounding Italian immigration in the United States of America and how they contributed to the current situation of Italian-Americans.
Audience: Undergraduate

2. Describe literary, historical, cultural concepts and phenomena in their context(s).
Audience: Undergraduate

3. Understand, analyze, and contextualize literary accounts on Italian-American experience.
Audience: Undergraduate

4. Analyze and explain socio-cultural relationships between the Italian Americans and other ethnic and racial groups in the US as they emerge from personal experiences evident in the assigned literary texts.
Audience: Undergraduate

5. Analyze from multiple perspectives a literary or cinematic text, a situation, and a context to be able to understand the main issues of the periods in question.
Audience: Undergraduate

6. Acquire intercultural and historical knowledge and competence and apply it to past and current issues.
Audience: Undergraduate

7. Demonstrate self-awareness and empathy towards others and their cultural and world views.
Audience: Undergraduate

8. Apply the understanding acquired to contexts beyond the classroom.
Audience: Undergraduate

ITALIAN 200 – ITALIAN LANGUAGE ABROAD III
1-4 credits.

Third semester Italian language course taken on a study abroad program for which there is no equivalent on this campus. Enrollment in a UW-Madison resident study abroad program
Requisites: None
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No

ITALIAN 201 – ACCELERATED FIRST YEAR ITALIAN
4 credits.

Accelerated development of oral, reading and writing skills up to a level equivalent to that of the end of ITALIAN 102. No previous knowledge of Italian is required. Does not award retrocredit.
Requisites: Not open to students with credit for ITALIAN 102
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025

ITALIAN 203 – THIRD SEMESTER ITALIAN
4 credits.

Conversational practice, review of grammar, viewing and discussion of Italian films, and class reading of short stories.
Requisites: ITALIAN 102 or ITALIAN 201
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ITALIAN 204 – FOURTH SEMESTER ITALIAN
4 credits.

Conversation and writing practice, review of grammar, and class reading of a modern Italian novel.
Requisites: ITALIAN 203
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ITALIAN 205 – ACCELERATED INTERMEDIATE ITALIAN
4 credits.

Accelerated development of Italian oral, reading and writing skills, equivalent to the completion of both ITALIAN 203 and ITALIAN 204.
Requisites: ITALIAN 102 or 201. Not open to students with credit for ITALIAN 204
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Accelerated Honors (!)
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Discuss and analyze authentic Italian texts, in particular the comedy Ti ho sposato per allegria.
Audience: Undergraduate

2. Intepret, discuss, and construct written and audio-visual texts in Italian.
Audience: Undergraduate

3. Interpret authentic Italian texts critically, both orally and in writing.
Audience: Undergraduate

4. Communicate information, hypotheses, and opinions through short written and oral productions in Italian.
Audience: Undergraduate

5. Recognize and restate Italian cultural products and practices.
Audience: Undergraduate

6. Make comparisons between Italian and other cultures while interacting with peers in order to learn and share perspectives.
Audience: Undergraduate

7. Recall Italian vocabulary and practice grammatical structures.
Audience: Undergraduate

ITALIAN 210 – ITALIAN STUDIES ABROAD IN THE HUMANITIES I
1-4 credits.

Italian studies course taken on a study abroad program for which there is no equivalent on this campus. Enrollment in a UW-Madison resident study abroad program
Requisites: None
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

ITALIAN 230 – MODERN ITALIAN CULTURE
3 credits.

A survey of Italian history, literature, art, music, politics, and popular culture of the 20th-21st centuries.
Requisites: ITALIAN 204 or 205 (or ITALIAN 202 prior to Summer 2025)
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ITALIAN 298 – DIRECTED STUDY
1-3 credits.

Independent study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2005

ITALIAN 299 – DIRECTED STUDY
1-3 credits.

Independent study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2019

ITALIAN 301 – ITALIAN FOR READING KNOWLEDGE
3 credits.

Intensive grammar; readings from appropriate texts in the humanities, sciences and social sciences. For those with language proficiency who wish to acquire a reading knowledge of Italian.
Requisites: ITALIAN 204, 205 (or ITALIAN 202 prior to Summer 2025), or graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2019

ITALIAN 310 – ITALIAN STUDIES ABROAD IN THE HUMANITIES II
1-4 credits.

Italian studies course taken on a study abroad program for which there is no equivalent on this campus. Enrollment in a UW-Madison resident study abroad program
Requisites: None
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

ITALIAN 311 – ADVANCED ITALIAN LANGUAGE
3 credits.

Development of accurate and nuanced capacity for expression in Italian and for understanding the spoken and written language. Also addresses Italian phonetics and phonology to develop accurate pronunciation.
Requisites: ITALIAN 204 or 205 (or ITALIAN 202 prior to Summer 2025)
Course Designation: Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ITALIAN 312 – WRITING WORKSHOP
3 credits.

Development of composition skills related to expository and other forms of writing, with focus on grammatical skills, conventions, rhetorical techniques for organizing information, presenting coherent arguments, and appropriateness of language to topic. Substantial work on the development of writing strategies for composing and editing.
Requisites: ITALIAN 204 or 205 (or ITALIAN 202 prior to Summer 2025)
Course Designation: Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ITALIAN 321 – STUDIES IN ITALIAN LITERATURE AND CULTURE I
3 credits.

Focuses on masterworks of Italian literature in Medieval and Renaissance Italy, and on the ways in which this period laid a foundation of today's Italian society and culture. Includes historical, social, and cultural contexts of the Medieval and Renaissance periods.
Requisites: ITALIAN 204 or 205 (or ITALIAN 202 prior to Summer 2025)
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Learn about and understand major Medieval and Renaissance literary and cultural movements, "schools," authors, texts
Audience: Undergraduate

2. Demonstrate understanding and ability to analyze literary and non-literary texts in Italian representing a broad spectrum of topics in Italian Medieval and Renaissance culture and history (interpretive communication)
Audience: Undergraduate

3. Express/convey/articulate ideas effectively in spoken and written Italian to inform, persuade, and narrate for different audiences of listeners, viewers, or readers (presentational communication)
Audience: Undergraduate

4. Express/convey/articulate ideas effectively in spoken and written Italian to share information, reactions, and opinions related to topics and texts discussed in the course (interpersonal communication);
Audience: Undergraduate

5. Demonstrate awareness of difference and diversity by comparing and contrasting culturally situated beliefs, behaviors, and norms of the Italian-speaking world with those found in their own culture
Audience: Undergraduate

6. Critically analyze and describe literary, historical, and cultural concepts and phenomena
Audience: Undergraduate

7. Analyze from multiple perspectives a text, a situation, a context
Audience: Undergraduate

8. Actively engage in problem solving
Audience: Undergraduate

9. Actively engage in effective teamwork
Audience: Undergraduate

10. Design and construct new content based on skills and information acquired in the course
Audience: Undergraduate

ITALIAN 322 – STUDIES IN ITALIAN LITERATURE AND CULTURE II
3 credits.

Focuses on a variety of genres and media (poetry, drama, novel, short story, cinema, television) and authors, with emphasis on the cultural and historical contexts from 1600 to the present.
Requisites: ITALIAN 204 or 205 (or ITALIAN 202 prior to Summer 2025)
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Learn about and understand major Italian modern and postmodern literary and cultural movements, "schools," authors, texts.

Audience: Undergraduate

2. Demonstrate understanding and ability to analyze literary and non-literary texts in Italian representing a broad spectrum of topics in Italian modern and postmodern culture and history (interpretive communication).

Audience: Undergraduate

3. Express/convey/articulate ideas effectively in spoken and written Italian to inform, persuade, and narrate for different audiences of listeners, viewers, or readers (presentational communication)
Audience: Undergraduate

4. Express/convey/articulate ideas effectively in spoken and written Italian to share information, reactions, and opinions related to topics and texts discussed in the course (interpersonal communication)
Audience: Undergraduate

5. Demonstrate awareness of difference and diversity by comparing and contrasting culturally situated beliefs, behaviors, and norms of the Italian-speaking world with those found in their own culture
Audience: Undergraduate

6. Critically analyze and describe literary, historical, and cultural concepts and phenomena
Audience: Undergraduate

7. Analyze from multiple perspectives a text, a situation, a context
Audience: Undergraduate

8. Actively engage in problem solving
Audience: Undergraduate

9. Actively engage in effective teamwork
Audience: Undergraduate

10. Design and construct new content based on skills and information acquired in the course
Audience: Undergraduate

ITALIAN 340 – STRUCTURES OF ITALIAN
3 credits.

Examination of Italian phonetics and phonology, morphology and word formation, and syntax, with attention to contrasts with English. Prepares for advanced courses in Italian linguistics.
Requisites: ITALIAN 204, 205 (or ITALIAN 202 prior to Summer 2025), or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022

ITALIAN/ILS 350 – ROME: LUST FOR GLORY
3-4 credits.

Examines the development of Rome, "the Eternal City," and its continuing presence as both a metaphoric and physical focal point of Italian artistic and cultural sensibilities. Outline the development of Rome's authoritative or "mythical" status in literature, art, architecture and film, beginning in the Augustan era and arriving to today, focusing on significant moments in the creation and expansion of the actual city and its cultural influence in the late-Middle Ages, the Renaissance, the era of the Risorgimento (Unification of Italy), and the rise of Fascism. Develop ability to think critically about how the diverse material productions of writers (historians, playwrights, poets), painters, sculptors, architects, philosophical thinkers, and later filmmakers of the periods covered reflect one another and reflect the ideas and ideologies of their age.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate knowledge of Roman society and culture in both Antiquity, the Pre-Modern, and Modern Eras.
Audience: Undergraduate

2. Examine, analyze, and interpret texts in translation and material culture.
Audience: Undergraduate

3. Critique Roman society and culture throughout the periods under review and compare them to other societies and cultures and to each other.
Audience: Undergraduate

ITALIAN/ILS/LITTRANS/POLI SCI 365 – MACHIAVELLI AND HIS WORLD
3 credits.

Introduces students to the major works of Machiavelli through the close reading of his writings in cultural and historical contexts. Discussion and targeted writing assignments will aim at cultivating in students 1) a broad understanding of Machiavelli's principal intellectual attitudes, 2) a deeper understanding of his literary sensibility, and 3) the ability to articulate controversies and complexities surrounding his thought.
Requisites: Satisfied Communications A requirement
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop a broad understanding of Machiavelli's principal intellectual attitudes.
Audience: Undergraduate

2. Cultivate a deep understanding of Machiavelli's literary sensibility.
Audience: Undergraduate

3. Articulate controversies and complexities surrounding Machiavelli's political thought.
Audience: Undergraduate

ITALIAN 400 – ITALIAN AMERICAN CINEMA AND TV
3 credits.

General survey of the most significant film and television directors, genres, styles and themes in Italian American Film and Television, from the Early Cinema to the present. Films and TV programs engaging with the Italian American Experience will be studied within the cultural, historical, literary and ethnic contexts of North America.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Identify the major directors, genres, movements and technological developments that have shaped the history of Italian American cinema and television.
Audience: Both Grad & Undergrad

2. Employ various critical approaches to the historical and aesthetic evolution of Italian American motion pictures within the history of immigration, ethnicity and race in North America.
Audience: Both Grad & Undergrad

3. Appreciate the complex interactions between Italian American film/television culture and that of other ethnic, migrant, and diaspora communities in North America since the early 1900s.
Audience: Both Grad & Undergrad

4. Contextualize Italian American film within cultural, socio-political and industrial developments at the national, European and global levels.
Audience: Both Grad & Undergrad

5. Develop research skills and write persuasively, elegantly, and with precision about the narrative structure, style, and cultural context of Italian films.
Audience: Both Grad & Undergrad

6. Conduct research and engage critically with the historiographical, theoretical, and methodological practices of scholarship in Italian American film studies.
Audience: Graduate

ITALIAN 420 – TOPICS IN ITALIAN: STUDY ABROAD
1-6 credits.

A course carried with a UW-Madison Study Abroad Program which has no equivalent on this campus. Enrollment in a UW-Madison resident study abroad program
Requisites: None
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

ITALIAN/FRENCH/PORTUG/SPANISH 429 – INTRODUCTION TO THE ROMANCE LANGUAGES
3 credits.

Introduction to structural similarities and differences apparent in major Romance languages (French, Italian, Portuguese, Spanish) and to their historical developments, with reference to basic linguistic features of each language: phonology, morphology, syntax, and lexicon.
Requisites: SPANISH 226, FRENCH 228, ITALIAN 311, or PORTUG 226
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023

ITALIAN/MEDIEVAL/RELIG ST 440 – POVERTY, ECOLOGY AND THE ARTS: ST. FRANCIS OF ASSISI
3 credits.

Focuses on literature about Francis of Assisi, from medieval accounts to contemporary literature, and related artistic portrayals of St. Francis as a religious symbol and model for economic, political and environmental justice.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Articulate the significance of Francis of Assisi as a multi-faceted historical, literary and symbolic figure, especially in relation to economic and environmental justice and reform.
Audience: Both Grad & Undergrad

2. Read and assess critically a range of literary genres that employ and depict Francis.
Audience: Both Grad & Undergrad

3. Compare interpretive models of Francis in literature and related artistic media over time and contexts.
Audience: Both Grad & Undergrad

4. Craft cogent written analysis of a literary and religious model such as Francis via selected interdisciplinary methods from religious studies, literary and historical scholarship.
Audience: Both Grad & Undergrad

5. Produce a research paper on a critical aspect of the presentation of Francis in selected works, employing one or more disciplinary approaches covered in the course.
Audience: Graduate

ITALIAN 450 – SPECIAL TOPICS IN ITALIAN LITERATURE
3 credits.

Focus on different topics across the centuries and the disciplines.
Requisites: ITALIAN 321, 322, or graduate/professional standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ITALIAN 452 – SPECIAL TOPICS IN ITALIAN STUDIES: CULTURE, FILM, LANGUAGE
3 credits.

Examination of an aspect of Italian studies: culture, film, language; topic varies.
Requisites: One of: (ITALIAN 230, 301, 310, 311, 312, 321, 322, 340, 350, or 365) or graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2022
Learning Outcomes: 1.
Audience: Undergraduate

2.
Audience: Graduate

ITALIAN/COM ARTS 460 – ITALIAN FILM
3 credits.

General survey of Italian cinema and of the relationship between film and the other arts. Consideration of the Italian and European socio-political context and developments in film theory.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Identify the major directors, genres, movements and technological developments that have shaped the history of Italian cinema
Audience: Both Grad & Undergrad

2. Contextualize Italian film within cultural, socio-political and industrial developments at the national, European and global levels
Audience: Both Grad & Undergrad

3. Identify major theories of film aesthetics impacting the development of Italian cinema
Audience: Both Grad & Undergrad

4. Develop research skills and write persuasively, elegantly, and with precision about the narrative structure, style, and cultural context of Italian films
Audience: Both Grad & Undergrad

5. Conduct research and engage critically with the historiographical, theoretical, and methodological practices of scholarship in Italian film studies.
Audience: Graduate

ITALIAN 621 – THE 18TH CENTURY
3 credits.

Survey of eighteenth-century Italian literature from 1700-1750
Requisites: ITALIAN 321, 322, or graduate/professional standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2020

ITALIAN 622 – THE 18TH CENTURY
3 credits.

Survey of eighteenth-century Italian literature from 1750-1800
Requisites: ITALIAN 321, 322, or graduate/professional standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ITALIAN 623 – ITALIAN THEATRE
3 credits.

Topics in Italian theatre
Requisites: ITALIAN 321, 322, or graduate/professional standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021

ITALIAN 631 – FEATURES IN ITALIAN LITERATURE
3 credits.

Survey of Italian literature from the Middle Ages to Baroque period. Topics vary. Taught in Italian.
Requisites: ITALIAN 321, 322, or graduate/professional standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

ITALIAN 632 – FEATURES IN ITALIAN LITERATURE
3 credits.

Survey of Italian literature from Mid-Modernity to the 21st century. Topics vary. Taught in Italian.
Requisites: ITALIAN 321, 322, or graduate/professional standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

ITALIAN 636 – THE ITALIAN NOVEL
3 credits.

History and trends of the Italian novel between tradition and innovation from early 20th Century to the Present.
Requisites: ITALIAN 321, 322, or graduate/professional standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

ITALIAN/MEDIEVAL 659 – DANTE'S DIVINA COMMEDIA
3 credits.

Lectures on Dante's life and times, reading Divine Comedy.
Requisites: ITALIAN 321, 322, or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ITALIAN/MEDIEVAL 671 – THE 13TH CENTURY
3 credits.

Systematic study of the earliest literary texts in Italy; the rise of the love lyric among the Sicilian poets; representative narrative works. The development of the lyric from Guittoe d'Arezzo to the poets of the Dolce Stil Nuovo.
Requisites: ITALIAN 321, 322, or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022

ITALIAN 681 – SENIOR HONORS THESIS
3 credits.

Individual mentored study for seniors completing theses for Honors in the Major as arranged with a faculty member
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2009

ITALIAN 682 – SENIOR HONORS THESIS
3 credits.

Individual mentored study for seniors completing theses for Honors in the Major as arranged with a faculty member
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2010

ITALIAN 691 – SENIOR THESIS
2 credits.

Individual mentored study for seniors completing theses, as arranged with a faculty member
Requisites: Consent of instructor
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No

ITALIAN 692 – SENIOR THESIS
2 credits.

Individual mentored study for seniors completing theses, as arranged with a faculty member
Requisites: Consent of instructor
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No

ITALIAN 698 – DIRECTED STUDY
1-6 credits.

Independent study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2018

ITALIAN 699 – DIRECTED STUDY
1-6 credits.

Independent study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2019

ITALIAN 730 – TOPICS IN ITALIAN LITERATURE AND CULTURE
3 credits.

Examination of aspects of Italian literature and culture, including disciplines such as language and cinema. Topic varies.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Fluently discuss the history and main motives of the topic of the course.
Audience: Graduate

2. Reflect on that topic and elaborate appropriate explorations of its relevance in the history of Italian literature, cinema, culture and other arts.
Audience: Graduate

ITALIAN 731 – FEATURES IN ITALIAN LITERATURE
3 credits.

In-depth exploration of periods and concepts of Italian literature, from the Middle Ages to Baroque period. Topics vary. Taught in Italian.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

ITALIAN 732 – FEATURES IN ITALIAN LITERATURE
3 credits.

In-depth exploration of periods and concepts of Italian literature, from Mid-Modernity to the 21st century. Topics vary. Taught in Italian.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

ITALIAN 741 – THE 17TH CENTURY AND ARCADIA
3 credits.

Survey of seventeenth-century Italian literature
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ITALIAN 799 – INDEPENDENT STUDY
1-6 credits.

Independent study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ITALIAN/FRENCH 821 – ISSUES IN METHODS OF TEACHING FRENCH AND ITALIAN
1-3 credits.

Intended for instructors of elementary- and intermediate-level collegiate instructors of Italian; key concepts of communicative, literacy-oriented language teaching and related techniques for classroom instruction of Italian.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ITALIAN 951 – SEMINAR-STUDIES IN ITALIAN LITERATURE
3 credits.

Advanced seminar. Topics vary.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ITALIAN 952 – SEMINAR-STUDIES IN ITALIAN LITERATURE
3 credits.

Advanced seminar. Topics vary.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ITALIAN 990 – INDIVIDUAL RESEARCH
1-12 credits.

In connection with the doctoral dissertation.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

JEWISH STUDIES (JEWISH)

JEWISH/GNS 105 – FIRST SEMESTER YIDDISH
4 credits.

Introduction to the Yiddish language through speaking, listening, reading, and writing. Emphasis on communication with attention to cultural and historical context.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Read the Yiddish alphabet and write in Yiddish cursive
Audience: Undergraduate

2. Express oneself in Yiddish at the sentence level in written and oral communications
Audience: Undergraduate

3. Read short Yiddish texts in the present, past, and future tenses
Audience: Undergraduate

4. Mobilize a vocabulary of 200+ Yiddish words, including those terms necessary to describe one's family, the life of the student, travel plans, daily life, and different geographic centers of Yiddish cultural production
Audience: Undergraduate

5. Name and describe major figures of twentieth and twenty-first century Yiddish culture
Audience: Undergraduate

JEWISH/GNS 106 – SECOND SEMESTER YIDDISH
4 credits.

Introduction to the Yiddish language through speaking, listening, reading, and writing. Emphasis on communication with attention to cultural and historical context.
Requisites: GNS/JEWISH 105
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Deploy Yiddish at the multi-sentence level in written and oral communications
Audience: Undergraduate

2. Express opinions about authentic Yiddish texts, including contemporary newspaper articles and poetry selections from the twentieth century
Audience: Undergraduate

3. Mobilize a vocabulary of 400+ Yiddish words, including those terms necessary to describe time, weather, calendrical units, literature (children's books, poetry, and the history of Yiddish publishing)
Audience: Undergraduate

4. Be creative with language in past, present, future, imperative, and conditional tenses
Audience: Undergraduate

5. Demonstrate familiarity with various forms of Yiddish cultural expression, such as Yiddish folksong, Yiddish poetry, Yiddish film, and the politics of Yiddishism
Audience: Undergraduate

JEWISH/LEGAL ST/RELIG ST 203 – JEWISH LAW, BUSINESS, AND ETHICS
3 credits.

Explores the development of Jewish law from antiquity to modernity, with a focus on legal questions related to business practices and ethics. Consider issues ranging from ethical practices in agriculture to how to run a modern multi billion-dollar kosher industry; from the ethics of Jews celebrating Thanksgiving to regulations governing the preparation, consumption, and sale of coffee.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. articulate the general development and evolution of Jewish law
Audience: Undergraduate

2. apply different strategies that different Jewish communities have used to regulate business and ethical practices
Audience: Undergraduate

3. analyze, in both written and oral form, Jewish legal texts
Audience: Undergraduate

4. apply Jewish legal principles to new material
Audience: Undergraduate

JEWISH/RELIG ST 211 – INTRODUCTION TO JUDAISM
4 credits.

General introduction to Judaism covering the biblical, classical rabbinic, medieval, and modern periods.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2018

JEWISH/HISTORY 213 – JEWS AND AMERICAN POP. CULTURE
3-4 credits.

Explores the interplay between Jews and U. S. popular culture, covering such subjects as early 20th century vaudeville, the "golden age" of Hollywood, rhythm and blues music, television, and stand-up comedy.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

JEWISH/RELIG ST 215 – THE SABBATH
3 credits.

What is the "Sabbath"? What does it mean "to rest"? Offers a broad, comparative introduction to the history of the Sabbath, from the Bible to the present day. Explore a range of textual sources from the Jewish and Christian traditions. Topics include the major theological, ritual, and cultural practices that have developed around the Sabbath. Analysis places emphasis on literary representations of the Sabbath across genres. Discuss contemporary political iterations of the Sabbath in modern, secular contexts.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Demonstrate knowledge of major forms, practices, social conditions, values, and themes that have shaped the history of the “Sabbath” in Jewish and Christian traditions, from antiquity to modernity
Audience: Undergraduate

2. Discern and integrate divergent and contradictory perspectives, identify and question assumptions, and assess evidence and methods in religious studies and across disciplinary lines
Audience: Undergraduate

3. Display skills in textual analysis and evaluate a range of formal and structural elements in writing
Audience: Undergraduate

4. Identify and interpret the literary techniques used by Jewish and Christian writers across genres, including relevant stylistic, rhetorical, figurative, and liturgical forms used in the representation of the Sabbath
Audience: Undergraduate

5. Generate original ideas and texts, experimenting and taking risks, solving problems, and answering questions in a range of media
Audience: Undergraduate

6. Write original, coherent, and compelling arguments that push beyond summary to analysis and independent and critical thinking in clear prose that meets expectations for grammatical correctness
Audience: Undergraduate

JEWISH/HISTORY 219 – THE AMERICAN JEWISH EXPERIENCE: FROM SHTETL TO SUBURB
4 credits.

Surveys American Jews from the eighteenth century until after WW II, examining political behavior (radicalism, liberalism, and nationalism), class formation, social mobility, culture, inter-ethnic group relations, religion, and problems in community building.
Requisites: Sophomore standing or 3 credits in HISTORY or JEWISH
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

JEWISH/HISTORY 220 – INTRODUCTION TO MODERN JEWISH HISTORY
4 credits.

The history of the Jews in selected parts of the world since the 17th century. Particular attention will be paid to the fact that this is the history of a minority group whose life unfolds in relationship to a larger society.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2021

JEWISH 225 – JEWS AND RACE
3 credits.

Takes a comparative look at the multiple intersections between Jewish history and histories of racism. Covers relevant case studies ranging from the Bible to the present, in order to analyze the long, global trajectory that has shaped issues of race and racial inequality in the United States and beyond. Topics include the so-called "curse of Ham"; the role of "the Jew" in medieval Christian theology; the demonization of Jews and Muslims during the Crusades; the interaction between Jews, European colonialism, and transatlantic slavery; nineteenth-century debates about "Semites"; the racialization of Jews during the Holocaust; the role of race and racism in the development of Zionism and the history of the Palestinian Nakba; debates about Black-Jewish relations in the United States; the question of Jews and whiteness; as well as historical encounters between Jews and Native Americans.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Demonstrate knowledge of significant moments at the intersection of Jewish history and the history of racism
Audience: Undergraduate

2. Articulate how the past has affected present day circumstances regarding race and racial inequalities in the U.S. and in a global context
Audience: Undergraduate

3. Recognize and question cultural assumptions and knowledge claims as they relate to race and ethnicity
Audience: Undergraduate

4. Demonstrate self-awareness and empathy toward the cultural perspectives and worldviews of others
Audience: Undergraduate

5. Cultivate skills in textual analysis and evaluate formal and structural elements in a range of media (e.g., essays, academic writing, oratory, visual art, etc)
Audience: Undergraduate

6. Write original, coherent, and compelling arguments that push beyond summary to analysis and independent and critical thinking in clear prose that meets expectations for grammatical correctness
Audience: Undergraduate

JEWISH/CLASSICS/LITTRANS/RELIG ST 227 – INTRODUCTION TO BIBLICAL LITERATURE (IN ENGLISH)
4 credits.

Introduction to the text, development, history, and social context of the Hebrew Bible/Old Testament. Covers the Torah (Pentateuch), Neviim (Former and Latter Prophets), and Ketuvim (Writings), and provides a brief introduction to early Jewish literature (Pseudepigrapha/Apocrypha). Discusses various methods of analysis and theories of composition. Addresses major theological claims made of the text by Jewish and Christian communities. Explores contextualized interpretations in the ancient and modern day.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate knowledge of ancient Near Eastern societies and cultures.
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts in translation.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

4. Articulate a self-critical understanding of one's own approach to the biblical text.
Audience: Undergraduate

JEWISH 230 – ELEMENTARY TOPICS IN JEWISH LITERATURE
3-4 credits.

Elementary topics in Jewish literature.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

JEWISH 231 – ELEMENTARY TOPICS IN JEWISH HISTORY
3-4 credits.

Elementary topics in Jewish history.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

JEWISH 232 – ELEMENTARY TOPICS IN JEWISH PHILOSOPHY AND THE ARTS
3-4 credits.

Elementary topics in Jewish philosophy and the arts.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

JEWISH 236 – BASCOM COURSE
3 credits.

Develop skills in critical reading, logical thinking, use of evidence, and use of library resources. Emphasis on writing in the conventions used in Jewish Studies.
Requisites: Satisfied Communications A requirement
Course Designation: Gen Ed - Communication Part B
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

JEWISH/GERMAN/GNS 240 – HEALTH AND HOTELS IN CENTRAL EUROPE
3 credits.

Introduction to spaces of leisure, medical recuperation, and Christian and Jewish cross-cultural exchange. Literature and films focus on sites of rest and healing between the World Wars as well as post-Holocaust reflections on these sites.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Demonstrate close reading skills in writing assignments through interpretation and analysis of texts in a variety of genres, including critical theory, prose, poetry, and film.
Audience: Undergraduate

2. Discern and integrate divergent and contradictory perspectives, identify and question assumptions, and assess evidence and methods.
Audience: Undergraduate

3. Identify major and lesser-known writers of central Europe between the World Wars.
Audience: Undergraduate

4. Acquire a critical vocabulary to speak and write effectively about the experience of health, illness, leisure, recuperation, and Jewish identity.
Audience: Undergraduate

5. Engage in sustained discussion with peers in a respectful and empathetic manner on topics concerning diverse worldviews and value systems, including an understanding of interactions between Jews and Christians within the context of minority-majority relationships in central Europe and across the globe.
Audience: Undergraduate

JEWISH/CLASSICS 241 – INTRODUCTION TO BIBLICAL ARCHAEOLOGY
4 credits.

An overview of archaeology and its relationship to understanding the biblical world.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2018
Learning Outcomes: 1. Demonstrate knowledge of Classical and ancient Near Eastern societies and cultures.
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts in translation and material culture.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

4. Demonstrate a holistic view of Ancient Mediterranean society and culture.
Audience: Undergraduate

JEWISH/GERMAN/LITTRANS 269 – YIDDISH LITERATURE AND CULTURE IN EUROPE
3 credits.

Exploration of European Yiddish fiction, poetry, folklore, and cinema, with a focus on works of the 19th and 20th centuries.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

JEWISH/GERMAN/LITTRANS 279 – YIDDISH LITERATURE AND CULTURE IN AMERICA
3 credits.

Exploration of American Yiddish poetry, fiction, theater, and cinema created by European Jews in the United States.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Prepare students for life and careers in an increasingly multicultural and multilingual US environment
Audience: Undergraduate

2. Develop critical thinking skills through sustained discussion with one's peers and foster a constructive climate in which to engage with questions concerning cultural, racial, religious, and linguistic difference
Audience: Undergraduate

3. Acquire a critical vocabulary to speak about historical and present-day issues concerning migration, ethnic identity, and religious difference
Audience: Undergraduate

4. Engage in reflective writing practices, respond critically to feedback, and assess one's own communicative strengths
Audience: Undergraduate

5. Identify the major themes of American Yiddish literature and culture from the early-twentieth century until today. These themes include: the politics of language use; the negotiation of a minoritized status; regional vs. national American Jewish identity; inter-generational conflict; Jews and the question of race
Audience: Undergraduate

JEWISH 299 – DIRECTED STUDY
1-3 credits.

Independent study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2008

JEWISH/HEBR-MOD 301 – INTRODUCTION TO HEBREW LITERATURE
3 credits.

Selected works from different periods and genres. Taught in Hebrew.
Requisites: HEBR-MOD 202 or placement into HEBR-MOD/JEWISH 301
Course Designation: Breadth - Literature. Counts toward the Humanities req
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

JEWISH/HEBR-MOD 302 – INTRODUCTION TO HEBREW LITERATURE
3 credits.

Selected works from different periods and genres. Taught in Hebrew.
Requisites: HEBR-MOD/JEWISH 301 or placement into HEBR-MOD/JEWISH 302
Course Designation: Breadth - Literature. Counts toward the Humanities req
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

JEWISH/HISTORY 310 – THE HOLOCAUST
3-4 credits.

References to the Holocaust abound in contemporary political debates and in our popular culture. But most people know very little about the history of the Holocaust, despite the mountains of superb historical scholarship that experts in the field have produced over decades of dedicated research. Utilize correspondence, diaries, or other firsthand accounts of Holocaust victims, together with study of the larger events around them, to reconstruct the experiences of ordinary families swept up in the Nazi genocide.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate in-depth knowledge of the Nazi genocide of European Jewry during WWII, including the events, processes, ideas, organizations, and individuals behind these crimes, and an understanding of how the everyday experiences of Holocaust victims limited their options for survival
Audience: Undergraduate

2. Explain the mechanics of how and why the Nazis and their collaborators were able to carry out a program of persecution and ultimately extermination against the Jewish communities of Europe, leading to the murder of an estimated 6 million Jews
Audience: Undergraduate

3. Identify central arguments in historiographical writing; use primary sources to reconstruct historical events; formulate research questions; develop written arguments that illuminate the lives of Holocaust victims and analyze the key events, policies, or sites of the Nazi genocide; support arguments with appropriate sources; and supply appropriate citations
Audience: Undergraduate

JEWISH/LITTRANS 318 – MODERN JEWISH LITERATURE
3-4 credits.

Pre-modern Jewish society's breakdown, immigration, the challenges of integration and exclusion, and the establishment of new communities will serve as a backdrop for the analysis and comparison of Jewish literary texts written in Hebrew, Yiddish, German, Russian, and English.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

JEWISH/CLASSICS/RELIG ST 323 — THE BIBLE AND FILM: LITERATURE AND MEDIA
3 credits.

An introduction to the study of the Bible as literature and of biblical reception in the medium of film, from early Hollywood to the present day. Explores the way in which the Bible (including both Hebrew and Greek Testaments), one of the foundational literary corpora of American society, has been interpreted, reinterpreted, and misinterpreted through the medium of film over the past century. We will begin each segment of the course by reading portions of the biblical text that have experienced significant interpretation, in order to understand the literary text that has been received in film. How beholden are filmmakers to the interpretations of communities that view these texts as authoritative, and where are they free to depart from their sources? Is it possible to "translate" biblical narratives into film without losing something in the translation? These questions will focus our study on ways the literature has been interpreted in this new medium.
Requisites: Sophomore standing
Course Designation: Gen Ed - Communication Part B
Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Demonstrate knowledge of ancient Near Eastern societies and cultures.
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts in translation.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

4. Develop understanding of film as a form of biblical reception.
Audience: Undergraduate

5. Hone close reading and film-watching skills so as to be able to read a literary text with deeper attention to detail and sharper interpretive instincts, as well as increase ability to articulate their observations.
Audience: Undergraduate

6. Demonstrate skills in critical reading, logical thinking, and the use of evidence.
Audience: Undergraduate

7. Demonstrate skills in the use of appropriate style and disciplinary conventions in writing and speaking.
Audience: Undergraduate

8. Demonstrate skills in the use of core library resources specific to the ancient Near Eastern world.
Audience: Undergraduate

JEWISH/LITTRANS/RELIG ST 328 — CLASSICAL RABBINIC LITERATURE IN TRANSLATION
3-4 credits.

Introduction to the literature of the Classical Rabbinic or Talmudic period of Judaism (2nd to 7th centuries CE). Historical and intellectual background; the interrelation of liturgy, legal and non-legal literature.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2019

JEWISH/CLASSICS/HEBR-BIB/LITTRANS/RELIG ST 332 — PROPHETS OF THE BIBLE
4 credits.

An introduction to the thought, literature, and history of the prophets of ancient Israel (in English).
Requisites: RELIG ST/CLASSICS/JEWISH/LITTRANS 227 or Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2019
Learning Outcomes: 1. Demonstrate knowledge of ancient Near Eastern societies and cultures.
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts in translation.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

4. Compare ancient Near Eastern prophetic voices to modern prophetic voices.
Audience: Undergraduate

JEWISH/CLASSICS/RELIG ST 335 – KING DAVID IN HISTORY AND TRADITION
3 credits.

An exploration of the literary and historical aspects of the text of 1-2 Samuel + 1 Kings 1-2; the history and archaeology of Jerusalem during the tenth century B.C.E.; and the varieties of ways in which the figure of King David has been received in subsequent religious and secular literature, visual art, music, television, and cinema.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Demonstrate knowledge of ancient Near Eastern societies and cultures.
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts in translation.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

4. Demonstrate a critical understanding of the reception of David in various media.
Audience: Undergraduate

JEWISH/RELIG ST 340 – THE AMERICAN JEWISH LIFE OF DNA
3 credits.

Explores the range of relationships between DNA and American Jewish life. It begins with the "prehistory" of the relationship between Jewishness and genetic science, from Biblical genealogies to early twentieth century racial science. It then turns to America in the second half of the twentieth century, when the discovery of the double helix and the atrocities of Auschwitz reinvigorated and reshaped American Jewish relationships to DNA.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. articulate informed answers to central questions at the intersection of Jewish Studies and Science and Technology Studies
Audience: Undergraduate

2. identify key themes, movements, and people in twentieth century American Jewish Studies and the history of the biological sciences
Audience: Undergraduate

3. analyze a range of sources, including material objects and digital media as well as written texts from religious, ethnic, and scientific communities
Audience: Undergraduate

4. employ an expanded range of religious literacy, including skills for identifying, evaluating, and interpreting the interrelationships and impact of religious and scientific worldviews and communities in the United States via a variety of theoretical ideas and methodologies in the social sciences and humanities
Audience: Undergraduate

5. employ stronger research and writing skills, including textual analysis, primary source analysis, synthesis of scholarly ideas, persuasive writing, oral communication, active listening, and critical empathy
Audience: Undergraduate

6. participate more effectively in creating open, engaging, fun, and collaborative learning environments that seek academic excellence, honesty, and integrity
Audience: Undergraduate

JEWISH/POLI SCI 341 – ISRAELI POLITICS AND SOCIETY
3-4 credits.

Examines the issues currently facing Israeli society and the ongoing debates in Israeli politics. Provides historical background and analytical understanding of contemporary Israeli politics. Attention will be paid to political history, institutions, economic development, coalition formation, ethnic politics, and religious-secular divisions as they are manifested in Israeli politics.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Learn about Israeli politics, history, and culture.
Audience: Undergraduate

2. Apply political science concepts and theories to understand Israeli politics and society.
Audience: Undergraduate

3. Understand who the main actors are in Israeli politics.
Audience: Undergraduate

4. Understand the main social and political cleavages in Israel.
Audience: Undergraduate

5. Assess the state of a body of scholarly literature related to course themes, identify gaps in that literature, and formulate an original research question in the context of those gaps.
Audience: Graduate

JEWISH 350 – WHAT IS JEWISH STUDIES?
3 credits.

Introduces Jewish studies as an interdisciplinary field and examines Jewish history, culture, and thought through the major questions that guide the field, including: What is Jewish practice? What is a Jewish text? What is diaspora? What is antisemitism? And, who are the Jews? Explores a variety of responses offered by scholars, writers, theologians, and artists. Develop the ability to think transhistorically, bringing together biblical, medieval, modern, and contemporary perspectives. Anchor inquiries into the field of Jewish studies through the completion of a substantial research project.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate knowledge of the major questions and concerns of modern Jewish studies
Audience: Undergraduate

2. Discern and integrate divergent and contradictory perspectives, identify and question assumptions, and assess evidence and methods
Audience: Undergraduate

3. Develop close reading skills with which to analyze Jewish studies texts; write original, coherent, and compelling arguments that push beyond summary to analysis; engage in reflective writing practices; respond critically to feedback; and assess one's own communicative strengths
Audience: Undergraduate

4. Engage in deep discussion with peers in a respectful and empathetic manner; ask each other constructive questions; and develop a shared vocabulary with which to speak about Jewish studies
Audience: Undergraduate

JEWISH 356 – JERUSALEM, HOLY CITY OF CONFLICT AND DESIRE
3 credits.

Jerusalem, the Holy City for Judaism, Christianity, and Islam, has become the center of religious, political, and national contention. Explores the sources of the conflict and its development over the centuries, with the aim of illuminating the complex situation of the region and its implications for the world.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2020

JEWISH/ENGL 370 – JEWISH HUMOR
3-4 credits.

What is humor? Why and when do people tell jokes? And what do we make of the fact that a certain form of humor has come to be labeled "Jewish"? Examine the notion of "Jewish humor" by reading a variety of texts (jokes, short stories, films, websites, conceptual art, and cultural kitsch). Begin by considering theoretical explorations of humor and "Jewish humor." Then trace techniques of Jewish humor from eastern Europe to central Europe to North America, paying specific attention to Jewish American humor. Themes to be examined include: in-group vs. out-group humor; humor and ethnicity; performance and "Jewface"; Jewish-Christian difference; humor and the Holocaust; gender and ethnicity; the notion of self-hatred; American popular culture; and the relationship between humor, repetition, and innovation. The general goal is to answer the question: Is there such a thing as "Jewish humor"? (Hint: The answer may be "no.")
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Discern and integrate divergent and contradictory perspectives, identify and question assumptions, and assess evidence and methods
Audience: Undergraduate

2. Demonstrate close-reading skills with which to analyze humor and American ethnicity, question assumptions about the popular representation of Jewish identity, and explore how humor manages and mobilizes questions of race, ethnicity, and religion
Audience: Undergraduate

3. Engage in reflective writing practices, respond critically to feedback, and assess one's own communicative strengths
Audience: Undergraduate

4. Engage in deep discussion with peers in a respectful and empathetic manner, ask each other constructive questions, develop a shared vocabulary with which to speak about Jewish humor, and, in doing so, explore preconceived notions about identities "inside" and "outside" students' social circles
Audience: Undergraduate

JEWISH/HEBR-MOD 401 – TOPICS IN MODERN HEBREW / ISRAELI LITERATURE AND CULTURE I
3 credits.

Readings in Hebrew literature. Taught in Hebrew.
Requisites: HEBR-MOD/JEWISH 302 or placement into HEBR-MOD/JEWISH 401
Course Designation: Breadth - Literature. Counts toward the Humanities req
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

JEWISH/HEBR-MOD 402 – TOPICS IN MODERN HEBREW / ISRAELI LITERATURE AND CULTURE II
3 credits.

Readings in Hebrew literature. Taught in Hebrew.
Requisites: HEBR-MOD/JEWISH 401 or placement into HEBR-MOD/JEWISH 402
Course Designation: Breadth - Literature. Counts toward the Humanities req
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

JEWISH/GNS 405 – FIRST SEMESTER YIDDISH FOR GRADUATE STUDENTS
4 credits.

Introduction to the Yiddish language through speaking, listening, reading, and writing. Emphasis on communication with attention to cultural and historical context. Includes tasks designed to facilitate Yiddish-related research.
Requisites: Graduate/professional standing
Repeatable for Credit: No
Learning Outcomes: 1. Read the Yiddish alphabet and write in Yiddish cursive
Audience: Undergraduate

2. Express oneself in Yiddish at the sentence level in written and oral communications
Audience: Undergraduate

3. Read short Yiddish texts in the present, past, and future tenses
Audience: Undergraduate

4. Mobilize a vocabulary of 200+ Yiddish words, including those terms necessary to describe one's family, the life of the student, travel plans, daily life, and different geographic centers of Yiddish cultural production
Audience: Undergraduate

5. Name and describe major figures of twentieth and twenty-first century Yiddish culture
Audience: Undergraduate

JEWISH/GNS 406 – SECOND SEMESTER YIDDISH FOR GRADUATE STUDENTS
4 credits.

Emphasis on proficiency in Yiddish through speaking, listening, reading, and writing, and on communication in cultural context.
Requisites: GNS/JEWISH 405
Repeatable for Credit: No
Learning Outcomes: 1. Deploy Yiddish at the multi-sentence level in written and oral communications
Audience: Undergraduate

2. Express opinions about authentic Yiddish texts, including contemporary newspaper articles and poetry selections from the twentieth century.
Audience: Undergraduate

3. Mobilize a vocabulary of 400+ Yiddish words, including those terms necessary to describe time, weather, calendrical units, literature (children's books, poetry, and the history of Yiddish publishing).
Audience: Undergraduate

4. Be creative with language in past, present, future, imperative, and conditional tenses.
Audience: Undergraduate

JEWISH/ILS/SOC 423 – MODERN JEWISH THOUGHT
3 credits.

How do Jews fit into the modern world? While the "Jewish Question" initially referred to debates about Jewish emancipation (the struggle for equal citizenship and social integration that started with the French Revolution), it later served to describe modern Jewish political and social thought about the identity, place, and role of the Jews in the modern world. Beginning in the late 19th century, as cultural assimilation, economic impoverishment in eastern Europe, and rising antisemitism sowed doubts about the viability of emancipation and traditionalism alike, Jewish thinkers proposed new answers to the Jewish question. Learn about some of the major answers they debated, including revolutionary universalistic utopias (socialism and Communism), various forms of Jewish nationalism, hyphenated identities, cultural pluralism, and cosmopolitanism. Work to contextualize these ideas historically while also considering whether and how they remain relevant to the present.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Engage with major figures, ideas, and debates in the social and political thought of Jews about the "Jewish Question" from the late 19th century until the mid-20th century
Audience: Undergraduate

2. Understand these ideas in relation to the historical contexts in which they were produced
Audience: Undergraduate

3. Enter into a dialogue with past thinkers, critically assessing whether and how their ideas may remain relevant to the changed circumstances of the present
Audience: Undergraduate

JEWISH 430 – INTERMEDIATE TOPICS IN JEWISH LITERATURE
3-4 credits.

Intermediate topics in Jewish literature.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

JEWISH 431 – INTERMEDIATE TOPICS IN JEWISH HISTORY
3-4 credits.

Intermediate topics in Jewish history.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2021

JEWISH 432 – INTERMEDIATE TOPICS IN JEWISH PHILOSOPHY AND THE ARTS
3-4 credits.

Intermediate topics in Jewish philosophy and the arts.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

JEWISH 433 – INTERMEDIATE TOPICS IN JEWISH STUDIES: SOCIAL SCIENCES
3-4 credits.

Intermediate topics in Jewish Studies drawn from the social sciences.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2021

JEWISH/PHILOS 442 – MORAL PHILOSOPHY AND THE HOLOCAUST
3 credits.

Selected moral and philosophical issues raised by the Holocaust such as when and whom to rescue; includes issues arising after the annihilation such as forgiveness and reconciliation.
Requisites: Sophomore standing or 3 Credits in PHILOS
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2021

JEWISH/AFRICAN/MEDIEVAL/RELIG ST 462 – MUSLIMS AND JEWS
3 credits.

Explores the historical relationship between Muslims and Jews in a variety of contexts from the seventh century to the present. Surveys literary and cultural exchanges against the background of shifting political and social conditions across the Middle East, Europe, and the United States. Considers also the parallel legacies of anti-Semitism, Orientalism, and Islamophobia. Major themes include comparative religion, secularization, migration, and colonialism, as well as the politics of history and cultural memory. Introduces readings in English translation of medieval and modern texts originally written across languages, and especially in Hebrew and Arabic.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate contextual knowledge of major historical events, figures, social conditions, religious communities, and geographies of Muslim Iberia (al-Andalus) from the eighth to sixteenth centuries
Audience: Undergraduate

2. Situate al-Andalus in relation to wider developments in politics, culture, and religion of the Middle East and North Africa, from the eighth century to the present
Audience: Undergraduate

3. Understand the terms and conditions that have shaped Muslim-Jewish relations from the seventh century until the present, including frameworks of theology, lived religious experience, and Orientalist representation
Audience: Undergraduate

4. Integrate relevant theoretical frameworks, debates, and conversations regarding the distinction between historical writing and cultural memory
Audience: Undergraduate

5. Discern divergent and contradictory representations of the history of al-Andalus in contemporary memory culture
Audience: Undergraduate

6. Cultivate skills in textual analysis and evaluate a range of formal and structural elements in written and visual materials across genres (philosophy, literature, religion, film) as well as in primary and secondary historical sources
Audience: Undergraduate

7. Generate original ideas and texts, through coherent writing and compelling argumentation, by experimenting and taking risks, solving problems, and answering questions in a range of media
Audience: Undergraduate

JEWISH/GERMAN 510 — GERMAN-JEWISH CULTURE SINCE THE 18TH CENTURY
3 credits.

Investigates German-Jewish culture since the 18th century, concentrating on toleration, emancipation, acculturation, assimilation, anti-Semitism, and Bildung.
Requisites: Junior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2020

JEWISH/HEBR-BIB 513 — BIBLICAL TEXTS, POETRY
3 credits.

Critical reading of selected texts from the Minor Prophets and the Writings.
Requisites: HEBR-BIB 324
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2021
Learning Outcomes: 1. Analyze classical Hebrew Bible texts.
Audience: Undergraduate

2. Interpret classical Hebrew Bible texts.
Audience: Undergraduate

3. Evaluate classical Hebrew Bible texts.
Audience: Undergraduate

JEWISH/HEBR-BIB 514 — BIBLICAL TEXTS, POETRY
3 credits.

Critical reading of selected texts from the Latter Prophets and the Writings.
Requisites: HEBR-BIB/JEWISH 513
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022
Learning Outcomes: 1. Analyze classical Hebrew Bible texts.
Audience: Undergraduate

2. Interpret classical Hebrew Bible texts.
Audience: Undergraduate

3. Evaluate classical Hebrew Bible texts.
Audience: Undergraduate

JEWISH/CURRIC/ED POL/HISTORY 515 — HOLOCAUST: HISTORY, MEMORY AND EDUCATION
3 credits.

Explores the ways in which Holocaust history, memory and education are mutually entangled, politically charged and morally complex. Using primarily American sites of memory, critically analyze a variety of representations of the Shoah--in literature, films, memoirs, monuments, museums and classrooms.
Requisites: Junior standing
Course Designation: Gen Ed - Communication Part B
Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022
Learning Outcomes: 1. Examine and question cultural assumptions and knowledge claims about race, ethnicity, and religion
Audience: Both Grad & Undergrad

2. Improve written and oral communication skills by engaging in critical conversations, making presentations, practicing group projects and writing papers
Audience: Both Grad & Undergrad

3. Demonstrate self-awareness and empathy to other worldviews and cultural differences and apply course concepts outside of the classroom by engaging in respectful conversations about race, ethnicity, and religion in our multi-cultural society
Audience: Both Grad & Undergrad

4. Construct and develop a meaningful project around a topic that interests you
Audience: Both Grad & Undergrad

5. Articulate answers to and pose complex questions regarding ethical issues, connecting historical events to present circumstances regarding racial inequalities
Audience: Undergraduate

6. Develop your academic writing by thinking carefully through your ideas and editing your work and your peers'
Audience: Undergraduate

7. Pose and answer complex historical and ethical questions regarding the Holocaust, genocide, their representations and political uses, connecting historical events to present circumstances regarding racial inequalities
Audience: Graduate

8. Develop interpersonal academic skills by editing peers' work
Audience: Graduate

JEWISH/HISTORY/SOC 518 – ANTISEMITISM IN EUROPEAN CULTURE
3 credits.

Through a critical and interdisciplinary lens, review the history and major theories of modern antisemitism in its past and present-day forms. Read scholarship on antisemitism, as well as canonical antisemitic texts, with attention to geographic, chronological, and cultural contexts. Learn about the origins, major themes, continuities and changes, and surprising endurance of antisemitism. Use historical thinking to understand antisemitism as a major historical problem and to address related contemporary issues with nuance.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the origins and development of antisemitism
Audience: Both Grad & Undergrad

2. Identify different elements and forms of antisemitism
Audience: Both Grad & Undergrad

3. Evaluate the claims in debates about the nature, origins, and development of antisemitism using historical evidence
Audience: Both Grad & Undergrad

4. Use historical evidence to assess the major theories of antisemitism
Audience: Both Grad & Undergrad

5. Critically analyze canonical antisemitic texts and understand classic and recent scholarship on antisemitism
Audience: Both Grad & Undergrad

6. Communicate clearly, effectively, and concisely in class discussions and writing assignments
Audience: Both Grad & Undergrad

7. Apply knowledge of antisemitism to understand it as an ongoing social problem
Audience: Both Grad & Undergrad

8. Develop original historical arguments using primary and secondary sources in discussion, presentations, and writing assignments.
Audience: Graduate

JEWISH/ENGL 539 – JEWISH LITERATURES IN DIASPORA
3 credits.

An exploration of Jewish literature in English and in Anglophone contexts.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2021

JEWISH 630 – ADVANCED TOPICS IN JEWISH LITERATURE
3-4 credits.

Advanced topics in Jewish literature.
Requisites: Junior standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2019

JEWISH 631 – ADVANCED TOPICS IN JEWISH HISTORY
3-4 credits.

Advanced topics in Jewish history.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

JEWISH 632 – ADVANCED TOPICS IN JEWISH PHILOSOPHY AND THE ARTS
3-4 credits.

Advanced topics in Jewish philosophy and the arts.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023

JEWISH 681 – SENIOR HONORS THESIS
3 credits.

Individual mentored study for seniors completing theses for Honors in the Major as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2022

JEWISH 682 – SENIOR HONORS THESIS
3 credits.

Individual mentored study for seniors completing theses for Honors in the Major as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2023

JEWISH 691 – SENIOR THESIS
3 credits.

Individual mentored study for seniors completing theses, as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No

JEWISH 692 – SENIOR THESIS
3 credits.

Individual mentored study for seniors completing theses, as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No

JEWISH 699 – DIRECTED STUDY
1-3 credits.

Independent study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

JOURNALISM AND MASS COMMUNICATION (JOURN)

JOURN 150 – INTRODUCTION TO SPORTS COMMUNICATION
3 credits.

Explore the central activities and concepts related to various communication professions involved in the realm of sports. These activities include sports journalism, sports broadcasting, sports marketing communications, and sports public relations. Consider major social issues that impinge upon these professions including how sports and media intersect with concerns associated with race and gender. Explore strategies to build careers in sports communications and beyond.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and explain the core concepts and principles that are part of the practice of sports journalism, broadcasting, advertising and public relations.
Audience: Undergraduate

2. Recognize the importance of strategic, creative and ethical thinking as applied to context of sports communications.
Audience: Undergraduate

JOURN 162 – MASS MEDIA IN MULTICULTURAL AMERICA
3 credits.

An introduction to the roles and functions of print, film, electronic and digital media in multicultural America. International comparisons highlight differences and commonalities in the social and cultural position of mass media in societies with racially and ethnically diverse populations.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

JOURN 163 – GENDER AND SEXUALITY IN MASS COMMUNICATION
3 credits.

Exploration of the role that gender and sexuality both play in media representation, production, reception, and activism.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Develop an understanding of the different definitions of gender that currently exist.
Audience: Undergraduate

2. Compare the difference between gender and sexuality.
Audience: Undergraduate

3. Describe the way that sexuality is connected to our social and personal identities.
Audience: Undergraduate

4. Examine how the mass media represent gender and sexuality.
Audience: Undergraduate

5. Determine the ways in which gender and sexuality inform the practice of media production.
Audience: Undergraduate

6. Demonstrate how gender and sexuality impact media reception.
Audience: Undergraduate

7. Articulate the way media activism campaigns specifically address issues of gender and sexuality.
Audience: Undergraduate

8. Apply the knowledge gained in the course in order to design a media activism campaign that focuses on gender, sexuality, or both.
Audience: Undergraduate

JOURN 175 – MEDIA FLUENCY FOR THE DIGITAL AGE
3 credits.

An introduction to digital media and how it influences - and is impacted by - society, culture, politics, and the economy. Create on-trend digital media content and critically examine digital mediums, messages, and audiences.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Understand what it means to be digitally fluent.
Audience: Undergraduate

2. Understand key media fluency terms and know why they are important.
Audience: Undergraduate

3. Critically examine how digital media forms are both consumed and produced in society - and how this affects society, culture, politics, and the economy.
Audience: Undergraduate

4. Apply media fluency knowledge and skills to produce fun and interesting, yet critical and thought-provoking digital media across a variety of forms – including podcasts, video, blogs, Wikipedia content, and other forms of social media.
Audience: Undergraduate

5. Be aware of ethics, policies, and industry standards surrounding content production in the digital space.
Audience: Undergraduate

JOURN 176 – SPECIAL TOPICS IN MASS COMMUNICATION
1-3 credits.

Special focus on a specific conceptual issue or topic involving mass communication.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Think critically about their own societies and the larger global community.
Audience: Undergraduate

2. Recognize one or more methodologies related to mass communication.
Audience: Undergraduate

3. Identify one or more theoretical approaches related to the study of mass communication.
Audience: Undergraduate

4. Synthesize and apply social science concepts.
Audience: Undergraduate

5. View issues from multiple perspectives.
Audience: Undergraduate

JOURN 201 – INTRODUCTION TO MASS COMMUNICATION
4 credits.

How the mass media are organized and how they function in modern society; their technological basis, economic and political foundations, and social implications.
Requisites: Freshman, sophomore, or junior standing only
Course Designation: Gen Ed - Communication Part B
Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

JOURN 202 – MASS COMMUNICATION PRACTICES
6 credits.

Build increasingly sophisticated communication skills, including writing, editing, gathering information, working with data, and presenting stories through varying media forms. Develop an appreciation of how different media influence message design by communicators and reception by audiences. Develop a complex toolkit of conceptual and practical skills for media work in journalism, strategic communication, and hybrids. Build writing skills and critical thinking abilities, two elements common to success in any field.
Requisites: Declared in a Journalism undergraduate program and JOURN 201 and concurrent enrollment in JOURN 203
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Write clearly, concisely, effectively and efficiently for a variety of media platforms and formats
Audience: Undergraduate

2. Think critically (asking the right questions in interviews, collecting and analyzing information, and assembling ideas)
Audience: Undergraduate

3. Review and synthesize information and develop appropriate messages
Audience: Undergraduate

4. Create professional, ethical work that uses proper grammar and style
Audience: Undergraduate

5. Work well in collaboration with other students and instructors
Audience: Undergraduate

6. Speak and write clearly about current events and trends by integrating knowledge across subject matter arenas and incorporating multiple sources
Audience: Undergraduate

7. Meet deadlines and manage competing demands
Audience: Undergraduate

8. Evaluate how to best present stories in a variety of formats, including audio, video and online, and produce those forms
Audience: Undergraduate

JOURN 203 – INFORMATION FOR COMMUNICATION
3 credits.

Develop information skills - information collection, information verification, information analysis, and information presentation (the CVAP approach) - that are used by professionals in journalism and strategic communication. Includes practical techniques that enhance basic skills related to the collection, evaluation, analysis and presentation of information. These skills will provide a foundation for the major and in journalism and mass communication careers.
Requisites: Concurrent enrollment in JOURN 202
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop knowledge of the various information sources used by professional journalists and marketing professionals, as well as working knowledge of how to use the most important information sources.
Audience: Undergraduate

2. Cultivate and practice critical skills for evaluating the validity of different forms of information used by journalists and marketing professionals, and to judge its quality and veracity.
Audience: Undergraduate

3. Explore different forms of analyzing and presenting information in forms that are useful to journalists and strategic communication professionals, including data visualization techniques.
Audience: Undergraduate

4. Practice skills and strategies for accomplishing group tasks and engaging in peer learning.
Audience: Undergraduate

JOURN/COM ARTS/RP & SE 312 – DISABILITY AND THE MEDIA
3 credits.

Examines the interaction between disability and media in modern society. Explore representations of disability in various forms of mass media, including television and film, social media, advertising, and others. Analyze how these representations affect disabled people directly, including the development of their identities, as well as how they influence disability attitudes and stigma throughout society. Discuss overt and casual ableism within media, as well as how the disability community uses media for activism. Discuss issues of access for disabled people (e.g., assistive technology, captions, audio descriptions), as well as the future of disability representations within media.
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify key concepts and terminology for understanding the intersection of disability and the media, including the medical and social models of disability, definitions and conceptualizations of disability, ableism, stigma, disability justice, disability identity development, and others.
Audience: Undergraduate

2. Identify how disability is represented within various forms of media, and how these representations affect disabled people both directly and indirectly.
Audience: Undergraduate

3. Describe how technology can facilitate access to media for disabled people
Audience: Undergraduate

4. Discuss how the media is and can be utilized in pursuit of disability justice.
Audience: Undergraduate

JOURN 335 – PRINCIPLES AND PRACTICES OF REPORTING
4 credits.

Basic reporting for print and electronic media. Bring together technical and conceptual skills by creating a variety of print, audio, and web-based news stories on a current public issue.
Requisites: JOURN 202 or graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

JOURN 345 – PRINCIPLES AND PRACTICE OF STRATEGIC COMMUNICATION
4 credits.

Introduction to strategic communication for students interested in advertising, public relations, health communications, and political campaigns.
Requisites: JOURN 202 or graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand the professional and social overview of the field as a single exposure to strategic communication.
Audience: Both Grad & Undergrad

2. Develop a foundation for higher-level courses for those interested in pursuing a career in strategic communication.
Audience: Both Grad & Undergrad

3. Learn content concerning research and account planning, campaign management, creative message development, conventional and digital media buying and planning, as well as public relations, promotions, and event planning.
Audience: Both Grad & Undergrad

4. Learn the fundamentals of the academic study of strategic communication in society, its history, laws and ethics, and the application of these principles to social, health and political campaigns, as well as career trajectories that involve the use of these principles beyond brand marketing.
Audience: Both Grad & Undergrad

5. Demonstrate a higher-order synthesis of concepts related to strategic communications.
Audience: Graduate

6. Develop an of application of these principles to a designated health or political campaign.
Audience: Graduate

JOURN 350 – SPORTS MARKETING COMMUNICATIONS
3 credits.

Explore various activities related to the promotion domain of sports marketing including marketing research, sports branding, image management, advertising promotion, event promotion, sports sponsorships, and public relations. Examine each of these activities, and focus on the marketing communications associated with each of these activities.
Requisites: JOURN 150
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand the basic concepts and principles that are part of the practice of sports marketing communications.
Audience: Undergraduate

2. Produce a strategically grounded, creatively inspired plan for various activities related to sports marketing.
Audience: Undergraduate

3. Persuasively pitch these activities to an audience.
Audience: Undergraduate

JOURN/POLI SCI/URB R PL 373 – INTRODUCTION TO SURVEY RESEARCH
3-4 credits.

Theory and practice of survey research; questionnaire design, sampling, data visualization, statistical analysis.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Formulate and construct logical arguments about political phenomena and evaluate those arguments using survey research
Audience: Undergraduate

2. Explain the theoretical components of survey research
Audience: Undergraduate

3. Interpret survey results in general with a particular focus on political polling
Audience: Undergraduate

4. Design and assess political surveys, including questionnaire design, question wording, survey mode, sample size, nonresponse, survey experiments, standard error, and margin of error
Audience: Undergraduate

5. Demonstrate statistical analysis skills in the context of political surveys including: hypothesis testing, confidence intervals, difference of means tests, data visualization and linear regression
Audience: Undergraduate

6. Recognize ethical issues in survey research
Audience: Undergraduate

7. Assess the state of a body of scholarly literature related to course themes, identify gaps in that literature, and formulate an original research question in the context of those gaps.
Audience: Graduate

JOURN 401 – IN-DEPTH REPORTING
4 credits.

Advanced reporting with emphasis on critical evaluation of evidence and on recognizing the complex effects of government actions. Explore and develop community context stories that originate in a range of venues from the courts to the schools.
Requisites: JOURN 335 or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

JOURN 405 – CREATIVE NONFICTION
4 credits.

Creative elements of non-fiction story telling to develop skills necessary for writing across the journalistic spectrum, from newspapers to magazines to books.
Requisites: JOURN 335 or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

JOURN 411 – MULTIMEDIA DESIGN
4 credits.

Visual communication and graphic design in multimedia contexts. Build design and production techniques to relay creative messages through print and digital media. Content explores design theory and techniques, as well as the effects and ethics of visual media messages.
Requisites: JOURN 335, 345, or graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

JOURN 415 – SCIENCE AND ENVIRONMENTAL JOURNALISM
4 credits.

Instruction and practice in strategies for communicating science to the public. Emphases include (1) how to explain difficult concepts and prrocesses; (2) skills for telling interesting and artful stories; and (3) strategies for making reasonable judgments about scientific evidence.
Requisites: JOURN 335 or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

JOURN 417 – MAGAZINE PUBLISHING
4 credits.

Integrated, in-depth approach to magazine management, writing, editing and design. Covers the magazine industry from both the editorial and business ends, bringing together journalism and strategic communication students. Includes production of Curb magazine in print, online and mobile formats.
Requisites: JOURN 335, 345, or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

JOURN 420 – INVESTIGATIVE REPORTING
4 credits.

Techniques of investigative and long-form enterprise reporting. Includes extensive reporting in the field and a final project.
Requisites: JOURN 335 or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

JOURN 425 – VIDEO JOURNALISM
4 credits.

Video journalism is widespread, thanks to online news and sources such as YouTube. Create news stories using the techniques of videography, digital editing, writing and producing. Video journalism is unique in its language, requiring engaging material, a fast start, sharp focus, short narrative and natural voices. Focus on capturing stories with strong visuals and ambient sound of the people affected by issues and events.
Requisites: JOURN 335 or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

JOURN 426 – COMMUNITY-BASED REPORTING
4 credits.

Provides advanced, targeted instruction in reporting that pays close attention to neighborhoods or very small communities (subcommunities), also known as hyperlocal reporting. These small communities can be defined by geographic boundaries or boundaries of shared topical interest. Locate community-based reporting's place in the larger media ecology of mainstream media (newspapers, TV, weekly papers, magazines, independent websites, etc.), and investigate how local journalism's place in changing media ecologies helps (or discourages) people from becoming active citizens in a democracy.
Requisites: JOURN 335
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2019

JOURN 445 – CREATIVE CAMPAIGN MESSAGES
4 credits.

Introduction to the creative aspects of message development for advertising, public relations, and other strategic communications.
Requisites: JOURN 345 or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

JOURN 447 – STRATEGIC MEDIA PLANNING
4 credits.

Introduction to media planning for students interested in careers in advertising, public relations, or other forms of strategic communication.
Requisites: JOURN 345 or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

JOURN 449 – ACCOUNT PLANNING AND STRATEGY
4 credits.

Process of planning, implementing, and analyzing strategic communication campaigns.
Requisites: JOURN 345 or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

JOURN 450 – SPORTS REPORTING AND WRITING
4 credits.

Core skills and issues of communicating about sports to a mass audience in a changing media landscape, as well as advice and support in starting a sports communication career including access to professionals in the field. Utilizes professional, historical and theoretical perspectives in helping participants gain proficiency in disseminating information about sports-related events and topics for informative and strategic purposes, while developing a sense of the role of sport in contemporary society.
Requisites: JOURN 150
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Gain an understanding of best practices particular to sports reporting and communication in a variety of media, including event and feature coverage, interviewing, sourcing, investigative techniques, data utilization and sports marketing/public relations.
Audience: Undergraduate

2. Articulate an understanding of the impact of sport on societal issues and attitudes.
Audience: Undergraduate

3. Apply best practices and theoretical understanding through written, discussion, and experiential exercises.
Audience: Undergraduate

JOURN 455 – EMERGING MEDIA AND THE NEWS
4 credits.

Tools and platforms with which to produce professional content for publication. Examples for course topics will include social media, multimedia and other new technologies that professional communicators must master.
Requisites: JOURN 335, 345, or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019

JOURN 456 – LONG FORM VIDEO
4 credits.

Develop skills needed to conduct professional-level journalism and strategic communication in long-form video. Produce documentary pieces of covering a contemporary topic of local or regional interest and complete other exercises in video analysis, composition and production.
Requisites: JOURN 335, 345, or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

JOURN 457 – STORYTELLING THROUGH SOUND
4 credits.

Audio storytelling as an art form, with a focus on creating a series of episodic long-form audio storytelling segments. Develop interview and writing skills, as well as field recording and editing techniques. Develop personal style and voice, while learning practical skills necessary to write and produce audio content for over the air or online.
Requisites: JOURN 335, 345, or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify compelling news that make use of the audio medium.
Audience: Both Grad & Undergrad

2. Illustrate field recording and editing techniques to draw audio rich news narratives.
Audience: Both Grad & Undergrad

3. Apply and integrate interview and writing skills to concisely form stylized narrative arcs.
Audience: Both Grad & Undergrad

4. Rethink and compose message creation to publish work for media outlets.
Audience: Both Grad & Undergrad

5. Demonstrate deeper engagement with the principles underlying the learning outcomes.
Audience: Graduate

6. Analyze and apply select concepts related to subject.
Audience: Graduate

7. Apply specific principles to revise and produce an additional project.
Audience: Graduate

8. Demonstrate characteristics of structure and applications that benefits the message.
Audience: Graduate

JOURN 463 – DIGITAL MEDIA STRATEGIES
4 credits.

Provides an overview of digital media from an objective, strategy, and tactical planning perspective within strategic communication media and promotion campaigns.
Requisites: Declared in a Journalism undergraduate program and JOURN 345
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

JOURN 464 – PUBLIC RELATIONS STRATEGIES
4 credits.

Provides an overview of public relations from an objective, strategy, and tactical planning perspective within strategic communication campaigns. Investigates one core element of a strategic communications campaign and provides an in-depth study into the topic area of public relations.
Requisites: JOURN 345
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

JOURN 465 – SOCIAL MEDIA MARKETING COMMUNICATIONS
4 credits.

Provides an overview of social media marketing planning and buying from an objective, strategy, and tactical perspective within strategic communication campaigns. Investigate one core element of a strategic communications campaign, and provides an in-depth study into the topic area of digital media.
Requisites: Declared in a Journalism undergraduate program and JOURN 345
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Distinguish social media from other strategic communications management and communications functions.
Audience: Undergraduate

2. Integrate social media into a broader strategic communications campaign.
Audience: Undergraduate

3. Strategically analyze social media audiences and influencers.
Audience: Undergraduate

4. Critically evaluate ethics and legalities of social media, and how social media plays a role in both creating and solving public relations crises.
Audience: Undergraduate

JOURN 475 – SPECIAL TOPICS IN ADVANCED CONCEPTS AND SKILLS
1-4 credits.

Exploration of a particular set of concepts and skills in more depth. Subject will vary.
Requisites: JOURN 335, 345, or graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

JOURN/HISTORY 560 – HISTORY OF U.S. MEDIA
4 credits.

Evolution of the mass media in the United States in the context of political, social, and economic change.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and explain important people, themes, events, and technologies that shaped media history.
Audience: Both Grad & Undergrad

2. Identify and explain historical arguments in secondary literature.
Audience: Both Grad & Undergrad

3. Analyze primary sources and know what questions to ask to be able to do that.
Audience: Both Grad & Undergrad

4. Produce original historical knowledge through research in primary and secondary sources.
Audience: Both Grad & Undergrad

5. Produce research suitable for submission to an academic journal or history magazine.
Audience: Graduate

JOURN 561 – MASS COMMUNICATION AND SOCIETY
4 credits.

Relationships between mass communications and society; analysis and evaluation of media performance and of suggestions for change.
Requisites: Junior standing; not open to special students
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

JOURN 562 – MASS MEDIA AND RACIAL DIVERSITY
4 credits.

Delves deeply into the concepts and theories related to the subject of mass media and racial diversity. Key concepts such as race, ethnicity, stereotypes, and white privilege are examined and analyzed in the news, advertising, digital media and social media and their intersection with African Americans, Native Americans, Asian Americans, Latinx Americans, and Arab Americans. Different social and cultural roles assumed by mainstream media and alternative media are also explored.
Requisites: Junior standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Differentiate the spectrum of race and race representation within mass and social media.
Audience: Both Grad & Undergrad

2. Use social scientific and critical research methods to identify current challenges faced by media professionals.
Audience: Both Grad & Undergrad

3. Recognize the origins of stereotyping in mass communication.
Audience: Both Grad & Undergrad

4. Appraise various stereotypes across the intersections of oppressive social systems.
Audience: Both Grad & Undergrad

5. Describe how marginalized groups use alternative and social media to tell their own stories.
Audience: Both Grad & Undergrad

6. Critically evaluate ideas from different sources and integrate or contrast race and media communication theories to produce research suitable for submission to an academic journal.
Audience: Graduate

JOURN 563 – LAW OF MASS COMMUNICATION
4 credits.

Freedom of speech and press with particular emphasis on major legal issues confronting media practitioners; introduction to such areas of law as censorship, libel, invasion of privacy, access to information, regulation of electronic media and commercial speech.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

JOURN 564 – MEDIA AND THE CONSUMER
4 credits.

Advertising and other mass media content from the consumer's viewpoint; consumer's need and opportunities for information, and use of opportunities; consumer evaluation of media performance, guidelines for effective use; alternative means for obtaining information; implications of consumer movement.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

JOURN 565 – EFFECTS OF MASS COMMUNICATION
4 credits.

Use and effects of mass communication for individuals and societies. Examines who is affected, what effects occur and how much, what different media content is involved and what situations make effects more or less likely.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

JOURN 566 – COMMUNICATION AND PUBLIC OPINION
4 credits.

The role of the mass media of communication in the formation of public opinion. Propaganda goals of government, political, economic, and social groups.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

JOURN 567 – MASS MEDIA AND GLOBAL COMMUNICATION
4 credits.

Introduces key concepts and issues in mass media and global communication studies. Covers broad trends, key topics, and critical debates in media and communication studies under global contexts and standpoints.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and explain key concepts and urgent issues in mass media and global communication studies.
Audience: Both Grad & Undergrad

2. Acquire different theoretical and methodological approaches to study global communication.
Audience: Both Grad & Undergrad

3. Examine various mechanisms of communication networks, media flows, media industries, and digital platforms across global contexts.
Audience: Both Grad & Undergrad

4. Learn interview skills and produce theoretically informed analysis of media consumption patterns and networks.
Audience: Both Grad & Undergrad

5. Analyze global media phenomena and produce research papers that rigorously engage with key concepts and issues covered in the course.
Audience: Both Grad & Undergrad

6. Recognize and understand critical connections between global changes, local issues, and personal lives.
Audience: Both Grad & Undergrad

7. Critically evaluate ideas from different sources and integrate (or contrast) different global communication theories to produce research suitable for submission to an academic journal.
Audience: Graduate

JOURN 601 – COLLOQUIUM IN PROFESSIONAL COMMUNICATION CAREERS
1 credit.

Explores a wide variety of post-undergraduate communication career options available in Journalism. Topics related to job hunting, resume writing, and networking are also covered. Focuses on opportunities and challenges in a wide variety of communication fields, from advertising and public relations to radio, newspapers and TV broadcasting. Guest speakers or panelists will span different sectors (agencies, corporations, nonprofits, higher education, government, etc.).
Requisites: Declared in a Journalism undergraduate program
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Expand knowledge about possible communications career paths, across a variety of industry sectors
Audience: Undergraduate

2. Use practical and specific tools to help obtain a 'first job' after graduation
Audience: Undergraduate

3. Network with communications industry experts
Audience: Undergraduate

4. Reflect on possible future career paths and opportunities
Audience: Undergraduate

JOURN/MARKETNG 605 – DIGITAL BRAND BUILDING
3 credits.

Provides an overview of the rapidly changing digital landscape and its role and importance in the marketing mix. Explores the digital revolution and its impact on building brands in today's digital first environment. Examines themes of the revolution and their effects on how organizations market their brands and, more broadly, on culture.
Requisites: MARKETNG 300, JOURN 201, or declared in the Business Exchange program
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain how the digital marketing landscape has evolved over time, including specific disruptions and revolutions that have made the greatest impact.
Audience: Undergraduate

2. Articulate how brand marketers adapted their strategies to compete in a changing digital ecosystem.
Audience: Undergraduate

3. Develop critical thinking and communication skills that will require analysis and synthesis of class lessons and topics.
Audience: Undergraduate

JOURN/COM ARTS/HDFS 616 – MASS MEDIA AND YOUTH
3 credits.

Children's and adolescents' use of mass media and mass media effects on them. Particular attention is given to changes in comprehension and other cognitive activities that give insights into media use and effects.
Requisites: JOURN 202, COM ARTS 325, HDFS 262 (or HDFS 362 prior to Fall 2023), ED PSYCH 320, PSYCH 460, LSC 251, or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain how children and youth process media
Audience: Undergraduate

2. Compare/contrast the impact of different types of media content on development
Audience: Undergraduate

3. Explain how individual differences moderate the impact of media on development
Audience: Undergraduate

4. Describe moderating effects of the context in which media use occurs
Audience: Undergraduate

5. Read, interpret, evaluate, and discuss social scientific reports of findings in this area
Audience: Undergraduate

6. Synthesize and interpret research in this area for a lay audience
Audience: Undergraduate

7. Explain with nuance how children and youth process media
Audience: Graduate

8. Compare/contrast the impact of different types and formats of media content on development, with reference to key developmental milestones
Audience: Graduate

9. Explain how individual differences and social contexts moderate the impact of media uses and interpretations on development
Audience: Graduate

10. Synthesize and interpret research in this area and identify a research gap for future work
Audience: Graduate

JOURN/COM ARTS/LSC 617 – HEALTH COMMUNICATION IN THE INFORMATION AGE
3 credits.

Examines the role of communication in health, how the revolution in information technology has affected health communication, and the assumptions about health information and communication that drive current efforts to use technologies.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate their understanding of major theories, approaches, concepts, and current research findings in the area of health communication
Audience: Both Grad & Undergrad

2. Gain a sense of the methodological issues involved in the construction and evaluation of health communication
Audience: Both Grad & Undergrad

3. Demonstrate their understanding of the connections between the environment (e.g., physical, social, media), cognition, and behavior
Audience: Both Grad & Undergrad

4. Communicate effectively through written reports, oral presentations and discussion
Audience: Both Grad & Undergrad

5. Evaluate ideas from different sources critically
Audience: Graduate

6. Derive new testable hypotheses by integrating or contrasting different theories
Audience: Graduate

7. Develop variations on theoretical models or ideas such as contingent conditions or mediating factors
Audience: Graduate

JOURN 618 – MASS COMMUNICATION AND POLITICAL BEHAVIOR
4 credits.

Interrelationships of news media, political campaigning, and the electorate. Impact of media coverage and persuasive appeals on image and issue voting, political participation and socialization.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

JOURN 620 – INTERNATIONAL COMMUNICATION
4 credits.

Historical, political, economic and cultural trends in global mass communication systems.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

JOURN 622 – THE IMPACT OF EMERGING MEDIA
3 credits.

Provides an introduction to the literature and research on emerging communication technologies (e.g., blogs, social media, massively multiplayer games, mobile devices) and the effects of these technologies on the individual and societal levels. Illuminates the psychological, social, political, industrial, and policy implications of the use of emerging communication technologies. Become equipped with a basic social and scientific understanding of the interplay between technology, individuals, and society, and recurring issues concerning the adoption and usage of new communication technologies. Emphasizes empirical approaches to understanding these relationships, delving into contexts such as journalism, strategic communication, and the place of digital media in politics and society.
Requisites: Junior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

JOURN 649 – BRAND STRATEGY IN ADVERTISING & INTEGRATED COMMUNICATIONS
4 credits.

Provides a comprehensive introduction to classical consumer packaged goods brand management by exploring the intersection of marketing, advertising, and strategy to grow sales profitably over time with winning products and effective campaigns. Illuminates the foundational concepts, frameworks, and tools brand management professionals use to drive awareness, consideration, trial and repeat of their offerings to increase market share and establish long-lasting brand equity with target consumer groups. Engages leadership and positioning principles to cultivate and communicate one's professional and personal brand in any career or life path.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Possess a basic understanding of the consumer packaged goods industry and the core concepts behind the work brand management professionals do to drive profitable sales growth in their product categories.
Audience: Undergraduate

2. Apply key brand and marketing management frameworks, calculations and approaches for handling specific business opportunities and problems.
Audience: Undergraduate

3. Know the project management cycles of short and long term initiatives including new product innovation and strategic campaign development.
Audience: Undergraduate

4. Formulate a complete and compelling strategy recommendation memo for use in future internship and full-time professional job roles (particularly in the advertising, marketing, and brand management fields).
Audience: Undergraduate

5. Present knowledge, analysis and thought leadership to a large audience.

Audience: Undergraduate

6. Recognize how fundamental brand principles can be applied to enhance one’s personal-professional “brand.”
Audience: Undergraduate

JOURN/ART HIST/HISTORY/L I S 650 – HISTORY OF BOOKS AND PRINT CULTURE IN EUROPE AND NORTH AMERICA
3 credits.

History of books and print culture in the West from ancient times to the present. Focus on the influence of reading and writing on social, cultural, and intellectual life. Methodologies, theories, and sources for study of book and print culture history.
Requisites: Graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

JOURN 651 – COMMUNICATING SPORTS CONTROVERSIES
3 credits.

Exploration of prominent controversies that pervade the realm of sports and engage the activities of sports communication professionals (such as sports journalists, broadcasters, marketers, and public relations specialists). Discuss the issues involved in these controversies and pay special attention to the way they impinge upon professional practices.
Requisites: JOURN 150, 162, 201, or junior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Examine the core concepts and principles that are involved in today's most salient sports controversies.
Audience: Undergraduate

2. Explore the perspectives and practices of sports communication professionals with respect to these controversies.
Audience: Undergraduate

JOURN 657 – UNDERSTANDING RESEARCH DESIGN & STATISTICS IN MASS COMMUNICATION
4 credits.

Covers fundamental thinking skills necessary for the critical evaluation and presentation of arguments in mass communication, especially those based upon quantitative information. Introduces generic logic and quantitative reasoning concepts through analysis and discussion of specific cases drawn from research reported in the mass media (e.g., health and business news, public opinion polls), research on the media (e.g., the impact of media violence), and research for the media (e.g., audience research). Logical and quantitative reasoning skills will be improved through a variety of "hands on" projects.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Gain a sense of the methodological issues involved in the construction and design of mass communication research studies, giving them the ability to critically evaluate the various types of reliability and validity.
Audience: Both Grad & Undergrad

2. Understand how to analyze and interpret survey data in mass communication research contexts (e.g., confidence intervals, t-tests, correlations, etc.) using various programs (e.g., Excel, R).
Audience: Both Grad & Undergrad

3. Critically evaluate and summarize information related peer reviewed mass communication research articles.
Audience: Both Grad & Undergrad

4. Communicate effectively through written reports, oral presentations and discussion on topics in mass communication.
Audience: Both Grad & Undergrad

5. Critically evaluate ideas from different sources, integrating (or contrasting) different communication theories, deriving new testable hypotheses, developing variations on theoretical models or other ideas such as contingent conditions or mediating factors important in mass communication research.
Audience: Graduate

JOURN 658 – COMMUNICATION RESEARCH METHODS
4 credits.

Survey of methods for investigating mass communication process and effects.
Requisites: Junior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

JOURN/ASIAN AM 662 – MASS MEDIA AND MINORITIES
4 credits.

Representations of minority groups in U.S. news and entertainment mass media. Historical, social, political, economic, and other factors influencing the mass mediated depictions of minorities.
Requisites: Junior standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022

JOURN 664 – SOCIAL NETWORKS IN COMMUNICATION
3 credits.

Examines key concepts in social network theory and develops and applies them to the field of communication. Attention is paid to the differences between social and online networks, as well as their relationships. Explores major concepts and questions in social network theory and analysis, including the elements that make up a network; network relationships (e.g. homophily, knowing others like ourselves); the construction of whole social networks out of dyads (two people) and triads (three); strong and weak ties; roles and positions; groups, cliques, and clusters; as well as small worlds and communities. Emphasis will be on what these concepts mean and how they work. There will be minimal introduction to technical network analysis and hands- on work.
Requisites: Junior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019

JOURN 669 – LITERARY ASPECTS OF JOURNALISM
3 credits.

Critical reading of the best reporting and writing.
Requisites: Junior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

JOURN 675 – TOPICS IN GOVERNMENT AND MASS MEDIA
3 credits.

Analysis of political and legal relationships between mass communication and government with emphasis on current problems and issues.
Requisites: Senior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

JOURN 676 – SPECIAL TOPICS IN MASS COMMUNICATION
1-4 credits.

In-depth analysis of a conceptual mass communication issue.
Requisites: Junior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

JOURN/L I S 677 – CONCEPTS AND TOOLS FOR DATA ANALYSIS AND VISUALIZATION
3 credits.

An introduction to information and data visualization: introduction to major concepts, instruction in specific tools for data analysis and visualization, and application of skills in a final project.
Requisites: None
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

JOURN 678 – LEGAL & ETHICAL DIMENSIONS OF EMERGING MEDIA
3 credits.

Examines the legal and ethical questions surrounding digital media and their effects on society and individuals.
Requisites: Junior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No

JOURN 681 – SENIOR HONORS THESIS
3 credits.

Mentored individual research and study for students completing Honors in the Major.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025

JOURN 682 – SENIOR HONORS THESIS
3 credits.

Mentored individual research and study for students completing Honors in the Major.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025

JOURN 691 – SENIOR THESIS
3 credits.

Mentored individual research and study for students completing a senior thesis.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2019

JOURN 692 – SENIOR THESIS
3 credits.

Mentored individual research and study for students completing a senior thesis.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2020

JOURN 697 – INTERNSHIP
1-3 credits.

Advanced directed study projects as arranged with a faculty or instructional academic staff member, based on internship experience.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

JOURN 698 – DIRECTED STUDY
1-6 credits.

Advanced directed study projects as arranged with a faculty or instructional academic staff member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2010

JOURN 699 – DIRECTED STUDY
1-6 credits.

Advanced directed study projects as arranged with a faculty or instructional academic staff member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

JOURN 801 – MASS COMMUNICATION AND THE INDIVIDUAL
3 credits.

Theory and research on individuals' use of mass communication and effects of mass communication. Topics include choice, selection and functions of mass media use, attention and cognitive processing, information effects, persuasion and emotion/involvement, and social and behaviroal effects.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

JOURN 802 – MASS COMMUNICATION AND SOCIETY
3 credits.

Examines systematic procedures for theory building and comparison of theories of communication processes between mass media and other societal institutions and their relationships with both individuals and micro-social systems.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

JOURN 803 – MASS COMMUNICATION AND CULTURE
3 credits.

Intensive readings focusing on the critical studies and/or cultural studies traditions in mass communication theory and research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

JOURN/HISTORY 808 – MASS COMMUNICATION HISTORY
3 credits.

Intensive reading and discussion designed to introduce literature of mass communication.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

JOURN/LSC 811 – CONCEPTUALIZATION AND DESIGN OF MASS COMMUNICATION RESEARCH
2-3 credits.

Assists students in turning research questions into substantive research designs with understanding of the concepts involved. For most students, the final product will be a well-developed thesis or dissertation proposal.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024
Learning Outcomes: 1. Explain key principles of social science research, with a focus on how empirical studies relate to, and contribute to social scientific theory creation and development
Audience: Graduate

2. Identify and explain common modes of empirical research in mass communication and science communication scholarship, including their strengths and weaknesses
Audience: Graduate

3. Assess different kinds of social scientific research for strengths/weaknesses related to increasing understanding of mass communication and/or science communication
Audience: Graduate

4. Articulate and/or evaluate research proposals in mass communication and/or science communication
Audience: Graduate

JOURN 812 – QUALITATIVE COMMUNICATION RESEARCH METHODS
3 credits.

Research methodology. Design research, analyze and interpret evidence, and develop a deeper appreciation of research strategies.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

JOURN 813 – PRACTICUM IN COMMUNICATION RESEARCH
3 credits.

Detailed practicum on conducting and publishing empirical research in mass communication.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022

JOURN 818 – COMPUTATIONAL APPROACHES TO COMMUNICATION RESEARCH
3 credits.

Surveys major computational approaches and analytical tools that are promising in advancing communication research and practices in the modern digital information environment.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Gain familiarity with major computational methods currently available to social scientists.
Audience: Graduate

2. Develop a conceptual understanding of the core assumptions, modeling strategies, and programming tools associated with each of the surveyed computational method.
Audience: Graduate

3. Critically assess how computational methods could help describe, predict, and explain communication phenomena and improve Interventions.
Audience: Graduate

4. Examine how computational approaches could triangulate with other research methods to help advance communication theory.
Audience: Graduate

5. Collectively build a shared resource library that includes annotated bibliographies, short response papers, and tutorials & codes for a selected set of R packages popular for computational communication research.
Audience: Graduate

6. Gain experiences with applying computational methods to address research questions of your interest.
Audience: Graduate

JOURN 821 – HEALTH COMMUNICATION
3 credits.

Application and integration of theory in understanding the effects of mass media, with close attention to health communication campaign messages.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

JOURN 822 – GLOBAL COMMUNICATION
3 credits.

Readings and discussion focussing on global media issues. Topics may include news flow, cultural imperialism, representations, history and political economy, globalization trends, new technologies, mass media and nation building, communication and grassroots politics.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

JOURN/ENVIR ST/LSC 823 – SCIENCE AND ENVIRONMENT COMMUNICATION
3 credits.

Tracks the evolution of mass media coverage of science and the environment. Emphasis on how journalists utilize evidence, the influence of scientific and journalistic norms on stories, and the effects of mass media on science and environment messages to the public.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Describe theoretical perspectives relating to science and environmental communication, including a sampling of recent findings and current theoretical model
Audience: Graduate

2. Combine theory and methods to develop and evaluation science and environmental communication efforts
Audience: Graduate

3. Apply research theories and findings to contemporary problems in environmental and science communication
Audience: Graduate

4. Communicate complex environmental and science concepts with scientific and general audiences in oral and written forms
Audience: Graduate

JOURN 824 – RACE, ETHNICITY AND MEDIA
3 credits.

Examines key theoretical and empirical readings in the area of race/ethnicity and media.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

JOURN/LSC 825 – LAW AND ETHICS OF COMMUNICATION AND MEDIA
3 credits.

Explores critical questions of media law and ethics within the United States.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021
Learning Outcomes: 1. Understand the dimensions of legal and ethical philosophies and frameworks as applied to media work.
Audience: Graduate

2. Interpret and critique common elements of media ethics codes and practices.
Audience: Graduate

3. Interpret and critique legal precedents and doctrines
Audience: Graduate

4. Apply philosophy and frameworks to current media concerns and controversies.
Audience: Graduate

5. Rationally defend or critique choices in specific media contexts.
Audience: Graduate

6. Research and write about law and ethics in scholarly or professional publications.
Audience: Graduate

JOURN/LSC 826 – JOURNALISM THEORY
3 credits.

Focus on the content and purposes of journalism, explores cultural values associated with journalism, relationships between journalism and other institutions, and current issues facing journalists at a time when the profession faces many challenges.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

JOURN/GEN&WS 828 – GENDER AND SEXUALITY IN MASS COMMUNICATION
3 credits.

A scholarly theory overview on gender and sexuality in communication studies.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain how cultural theorists have defined "gender," "sexuality," and "intersectionality."
Audience: Graduate

2. Analyze how gender and sexuality are represented in the mass media.
Audience: Graduate

3. Explain how gender and sexuality are relevant to media production, media consumption (media audiences), and media activism.
Audience: Graduate

4. Describe how gender and sexuality inform the creation of media publics.
Audience: Graduate

JOURN/POLI SCI 829 – POLITICAL COMMUNICATION
3 credits.

This course examines the role of communication in American politics. Topics covered include the communication of politics (e.g., communication by politics elites, effects of mass media and interpersonal communication on political attitudes) as well as the politics of communications (regulation of political communication, policy issues, etc.).
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

JOURN/LSC 833 – TECHNOLOGY AND SOCIETY
3 credits.

Considers the effects of new communication technologies on everyday life and political mobilization.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

JOURN 835 – NEWS FRAMING AND SOCIAL PROTEST MOVEMENTS
3 credits.

Addresses the multi-disciplinary theory and research that have contributed to our understanding of both the antecedents and consequences of mediated messages as they impinge upon processes related to social protest. Draws from literature in mass communication, political science, sociology, psychology and other disciplines to examine questions about the role of communication media in the dynamics of social protest.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Master the literature in the areas of framing, framing effects, and news coverage of social movements.
Audience: Graduate

2. Design and execute a research project that contributes to the literature of news framing and social protest.
Audience: Graduate

3. Develop skills in analyzing and presenting their own and others' research.
Audience: Graduate

JOURN 880 – TOPICS IN MASS COMMUNICATION
3 credits.

In-depth investigation of a specific topic in mass communication.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

JOURN 901 – COLLOQUIUM IN MASS COMMUNICATION
1 credit.

Research presentations by mass communication scholars, and is designed to acquaint graduate students with theoretical and methodological approaches to the study of communication.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

JOURN 902 – GRADUATE TEACHING COLLOQUIUM
1 credit.

Colloquium series in fields related to communication and information studies. Teaching presentations on various theoretical and practical approaches to teaching and learning in the communication and information fields.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

JOURN 903 – PROFESSIONAL MASTER'S COLLOQUIUM
1 credit.

Expands the toolkit of skills and experiences through direct work with working journalists and communication professionals.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Gain professional lessons about the craft and industry of journalism and media from those who practice it.
Audience: Graduate

2. Apply skills learned using WordPress and other technology to develop pieces for a professional portfolio.
Audience: Graduate

3. Craft an understanding of the ethics and practice of journalism from a practical and theoretical perspective and demonstrate how to apply them in professional situations.
Audience: Graduate

4. Develop relationships with professionals and mentors to further their careers in journalism.
Audience: Graduate

JOURN 990 – THESIS
1-9 credits.

Advanced level mentored reading and research for students with dissertator status.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

JOURN 999 – INDEPENDENT RESEARCH PROBLEMS
2-4 credits.

Advanced level mentored reading and research for dissertators.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

KINESIOLOGY (KINES)

KINES 100 – EXERCISE, NUTRITION, AND HEALTH
2 credits.

Guidelines and assessment methods for fitness and nutrition. Motivation, adherence and stress-reduction techniques discussed. Lecture-demonstration concerning effects of exercise and nutrition on health and well-being.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and explain the scientific principles and concepts of physical activity, nutrition, and positive health behaviors on health outcomes.
Audience: Undergraduate

2. Understand the physiological and psychological benefits of regular physical activity and nutrition.
Audience: Undergraduate

3. Evaluate health and fitness information to differentiate between research-based information and trends.
Audience: Undergraduate

4. Apply course concepts to make informed decisions about personal health and wellness.
Audience: Undergraduate

5. Design and implement personal wellness programs using exercise, dietary, and health behavior guidelines and assessments.
Audience: Undergraduate

KINES 104 – AQUATICS
1 credit.

Attainment and maintenance of a high degree of personal efficiency in swimming strokes and proficiency in fundamental aquatic skills, and an understanding of the fundamental physiological, mechanical and kinesiological principles as they relate to aquatic performance.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2018
Learning Outcomes: 1. Develop the ability to properly sequence skills and ensure safety within the block plan.
Audience: Undergraduate

2. Develop the ability to create lesson plans that include safety and skill components, as well as demonstrate understanding of motor development and motor learning principles.
Audience: Undergraduate

3. Develop understanding of hydrodynamic principles as seen in the block plans, lesson plans and personal swimming skills.
Audience: Undergraduate

4. Demonstrate the ability to assess quality lessons and skills.
Audience: Undergraduate

5. Demonstrate improvement in personal swimming skills through assessments.
Audience: Undergraduate

6. Demonstrate the ability to assess swimming skills
Audience: Undergraduate

KINES 110 – EXPLORING CAREERS IN HEALTH AND WELLNESS
1 credit.

Explore the wide range of career pathways available in the fields of health and wellness. Engage with guest speakers, research industry trends, and complete personal reflections to gain understanding of career opportunities. Discover and utilize on-campus resources to develop practical skills for career planning and exploration. Cultivate an understanding of the next steps required in pursuing careers academically and professionally.
Requisites: None
Repeatable for Credit: No
Learning Outcomes: 1. Describe career opportunities in the fields of health and wellness
Audience: Undergraduate

2. Identify on-campus resources to develop practice skills for career planning
Audience: Undergraduate

3. Assess personal interests and strengths in relation to careers in health and wellness
Audience: Undergraduate

KINES 111 – THRIVE: ENHANCING YOUR WELLNESS ON CAMPUS AND HEALTH FOR LIFE
3 credits.

Explore personal wellness by examining five dimensions of wellness (physical, emotional, social, intellectual and occupational) to understand how each dimension contributes to overall health, wellbeing, and quality of life. Discover and utilize on-campus resources that support each dimension and build a resource network to proactively support wellness as a college student. Develop and apply practical skills grounded in theory to implement meaningful behavior change to achieve growth across all dimensions. Engage in critical reflection regarding challenges and barriers faced in achieving desired health outcomes and cultivate strategies to overcome these obstacles to support sustainable wellness practices today and across the lifespan. Enhance dimensions of personal wellness as a method to explore the field of health promotion.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the dimensions of wellness and their impact on health, wellbeing, and quality of life
Audience: Undergraduate

2. Identify on-campus resources and understand how to use them to support individual wellness
Audience: Undergraduate

3. Demonstrate methods to enhance individual wellness across all dimensions
Audience: Undergraduate

4. Develop and apply skills to make meaningful behavior changes grounded in theory
Audience: Undergraduate

5. Apply strategies to overcome challenges and barriers to achieve desired health outcomes across the dimensions of wellness, during college and beyond
Audience: Undergraduate

KINES 112 – MAKE IT COUNT: MEASURING PHYSICAL ACTIVITY BEHAVIOR
3 credits.

Define exercise and physical activity behaviors and how to systematically measure them. Content will encompass the American College of Sports Medicine definition of physical activity and recommendations for exercise across different populations. Students will engage in a service learning opportunity with our adapted fitness program where they will practice measuring and addressing the difficulties in broadly defining physical activity.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply their knowledge of science to address global health concerns related to physical activity and sedentary time.
Audience: Undergraduate

2. Quantify a behavior and examine relationships of that quantification with different types of behavioral measurements.
Audience: Undergraduate

3. Use their knowledge of kinesiology to construct a flexible definition of physical activity to include a variety of behaviors.
Audience: Undergraduate

4. Demonstrate an understanding of the importance of physical activity behaviors across gender, ethnicity, and illness.
Audience: Undergraduate

5. Create an assessment plan to quantify a variety of physical activity behaviors.
Audience: Undergraduate

6. Identify challenges to exercise prescription in the field of kinesiology.
Audience: Undergraduate

KINES 113 – MEDICAL MIRACLES AND BARBIE MAKEOVER SURGERIES: BIOETHICS AND NEW MEDICAL TECHNOLOGIES
3 credits.

Introduction to the ethical implications and impacts of emerging medical technologies. Will explore the ethical, social, and cultural questions raised by these medical developments in cross cultural settings. While most medical technologies have originated in the so-called developed countries, medical innovations are being increasingly globalized, raising important questions at home and abroad about the distribution of risks and benefits and broader health disparities.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify ethical, social, and cultural issues raised by emerging global medical technologies
Audience: Undergraduate

2. Apply a social justice or equity approach to understand how the benefits and risks of these technologies might be distributed
Audience: Undergraduate

3. Evaluate key medical technology and its ethical and sociocultural implications
Audience: Undergraduate

KINES 114 – EXERCISE AS MEDICINE
3 credits.

Explore the powerful connection between exercise and health, examining how exercise serves as both a preventive and therapeutic tool. Learn about the positive effects of exercise on mental health, sleep, cognitive function, and overall well-being. Participate in diverse physical activities that enhance fitness and contribute to a balanced lifestyle. Collaborate on a physical activity initiative addressing barriers to exercise. Benefit from practical experiences that promote a healthier lifestyle and academic success.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the relationship between exercise and physical health, mental health, and cognitive health
Audience: Undergraduate

2. Analyze the impact of exercise on stress, anxiety, sleep quality, and academic performance among college students
Audience: Undergraduate

3. Collaborate with peers to lead a physical activity initiative that identifies and addresses barriers to exercise
Audience: Undergraduate

4. Apply strategies to sustain a physically active lifestyle during academic years and beyond, emphasizing long-term health and success
Audience: Undergraduate

5. Explain the importance of exercise for academic success and health
Audience: Undergraduate

KINES 115 – PHYSIOLOGY OF HUMAN PERFORMANCE
3 credits.

Humans are capable of achieving astonishing performances in athletics, in work and in other extraordinary situations. These extraordinary performances often provide important insights into physiological processes and their limits. This course integrates information from biology, chemistry, psychology, mechanics, etc., to understand the factors that determine and limit human performance from the molecular level all the way up to whole body movement. The emphasis in the class is on using case studies to investigate physiological processes underlying movement, exercise, and performance.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Develop effective strategies for solving problems in science, including some strategies for finding information to help solve the problem.
Audience: Undergraduate

2. Develop an appreciation for the role that limiting factors play in human physiology and an ability to identify limiting factors in a variety of physiological processes
Audience: Undergraduate

3. Have an appreciation for the relationships between a variety of different subjects related to human physiology and understand how an effective approach to understanding human performance requires an integrated approach from a number of disciplines.
Audience: Undergraduate

KINES 116 – FIRST AID AND BASIC LIFE SUPPORT
2 credits.

Techniques and procedures to deal effectively with common emergencies. Includes training in airway obstruction, cardiopulmonary resuscitation, automated external defibrillation, injuries, and medical emergencies.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the signs and symptoms of breathing emergencies and cardiac emergencies and demonstrate how to provide care for each.
Audience: Undergraduate

2. Differentiate the signs and symptoms of various soft tissue and musculoskeletal injuries, and demonstrate how to care for them.
Audience: Undergraduate

3. Organize the signs and symptoms of medical emergencies, including sudden illnesses, poisoning, bites and stings, and heat and cold emergencies, and illustrate how to care for them.
Audience: Undergraduate

4. Analyze the causes of and solutions for the sustainability challenge of caring for shock.
Audience: Undergraduate

5. Analyze sustainability issues and practices using a systems-based approach for providing emergency care.
Audience: Undergraduate

KINES 119 – INTRODUCTION TO KINESIOLOGY
2 credits.

Introduces students to the field of kinesiology and the Department of Kinesiology at the University of Wisconsin-Madison. Introductory material about physical activity and health will be provided, and career opportunities in kinesiology will be discussed.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define the broad integrative nature of the field of Kinesiology.
Audience: Undergraduate

2. Identify the nature and demands of professional occupations, the career options available to students graduating from departments of kinesiology, and the qualifications associated with each.
Audience: Undergraduate

3. Explain the importance of physical activity in daily life and the implications of this for the discipline of kinesiology.
Audience: Undergraduate

4. Demonstrate an ability to honestly self-assess personal strengths, interests, values and goals as they relate to career selection.
Audience: Undergraduate

5. Demonstrate a recognition and appreciation for the many careers within the field.
Audience: Undergraduate

6. Examine the questions and problems currently being explored in the field of kinesiology.
Audience: Undergraduate

7. Transfer skills/knowledge to new situations/contexts in a meaningful approach.
Audience: Undergraduate

KINES 121 – FOUNDATIONS OF PHYSICAL EDUCATION
2 credits.

Introduction to physical education teaching, movement education, and an operational understanding of the scientific study of human movement.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the relationship between the major educational philosophies and their application to physical education, and the development of physical education through a historical perspective.
Audience: Undergraduate

2. Explain the goals and objectives of physical education and the characteristics of a quality physical education program, and illustrate the application of standards to physical education instruction.
Audience: Undergraduate

3. Demonstrate movement concepts, locomotor skills, nonlocomotor skills, manipulative skills, and rhythmic activities.
Audience: Undergraduate

4. Analyze the causes of and solutions for the sustainability challenge of addressing social health issues through physical education.
Audience: Undergraduate

5. Apply sustainability principles and/or frameworks to addressing the challenge of teaching an educational movement theme.
Audience: Undergraduate

KINES 123 – LIVING WELL: LIFESTYLE REDESIGN AND HEALTH PROMOTION FOR COLLEGE STUDENTS
2 credits.

Focuses on the application of biological, cultural and social theory and research to lifestyle change. There will be lectures by experts, experiential learning, and the application of course knowledge to student's lives through class assignments and activities. The transition to college requires students to construct a new lifestyle, take on new and greater personal responsibilities while at the same time meet rigorous academic challenges. This transition includes a loss of structured daily schedules, decreased family support for the day to day living, and greater responsibility for their finances and life choices. Students may have difficulty managing their time, exercise less, eat less healthy foods, engage in increased drinking of alcohol, and experience greater stress and depression when adjusting to college life. This life transition provides an opportunity for reexamination and an opportunity to make thoughtful choices about lifestyle.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe research in multiple disciplines including occupational science, family studies, biology, psychology, and sociology that explains how colleges students' participation in daily activities relates to their health and well-being.
Audience: Undergraduate

2. Understand the intricacies of daily routines, and the dynamics of creating life change within everyday routines to create health and occupational balance.
Audience: Undergraduate

KINES 125 – ADAPTED FITNESS AND PERSONAL TRAINING
1 credit.

Fitness class for developing individualized personal goals. Accommodates persons having temporary or permanent disability. Alternative to dropping from other program classes due to injury or other medical reason.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025

KINES 127 – INTRODUCTION TO ATHLETIC HEALTHCARE
2 credits.

Issues and basic concepts of athletic healthcare including health care systems, interprofessonal teams, and injuries and conditions common to active populations. Emphasis on the team approach to patient care with exposure to a variety of health science professions.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define athletic healthcare
Audience: Undergraduate

2. Identify components of the health care system commonly used in athletic healthcare.
Audience: Undergraduate

3. Interpret the role of public health in addressing issues in athletic healthcare.
Audience: Undergraduate

4. Demonstrate their knowledge of common injuries and conditions in active populations.
Audience: Undergraduate

5. Differentiate the roles of specific health science professions that make up a comprehensive athletic healthcare team.
Audience: Undergraduate

6. Assess the relationship of policy to practice in athletic healthcare.
Audience: Undergraduate

7. Identify the nature and demands of a variety of athletic healthcare employment settings.
Audience: Undergraduate

KINES 140 – SCIENCE AND PRACTICE OF RESISTANCE TRAINING
2 credits.

Lectures and demonstrations on the principles of resistance training and associated physiological effects designed for practitioners who wish to gain a detailed understanding of the science of resistance training.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Detail scientific rationale behind resistance training program design variables.
Audience: Undergraduate

2. Design a resistance training program.
Audience: Undergraduate

3. Differentiate resistance training programs based on desired training outcomes.
Audience: Undergraduate

4. Evaluate efficacy and safety of resistance training program.
Audience: Undergraduate

KINES 145 – CHOOSING TO MOVE: CONSTRUCTING AN ACTIVE LIFESTYLE
2 credits.

Will promote physical activity at a level to achieve health benefits, particularly in students who currently are insufficiently active (less than 150 minutes each week of moderate intensity physical activity). Students will apply course materials (e.g., behavior change strategies) to their own lives by completing self-analysis of their physical activity levels and then developing a physical activity plan to increase current physical activity levels, as well as a plan to maintain the activity after the course has ended.
Requisites: None
Repeatable for Credit: No
Last Taught: Spring 2020
Learning Outcomes: 1. Describe the benefits of physical activity and how much physical activity is needed to achieve health benefits.
Audience: Undergraduate

2. Develop a physical activity program at a level to achieve health benefits.
Audience: Undergraduate

3. Understand the challenges of sustaining a physical activity program.
Audience: Undergraduate

4. Develop skills to be able to sustain a physical activity program after the course has ended.
Audience: Undergraduate

KINES 150 – FOUNDATIONS OF HEALTH BEHAVIOR AND HEALTH EQUITY
3 credits.

Provides students with an overview of the personal, interpersonal and broader social factors that contribute to the health and well-being of individuals and populations in the United States. Examinations of contemporary approaches to health education and health behavior interventions including: Foundations of health education and health behavior programs, health indicators, social and structural determinants of health and health disparities, models of health education/health behavior that support interventions for individuals and communities.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the differences between health and wellness.
Audience: Undergraduate

2. Identify the most common health problems observed in the United States.
Audience: Undergraduate

3. Identify the impact of ethnicity and race, education, age, income and geography and disability on physical and mental health.
Audience: Undergraduate

4. Describe intra and interpersonal determinants of health behaviors.
Audience: Undergraduate

5. Describe the cultural, social, economic environmental and policy factors that influence health behaviors.
Audience: Undergraduate

6. Review health education strategies designed to influence individual and public health.
Audience: Undergraduate

7. Evaluate health information to determine accuracy and effectiveness.
Audience: Undergraduate

KINES 197 – TECHNIQUES IN ATHLETIC TRAINING
1 credit.

An applied clinical approach to basic skills commonly used in the field of athletic training. Designed for students interested in athletic training, and an appropriate elective for those who plan to teach or coach.
Requisites: Classified as Pre-Kinesiology or Pre-Physical Education
Repeatable for Credit: No
Last Taught: Spring 2020
Learning Outcomes: 1. Demonstrate ability to apply various common taping techniques used in the care of active individuals.
Audience: Undergraduate

2. Demonstrate ability to apply superficial modalities.
Audience: Undergraduate

3. Attend various competitions on campus for clinical observation of athletic training professionals in the work setting.
Audience: Undergraduate

4. Demonstrate application of commonly used orthopedic appliances.
Audience: Undergraduate

5. Demonstrate ability to apply commonly used orthopedic pre-cut pads.
Audience: Undergraduate

6. Demonstrate the ability to take a patient history and measure pulse rate and respiration rates and body temperature.
Audience: Undergraduate

7. Demonstrate ability to utilize universal precautions and provide wound care.
Audience: Undergraduate

KINES 200 – INTRODUCTORY NEUROSCIENCE
4 credits.

Entry-level course provides a systematic introduction to the mammalian nervous system, with emphasis on the structure and function of the human brain. Topics include the function of nerve cells, sensory systems, control of movement, learning and memory, and diseases of the nervous system. The foundational knowledge covered in this course serves students interested in health sciences majors, as well as non-science students interested in neuroscience and its relation to human health, wellness, and disease.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2023
Learning Outcomes: 1. Describe the basic organization and function of the human nervous system.
Audience: Undergraduate

2. Summarize the neural circuits and mechanisms that govern how we sense, move, feel and think.
Audience: Undergraduate

3. Explain how sensory information is encoded in neural signals used in the generation of motor behavior.
Audience: Undergraduate

4. Explain the nature of information processing important for human motor behavior.
Audience: Undergraduate

5. Discuss how experience modifies brain circuitry.
Audience: Undergraduate

6. Apply the basic knowledge and neuroscientific concepts that are taught in the course to human health, wellness and disease.
Audience: Undergraduate

KINES 214 – CULTURE AND ENVIRONMENT IN EXERCISE PHYSIOLOGY ABROAD
3 credits.

Examines physiological responses and adaptations to exercise and physical activity, with particular focus on the role that both the physical environment (temperature, altitude, etc.) and the cultural environment (cultural history, norms, etc.) play in these exercise responses. Topics include acute responses to exercise in normal environments and then in extreme environmental conditions (heat and cold, high altitude, and space environments). Consider exercise adaptations in athletes. Examine health consequences of low-levels of physical activity and consider the socio-cultural barriers to health promotion activities among the indigenous Maori in New Zealand, and compare them to at risk populations in United States. Requires completion of ANAT&PHY 235 or 335 and a valid passport that does not expire at least 6 months past the travel dates.
Requisites: Consent of instructor
Repeatable for Credit: No
Learning Outcomes: 1. Describe the physiological challenges and responses during exercise in the extremes of the physical environment (temperature and altitude extremes)
Audience: Undergraduate

2. Identify the role that "cultural environments" play in our view of the physiological effects of exercise and our view of exercise as a healthy activity
Audience: Undergraduate

3. Recognize benefits and barriers to exercise in New Zealand's native Maori population
Audience: Undergraduate

4. Identify the similarities and differences in extreme health that built environments produce and how culturally responsive physical activity can be used to promote health in indigenous populations
Audience: Undergraduate

KINES 225 – INTRODUCTION TO PHYSICAL ACTIVITY PROGRAMMING FOR DIVERSE ABILITIES
2 credits.

Focused and rooted on the application of biological, cultural, social, and research-based practices for professional development in promoting physical activity for everyone, especially those with a variety of disabling conditions. Work as individuals or teams to plan and implement specified physical activities for individuals with diverse abilities in a variety of settings, including the adapted fitness gym, recreational and competitive endeavors and the home-based exercise.
Requisites: None
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop knowledge of various inherited and acquired disabilities across diverse populations.
Audience: Undergraduate

2. Identify socioecological health disparities and the barriers and facilitators of physical activity for the health and well-being of individuals with disabilities and diverse abilities.
Audience: Undergraduate

3. Demonstrate understanding of the dynamics of creating behavioral change in challenging daily routines for persons with diverse needs by conducting motivational interviewing and other behavioral change techniques used in exercise counseling.
Audience: Undergraduate

4. Program and facilitate exercise and physical activities for persons with diverse abilities to improve their health and wellness, performance of activities of daily living, and participation in leisure, recreational and sports activities, as measured by assessments used in fitness and clinical settings.

Audience: Undergraduate

5. Develop practical skills and knowledge to modify and or adapt activities to minimize the effects of disabling conditions and maximize safety and healthy movement opportunities.
Audience: Undergraduate

6. Learn how to take basic vitals, conduct fitness assessments, measure physical activity and track progress for individuals with disabilities.
Audience: Undergraduate

7. Review evidence-based practices, community resources and current trends in health, fitness and exercise for a client-centered professional development project.
Audience: Undergraduate

8. Develop skills in inter-disciplinary collaboration and teamwork.
Audience: Undergraduate

KINES 227 – INTRODUCTION TO CLINICAL ANATOMY OF HUMAN MOVEMENT
2 credits.

Designed to provide students with a foundational knowledge in musculoskeletal anatomy and anatomical considerations related to human movement and physical activity.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define basic knowledge of the musculoskeletal system (bones, muscles, connective tissue and various articulations).
Audience: Undergraduate

2. Interpret evolutionary influences on our musculoskeletal system.
Audience: Undergraduate

3. Illustrate the relationships between anatomical structure and function.
Audience: Undergraduate

4. Explain how anatomy serves as a cornerstone of knowledge for future study in Kinesiology.
Audience: Undergraduate

5. Identify the anatomical consequence of injury and inactivity.
Audience: Undergraduate

6. Summrize key historical events in the study of human anatomy.
Audience: Undergraduate

KINES 250 – SEDENTARY BEHAVIOR IN THE U.S. AND ABROAD
3 credits.

Examines sedentary behavior, physical activity, physical inactivity, and associations with health outcomes in the United States and across the world. Topics include the determinants and consequences of sedentary behavior in children, adults, and special populations. Research examining psychological outcomes of sedentary behavior and barriers to adopting a physically active lifestyle is covered. Emphasis placed on Portuguese socio-cultural context, economic systems, and healthcare structures contributing to health outcomes. Compares the U.S. and European health models and physical activity guidelines. Design a sedentary behavior intervention informed by theories of behavior change.
Requisites: None
Repeatable for Credit: No
Learning Outcomes: 1. Critically evaluate definitions of sedentary behavior (SB) and physical activity (PA) and how they are measured.
Audience: Undergraduate

2. Identify and define psychological variables that relate to participation (antecedents) in SB and PA and those that are impacted by these behaviors (consequences).
Audience: Undergraduate

3. Communicate National and International recommendations and guidelines for SB and PA.
Audience: Undergraduate

4. Formulate behavior change interventions for sedentary individuals with a consideration of the social determinants of health, cultural influences, and expected changes in health outcomes.
Audience: Undergraduate

5. Demonstrate awareness of variables influenced by sociocultural meanings and histories that are related to global perspectives of SB and PA.
Audience: Undergraduate

6. Synthesize connections between out of the classroom experiences and dialogue with perspectives reflecting cultural beliefs related to health behavior within Portugal.
Audience: Undergraduate

KINES 260 – INCLUSIVE PHYSICAL ACTIVITY, SPORT & REHABILITATION IN IRELAND
3 credits.

Focus on applying models, research, and best practices in motor control and motor learning to inclusive physical activity, sports, and rehabilitation for individuals with disabilities. Participate in training seminars and site visits led by content experts in physical activity, sport, and rehabilitation. Explore and participate in sports, recreation, and physical activities through the lens of a tourist/participant with disabilities. Must have sophomore standing and a valid passport.
Requisites: Consent of instructor
Repeatable for Credit: No
Learning Outcomes: 1. Operationalize the concepts of culture, cultural humility, and cultural safety in relation to healthcare for individuals with diverse abilities in Ireland, as well as health education for their participation in adapted physical activity
Audience: Undergraduate

2. Identify and compare theoretical models of motor control and models of practice in occupational performance and physical therapy used by allied health professionals and health educators in Ireland and the U.S. to facilitate culturally competent care for individuals with diverse abilities
Audience: Undergraduate

3. Explore evidenced-based practices and interventions used by Irish healthcare providers and researchers to improve motor control and occupational performance in individuals with diverse abilities
Audience: Undergraduate

4. Examine the connection between improved motor control, occupational performance, and accessibility to inclusive and adapted physical activity settings for individuals with diverse abilities
Audience: Undergraduate

5. Describe issues of accessibility to healthcare services and access to physical activity and sports in Ireland as compared to similar services in the U.S.
Audience: Undergraduate

6. Appraise the ways that culture, advocacy, and public policy can be a driving force for occupational and physical activity participation, and how these issues affect climate and environmental justice for individuals with disabilities
Audience: Undergraduate

KINES 280 – HEALTH COACHING PRINCIPLES AND METHODS
3 credits.

Provides knowledge/skills needed to assess a client's wellness-related priorities and support them through development of wellness goals and the process of behavior change. Discussion of behavior change models and theories will provide a foundational understanding of health coaching. Covers principles and practice of motivational interviewing. Provides didactic and experiential training in mindfulness. Defines health coaching as a profession through discussion of scope of practice, the business of health coaching, professional conduct, and ethical considerations. Introduces lifestyle medicine through discussion of stress management, nutrition, physical activity, and other lifestyle factors, in addition to chronic disease and comorbid conditions. Uses elements of the American Council on Exercise (ACE) Health Coach University Curriculum.
Requisites: None
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Demonstrate understanding of ACE Health Coach certification exam requirements and eligibility.
Audience: Undergraduate

2. Describe and apply behavior change models and theories used in the practice of health coaching.
Audience: Undergraduate

3. Apply the core features of motivational interviewing in health coaching practice.
Audience: Undergraduate

4. Describe the health coach's role and scope of practice, the business of health coaching, and ethical commitments and considerations in health coaching.
Audience: Undergraduate

5. Understand and apply mindfulness in the context of health coaching
Audience: Undergraduate

6. Summarize fundamental concepts of lifestyle medicine and chronic disease.
Audience: Undergraduate

7. Apply the principles and methods of health coaching through coaching practice.
Audience: Undergraduate

KINES 300 – PRACTICUM IN KINESIOLOGY
1-3 credits.

Supervised experience in a specialized area of physical education.
Requisites: Declared in Kinesiology and KINES 314 or 427
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Understand the scientific concepts that are related to the specific practicum focus.
Audience: Undergraduate

2. Demonstrate the ability to apply scientific knowledge to the field setting. Depending upon the setting, this would include demonstrating ways to modify activities and treatments, conducting assessment procedures and screening processes, understanding and implementing research procedures, and designing exercise prescriptions for clients.
Audience: Undergraduate

3. Develop effective personal communication skills with clients and staff.
Audience: Undergraduate

4. Demonstrate professional characteristics, including punctuality, confidentiality, flexibility, cooperation, enthusiasm, and responsibility.
Audience: Undergraduate

5. Reflect on learning experiences of the practicum, through journal submissions and a summary report.
Audience: Undergraduate

KINES 301 – ADVANCED TECHNIQUES IN ATHLETIC TRAINING
2 credits.

Provides future athletic training professionals a foundation in advanced athletic training techniques. Sample topics include: injury prevention, emergency care, orthopedic appliance applications, protective equipment, environmental considerations, and computer applications.
Requisites: Declared in Athletic Training
Repeatable for Credit: No
Last Taught: Fall 2019
Learning Outcomes: 1. Demonstrate knowledge of emergency care related to sudden cardiac death, head trauma/spinal injuries, exertional heat illness and environmental conditions.
Audience: Undergraduate

2. Document and present emergency action plans for specific assigned venues related to athletic events.
Audience: Undergraduate

3. Create and implement custom padding as well as demonstrate appropriate splinting techniques of various injuries.
Audience: Undergraduate

4. Understand proper athletic equipment fitting and rules related to athletic equipment prior to activity as well as removal of equipment in emergency situations.
Audience: Undergraduate

KINES 308 – BIOMECHANICS OF PHYSICAL ACTIVITY
2 credits.

Provides a comprehensive study of biomechanical foundations and principles underlying physical activity. Topics include musculoskeletal determinants of human movement, analysis of sports skills, feedback, and cueing techniques. Includes descriptions and applications of biomechanical concepts related to skillful movement, physical activity, and fitness.
Requisites: Declared in Physical Education and MATH 112
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate and apply fundamental principles from physics and mechanics to human movement.
Audience: Undergraduate

2. Describe and apply biomechanical concepts related to skillful movement, physical activity, and fitness.
Audience: Undergraduate

3. Gain the skills necessary to assess both proper and improper movement strategies and provide teaching cues based on biomechanical principles to facilitate movement mastery.
Audience: Undergraduate

KINES 312 – TECHNOLOGY FOR PHYSICAL ACTIVITY AND HEALTH PROFESSIONALS
2 credits.

Designed to provide students with creative technology strategies in the fields of school wellness education, physical activity, and fitness management. Students will build skills for using widely available technology resources to enhance instruction, assessment, motivation, communication, and advocacy in health and fitness settings. Skill-specific units present experiential assignments that increase learner confidence. Each unit produces print or digital materials for practical professional use with an emphasis on innovation.
Requisites: None
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Demonstrate knowledge of computer basics and terminology.
Audience: Undergraduate

2. Demonstrate knowledge of ethical uses of technology.
Audience: Undergraduate

3. Recognize the importance of, and plan for, professional development.
Audience: Undergraduate

4. Apply the need for technological skills in health and physical activity.
Audience: Undergraduate

5. Apply technological skills to improve performance and learning.
Audience: Undergraduate

6. Acquire knowledge of current technological innovations and tools specific to health and physical activity to enhance wellness.
Audience: Undergraduate

7. Evaluate system specifications relative to value.
Audience: Undergraduate

8. Demonstrate ability to locate and critique information.
Audience: Undergraduate

9. Demonstrate proficiency with software and hardware.
Audience: Undergraduate

10. Demonstrate proficiency in acquiring and working with digital images and video.
Audience: Undergraduate

KINES 314 – PHYSIOLOGY OF EXERCISE
4 credits.

Fundamental knowledge about, and appreciation for, the adaptability of human physiological systems in meeting a range of exercise demands.
Requisites: PHYSIOL 335, ANAT&PHY 335, or KINES 235
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the primary muscular, metabolic, cardiovascular, and respiratory adaptations to exercise training.
Audience: Undergraduate

2. Explain the biochemical changes that are caused by muscle contraction and how these change with the repeated muscle contractions.
Audience: Undergraduate

3. Explain the cardiorespiratory response when moving from rest to exercise to maximal exercise.
Audience: Undergraduate

4. Compare different modes of exercise and explain the metabolic and cardiovascular adjustments as well as adaptations in exercise-trained adults.
Audience: Undergraduate

5. Discuss how environmental conditions influence the cardiovascular and metabolic response to exercise.
Audience: Undergraduate

6. Design and conduct an experiment in exercise physiology, analyze the data collected, and discuss the strengths and limitations of the experimental approach.
Audience: Undergraduate

KINES 315 – ASSESSMENT AND RESEARCH IN PHYSICAL ACTIVITY PEDAGOGY
3 credits.

Topics and laboratory experiences will focus on parameters that are measured in physical activity pedagogy; instruments for measuring physical activity, health related fitness, knowledge, and psychological characteristics; concepts of assessment and research, basic statistical methods; and action research.
Requisites: Satisfied Quantitative Reasoning (QR) A requirement and declared in Physical Education
Course Designation: Gen Ed - Quantitative Reasoning Part B
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Summarize the concept of assessment and identify the criteria for a good assessment instrument.
Audience: Undergraduate

2. Recall the concept of research, various research designs, and the importance of research in physical education.
Audience: Undergraduate

3. Develop skills in quantitative reasoning, including: manipulate quantitative information to create models, and devise solutions to problems using multi-step arguments using quantitative information, evaluate models and arguments using quantitative information, and express and interpret in context models, solutions and arguments using verbal, numerical, and computational techniques.
Audience: Undergraduate

4. Apply the sustainability principles and/or frameworks to addressing the challenge of producing assessment instruments in the psychomotor, cognitive, and affective domains, focusing on the five national standards.
Audience: Undergraduate

5. Describe the social, economic, and environmental dimensions of conducting a research project, including writing methods, analyzing data, discussing results, drawing conclusions, and presenting findings, and identify potential trade-offs and interrelationships among these dimensions at a level appropriate to the course.
Audience: Undergraduate

KINES 316 – ADAPTED PHYSICAL ACTIVITY
3 credits.

An understanding of foundations, assessment and pedagogy for individuals with disabilities in a variety of physical activity settings. Emphasis on individual differences, life-span, and self-actualization.
Requisites: Declared in Physical Education
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain educational and civil rights of individuals with disabilities and to help promote a community of learners. Explain the rights and responsibilities of individuals, parents, teachers and other professional staff regarding advocacy and collaboration for individuals with disabilities.
Audience: Undergraduate

2. Demonstrate knowledge about the safety and planning aspects (self-reflection, including developmentally appropriate formal and informal assessment, collaboration of services, strategies and resources, IEP writing, goal and objective formulation, and activity selection) of physical education programming for individuals with disabilities.
Audience: Undergraduate

3. Demonstrate knowledge of the influence of selected diseases, conditions, and disabilities on the learning and performance of physical activities.
Audience: Undergraduate

4. Demonstrate knowledge of a range of individual characteristics regarding communication, language acquisition, critical elements for motor skills, literacy development, and alternative means of communication, as well as collaborate with appropriate resources/services to facilitate communication.
Audience: Undergraduate

5. Demonstrate use of technology, including assistive technology, through the collection of resources that enhance language, literacy, communication, understanding, and learning when working with individuals with disabilities.
Audience: Undergraduate

6. Demonstrate knowledge in lesson planning and instruction to meet the multiple needs and learning styles of individuals with disabilities. This will include adapting activity/equipment, using instructional tasks, cues, and prompts, implementing managerial and instructional routines; identifying signs of learner distress and designing strategies for safe reflective teaching of physical education.
Audience: Undergraduate

7. Apply knowledge of research- or evidence-based strategies, including utilizing universal design principles, for teaching and working effectively and inclusively with all students.
Audience: Undergraduate

8. Apply knowledge of research- or evidence-based strategies for teaching and working effectively and inclusively with students from various social and economic circumstances and students with diverse family and living arrangements (e.g., students who are homeless; students who are in foster care; students with interrupted, limited, or no formal education).
Audience: Undergraduate

9. Identify teacher responsibilities and requirements in working with students with disabilities and other special learning needs, including providing increasingly intensive supports and interventions through response to intervention (RTI) and positive behavioral interventions and supports (PBIS) to support struggling learners and ensure appropriate

KINES 318 – BIOMECHANICS OF HUMAN MOVEMENT
3 credits.

Analysis of human action through the application of mechanical principles.
Requisites: (ANAT&PHY 337 or 338) and (MATH 112 or placement into MATH 113)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify, quantify, and describe mechanical aspects of human activities.
Audience: Undergraduate

2. Determine forces within and external to the human body that are necessary to achieve desired behaviors.
Audience: Undergraduate

3. Determine movements that result from muscle activity and external forces.
Audience: Undergraduate

4. Demonstrate use of instruments to measure forces, muscle activity, and motion.
Audience: Undergraduate

5. Interpret quantitative measurements of force, muscle activity, and motion.
Audience: Undergraduate

6. Evaluate the validity of biomechanical claims related to exercise techniques, exercise devices, and assistive devices.
Audience: Undergraduate

7. Become independent in self-guided continuation of learning and application of biomechanical principles beyond this course.
Audience: Undergraduate

8. Demonstrate awareness of individual behaviors as they impact group dynamics.
Audience: Undergraduate

9. Develop metacognitive skills for problem solving in biomechanics.
Audience: Undergraduate

KINES 325 – GROUP DEVELOPMENT AND BEHAVIOR MANAGEMENT
3 credits.

Provide students with opportunities and experiences to learn and participate in the development of groups. Provide students with strategies and experiences in the management of behaviors and techniques to maintain a safe and productive teaching environment.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply knowledge related to movement and physical activity techniques and approaches in clinical and applied settings to enhance human health and quality of life.
Audience: Undergraduate

2. Develop appropriate styles of written and oral communication to use both within and outside the scientific community.
Audience: Undergraduate

3. Identify, develop and deliver messages using a variety of communication strategies, methods, and techniques.
Audience: Undergraduate

4. Discuss biases/prejudices and barriers to diversity.
Audience: Undergraduate

5. Understand the perspective of a person from a different cultural background.
Audience: Undergraduate

6. Demonstrate practical skills of working toward becoming a culturally responsive facilitator.
Audience: Undergraduate

7. Address health characteristics of individuals from a different cultural background.
Audience: Undergraduate

8. Analyze relationships among behavioral, environmental, and other factors that influence health and identify and analyze factors that influence health behaviors.
Audience: Undergraduate

9. Assess social, environmental, political, and other factors that may impact health education/promotion.
Audience: Undergraduate

10. Analyze an organization's culture to determine the extent to which it supports health education/promotion and apply principles of cultural competence in selecting and/or designing strategies/interventions.
Audience: Undergraduate

11. Demonstrate leadership, employ conflict resolution techniques, and develop skills in facilitating team development.
Audience: Undergraduate

KINES 327 – CURRENT TOPICS IN OUTDOOR PURSUITS
1 credit.

Introduce outdoor activities to enable the teaching of these topics.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Select and facilitate activities for emotionally, socially, and physically safe outdoor education experiences across the lifespan
Audience: Undergraduate

2. Assess natural, cultural, and historical factors for implementing environmentally sound outdoor education experiences and demonstrated in the facilitation and organization assignments
Audience: Undergraduate

3. Know and use the constructs for primary outcomes of group development activities in outdoor pursuits such as communication, respect for diversity, team effectiveness, shared situational leadership, problem-solving, and trust
Audience: Undergraduate

4. Develop an awareness of seasonal and geographic outdoor pursuit topics which are presentable based on weather, terrain, skill, and the developmental levels of the students and assessed through the discussion forum and the organization assignment
Audience: Undergraduate

KINES 330 – RESEARCH IN KINESIOLOGY
2 credits.

The research process as applied in kinesiology, including hypothesis development, ethical issues, study design, measurement and statistical concepts, and presentation of results. Includes exposure to current research within the Department of Kinesiology.
Requisites: MATH 112 or placement in MATH 113 and (STAT 371, 301, or PSYCH 210)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge of the research process and different research methods
Audience: Undergraduate

2. Utilize common research tools and resources
Audience: Undergraduate

3. Retrieve, read, and evaluate primary and secondary sources of information
Audience: Undergraduate

4. Communicate key elements of study design and analysis
Audience: Undergraduate

KINES 350 – INTRODUCTION TO EXERCISE PSYCHOLOGY
3 credits.

Emphasis on the psychological foundations of exercise with motivational techniques, perception of effort, personality dynamics, and mental health serving as the focal points.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss historical and current physical activity issues based on various perspectives with a specific emphasis on the psychological and psychobiological perspectives.
Audience: Undergraduate

2. Recall information concerning the historical roots of Sport and Exercise Psychology.
Audience: Undergraduate

3. Explain the relationship between bioscience and psychological concepts as they relate to physical activity and sport.
Audience: Undergraduate

4. Apply basic tools to critically evaluate evidence in general and specific to exercise and sport psychology topics.
Audience: Undergraduate

5. Describe the differences and similarities of Sport and Exercise Psychology.
Audience: Undergraduate

6. Design exercise psychology experiments using the Gold Standard.
Audience: Undergraduate

7. Apply knowledge in an integrated fashion.
Audience: Undergraduate

KINES 353 – HEALTH AND PHYSICAL EDUCATION IN A MULTICULTURAL SOCIETY
3 credits.

Explores aspects and perspectives of diversity and culture, the concepts and importance of culturally responsive teaching, health education, and the Act 31 requirement for teacher education students. Perform a cultural self-mapping to become knowledgeable of how cultural background influences personal attitudes and actions, and attend a cross-cultural event to experience life in "another person's shoes." Engage in a multicultural field experience.
Requisites: Declared in Physical Education or Health Promotion and Health Equity, junior standing, and Satisfied Communications A requirement
Course Designation: Gen Ed - Communication Part B
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define multicultural education, interpret biases/prejudices of teachers, and explain the importance of multicultural assessment.
Audience: Undergraduate

2. Integrate Act 31 content into their teaching.
Audience: Undergraduate

3. Develop advanced communication skills in: critical reading, logical thinking and the use of evidence; the use of appropriate style and disciplinary convention in writing and speaking; the productive use of core library resources specific to the discipline.
Audience: Undergraduate

4. Explain the social, economic, and/or environmental dimensions of the sustainability challenge of culturally responsive teaching.
Audience: Undergraduate

5. Analyze the causes of and solutions for the sustainability challenge of the impact of one’s attitudes and actions, from a cultural perspective, on other individuals.
Audience: Undergraduate

KINES 355 – SOCIO-CULTURAL ASPECTS OF PHYSICAL ACTIVITY
3 credits.

An introduction to the philosophy of physical activity/education, history of physical activity/education and sport, and sociology of sport.
Requisites: Declared in Kinesiology or Physical Education and Satisfied Communication A requirement
Course Designation: Gen Ed - Communication Part B
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Summarize the various philosophies of physical activity/education.
Audience: Undergraduate

2. Differeniate the role of physical activity/education and sport throughout history from ancient times to today.
Audience: Undergraduate

3. Analyze how physical activity is a reflection of society and the culture in which it exists.
Audience: Undergraduate

4. Develop advanced communication skills in critical reading, logical thinking, and the use of evidence; the use of appropriate style and disciplinary conventions in writing and speaking; the productive use of core library resources specific to the discipline.
Audience: Undergraduate

5. Analyze the causes of and solutions for the sustainability challenge regarding a current issue in physical activity.
Audience: Undergraduate

6. Describe the social, economic, and environmental dimensions of increasing physical activity for children and adolescents and identify potential trade-offs and interrelationships among these dimensions at a level appropriate to the course.
Audience: Undergraduate

KINES 360 – LIFESPAN MOTOR DEVELOPMENT
3 credits.

Designed to introduce major concepts and terminology in the field of human motor development. Includes a description of how movement changes across the lifespan and the factors that influence and/or correlate with the changes. The Mountain of Motor Development model will help organize understanding of human motor development.
Requisites: Declared in Kinesiology BS, Physical Education BS or Promoting Activity for Diverse Abilities certificate
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Know and apply terminology and concepts from the field of human motor development through assignments, exams and observations.
Audience: Undergraduate

2. Know and identify how human lifespan motor development changes within each of the four domains of; cognitive, social, physical and motor through assignments, exams, movement experiences and observations.
Audience: Undergraduate

3. Understand and analyze the impact of various factors on human motor development across the lifespan through assignments and exams.
Audience: Undergraduate

4. Appreciate human motor development terminology, concepts and content through application to movement experiences, observations and future life and career settings.
Audience: Undergraduate

5. Synthesize current motor development research and its influence on health and well-being through assignments, exams and final research paper.
Audience: Undergraduate

KINES 361 – MOTOR LEARNING AND PERFORMANCE
3 credits.

A basic and up-to-date view of the major processes and mechanisms underlying the performance and learning of motor skills. Principles in motor learning and control are systematically introduced to produce a meaningful conceptual framework.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate the scientific methods used for studying motor performance and learning.
Audience: Undergraduate

2. Describe how the sensory information is used in movement production.
Audience: Undergraduate

3. Describe how cognitive factors such as attention and memory affect skill acquisition and performance.
Audience: Undergraduate

4. Articulate current theories of motor skill performance and acquisition.
Audience: Undergraduate

5. Explain how practice can be structured to optimize motor skill acquisition.
Audience: Undergraduate

6. Demonstrate mastery of the above knowledge in a laboratory setting.
Audience: Undergraduate

KINES 362 – ADAPTED PHYSICAL EDUCATION COMMUNITY ENGAGEMENT
1 credit.

A community-based experience in the Adapted Physical Education. Assist, lead, and teach participants in a physical activity program, community recreation activity, or other events that are specific to individuals with disability. Emphasis placed on the adaptation of physical education and physical activities to the needs of individuals with physical, intellectual, emotional, or sensory disabilities.
Requisites: KINES 316
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify Universal Design for Learning through reading, discussion, and reflection as a learning framework at the outset of the course to better support and coach those with diverse abilities.
Audience: Undergraduate

2. Identify activities and plans that will support the activity leader in providing quality physical activities for individuals with diverse abilities
Audience: Undergraduate

3. Implement Universal Design for Learning principles when getting opportunities to work with community-based participants in a in community-based physical activity and/or sport activity setting.
Audience: Undergraduate

4. Engage in a variety of activities with individuals with disabilities in a community-based physical activity and/or sport activity setting.
Audience: Undergraduate

5. Identify ways collaborations occurred with Adapted Physical Education teachers, other professionals and parents throughout the community-based experience.
Audience: Undergraduate

6. Explain and describe weekly experiences, activities, and events in the community-based experience to provide knowledge in teaching, instructing, and coaching individuals with disability.
Audience: Undergraduate

7. Develop a reflective summary of the community-based experience and apply these toward application in the role as a future Adapted Physical Education teacher.
Audience: Undergraduate

KINES 363 – MANAGEMENT STRATEGIES IN ADAPTED PHYSICAL EDUCATION
2 credits.

Provides comprehensive understanding of behavior management strategies for working with diverse populations in schools, including individuals with disabilities. Explore various topics such as preventative strategies, applied behavior analysis principles, behavior management strategies, developing positive behavioral interventions and support (PBIS), and specific approaches for different conditions, including emotional behavioral disabilities, ADHD, autism, and students in crisis. Learn how to assess behaviors and develop effective behavior intervention plans. Incorporates real-life case studies and presentations to enhance practical application.
Requisites: KINES 316
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and describe the different types of behavioral approaches when working with children in schools.
Audience: Undergraduate

2. Select and implement the least intensive behavioral intervention consistent with the needs of individuals with exceptionalities in a final case study or using field practicum examples.
Audience: Undergraduate

3. Identify and describe how to assess and create a positive learning environment in schools.
Audience: Undergraduate

4. Plan and create a Behavioral Management Plan during class learning assignments
Audience: Undergraduate

5. Describe how to organize an effective classroom management system for all students, particularly those with exceptional learning needs (e.g., schedules, procedures, routines, signals, physical set-up of room, rules and consequences, monitoring, transitions, etc.).
Audience: Undergraduate

6. Know and describe the types of reinforcement used in behavior management.
Audience: Undergraduate

7. Identify and describe two systems of Behavioral Intervention – Positive Behavioral Support (PBS) and the Response to Intervention: Behavior (RTI:B), which are based on student needs.
Audience: Undergraduate

8. Design a positive behavior intervention plan (BIP) that supports a system for classroom and non-classroom environments that includes a data collection system for evaluating individual student behavior.
Audience: Undergraduate

KINES 364 – ASSESSMENT AND PROGRAMMING IN ADAPTED PHYSICAL EDUCATION
3 credits.

Learn and practice assessment strategies in Adapted Physical Education. Experiences in the gymnasium and pool.
Requisites: KINES 315 and 362
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify a developmental approach to teaching individuals with disabilities
Audience: Undergraduate

2. Identify activities and skills used to include individuals with disabilities in physical education based on evaluation and assessment of their needs
Audience: Undergraduate

3. Implement appropriate assessment tools for individuals with disabilities in a classroom and gym activity session
Audience: Undergraduate

4. Analyze appropriate adapted physical education assessments at the end of the course based on knowledge of an individual with a specific disability
Audience: Undergraduate

5. Identify ways the physical education teacher is a part of the collaborative partnership team when considering a student with an IEP by the end of the course
Audience: Undergraduate

6. Synthesize and design the process for providing an appropriate assessment for a student with a disability (case study) by using the most appropriate assessment tool learned in the course while including concepts, terms, and philosophies needed based on the person's condition

Audience: Undergraduate

7. Engage in conference planning/presentations, attending conferences/seminars, or school professional development sessions to gain more experience in programming and instruction for students with a disability
Audience: Undergraduate

KINES 365 – PRACTICUM: ADAPTED PHYSICAL EDUCATION
2 credits.

A practicum experience for individuals who are emphasizing the area of Physical Education/Special Populations. Six hours per week working with individuals who have disabling conditions.
Requisites: None
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Describe and explain Adapted Physical Education and concepts relative to teaching, planning, or assessing children with disabilities in writing.
Audience: Undergraduate

2. Participate in active engagement in daily lesson plans by the cooperating teacher and developing lesson plans for teaching at least one lesson.
Audience: Undergraduate

3. Analyze the process of learning practical teaching skills in school-based settings by recognizing instructional strategies, behavior management, and applications the cooperating teacher uses in the classroom with all students but especially those with disabilities.
Audience: Undergraduate

4. Observe in school-based interactions and practical teaching experiences with children with disabilities in Adapted Physical Education/ Physical Education classes.
Audience: Undergraduate

5. Reflect on teaching practice through observation of teaching lessons in schools with children.
Audience: Undergraduate

6. Utilize assessment tools to determine skills tasks that student needs modifications/adaptations for students to be successful within an adapted physical education.
Audience: Undergraduate

7. Discuss and develop present levels of performance for developing the final IEP Case Study with the Cooperating Teacher during the lessons throughout the semester.
Audience: Undergraduate

8. Synthesize and design the process for providing an IEP based on assessment data, teacher input, and observations of student in schools that is comprehensive and provides for specific details for future goals and objectives for a particular student
Audience: Undergraduate

KINES 370 – PLANNING, FACILITATING & ASSESSMENT IN MOVEMENT AND HEALTH PROFESSIONALS
3 credits.

Builds a repertoire of instructional skills and strategies such as organizing, planning, implementing and assessing developmentally appropriate learning tasks that are aligned with local, state, and national standards to address the diverse needs of participants.
Requisites: Declared in Physical Education or Health Promotion and Health Equity
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Design and implement short- and long-term plans that meet program and educational goals, as well as a variety of participants needs.
Audience: Undergraduate

2. Develop a program plan that leads to appropriate and valuable content in movement and health.
Audience: Undergraduate

3. Select and implement instructional strategies based on developmental levels, learning styles, special and diverse learning needs, and safety issues.
Audience: Undergraduate

4. Identify and use appropriate services and resources to meet special and diverse learning needs.
Audience: Undergraduate

5. Use effective demonstrations and explanations to link movement and health concepts to appropriate learning experiences.
Audience: Undergraduate

6. Develop and practice a wide variety of facilitation skills to lead and guide others to increased health and physical activity.
Audience: Undergraduate

7. Select and utilize varied roles in the instructional process based on the content, purpose of instruction, and the needs of participants (model, assessor, monitor and facilitator).
Audience: Undergraduate

8. Use standards to guide instruction and develop assessment plans.
Audience: Undergraduate

9. Evaluate the benefits and disadvantages of a wide variety of assessment tools.
Audience: Undergraduate

10. Demonstrate the ability to connect planning, facilitation, and assessment skills.
Audience: Undergraduate

KINES 371 – METHODS AND PRACTICUM OF TEACHING PK-12 DANCE AND GYMNASTICS
3 credits.

Methods of instruction in movement concepts, educational dance and gymnastics. Students will gain practice in planning, teaching, and assessing participants. Students will also observe, practice, and assess the facilitation skills of health and physical activity professionals. In addition, students will apply the concepts presented in KINES 370.
Requisites: Declared in Physical Education and KINES 370 or concurrent enrollment
Repeatable for Credit: No
Last Taught: Fall 2022
Learning Outcomes: 1. Demonstrate knowledge of movement concepts and locomotor, manipulative, games, dance, and gymnastics skills.
Audience: Undergraduate

2. Identify the developmental progression of movement concepts and skills.
Audience: Undergraduate

3. Identify, select and/or create learning tasks that are appropriate, inclusive, and engaging.
Audience: Undergraduate

4. Demonstrate an understanding and appropriate use of curriculum models in planning, teaching, and assessing.
Audience: Undergraduate

5. Demonstrate an ability to use appropriate management responses to student behaviors.
Audience: Undergraduate

6. Demonstrate an understanding of quality teaching skills by reviewing videotape and critically analyzing performance.
Audience: Undergraduate

KINES 372 – METHODS AND PRACTICUM OF TEACHING PK-5 PHYSICAL EDUCATION
4 credits.

Address methods of instruction in movement concepts, locomotor and nonlocomotor skills, games, and educational dance and gymnastics. Explores curriculum models such as Developmental Movement, Skills-Theme, and Teaching Personal and Social Responsibility (TPSR). Gain practice in planning, teaching, and assessing teaching skills. Develop teaching competencies (planning, teaching, and assessing) through teaching in a variety of settings. Apply concepts and skills addressed in previous classes.
Requisites: Declared in Physical Education
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate knowledge of movement concepts and locomotor, manipulative, games, dance and gymnastics skills.
Audience: Undergraduate

2. Identify the developmental progression of movement concepts and skills.
Audience: Undergraduate

3. Identify, select and/or create learning tasks that are appropriate, inclusive, and engaging.
Audience: Undergraduate

4. Demonstrate an understanding of quality teaching skills by reviewing videotape and critically analyzing performance.
Audience: Undergraduate

5. Demonstrate an understanding and appropriate use of curriculum models including, skill theme, developmental movement, and TPSR in planning, teaching, and assessing.
Audience: Undergraduate

6. Demonstrate an ability to use appropriate management responses to student behaviors.
Audience: Undergraduate

KINES 373 – METHODS AND PRACTICUM OF TEACHING 6-12 PHYSICAL EDUCATION
4 credits.

Practice in planning and teaching sport concepts and skills. Builds on the planning for learning and instruction foundation. Centered on the Tactical Games, Sport Education, Fitness Education, and Personalized Instruction models and focuses on students developing teaching competencies rather than learning specialized sports skills. Adapt instruction within tactically similar sports.
Requisites: KINES 372
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Master sport content, tactical concepts, and sport skills.
Audience: Undergraduate

2. Identify the development skill acquisition process for motor skills.
Audience: Undergraduate

3. Analyze skills by critical phases for use in teaching.
Audience: Undergraduate

4. Effectively organize content for presentation to students.
Audience: Undergraduate

5. Identify, select, and/or create learning activities that are appropriate, inclusive, and engaging.
Audience: Undergraduate

6. Demonstrate their understanding of quality teaching skills by reviewing videotape and analyzing teacher performance.
Audience: Undergraduate

7. Demonstrate an understanding of professional policies and practices related to negligence and liability.
Audience: Undergraduate

KINES 375 – PRACTICUM IN PHYSICAL EDUCATION
3 credits.

Provides opportunities for the physical education student to develop competencies in the teaching skills necessary to provide quality Physical Education to children and youth. Students will receive individualized feedback about their performance from the cooperating teacher and the university supervisor. Provide a forum for students to learn from their peers through discussions, sharing their experiences and knowledge gained from their practicum placement.
Requisites: KINES 371, 372, and 373
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: No
Last Taught: Spring 2019
Learning Outcomes: 1. Understand and demonstrate the pedagogical aspects of teaching physical education to include learning environment, instructional delivery, factors influencing student learning, teacher effectiveness, teaching strategies, content development, teacher and student assessment
Audience: Undergraduate

2. Value student learning as a primary purpose of teaching
Audience: Undergraduate

3. Demonstrate knowledge on teaching as a professional endeavor (reflective teaching, professional development, continuous learning, characteristics of an effective teacher, advocacy)
Audience: Undergraduate

4. Utilize technology to analyze behavior and content development
Audience: Undergraduate

KINES 387 – THE YOUNG ATHLETE: CONSIDERATIONS FOR EXERCISE, MEDICINE, AND ACTIVITY
2 credits.

Sports are a great way for children to stay physically active, but adults are changing sports in ways that impact children in negative ways. Focuses on how kids are different than adults in terms of their needs for exercise and physical activity. Topics include physical activity epidemiology, growth, maturation, and sport specialization. Additional focus on common orthopedic injuries in the adolescent and pediatric populations and how injuries in young athletes are treated.
Requisites: None
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Describe how sport and physical activity are related. As well as the pros and cons to sport participation.
Audience: Undergraduate

2. Identify common sport-related injuries in children and common treatments for those injuries.
Audience: Undergraduate

3. Identify sport participation recommendations and apply these recommendations to determine appropriate sport participation levels in children.
Audience: Undergraduate

4. Understand the complex interaction between growth, maturation, and sport participation and how this impacts talent development in young athletes.
Audience: Undergraduate

5. Identify key members of the pediatric care team as it relates to athletic healthcare.
Audience: Undergraduate

KINES 390 – PRINCIPLES OF EXERCISE LEADERSHIP
2 credits.

Introduction to the design of individual and group exercise programs utilized in fitness leadership roles. Supervised practical experience will be provided in class to assist the development of student leadership skills.
Requisites: Declared in Kinesiology
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Know the principles of health and skill related fitness.
Audience: Undergraduate

2. Understand obesity issues and how to adapt exercises for those individuals.
Audience: Undergraduate

3. Manage group fitness activities with individuals who are senior citizens or have special health issues.
Audience: Undergraduate

4. Demonstrate knowledge about the different types of fitness programs that are being offered.
Audience: Undergraduate

5. Set up and teach lessons in group fitness that is appropriate for the age group.
Audience: Undergraduate

6. Demonstrate knowledge on adapting different activities that encompass cardiovascular endurance, muscular strength/endurance, neuromotor, step, yoga and other fitness activities available to the general public.
Audience: Undergraduate

7. Know how to use the various fitness equipment available in a fitness setting.
Audience: Undergraduate

KINES 399 – INDEPENDENT STUDY
1-3 credits.

Independent undergraduate study in beginning to intermediate area of study under direct guidance of kinesiology faculty.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

KINES 412 – ORGANIZATION AND ADMINISTRATION OF PHYSICAL EDUCATION
2 credits.

The presentation of materials and depth study of the organization and administration of a sound program of physical education, the knowledge of which is mandatory for all physical education teachers.
Requisites: Declared in Kinesiology or Physical Education
Repeatable for Credit: No
Last Taught: Fall 2022
Learning Outcomes: 1. Learn about different organizational methods as they apply to physical education.
Audience: Undergraduate

2. Demonstrate a knowledge of how to promote physical education.
Audience: Undergraduate

3. Understand safety/liability as it relates to physical education.
Audience: Undergraduate

4. Demonstrate knowledge about financial and purchasing management through a budget process.
Audience: Undergraduate

5. Demonstrate knowledge about the newest materials to use in the design of a new physical education facility/fieldhouse.
Audience: Undergraduate

6. Demonstrate an understanding of Title IX and how it relates to physical education and sport.
Audience: Undergraduate

7. Demonstrate a knowledge of the latest technology used in physical education.
Audience: Undergraduate

KINES 417 – ADVANCED CLINICAL ASSESSMENT TECHNIQUES IN ATHLETIC TRAINING
2 credits.

Provides students with knowledge and skills in advanced clinical assessment techniques used in the evaluation of injuries, illnesses, and conditions found in physically active populations.
Requisites: KINES 317
Repeatable for Credit: No
Last Taught: Fall 2020

KINES 427 – FITNESS TESTING AND EXERCISE PRESCRIPTION
3 credits.

Fitness assessment and exercise prescription principles are applied to the health-related fitness components through discussion and lab activities.
Requisites: ANAT&PHY 335
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify the components of a needs analysis and their application to appropriate exercise testing and prescription
Audience: Undergraduate

2. Demonstrate knowledge of performing a fitness testing battery
Audience: Undergraduate

3. Administer, calculate, and interpret scores from various fitness assessments
Audience: Undergraduate

4. Develop exercise programs based upon scores of fitness evaluations
Audience: Undergraduate

KINES 450 – CLINICAL FIELD EXPERIENCE IN ATHLETIC TRAINING
3 credits.

A clinical field placement for students in the athletic training professional preparation program. Clinical placements under the direction of an AT Program Clinical Preceptor are offered in a variety of clinical settings including intercollegiate, secondary school, and private clinical settings.
Requisites: Declared in Athletic Training
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2021

KINES 478 – ELEMENTARY SCHOOL PHYSICAL EDUCATION STUDENT TEACHING
2-8 credits.

Student teaching placement in elementary school setting.
Requisites: None
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: No
Last Taught: Fall 2025

KINES 479 – MIDDLE SCHOOL OR HIGH SCHOOL PHYSICAL EDUCATION STUDENT TEACHING
2-8 credits.

Student teaching placement in secondary school setting.
Requisites: None
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: No
Last Taught: Fall 2025

KINES 487 – ATHLETIC HEALTHCARE: CONTEMPORARY PERSPECTIVES
3 credits.

Discussion of contemporary issues in Athletic Healthcare including acute and chronic medical issues that may affect athletic performance.
Requisites: KINES 127
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand the pre-participation evaluation process as well as factors that contribute to sudden unexpected cardiac death.
Audience: Undergraduate

2. Recognize illicit drug use among athletic populations, cite drug testing procedures, and identify educational resources related for drug intervention.
Audience: Undergraduate

3. Apply basic physical exam skills.
Audience: Undergraduate

4. Understand common medical issues in athletic populations including concussions, respiratory illness and infectious disease, respiratory illnesses and exercise induced asthma.
Audience: Undergraduate

5. Describe and understand general medications commonly found in athletic environments.
Audience: Undergraduate

KINES 501 – THEORY-BASED HEALTH EDUCATION AND HEALTH PROMOTION PROGRAMS
3 credits.

Provides an overview of the behavioral, social and cultural factors related to individual and population health and health disparities. Social and behavioral science theories and strategies in health promotion/education will be discussed in relation to preventing disease and promoting health. Provides current knowledge and analysis of issues influencing people's health and well-being from a social and behavioral science perspective. Theoretical frameworks that draw on major health behavior theories provide a better understanding of how individuals, families, peers, schools, neighborhoods, and the larger community influence risk and protective factors. Ethical considerations intrinsic to social and behavioral science efforts designed to produce health-related behavior change will be discussed. Promotes intellectual and collaborative learning through course lectures, readings, class discussions, and individual and group work.
Requisites: Junior standing and declared in Kinesiology, Health Promotion Health Equity, or Physical Education program
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply theories and models within the field of Health Education/Promotion.
Audience: Undergraduate

2. Explain the role of social and behavioral sciences in public health.
Audience: Undergraduate

3. Describe the role of ethical issues in social and behavioral sciences research and practice.
Audience: Undergraduate

4. Evaluate the literature concerning individual and social influences on health behavior.
Audience: Undergraduate

5. Apply the steps to conducting a community needs and asset assessments.
Audience: Undergraduate

6. Research and develop informational materials within the field of Health Education/Promotion.
Audience: Undergraduate

7. Apply the steps and procedures for the planning, implementation, and evaluation of public health interventions, programs, and policies from a social and behavioral sciences perspective.
Audience: Undergraduate

KINES 508 – WORKSHOP IN KINESIOLOGY
1-3 credits.

Designed to explore topics in kinesiology and/or occupational therapy. Topics may change each semester.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

KINES 513 – CLIMATE CHANGE AND HEALTH DISPARITIES
3 credits.

Employs public health, epidemiology, medical anthropology, and global public health sources to illustrate the current and future effects of climate change on health from a cross-cultural, global perspective. Critically engage with health disparities with potential solutions or mitigations to the multiple public health crises created by climate change, from possible adaptations to more radical forms of community empowerment and social justice.
Requisites: Junior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Recognize the different pathways through which climate change affects human health
Audience: Undergraduate

2. Identify how climate change can create or reinforce preexisting health disparities
Audience: Undergraduate

3. Critically assess strategies to mitigate the health effects of climate change at the community, national, and global levels
Audience: Undergraduate

4. Employ a multidisciplinary approach to the issue of climate change and health
Audience: Undergraduate

5. Produce written assignments reflecting on a key aspect of climate change and its effects on population health
Audience: Undergraduate

KINES 516 – PHYSICAL ACTIVITY FOR DIVERSE ABILITIES
3 credits.

Develop knowledge of diverse populations and the ability to promote physical activity and well-being for a lifetime. Apply knowledge of barriers and the use of inclusive techniques to develop meaningful experiences and programs.
Requisites: Declared in Promoting Activity for Diverse Abilities Certificate and KINES 225
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop knowledge of the history, legislation and models that have impacted diverse populations.
Audience: Undergraduate

2. Develop knowledge and understanding of diverse populations.
Audience: Undergraduate

3. Understand the barriers that impact physical activity and well-being for diverse populations and the strategies to positively change barriers.
Audience: Undergraduate

4. Understand and apply techniques that result in more inclusive experiences and programs.
Audience: Undergraduate

KINES 521 – PHYSICAL ACTIVITY AND HEALTH
3 credits.

Research evidence regarding how physical activity and fitness are related to health (e.g., during pregnancy and aging) and disease, especially cardiovascular diseases, obesity, diabetes, osteoporosis, and cancer. Application and communication of knowledge in practical situations.
Requisites: Declared in Kinesiology and KINES 314
Course Designation: Gen Ed - Communication Part B
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the various measures of physical activity and their use in epidemiology/biomedical research
Audience: Both Grad & Undergrad

2. Explain the various study designs used to assess relationships between physical activity and health, and their strengths and weaknesses
Audience: Both Grad & Undergrad

3. Identify the currently recommended amount of activity for health benefits
Audience: Both Grad & Undergrad

4. Develop an accurate understanding of the relationships between physical activity and health outcomes including cardiovascular and metabolic disorders, obesity, musculoskeletal health, cancers and mental health
Audience: Both Grad & Undergrad

5. Critically evaluate the literature on physical activity and health topics
Audience: Graduate

KINES 523 – CLINICAL EXERCISE TESTING AND PRESCRIPTION FOR HEALTH PROFESSIONALS
3 credits.

Explore how exercise prevents, manages, and treats chronic health conditions. Develop skills in basic ECG interpretation, understand medications' effect on exercise, and design exercise prescriptions for various chronic diseases including obesity, hypertension, cardiovascular disease, diabetes, cancer, pulmonary disease, skeletal and joint disease, and more. Acquire the expertise to elevate health outcomes and enhance quality of life through exercise.
Requisites: ANAT&PHY 235, 335 or 435
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Administer pre-exercise screening and safely conduct exercise testing
Audience: Both Grad & Undergrad

2. Identify commonly used medications for chronic diseases and their effects on exercise
Audience: Both Grad & Undergrad

3. Identify exercise limitations and contraindications to exercise associated with the chronic diseases
Audience: Both Grad & Undergrad

4. Apply concepts of exercise prescription to the development of comprehensive exercise training programs for individuals with chronic diseases
Audience: Both Grad & Undergrad

5. Apply knowledge related to movement and physical activity to a clinical population to enhance human health and quality of life
Audience: Both Grad & Undergrad

6. Demonstrate effective collaboration skills by working collaboratively with peers on group projects and discussion
Audience: Both Grad & Undergrad

7. Critically evaluate current research literature to inform decision-making in clinical exercise programming for individuals with chronic diseases
Audience: Graduate

KINES/NUTR SCI 525 – NUTRITION IN PHYSICAL ACTIVITY AND HEALTH
3 credits.

Provides both scientific knowledge and application of nutrition related to exercise, health, and sports.
Requisites: ANAT&PHY 335
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify how nutritional and hydration demands vary by physical activity frequency, intensity, type, and time
Audience: Undergraduate

2. Outline dietary assessment techniques and common dietary strategies for both the healthy population and populations with additional dietary needs
Audience: Undergraduate

3. Apply the potential benefits of nutrient timing strategies to optimize performance and to promote tissue growth, recovery, and repair
Audience: Undergraduate

4. Synthesize and discuss nutrition research related physical activity and health
Audience: Undergraduate

5. Evaluate the safety and efficacy of common nutritional strategies, supplements, and ergogenic aids
Audience: Undergraduate

KINES 527 – PRINCIPLES OF STRENGTH AND CONDITIONING
3 credits.

Present/discuss the scientific basis and current practices of strength and conditioning for athletic performance. Training program design and training methods, for performance enhancement, related to the areas of strength, power, speed, and endurance.
Requisites: KINES 427
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge of proper exercise selection and technique
Audience: Undergraduate

2. Evaluate the safety and effectiveness of various training methods. modalities, equipment, and environments
Audience: Undergraduate

3. Design strength and conditioning programs intended for improvement in strength, power, speed, and/or endurance
Audience: Undergraduate

4. Convey how contemporary scientific principles and training methodologies are being used to improve athletic performance
Audience: Undergraduate

KINES 528 – SEMINAR IN STRENGTH AND CONDITIONING
1 credit.

Provides scientific knowledge and opportunity to practice the application of strength and conditioning practices.
Requisites: KINES 527 or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 3 number of completions
Last Taught: Spring 2023
Learning Outcomes: 1. Demonstrate an awareness and understanding of strength and conditioning research and practices.
Audience: Both Grad & Undergrad

2. Demonstrate an understanding of the basic concepts of strength and conditioning.
Audience: Both Grad & Undergrad

3. Critically evaluate current research and practices related to strength and conditioning, including study/practice design, strength and conditioning guidelines, and implementation of the information.
Audience: Both Grad & Undergrad

4. Provide presentations and lead discussions on journal articles and current practices in the field of strength and conditioning.
Audience: Both Grad & Undergrad

5. Discuss methods of implementing research into practice with clients or patients.
Audience: Graduate

6. Compare research and clinician expertise to determine best practices.
Audience: Graduate

KINES 531 – NEURAL CONTROL OF MOVEMENT
3 credits.

Intermediate course on neuronal circuits and neurophysiological mechanisms involved in the control of human motor behavior. Including discussion of: 1) sensorimotor integration, 2) interactions between spinal, brainstem, and cerebral cortical levels of control, and 3) how motor control knowledge is created and evaluated.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the basic organization and function of the human sensorimotor system.
Audience: Undergraduate

2. Summarize the neural circuits and mechanisms that govern how we sense, move, feel, and think.
Audience: Undergraduate

3. Explain how sensory information is encoded in neural signals used in the generation of motor behavior.
Audience: Undergraduate

4. Explain the nature of information processing important for human motor behavior.
Audience: Undergraduate

5. Explain how experience modifies neural circuitry.
Audience: Undergraduate

6. Apply the basic knowledge and neuroscientific concepts to human health, wellness and disease.
Audience: Undergraduate

KINES 540 – DIVERSITY IN HEALTH AND PHYSICAL ACTIVITY SETTINGS
3 credits.

Issues related to promoting equal learning opportunities in the classroom and other community settings, including effective approaches to encouraging collaboration among colleagues, staff, parents, and students who are culturally, ethnically and socio-economically diverse are examined. In addition, effective instructional and coaching methods for an inclusive sport environment, athletic programs, and health professions as they relate to diverse individuals are addressed. Theoretical and practical paradigm of cultural differences are introduced. The focus is on diversity issues as they relate to race, ethnicity, gender, social class, sexuality, and racial considerations, development and ability differences, variations in learning styles and a variety of physical, mental, and emotional disabilities.
Requisites: Junior standing
Course Designation: Gen Ed - Communication Part B
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Provide an overview of diversity, including a definition of diversity and diversity management, and discuss the various reasons for the emphasis on diversity.
Audience: Both Grad & Undergrad

2. Demonstrate knowledge of prevalent attitudes regarding equity, fairness, and diversity.
Audience: Both Grad & Undergrad

3. Demonstrate knowledge about varying beliefs about health, disease and treatment that influence health care practice in oral presentations and written communication using outlining, drafting and revision.
Audience: Both Grad & Undergrad

4. Address issues of racism, bias, and prejudice and explain how these issues affect the experience of individuals and groups.
Audience: Both Grad & Undergrad

5. Demonstrate culturally sensitive verbal and non-verbal communication skills with respect to age, disability, gender, sexual orientation, socioeconomic status, race, ethnicity, nationality and religion.
Audience: Both Grad & Undergrad

6. Critically evaluate the literature on physical activity and health topics using relevant, reliable, and high-quality research sources.
Audience: Both Grad & Undergrad

7. Demonstrate an understanding of how race, ethnicity, gender, social class, sexuality, and diverse abilities (e.g. physical, cognitive) currently impact opportunities and experiences in physical activities and sports.
Audience: Both Grad & Undergrad

8. Demonstrate an understanding of teaching, coaching, and communication techniques that may enhance your ability to work with diverse populations in order to promote healthy lifestyles.
Audience: Both Grad & Undergrad

9. Demonstrate the ability to make recommendations regarding the design, implementation, and evaluation of curricular and instructional practices that fully includes learners' diverse needs.
Audience: Graduate

10. Demonstrate knowledge of models and theories impacting on equity, fairness, or diversity.

KINES 547 – SKILLS FOR HEALTH: METHODS AND PRACTICUM OF TEACHING HEALTH
3 credits.

Centered on the components (social, emotional, spiritual, environmental, occupational, intellectual, and physical) and skills (influence analysis, interpersonal communication, health-enhancing behaviors, accessing valid information, goal-setting, decision-making and advocacy) of wellness. Gain competence by planning for, learning, and practicing teaching skills in educational settings. Through this approach, highly competent teachers will be developed who can adapt health instruction to a wide variety of audiences and topics.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Comprehend concepts and skills related to health promotion and disease prevention.
Audience: Undergraduate

2. Analyze and organize content for teaching.
Audience: Undergraduate

3. Effectively organize content for presentation to students.
Audience: Undergraduate

4. Identify, select, and/or create learning activities that are appropriate, inclusive and engaging.
Audience: Undergraduate

5. Demonstrate their understanding of quality teaching skills by reviewing videotape and analyzing teacher performance.
Audience: Undergraduate

KINES 555 – SPORTS SCIENCE & ATHLETE MONITORING
3 credits.

In-depth look at how technology is changing the way we assess physical activity, help people return from injury, and increase physical performance. Topics include field-based testing, athlete monitoring, and movement screenings. Exposure to the most popular technologies in the field of human performance. Upper level elective in Kinesiology that builds on concepts acquired in the Kinesiology core curriculum. Offers real-world application of these concepts to students.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand the principles behind athletic monitoring and human performance testing.
Audience: Both Grad & Undergrad

2. Implement field-based monitoring systems.
Audience: Both Grad & Undergrad

3. Develop an assessment for the injured athlete and learn about the role monitoring plays in the progression to return-to-sport after injury.
Audience: Both Grad & Undergrad

4. Collect performance data for analysis, interpretation, and visualization.
Audience: Both Grad & Undergrad

5. Create useful tools for dissemination of testing results.
Audience: Both Grad & Undergrad

6. Apply principles behind athletic monitoring to field-based sports.
Audience: Graduate

7. Develop return-to-play protocols and understand how they can mitigate injury risk.
Audience: Graduate

KINES 560 – SENIOR RESEARCH WRITING IN KINESIOLOGY
3 credits.

Develop skills in reading, reporting, and evaluating research in Kinesiology. Discuss and critically analyze peer-reviewed research articles in Kinesiology. Apply knowledge of scientific writing by preparing a scholarly research project such as a scientific literature review, systematic review, senior research thesis, original manuscript, or clinical case report.
Requisites: KINES 330 and declared in Kinesiology BS
Course Designation: Gen Ed - Communication Part B
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Design a scholarly research writing project that will serve as the foundation for an advanced learning experience
Audience: Undergraduate

2. Apply critical thinking skills to evaluate scientific literature
Audience: Undergraduate

3. Develop peer review and revision skills through collaborative feedback sessions
Audience: Undergraduate

4. Compose a written paper that demonstrates knowledge and understanding of research projects
Audience: Undergraduate

5. Create an oral presentation to effectively communicate research findings and analyses
Audience: Undergraduate

KINES 566 – PROMOTING HEALTH IN THE COMMUNITY
3 credits.

Introduces theories and application of health promotion and health education, specifically, health education specialties and philosophical foundations. Addresses professional issues relating to the history, philosophy, ethics, practice, settings and competence of health education. Includes a focus on skills and techniques in writing, developing health educational materials, public speaking and group dynamics as they relate to community health promotion and health education programs.
Requisites: KINES 370
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. List responsibilities and competencies an entry-level health educator should possess.
Audience: Undergraduate

2. Define health terminology and identify one's role in the health education/promotion profession.
Audience: Undergraduate

3. Identify the physical, mental, and social characteristics affecting health in specific populations.
Audience: Undergraduate

4. Describe the role and importance of networking in the school and community health profession.
Audience: Undergraduate

5. Demonstrate effective methodologies of teaching health.
Audience: Undergraduate

6. Create a comfortable, safe environment for educating others about health topics.
Audience: Undergraduate

7. Write behavioral objectives for any health topic based upon target audience development and need.
Audience: Undergraduate

8. Incorporate National Health Education standards into health lesson plans.
Audience: Undergraduate

9. Practice skills planning and assessing their own classroom or community health-related presentations.
Audience: Undergraduate

10. Assess their own attitudes, beliefs, and values concerning these topics and the possible effects they may have on their professional work educating others.
Audience: Undergraduate

KINES 568 – STUDENT TEACHING IN HEALTH EDUCATION
2 credits.

Provides the opportunity for the student teacher to put theory into practice under the guidance of a licensed teacher and a university supervisor, allowing the gradual induction into the role of a professional teacher. Feedback and assessment are given in terms of growth in the understandings and abilities needed to assume the responsibilities of a beginning teacher. Emphasis is placed on helping the student teacher become a reflective professional. Cooperation among the classroom teacher, university supervisor, and administrators is encouraged.
Requisites: KINES 547
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Observe teachers in their various roles as they work with students, meet with parents, confer with support staff and administrators, and collaborate with colleagues
Audience: Undergraduate

2. Practice various teaching methods (including technology) in relevant curricular areas
Audience: Undergraduate

3. Develop and implement appropriate unit and lesson plans in relevant curricular areas for optimal teaching and learning.
Audience: Undergraduate

4. Develop an awareness of one's preferred teaching style
Audience: Undergraduate

5. Practice various documentation and assessment tools
Audience: Undergraduate

6. Demonstrate classroom management principles that promote responsibility and self-discipline (help students learn conflict negotiation strategies)
Audience: Undergraduate

7. Recognize and understand individual and group needs, especially in terms of inclusive education (multicultural, gender-fair, disability aware)
Audience: Undergraduate

8. Demonstrate professional characteristics, including punctuality, confidentiality, flexibility, cooperation, enthusiasm, and responsibility
Audience: Undergraduate

9. Demonstrate oral and written communication skills at a level at which ideas are conveyed clearly and effectively.
Audience: Undergraduate

10. Teach with full responsibility for a minimum of six weeks
Audience: Undergraduate

11. Practice reflective teaching by communicating weekly with the University Supervisor through dialogue and reflective journaling to describe and ask questions regarding observations and perceptions
Audience: Undergraduate

KINES 570 – ANATOMICAL FOUNDATIONS IN ATHLETIC TRAINING
3 credits.

Structure, regions and function of the neurological and musculoskeletal systems are presented with the purpose of providing insight into the anatomical foundations of common injuries and conditions.
Requisites: Declared Athletic Training MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Locate anatomical structures of the musculoskeletal, articular, nervous, and vascular system.
Audience: Graduate

2. Demonstrate the functional application of these anatomical structures in identifying specific musculoskeletal, articular, nervous, and vascular injuries and conditions.
Audience: Graduate

3. Apply injury classification principles to specific tissues to understand injury severity.
Audience: Graduate

4. Recognize the role of these anatomical structures as they relate to athletic injury mechanism, evaluation, and rehabilitation.
Audience: Graduate

KINES 571 – EMERGENCY PROCEDURES FOR ATHLETIC TRAINERS
2 credits.

Provides future athletic training professionals with knowledge and skills to respond to emergency situations common to the athletic training environment. Emphasis on hands-on applications and interprofessional relationships with other emergency care providers and agencies.
Requisites: Declared Athletic Training MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Demonstrate proficient skills in CPR and AED use
Audience: Graduate

2. Demonstrate knowledge of emergency care related to sudden cardiac death, head trauma/spinal injuries, exertional heat illness and environmental conditions.
Audience: Graduate

3. Design and create emergency action plans for specific assigned venues related to athletic events.
Audience: Graduate

4. Show proper athletic equipment fitting and describe rules related to athletic equipment prior to activity as well as removal of equipment in emergency situations.
Audience: Graduate

KINES 572 – FOUNDATIONAL SKILLS IN ATHLETIC TRAINING
1 credit.

Introduces foundational skills used by athletic training professionals in the evaluation and prevention of injuries and conditions common to active populations.
Requisites: Declared Athletic Training MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Demonstrate history taking, components of a physical exam, and components of preparticipation exam.
Audience: Graduate

2. Discuss basic injury terminology.
Audience: Graduate

3. Establish standards of basic patient interaction and HIPPA compliance.
Audience: Graduate

4. Create and implement custom padding, demonstrate appropriate splinting and taping techniques, and apply orthopedic appliances for various injuries.
Audience: Graduate

KINES 600 – ADVANCED EXERCISE PSYCHOLOGY
3 credits.

Exercise and performance examined from the standpoint of motivation, personality dynamics, psychophysics, mental health, social psychology, and behavioral medicine.
Requisites: Graduate/professional standing or declared in Kinesiology
Course Designation: Gen Ed - Communication Part B
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate competence in the scientific research process which includes the ability to consume, analyze, interpret, and critically review the scientific literature.
Audience: Undergraduate

2. Develop appropriate styles of written and oral communication to use both within and outside the scientific community.
Audience: Undergraduate

3. Actively develop disciplinary knowledge, logical/critical thinking skills, active listening skills, and awareness of the relevant scientific literature.
Audience: Undergraduate

4. Be able to efficiently search the literature (research and investigation skills) in response to an exercise psychology-related question, and be able to synthesize (critical thinking skills) the research to formulate succinct and evidence-based responses (communication skills).
Audience: Undergraduate

KINES 614 – BIOLOGICAL FACTORS INFLUENCING EXERCISE PERFORMANCE
3 credits.

Explore the physiological, biochemical, and molecular mechanisms of the body's response to both acute and chronic exercise. Examine the body's physiological responses to environmental stressors such as heat, cold, and hypoxia. Gain an in-depth understanding of advanced exercise physiology concepts through the analysis of research publications.
Requisites: KINES 314 or graduate/professional standing
Course Designation: Gen Ed - Communication Part B
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze the body’s acute and chronic physiological responses to exercise
Audience: Both Grad & Undergrad

2. Evaluate key concepts of environmental factors affecting exercise performance
Audience: Both Grad & Undergrad

3. Demonstrate advanced information literacy skills within the context of exercise physiology
Audience: Both Grad & Undergrad

4. Compose a comprehensive written evaluation of the scientific literature pertaining to exercise physiology
Audience: Both Grad & Undergrad

5. Develop oral communication skills tailored for effective engagement within the exercise physiology scientific community
Audience: Both Grad & Undergrad

6. Demonstrate practical application of theoretical knowledge in the field of exercise physiology
Audience: Graduate

KINES 615 – LABORATORY TECHNIQUES IN EXERCISE PHYSIOLOGY
2 credits.

Laboratory procedures and skills commonly used in exercise physiology.
Requisites: Declared in Kinesiology, Physical Education, or Athletic Training, and KINES 314 or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2019
Learning Outcomes: 1. Define questions of physiologic relevance and apply methods to test those questions.
Audience: Both Grad & Undergrad

2. Summarize and consistently report on the methods and findings in brief reports.
Audience: Graduate

KINES 618 – BIOMECHANICS
2-3 credits.

Biomechanics of human movement and skill with emphasis on kinematics and kinetics.
Requisites: Declared in Kinesiology, KINES 318 and (KINES 328, 337 or ANAT&PHY 337) or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Identify, quantify and describe mechanical aspects of human activities.
Audience: Both Grad & Undergrad

2. Determine forces within and eternal to the human body that are necessary to achieve desired behaviors.
Audience: Both Grad & Undergrad

3. Determine movements and forces that result from muscle activity and external forces.
Audience: Both Grad & Undergrad

4. Use mechanical principles to simulate standing.
Audience: Both Grad & Undergrad

5. Use mechanical simulation of standing to investigate neural control of balance.
Audience: Graduate

KINES 620 – CLINICAL PRACTICUM IN ATHLETIC TRAINING I
2 credits.

Clinical practicum that provides practical and skills-oriented instruction under the supervision of a skilled clinical preceptor. Provides an opportunity for exposure will be to a large volume and variety of clinical experiences to facilitate learning in authentic clinical settings.
Requisites: Declared Athletic Training MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Apply and integrate foundational athletic training skills (e.g. patient history, bracing and taping), in a clinical athletic training setting.
Audience: Graduate

2. Demonstrate relevant interpersonal skills needed in a patient-centered clinical environment.
Audience: Graduate

3. Identify common operational policies (e.g. clinical hours, facility standards, hygiene) and practices (e.g. emergency plans, medical documentation) found in athletic training clinical settings.
Audience: Graduate

4. Demonstrate adherence to appropriate ethical behaviors and professional boundaries.
Audience: Graduate

5. Use documentation techniques to record clinical patient encounters
Audience: Graduate

6. Demonstrate appropriate patient interactions under the direction of a clinical preceptor in the provision of patient care for various conditions (e.g. acute, chronic and emergent).
Audience: Graduate

7. Develop strategies for future patient interactions through observation, preceptor feedback, and written reflection of patient encounters.
Audience: Graduate

KINES 621 – CLINICAL PRACTICUM IN ATHLETIC TRAINING II
3 credits.

Clinical practicum that provides practical and skills-oriented instruction under the supervision of a skilled clinical preceptor. Exposure to a large volume and variety of clinical experiences to facilitate learning in authentic clinical settings.
Requisites: KINES 620
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply and integrate foundational athletic training skills (e.g. objective measures, evaluation of range of motion, manual muscle testing and special testing), in a clinical athletic training setting.
Audience: Graduate

2. Apply interpersonal, clinical exam skills and therapeutic interventions in patient encounters as directed by clinical preceptor for various conditions (e.g. acute, chronic and emergent).
Audience: Graduate

3. Identify operational policies (e.g. clinical hours, facility standards, hygiene) and practices (e.g. emergency plans, documentation) for your assigned clinical setting.
Audience: Graduate

4. Apply athletic training skills from previous coursework (e.g. taping, patient history, objective measures) and new skills as acquired in concurrent courses.
Audience: Graduate

5. Develop strategies for future patient interactions through observation, clinical experience, preceptor feedback, and written reflection of patient encounters.
Audience: Graduate

6. Interpret information gained from patient encounters and preceptor feedback to develop clinical decision-making skills.
Audience: Graduate

7. Demonstrate adherence to appropriate ethical behaviors and professional boundaries.
Audience: Graduate

KINES 622 – CLINICAL FIELD EXPERIENCE IN ATHLETIC TRAINING I
3 credits.

Provides a clinical field experience allowing for practical and skills-oriented instruction under the supervision of a skilled clinical preceptor. Exposure to a large volume and variety of athletic training clinical experiences to facilitate learning in authentic clinical settings. Increased patient interactions concurrent with skill acquisition and Athletic Training program progression.
Requisites: KINES 621
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply athletic training skills from previous coursework (e.g. posture, gait, objective measures) and new skills as acquired in concurrent courses.
Audience: Graduate

2. Apply interpersonal, clinical exam skills, including differential diagnoses, and therapeutic interventions in patient encounters as directed by clinical preceptor for various conditions (e.g. acute, chronic and emergent).
Audience: Graduate

3. Identify operational policies (e.g. clinical hours, facility standards, hygiene) and practices (e.g. emergency plans, documentation) for your assigned clinical setting.
Audience: Graduate

4. Demonstrate adherence to appropriate ethical behaviors and professional boundaries.
Audience: Graduate

5. Develop strategies for future patient interactions through hands-on clinical experience, preceptor feedback, and written reflection of patient encounters.
Audience: Graduate

6. Interpret information gained from patient encounters and preceptor feedback to practice clinical decision-making skills.
Audience: Graduate

KINES 623 – CLINICAL FIELD EXPERIENCE IN ATHLETIC TRAINING II
3 credits.

Clinical field experience that provides practical and skills-oriented instruction under the supervision of a skilled clinical preceptor as a precursor to clinical immersion placement. Provides exposure to a large volume and variety of clinical experiences in authentic clinical settings. Increased patient encounters concurrent with skill acquisition.
Requisites: KINES 622
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Apply athletic training skills from previous coursework and new skills as acquired in concurrent courses.
Audience: Graduate

2. Demonstrate adherence to appropriate ethical behaviors and professional boundaries.
Audience: Graduate

3. Interpret information from patient encounters and preceptor feedback to develop clinical decision-making skills.
Audience: Graduate

4. Identify operational policies (e.g. clinical hours, facility standards, hygiene) and practices (e.g. emergency plans, documentation) for your assigned clinical setting.
Audience: Graduate

5. Apply interpersonal, clinical exam skills, and therapeutic interventions in patient encounters as directed by the clinical preceptor for various conditions (e.g., acute, chronic, and emergent).
Audience: Graduate

6. Develop strategies for future patient interactions through observation, clinical experience, preceptor feedback, and written reflection of patient encounters.
Audience: Graduate

KINES 624 – ATHLETIC TRAINING PRECEPTORSHIP I
6 credits.

Provides extensive patient encounters and advanced skills-oriented instruction under the supervision of a skilled clinical preceptor, working towards independent athletic training practice. Immersive experience provides exposure to a large volume and variety of patient encounters in authentic clinical settings. Provides extensive opportunities for supervised autonomy to develop clinical decision-making skills progressing toward independent clinical-decision making.
Requisites: KINES 623
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply athletic training skills from all previous coursework (e.g. patient intake, physical examination, differential diagnosis, intervention planning, and execution of treatment plans) and new skills as acquired in concurrent courses.
Audience: Graduate

2. Apply interpersonal, clinical exam skills, including differential diagnoses, and therapeutic interventions in patient encounters as directed by clinical preceptor for various conditions (e.g. acute, chronic and emergent).
Audience: Graduate

3. Identify operational policies (e.g. clinical hours, facility standards, hygiene) and practices (e.g. emergency plans, documentation) for your assigned clinical setting.
Audience: Graduate

4. Demonstrate adherence to appropriate ethical behaviors and professional boundaries.
Audience: Graduate

5. Develop strategies for future patient interactions through hands-on clinical experience, preceptor feedback, and written reflection of patient encounters.
Audience: Graduate

6. Interpret information gained from patient encounters and preceptor feedback to practice clinical decision-making skills in a progressively autonomous fashion.
Audience: Graduate

7. Appraise student documented patient-encounter information to assess specific learner needs in the interest of progressing to autonomous practice.
Audience: Graduate

KINES 625 – ATHLETIC TRAINING PRECEPTORSHIP II
7 credits.

Provides extensive patient encounters and advanced skills-oriented instruction under the supervision of a skilled clinical preceptor, working towards independent athletic training practice. Final immersive clinical experience will provide exposure to a large volume and variety of patient encounters in authentic clinical settings. Provides extensive opportunities for supervised autonomy moving to independent clinical decision-making.
Requisites: KINES 624
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply athletic training skills from all previous coursework (e.g. patient intake, physical examination, differential diagnosis, intervention planning, and execution of treatment plans) and new skills as acquired in concurrent courses.
Audience: Graduate

2. Apply interpersonal, clinical exam skills, including differential diagnoses, and therapeutic interventions in patient encounters as directed by clinical preceptor for various conditions (e.g. acute, chronic and emergent).
Audience: Graduate

3. Identify operational policies (e.g. clinical hours, facility standards, hygiene) and practices (e.g. emergency plans, documentation) for assigned clinical setting.
Audience: Graduate

4. Demonstrate adherence to appropriate ethical behaviors and professional boundaries.
Audience: Graduate

5. Develop strategies for future patient interactions through hands-on clinical experience, preceptor feedback, and written reflection of patient encounters.
Audience: Graduate

6. Interpret information gained from patient encounters and preceptor feedback to practice clinical decision-making skills in a progressively autonomous fashion.
Audience: Graduate

7. Appraise student documented patient-encounter information to assess specific learner needs in the interest of progressing to autonomous practice.
Audience: Graduate

KINES 650 – FOUNDATIONS OF PROFESSIONAL PRACTICE IN ATHLETIC TRAINING
1 credit.

Addresses foundational concepts and skills required for contemporary athletic training practice including: an introduction to evidence-based practice, disablement models and patient reported outcomes, team approach to healthcare, legal and ethical considerations, primacy of the patient, effective communication, concepts of professionalism and cultural competence.
Requisites: Declared Athletic Training MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 2 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize the role of evidence based practice in clinical decision in athletic training
Audience: Graduate

2. Demonstrate the role of disablement models and patient reported outcomes in the provision of patient-centered care.
Audience: Graduate

3. Describe legal and ethical concepts that influence athletic training practice.
Audience: Graduate

4. Identify components of professionalism and cultural competence in athletic training.
Audience: Graduate

KINES 651 – PUBLIC HEALTH, POLICY, AND PRACTICE
3 credits.

Addresses the intersection of athletic training and public health by exploring population-based approaches to injury prevention and challenges students to explore how population-level problems impact individual health. Introduces and explores specific policies (e.g. concussion, athletic pre-participation, catastrophic injury) that impact the provision of effective patient-centered care and introduces skills required for management of these conditions.
Requisites: Declared Athletic Training MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define public health and differentiate public health/population health from personal health.
Audience: Graduate

2. Recognize the goals of public health, to improve health and eliminate health disparities, and how athletic training intersects with these goals.
Audience: Graduate

3. Summarize the methods used to measure the health of populations, find causes, and develop interventions specific to athletic training settings.

Audience: Graduate

4. Appraise specific policies (e.g. concussion, athletic pre-participation, catastrophic injury) that impact the provision of effective patient-centered care.
Audience: Graduate

5. Apply clinical skills required for management of injuries and conditions impacted by policy.
Audience: Graduate

6. Identify agencies, statutes, and standards of care that establish policies that impact athletic training practice.
Audience: Graduate

KINES 652 – EVALUATION AND THERAPEUTIC INTERVENTIONS I
4 credits.

Provides evaluation techniques, theory and practice in the use of therapeutic exercise for the rehabilitation of athletic injuries. Provides the appropriate knowledge and skills needed to evaluate and apply therapeutic strategies in the treatment of athletic injuries. Focuses on lower extremity and closed head injuries.
Requisites: Declared Athletic Training MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate advanced knowledge and skills in the assessment of injuries in order to apply therapeutic strategies to active populations.
Audience: Graduate

2. Use problem-solving skills to apply therapeutic strategies to common lower extremity and closed head injuries seen in active populations.
Audience: Graduate

3. Apply clinical and physiological knowledge for the implementation of manual therapeutic strategies
Audience: Graduate

4. Demonstrate the skills, knowledge, and clinical abilities to conduct a thorough clinical examination of injuries common to active populations.
Audience: Graduate

5. Demonstrate the skills, knowledge, and physiological framework for the safe use of therapeutic modalities and therapeutic exercise for athletic injury management.
Audience: Graduate

6. Demonstrate the appropriate knowledge and skills in the areas of problem solving, program design, documentation, and a variety of therapeutic interventions needed to treat injuries common to athletes and physically active populations.
Audience: Graduate

KINES 653 – EVALUATION AND THERAPEUTIC INTERVENTIONS II
4 credits.

Provides Athletic Trainers with the knowledge, physical exam skills, and therapeutic interventions to diagnose and address common injuries and conditions. Scientific rationale for appropriate exercise design, implementation, and progression of care are emphasized.
Requisites: KINES 652
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Implement program design and instruct patients in therapeutic exercises
Audience: Graduate

2. Utilize clinical skills in order to establish differential diagnoses and defend rationale for final diagnosis
Audience: Graduate

3. Apply clinical and physiological knowledge for the implementation of manual therapeutic strategies
Audience: Graduate

4. Demonstrate the skills, knowledge, and clinical abilities to conduct a thorough clinical examination of injuries common to active populations
Audience: Graduate

5. Demonstrate the skills, knowledge, and physiological framework for the safe use of therapeutic modalities and therapeutic exercise for athletic injury management.
Audience: Graduate

6. Demonstrate the appropriate knowledge and skills in the areas of problem solving, program design, documentation, and a variety of therapeutic interventions needed to treat injuries common to athletes and physically active populations
Audience: Graduate

KINES 654 – CLINICAL MEDICINE IN ATHLETIC TRAINING I
3 credits.

Examines acute and chronic medical problems encountered by athletic trainers. Includes examination and clinical skills, interventions, and requirements for referral as part of collaborative care. Emphasis on cardiopulmonary, respiratory, gastrointestinal, genitourinary, gynecological, neurological, and systemic issues.
Requisites: Declared Athletic Training MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize and appropriately manage common medical conditions, including cardiovascular, pulmonary, respiratory, gastrointestinal, genitourinary, otolaryngological, ophthalmological, dental, and hematological conditions.
Audience: Graduate

2. Differentiate best practices for appropriate laboratory and diagnostic testing of common medical conditions.
Audience: Graduate

3. Summarize best practices for evaluating and treating patients across the lifespan and genders.
Audience: Graduate

4. Establish best practices for the management of patients with chronic medical conditions (e.g., high blood pressure, arthritis, IBD).
Audience: Graduate

5. Recognize and provide evidence-based health promotion and risk factors/disease prevention guidance as well as patient education and counseling.
Audience: Graduate

KINES 655 – CLINICAL MEDICINE IN ATHLETIC TRAINING II
3 credits.

Examines acute and chronic medical problems encountered by athletic trainers. Includes examination and clinical skills, interventions, and requirements for referral as part of collaborative care. Emphasis on drug testing, illicit drug use, mental and behavioral health, sexual health, dermatology, wound care and closure, diabetes, and infectious disease.
Requisites: KINES 654
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate the skills, knowledge, and clinical abilities to conduct a thorough clinical examination of illnesses common to active populations.
Audience: Graduate

2. Identify and appropriately manage common medical conditions, including endocrine, dermatological, genitourinary, otolaryngological, psychological, environmental, nutritional and hematological conditions.
Audience: Graduate

3. Recognize and appropriately manage common behavioral health conditions and work with the appropriate mental health providers.
Audience: Graduate

4. Establish best practices for the management of patients with chronic medical conditions (e.g., diabetes).
Audience: Graduate

5. Recognize and provide evidence-based health promotion and risk factors/disease prevention guidance as well as patient education and counseling.
Audience: Graduate

KINES 656 – SCIENTIFIC INQUIRY IN ATHLETIC TRAINING
3 credits.

Addresses the role of evidence in supporting Athletic Training practice. Presents the concepts, methods, and strategies related to evidence-based practice and the development of critical reading and scientific writing skills.
Requisites: KINES 650
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate the importance of evidence and evidence guided practice in athletic training.
Audience: Graduate

2. Use library resources to identify scientific articles about injuries specific to their clinical rotation.
Audience: Graduate

3. Apply the levels of evidence in the literature and how to identify and make clinical recommendations related to common clinical questions.
Audience: Graduate

4. Apply the literature evaluation process learned in this course to determine the level of evidence for common physical medicine interventions.
Audience: Graduate

KINES 657 – ROLE TRANSITION AND PROFESSIONAL PRACTICE IN ATHLETIC TRAINING
1 credit.

Addresses role transition and professional practice issues facing athletic trainers. Emphasis on identifying gaps in skills and expertise, recognizing communication needs, and role socialization skills for future development during final preceptorship placements and entrance into the healthcare workforce. Board of Certification preparation strategies are explored.
Requisites: KINES 623
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Appraise issues facing newly credentialed athletic trainers as they transition to professional practice.
Audience: Graduate

2. Discuss strategies for successful socialization to various athletic training employment settings.
Audience: Graduate

3. Identify gaps in professional knowledge, skills, and abilities using preceptorship evaluations, self-assessment examinations, and self-reflection activities.
Audience: Graduate

4. Design an individual professional development plan to address gaps in professional knowledge, skills, and abilities to address in future preceptorship placements.
Audience: Graduate

5. Develop an individualized Board of Certification exam preparation plan.
Audience: Graduate

6. Identify current issues in athletic training for the purpose of professional advocacy and engagement.
Audience: Graduate

KINES 658 – SEMINAR IN ATHLETIC TRAINING
1 credit.

Provides a forum for athletic training students, faculty and staff to present and discuss research and current issues related to the field of athletic training.
Requisites: Declared Athletic Training MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Explore contemporary issues in the professional practice of athletic training.
Audience: Graduate

2. Assess published athletic training and sports medicine research.
Audience: Graduate

3. Present student led discussion of published research and professional issues in athletic training.
Audience: Graduate

KINES 670 – ENHANCING PERFORMANCE AND WELLNESS
1 credit.

Explores concepts related to promoting and implementing specialized programs focused on addressing health and performance in patients. Topics include strength and conditioning, nutrition, and wellness.
Requisites: Declared Athletic Training MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and implement performance tests for assessing sport-specific fitness and athleticism to determine: physical status in order to identify athlete readiness to train & compete, performance development, strengths and weaknesses, and effectively interpret results for exercise prescription.
Audience: Graduate

2. Optimize potential objectives of weight loss and weight gain in sport for performance and develop ability to advise athlete's effectively regarding nutrition, hydration, and ergogenic aids.
Audience: Graduate

3. Apply training principles and exercise prescription in primary areas of strength and conditioning in order to optimize individual outcomes of performance, development and injury resistance.
Audience: Graduate

4. Apply sport-specific training (i.e. physiological and neuromechanical) principles to optimize training relative to the athlete's needs during return to play spectrum.
Audience: Graduate

5. Understand the use of ergogenic aids, and the ability to advise athletes regarding their use (positive and negative) in order to create awareness among the athletes.
Audience: Graduate

6. Explain governance over ergogenic aids.
Audience: Graduate

KINES 671 – DIAGNOSTIC IMAGING IN ATHLETIC TRAINING
1 credit.

Addresses diagnostic imaging tools used in sports medicine and orthopedics, interpretation of results, and implementation into clinical practice as part of a comprehensive evaluation.
Requisites: KINES 652
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify imagining modalities used in the diagnosis of musculoskeletal injuries and conditions.
Audience: Graduate

2. Summarize appropriate imagining selection patterns based on target tissue, clinical practice, and diagnostic accuracy.
Audience: Graduate

3. Explain the safety considerations for patients referred for musculoskeletal imaging including indications and contraindications (e.g radiographs, magnetic resonance imaging, computer tomography).
Audience: Graduate

4. Assess the role of musculoskeletal imaging in the development of therapeutic protocols and surgical planning.
Audience: Graduate

5. Appraise common clinical prediction rules in determining referral for diagnostic imaging.
Audience: Graduate

6. Examine the use of diagnostic ultrasound by non-radiologist in clinical practice settings
Audience: Graduate

KINES 672 – PRINCIPLES OF PHARMACOLOGY FOR ATHLETIC TRAINERS
1 credit.

Pharmacological and toxicological actions and therapeutic use of medications commonly encountered in the practice of athletic training. Includes categories of drugs, use, effects and precautions for common drugs and drug-interactions. Implications for physical activity and legal issues are examined.
Requisites: KINES 654
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Identify the general concepts and differences in the legal regulation of non-prescription, prescription, and classified pharmaceuticals.
Audience: Graduate

2. Define the pharmacological concepts of dissolution, bioavailability, and bioequivalence.
Audience: Graduate

3. Summarize the pharmacodynamic principles of receptor theory, dose-response relationship, placebo effect, potency, and drug interactions as they relate to the mechanism of drug action and therapeutic effectiveness.
Audience: Graduate

4. Describe how common pharmacological agents influence pain and healing and their influence on various therapeutic interventions.
Audience: Graduate

5. Assess the general indications, contraindications, and adverse reactions of prescription and nonprescription medications commonly encountered in the practice of athletic training (e.g. steroidal and nonsteroidal anti-inflammatory medications, analgesics, antibiotics) as identified in the course syllabus.
Audience: Graduate

6. Explain the central role the prescribing provider plays in the selection, prescription, and clinical supervision of the athlete's clinical treatment program.
Audience: Graduate

KINES 673 – HEALTHCARE INFORMATICS AND QUALITY IMPROVEMENT IN ATHLETIC TRAINING
1 credit.

Explores the principles of health informatics and quality improvement for applications in contemporary athletic training practice. Content includes ethical use of data, technology, healthcare information management, fundamentals of quality improvement, measuring improvement, cost and value models, and the history of quality improvement in healthcare.
Requisites: Declared Athletic Training MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Assess health related data in athletic training and analyze its role in evidence-based practice, revenue models, practice management, and patient outcomes.
Audience: Graduate

2. Compare and contrast the advantages and disadvantages of various clinical information systems used in professional practice.
Audience: Graduate

3. Demonstrate the value of an athletic trainer in a healthcare system through analysis of clinical and administrative data.
Audience: Graduate

4. Apply the principles of quality improvement to address a specific issue in an athletic training health care setting.
Audience: Graduate

5. Create a proposal for the adoption of a health-related technology, application, or system for clinical practice across an organization.
Audience: Graduate

KINES 674 – CLINICAL SCHOLARSHIP IN ATHLETIC TRAINING
1 credit.

Develops understanding of the athletic trainer as an evidence-guided clinical scholar. Designed as a companion to an immersive clinical experience that allows examination of the elements of clinical scholarship in the practice of athletic training. Emphasis on understanding how patient-centered care is improved through best practices and the utilization of practice-based research tools.
Requisites: KINES 656
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify the unique roles of clinicians and patients in the collection of practice-based information for the purpose of patient-centered care and shared decision-making.
Audience: Graduate

2. Develop appropriate clinical questions that can be best addressed at the point of care using PICO (Patient, Intervention, Comparison, Outcome) style questions.
Audience: Graduate

3. Assess an athletic training clinical environment for the purpose of developing data collection strategies during normal point-of-care encounters to improve best practices.
Audience: Graduate

4. Assess clinical practices that require unlearning strategies in the interest of up-to-date patient-centered care.
Audience: Graduate

5. Understand how participation in practice-based research networks can advance athletic training research and patient care efforts.
Audience: Graduate

6. Appraise point-of-care technology (e.g., electronic medical records) to enhance the collection of practice-based data.
Audience: Graduate

KINES 690 – INTERNSHIP IN KINESIOLOGY
1-6 credits.

Provides an experiential learning experience to integrate theoretical concepts learned in the classroom into field experience. Through supervised practical experiences, gain valuable insights into the diverse applications of exercise science in various settings. Assume responsibilities that are consistent with level of professional development and learning experiences.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 4 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate the ability to integrate theoretical knowledge of kinesiology into practical applications within a professional setting.
Audience: Graduate

2. Research and obtain information which can be used as a basis for making choices regarding future career paths, areas of specialization, and/or further study in exercise science.
Audience: Graduate

3. Cultivate effective interpersonal skills and demonstrate an understanding of diverse perspectives.
Audience: Graduate

KINES 699 – INDEPENDENT STUDY
1-3 credits.

Independent undergraduate work in advanced area of study under direct guidance of kinesiology faculty.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

KINES 700 – PSYCHOLOGICAL EFFECTS OF EXERCISE
3 credits.

Consequences of involvement in acute and chronic exercise on selected psychological states such as anxiety, depression, hostility, and self-esteem.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

KINES 713 – NEURAL BASIS OF NORMAL AND PATHOLOGICAL MOVEMENT
3 credits.

In-depth look at anatomic, neurophysiological, behavioral, and clinical aspects of motor control under normal and pathological conditions. Movement disorders include sensory neuropathy, cerebral cortical or brain stem stroke, basal ganglia dysfunction, and cerebellar disease.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

KINES 721 – NEURAL BASIS FOR MOVEMENT
3 credits.

How the central nervous system organizes skilled human performance. Evolution of neuromuscular mechanisms, subserving skills, and the causes and limitations of movement at high speeds and high levels of force.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

KINES 773 – CARDIORESPIRATORY ADAPTIONS TO ENVIRONMENT AND EXERCISE
3 credits.

Examination of the effects of acute and chronic exercise and exposure to hypo- and hyperbaric environments on physiological responses; mechanisms underlying these responses.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

KINES 774 – METABOLIC RESPONSES TO EXERCISE AND ENVIRONMENTAL STRESS
2 credits.

Examination of the metabolic and biochemical responses to acute and chronic exercise and environmental stress. Emphasis placed on the mechanisms underlying these responses.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

KINES 779 – HUMAN MUSCLE FUNCTION IN HEALTH AND DISEASE
2 credits.

Multidisciplinary seminar on human muscle function in health and disease. The course is geared toward advanced undergraduate and graduate students in kinesiology, physical and occupational therapy, motor control and behavior, neurophysiology resident in neurology and other related allied health professionals.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

KINES 785 – HUMAN OCCUPATION AND HEALTH
2-3 credits.

Focuses on the nature of human occupation (everyday purposeful activity) and its relationship to well-being and health. Theories of occupation and health are critically examined.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

KINES/POP HLTH 791 – PHYSICAL ACTIVITY EPIDEMIOLOGY
3 credits.

Recommendations for and surveillance of physical activity in the U.S., and associations with health and disease at the population level. Emphasis on measurement techniques, study design and research considerations.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify the strengths and weaknesses of epidemiological study designs and critical issues in the analysis of physical activity-related research.
Audience: Graduate

2. Compare and contrast the specific measurement tools used in physical activity surveillance and research and identify the errors associated with these tools.
Audience: Graduate

3. Identify current public health recommendations for physical activity and describe how they have evolved.
Audience: Graduate

4. Describe the contemporary trends in physical activity in the United States and know how they have been measured.
Audience: Graduate

5. Identify the relationships between physical activity and various health conditions/diseases.
Audience: Graduate

6. Review and analyze the epidemiologic evidence for a link between physical activity and a specified outcome of interest (e.g. physical activity and depression), and present a review of the evidence
Audience: Graduate

KINES 861 – PRINCIPLES OF MOTOR CONTROL AND LEARNING
3 credits.

Theories and experimental findings in motor control, acquisition and retention of motor behavior. Topics: attention, models of motor control, kinesthesis, learning, information processing, memory, transfer, feedback, age and gender differences.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

KINES 862 – ADVANCED RESEARCH ETHICS & RESPONSIBLE CONDUCT OF RESEARCH
3 credits.

Explore the ethical dilemmas faced by researchers across biomedical and nonbiomedical research and consider how to best support scientific integrity and public trust. Fulfill NIH training requirements for the responsible conduct of research. Identify the regulatory guidelines and ethical frameworks and principles guiding research ethics and responsible research conduct. Develop the skills to make ethically informed decisions in relation to their research and training.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify key U.S. policies and regulations related to the responsible conduct of research (RCR) and explain their significance in adhering to ethical research standards.
Audience: Graduate

2. Describe the historical context behind the need for human subject protection in research and summarize how responsible research conduct guidelines and regulations have evolved.
Audience: Graduate

3. Apply ethical principles to analyze and address challenges related to the protection of human subjects and adherence to RCR standards.
Audience: Graduate

4. Evaluate ethical issues by critically examining dilemmas encountered in human subject protection and RCR practices, using examples from the field of kinesiology and occupational therapy.
Audience: Graduate

5. Evaluate ethical issues in the protection of human subjects and RCR, demonstrating an in-depth understanding within the fields of kinesiology and occupational therapy.
Audience: Graduate

KINES 885 – SEMINAR IN OCCUPATION AND HEALTH
1 credit.

Current theoretical and methodological issues and problems within the study of human occupation and health.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

KINES 900 – SEMINAR IN KINESIOLOGY
1 credit.

Provides a forum for students, faculty and staff from the department of kinesiology to present and discuss research and current issues related to the field of kinesiology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

KINES 950 – PROFESSIONAL SKILLS AND RESEARCH IN KINESIOLOGY
3 credits.

Foundational skills to succeed in both academic and applied settings within the field of kinesiology. Search, analyze, and critique scientific literature on exercise and health while developing critical thinking, research methodologies, and evidence-based decision-making. Refine oral and written communication and create professional materials including CV and cover letter for career development.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 3 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Understand the methods used to search for, analyze, and critique scientific literature.
Audience: Graduate

2. Develop proficiency in formulating research questions, locating relevant literature, appraising studies, synthesizing findings, and applying conclusions across diverse contexts.
Audience: Graduate

3. Perform thoughtful critiques of your peers' work by providing constructive feedback.
Audience: Graduate

4. Refine oral and written communication skills for presenting information clearly and effectively.
Audience: Graduate

5. Develop professional materials that showcase qualifications for future job opportunities.
Audience: Graduate

KINES 951 – SEMINAR-BIOMECHANICS
2 credits.

Seminar topics in field of biomechanics.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

KINES 953 – HUMAN BIODYNAMICS SEMINAR
1 credit.

Seminar topics in field of human biodynamics.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

KINES/POP HLTH 955 – SEMINAR - PHYSICAL ACTIVITY EPIDEMIOLOGY
1 credit.

Current research developments in physical activity epidemiology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Name and explain the basic concepts of physical activity epidemiology, including study designs, public health guidelines, surveillance, and physical activity measures
Audience: Graduate

2. Critically evaluate current research on physical activity and health topics
Audience: Graduate

3. Prepare a presentation and lead a group in an in-depth discussion of the methods, interpretation, and implications of recent scientific articles
Audience: Graduate

KINES 961 – SEMINAR IN MOTOR CONTROL AND LEARNING
2 credits.

Seminar topics in field of motor control and learning.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2022
Learning Outcomes: 1. Demonstrate an understanding of the major current and past theories, research findings, methodologies and techniques related to the specific topic for the course
Audience: Graduate

2. Retrieve and examine scientific literature, evaluate evidence for and against hypotheses, and be able to discuss strengths and weaknesses in the existing literature with respect to the specific topic
Audience: Graduate

KINES 990 – RESEARCH OR THESIS
1-12 credits.

Independent research and writing for graduate students under the supervision of kinesiology faculty member.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

KINES 991 – RESEARCH IN PHYSICAL ACTIVITY- THEORY AND DESIGN
3 credits.

Basic principles of scientific inquiry and their application to the study of physical activity.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

KINES 999 – INDEPENDENT READING
1-4 credits.

Directed study projects for graduate students as arranged with kinesiology faculty member.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

LANDSCAPE ARCHITECTURE (LAND ARC)

LAND ARC/AMER IND 106 – EARTH PARTNERSHIP INDIGENOUS ARTS AND SCIENCES
3 credits.

In collaboration with Tribal partners in Wisconsin, emphasize environmental science rooted in land stewardship and land management aligned with cultural values and Indigenous science processes. Experience the culture and ecology of a place while engaging in ecological restoration and stewardship, reflecting on relationships to the land and as global citizens. The intersection of Indigenous knowledge and Western science helps explain the need for a diversity of perspectives to respond to social and environmental justice in our changing world.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate the importance of legitimizing diverse cultural perspectives and knowledge, and forming equitable relationships in a multicultural society
Audience: Undergraduate

2. Recognize Indigenous and other cultural groups' contributions to addressing environmental and social justice issues locally, regionally, and globally
Audience: Undergraduate

3. Comprehend how past traumas of colonization and racism impact communities today along with how inaccurate assumptions impact all peoples
Audience: Undergraduate

4. Apply an approach to restoration and stewardship that considers diverse perspectives and assets related to equity and inclusion
Audience: Undergraduate

5. Reflect and deepen one's understanding of the ancestral and contemporary lands of the Ho-Chunk Nation on whose land UW-Madison resides
Audience: Undergraduate

6. Experience firsthand the resiliency and self-determination of Indigenous communities in Wisconsin.
Audience: Undergraduate

7. Apply the four guiding principles of respect, responsibility, relationship, and reciprocity with the land community (including human and non-human members) through work in restoration and stewardship.
Audience: Undergraduate

8. Demonstrate understanding of Earth Parternship's 10 steps for restoration by applying appropriate steps to community-based projects and local Mound restoration efforts.
Audience: Undergraduate

LAND ARC 210 – INTRODUCTION TO LANDSCAPE ARCHITECTURE DESIGN STUDIO
4 credits.

Introduction to the techniques and processes used in solving three-dimensional design problems in the urban and natural environment through studio exercises. Understand how design process and design principles create physical and sensory experiences in our everyday lives. Develop fundamental verbal and graphic communication skills used in the professional design world. Gives attention to the basics of design theory and philosophy.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify how humans perceive, utilize and value both interior and exterior spaces
Audience: Undergraduate

2. Complete design processes used by landscape architects to create effective, sustainable, resilient, and human-scaled spaces and places.
Audience: Undergraduate

3. Illustrate spatial manipulations, with an emphasis on the analysis of space, two and three-dimensional ordering principles, designing in context, and basic design theories.
Audience: Undergraduate

4. Apply problem-solving skills and solution-generating activities on basic site design projects.
Audience: Undergraduate

5. Apply verbal, written, and graphic communication skills commonly used by landscape architects.
Audience: Undergraduate

LAND ARC 211 – SHAPING THE BUILT ENVIRONMENT
3 credits.

Urban, suburban, and rural environments intersect with the natural environment in important yet complex ways. Cultural as well as biophysical systems influence the structure and function of these environments at both local and regional scales. Exploration of these relationships by analyzing built environments and simulating future design and planning scenarios offer a transdisciplinary foundation for subsequent coursework.
Requisites: None
Course Designation: Breadth - Natural Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand the diverse range of cultural, biophysical, and socio-political factors that shape the built environments of North America.
Audience: Undergraduate

2. Understand the principles and theories of how the built environment influences human health, safety, and well-being, as well as community sustainability, resiliency, and quality of life.
Audience: Undergraduate

3. Demonstrate the ability to analyze, interpret, and communicate information portraying community character and sense of place across the urban, suburban, and exurban landscape.
Audience: Undergraduate

4. Explain the social, economic, and/or environmental dimensions of the sustainability challenge(s) of designing and planning within the built environment.
Audience: Undergraduate

5. Apply sustainability principles and/or frameworks to addressing the challenge of designing and planning within the built environment.
Audience: Undergraduate

LAND ARC/ART HIST/ENVIR ST/GEOG/HISTORY 239 – MAKING THE AMERICAN LANDSCAPE
3-4 credits.

Traces the history and evolution of the American cultural landscape from precolonial times to present. Explores how class, ethnic, and racial inequality have shaped the appearance of the American landscape over time, and how that landscape in turn has affected relationships between people and groups through the present day. Examines extraordinary things (civic structures (like our State Capitol), National Parks, War Memorials) and more ordinary kinds of places (mining towns, cotton plantations, sites of recreation and leisure, and suburban tract housing) to stimulate critical thinking about how these places have served people and groups unequally and disproportionately over time and across space. Considers complex meanings of American spaces and places to different people and groups, stimulating empathy and encouraging participation in a multicultural society.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe and interpret the American landscape as a richly layered historical document mediated by complex relationships between people and groups
Audience: Undergraduate

2. Explain how the American cultural landscape has affected present day circumstances regarding ethnicity and race as well as racial and ethnic inequalities
Audience: Undergraduate

3. Articulate ways in which historical change manifest in buildings, enclosed spaces, and other elements of the American landscape reveal racial, ethnic, class and gender dynamics between and among people and groups over time
Audience: Undergraduate

4. Enlist forms of historical evidence – maps (current and historic), photographs (aerial and otherwise), historical newspapers, census records, deeds and land records – to interpret landscapes and landscape change
Audience: Undergraduate

5. Explain the American landscape as a product of competing interests, which will demonstrate self-awareness and empathy toward the cultural perspectives and worldviews of others
Audience: Undergraduate

LAND ARC 250 – SURVEY OF LANDSCAPE ARCHITECTURE DESIGN
3 credits.

Principles of landscape and environmental design; incorporates elements of landscape planning and management. Provides background to the ideas and personalities shaping landscape architecture in America. Establishes design basics with a focus on the processes used by landscape architects to create meaningful site and context-sensitive designs in the built and natural environment.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the many facets of Landscape Architecture, and the influence of landscape design on human health, safety, and welfare, and on both cultural and natural ecosystems.
Audience: Undergraduate

2. Identify the basic building blocks of design to understand how and why designed spaces are put together and be able to demonstrate the use of a landscape design process to create more sustainable designs.
Audience: Undergraduate

3. Identify and describe influential people, organizations, and ideas that have influenced the profession in the past and those that are contributing to it today.
Audience: Undergraduate

4. Summarize the profession of landscape architecture and their professional ethics and social and environmental responsibilities.
Audience: Undergraduate

5. Identify and compare the issues affecting our natural and cultural environments, such as climate change, and how landscape architecture addresses these concerns.
Audience: Undergraduate

6. Evaluate and analyze landscapes around us for enjoyment and an improved understanding of spatial awareness.
Audience: Undergraduate

7. Illustrate basic site design concepts and analysis data.
Audience: Undergraduate

LAND ARC 260 – HISTORY OF LANDSCAPE ARCHITECTURE
3 credits.

A critical and historical analysis of our design of outdoor space.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Trace the evolution of landscape architectural practice in the United States.
Audience: Undergraduate

2. Link design vocabulary to specific designed landscapes.
Audience: Undergraduate

3. Name landscape architects/designers associated with periods in landscape architectural history and give examples of their important designed landscapes.
Audience: Undergraduate

4. Discuss the values and aspirations guiding landscape architectural design in the United States.
Audience: Undergraduate

LAND ARC 261 – PRINCIPLES OF LANDSCAPE ARCHITECTURE DESIGN AND GRAPHICS
4 credits.

Basic principles in the design of landscapes to aid in developing individual capacities and approaches to designing. Principles of graphic communication media and development of practical graphic skills.
Requisites: Declared in Landscape Architecture BLA
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply design skills to advanced site planning projects at a variety of scales.
Audience: Undergraduate

2. Explain how the design process creates forms, objects, spaces, and experiences.
Audience: Undergraduate

3. Implement communication skills through computer graphics, hand graphics, verbal exercises, and written exercises.
Audience: Undergraduate

4. Explain how the elements of site planning work together to integrate form, function, and social experience.
Audience: Undergraduate

5. Incorporate design ethics that support diversity, inclusion, and equity, while creating places that respond to environmental, climate, and social justice
Audience: Undergraduate

6. Apply research to support evidence-based design to improve the health and well-being of both human and nonhuman systems
Audience: Undergraduate

LAND ARC/PLANTSCI 263 – WOODY LANDSCAPE PLANT IDENTIFICATION, CULTURE, AND USE
4 credits.

Field identification, landscape characteristics, uses, environmental requirements, and adaptability of woody ornamental plants; their autumn and winter characteristics. Topics include trees, shrubs, evergreens, vines and woody groundcovers.
Requisites: Sophomore standing and (BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY/BOTANY 152, or BOTANY 100)
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Use basic taxonomic tools needed for plant identification, including classification, vegetative and reproductive morphology, and nomenclature of cultivated plants
Audience: Undergraduate

2. Recognize many woody ornamental trees, shrubs, groundcovers, and vines, both native and exotic, by family, species (genus and specific epithet), variety, cultivar, and sometimes trademark
Audience: Undergraduate

3. Discuss woody landscape plant identification, distribution, ornamental characteristics as well as undesirable features, culture, adaptability, and uses
Audience: Undergraduate

4. Select woody landscape plants for specific purposes and site conditions
Audience: Undergraduate

5. Identify appropriate reference material and guides for identifying woody landscape plants
Audience: Undergraduate

LAND ARC/ANTHRO/ART HIST/DS/HISTORY 264 – DIMENSIONS OF MATERIAL CULTURE
4 credits.

This course introduces students to the interdisciplinary field of material culture studies. It is intended for students interested in any professional endeavor related to material culture, including careers in museums, galleries, historical societies, historic preservation organizations, and academic institutions. During the semester, students have varied opportunities to engage with and contemplate the material world to which people give meaning and which, in turn, influences their lives. Sessions combine in some way the following: presentations from faculty members and professionals who lecture on a phase of material culture related to his/her own scholarship or other professional work; discussion of foundational readings in the field; visits to collections and sites on campus and around Madison; discussion of readings assigned by visiting presenters or the professors; and exams and short papers that engage material culture topics.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

LAND ARC 289 – HONORS INDEPENDENT STUDY
1-2 credits.

Independent study as arranged with a faculty member for Honors in the Major.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions

LAND ARC 299 – INDEPENDENT STUDIES
1-3 credits.

Independent study as arranged with a faculty member.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

LAND ARC 311 – INTRODUCTION TO DESIGN FRAMEWORKS AND SPATIAL TECHNOLOGIES
2 credits.

Geodesign considers questions and methods necessary to solve large, complicated, and significant design problems across a range of geographic scales. Introduces methods and technologies related to geodesign problems through interactive lessons, discussions, and laboratory exercises.
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify key geodesign framework questions, models, and iterations
Audience: Undergraduate

2. Locate, evaluate, and interpret representation model data
Audience: Undergraduate

3. Identify the contributions of the interdisciplinary geodesign team and stakeholders in the geodesign framework
Audience: Undergraduate

4. Develop a functional understanding of the geospatial technologies used within the geodesign process
Audience: Undergraduate

LAND ARC 321 – ENVIRONMENT AND BEHAVIOR STUDIO - DESIGNING HEALTH PROMOTING ENVIRONMENTS
4 credits.

Design studio with an emphasis on the application of design principles aimed at promoting people's health and wellbeing in the built environment.
Requisites: LAND ARC 261 and DS 221
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the significant and complex role that open spaces and open space systems play in public health and quality of life.
Audience: Undergraduate

2. Explain the impact the physical environment has on people and the role designs play in creating healthy places.
Audience: Undergraduate

3. Collect and analyze relevant data to influence a design concept and approach.
Audience: Undergraduate

4. Evaluate and apply tools and techniques that are appropriate for development and communication of design decisions.
Audience: Undergraduate

5. Identify, evaluate, describe, and discuss health problems as they intersect with the physical environment at multiple scales.
Audience: Undergraduate

6. Apply a design-thinking approach to understand the design process from concept to implementation.
Audience: Undergraduate

7. Develop and apply creative and critical thinking skills.
Audience: Undergraduate

8. Promote a collaborative studio environment (reminiscent of practice) that encourages communication, time-management, and peer review.
Audience: Undergraduate

LAND ARC 353 – LANDSCAPE ARCHITECTURAL TECHNOLOGY I
3 credits.

Problems dealing with the comprehension and modification of the earth's surface including landform design, preparation of grading plans, earthwork calculations.
Requisites: Declared in Landscape Architecture BLA
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

LAND ARC 354 – LANDSCAPE ARCHITECTURAL TECHNOLOGY II
3 credits.

Problems dealing with construction detailing, including roadways, drainage structures, construction materials, cost estimating, specifications and working drawings.
Requisites: Declared in Landscape Architecture BLA
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

LAND ARC 360 – EARTH PARTNERSHIP RESTORATION EDUCATION: INDIGENOUS ARTS & SCIENCES
1 credit.

Participate in a one-week community-based, intergenerational Institute focused on ecological restoration and water stewardship rooted in Indigenous knowledge while working with Native Nations in Wisconsin. An emphasis is on environmental science aligned with cultural values and indigenous science processes and address environmental, education and health issues through restoration and stewardship action. Learn culturally accurate and authentic resources about tribal sovereignty, history, and culture and contemporary issues relevant to each community. Through hands-on stewardship action, a greater sense of self and diversity of perspectives related to impacts of climate change and preserving biodiversity will be gained.
Requisites: Junior standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, for 3 number of completions
Last Taught: Summer 2025
Learning Outcomes: 1. Articulate the fundamental importance of legitimizing diverse cultural perspectives, knowledge and relationships with the environment.
Audience: Undergraduate

2. Demonstrate knowledge of WI Native Nations, including history, sovereignty, government structure, treaties and culture.
Audience: Undergraduate

3. Communicate effectively and professionally in our multicultural society informed by place (local culture, history, ecology).
Audience: Undergraduate

4. Articulate an approach to restoration education and stewardship that considers diverse perspectives and assets related educational equity and inclusion.
Audience: Undergraduate

5. Apply sustainability principles and/or frameworks to addressing the challenge for water stewardship and Indigenous cultural practices related to impacts of climate change and preserving biodiversity.
Audience: Undergraduate

6. Analyze sustainability issues and/or practices using a systems-based approach including indigenous ways of knowing.
Audience: Undergraduate

LAND ARC/ENVIR ST 361 – WETLANDS ECOLOGY
3 credits.

Types, origins, settings, and structure of wetlands. Physical, biological, and cultural values, uses and assessments. Physical and biological characteristics and dynamics. Protection, management and restoration.
Requisites: (ZOOLOGY/BIOLOGY 101 and 102), ZOOLOGY/BIOLOGY/BOTANY 152, ZOOLOGY 153, (BIOCORE 381 and 382), BIOLOGY/BOTANY 130, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain what a wetland is and describe the attributes (physical and biological) currently used to classify wetlands.
Audience: Both Grad & Undergrad

2. Explain why which attributes are included in a definition matters with regard to wetland conservation
Audience: Both Grad & Undergrad

3. Describe the global distribution of wetlands and explain how the geomorphological features of the earth, its orbit, as well as the properties of its atmosphere contribute to this distribution.
Audience: Both Grad & Undergrad

4. Identify and describe the physical characteristics and dynamics of water, how these influence biogeochemical cycles and how they all influence the morphology, physiology, and behavior of wetland organisms.
Audience: Both Grad & Undergrad

5. Describe the hydrology and soils, and the characteristic plants and animals of the major Wisconsin wetland types and their geographical locations.
Audience: Both Grad & Undergrad

6. Apply the contemporary theories, concepts, and understanding of wetland ecology to their own research projects, and/or to evaluating and suggesting solutions to a contemporary issue regarding the preservation, restoration, or management of wetlands.
Audience: Graduate

LAND ARC 363 – EARTH PARTNERSHIP: RESTORATION EDUCATION FOR EQUITY AND RESILIENCE
3 credits.

Ecological restoration education utilizes the power of place to work towards social justice and sustainability. Work with Native Nations and community partners to apply Earth Partnership's 10 Step process. This process includes historical, cultural, ecological, and social justice components. Learn about assets-based, culturally relevant approaches to working with community partners. Interact with guest speakers and partners to experience firsthand different perspectives on environment, cultural priorities, protocols for interaction, and opportunities for relationship building. Work on community-based stewardship projects and reflect upon your epistemological relationship to land and people as global citizens.
Requisites: Junior standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, for 2 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate the fundamental importance of legitimizing diverse cultural perspectives, knowledge and relationships with the environment.
Audience: Undergraduate

2. Communicate effectively and professionally with community partners about environmental science and restoration informed by place (local culture, history, ecology).
Audience: Undergraduate

3. Reflect upon and share knowledge about local to global community collaboration, place-based education and the importance of historical socio-cultural perspectives for restoration in the community.
Audience: Undergraduate

4. Use sustainability principles for developing personal goals and professional values to reflect upon and articulate a personal land ethic or personal connection to the land and how it guides your actions.
Audience: Undergraduate

5. Articulate an approach to restoration education and stewardship that considers diverse perspectives and assets related to educational equity and inclusion.
Audience: Undergraduate

6. Apply sustainability principles and/or frameworks to addressing the challenge for water stewardship and Indigenous cultural practices related to impacts of climate change and preserving biodiversity.
Audience: Undergraduate

LAND ARC 366 – INTRODUCTION TO ARCHITECTURAL AND ENVIRONMENTAL DESIGN
3 credits.

Introduces beginning design students to the interdisciplinary processes used in solving three-dimensional design problems for both exterior and interior spaces. Allows students to understand the integration between architectural design, site design and interior design, and how these design realms create physical and sensory experiences in our everyday lives. Helps students develop fundamental verbal and graphic communication skills used in the professional design world. Questions explored in this course include: How to humans experience their environment? How do we perceive and interact with spaces where we live, work, and play? What makes great interior and exterior spaces? How do designers think to solve creative spatial design problems?
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Develop an understanding of the design professions of architecture, landscape architecture, and interior design and how they integrate to create holistic environments for living, working, socialization, and recreation.
Audience: Undergraduate

2. Apply the design processes used by designers to create effective, sustainable, resilient, and human-scaled spaces and places.
Audience: Undergraduate

3. Understand how humans experience both interior and exterior spaces through a variety of design encounters.
Audience: Undergraduate

4. Increase awareness of spatial manipulation, with emphases on the analysis of space, two and three-dimensional ordering principles, designing in context, scale, and basic design theories.
Audience: Undergraduate

5. Develop an increased awareness of problem-solving and solution-generating activities, including the establishment of basic design and graphic communication skills that will be further developed in subsequent courses (and during your career as a designer).
Audience: Undergraduate

LAND ARC/ENVIR ST/F&W ECOL/G L E/GEOG/GEOSCI 371 – INTRODUCTION TO ENVIRONMENTAL REMOTE SENSING
3 credits.

Introduction to the Earth as viewed from above, focusing on use of aerial photography and satellite imagery to study the environment. Includes physical processes of electromagnetic radiation, data types and sensing capabilities, methods for interpretation, analysis and mapping, and applications.
Requisites: (Sophomore standing and MATH 113, 114, or 171), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025

LAND ARC 373 – MINDFULNESS IN RESTORATIVE ENVIRONMENTS
3 credits.

Explore the intersection of nature-based mindfulness practices and design of restorative outdoor environments that support health and well-being in public places, including school gardens, botanical gardens, and campus natural areas, with a focus on sensory engagement and sense of belonging. Design and co-design restorative environments and features through a participatory planning process with community partners.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply skills with which to observe, interpret, analyze, and design restorative outdoor environments in public places.
Audience: Undergraduate

2. Apply co-design and participatory planning methods and processes.
Audience: Undergraduate

3. Recognize and comprehend how specific environmental design approaches and features can support well-being of people in outdoor places.
Audience: Undergraduate

4. Recognize and apply concepts and theories of nature-based mindfulness and restorative natural environments.
Audience: Undergraduate

5. Apply principles of community-based engagement and learning for developing personal goals and professional values.
Audience: Undergraduate

6. Use knowledge to build empathy and appreciation for the complexities of one's own and other people's perspectives.
Audience: Undergraduate

LAND ARC 375 – SPECIAL TOPICS
1-4 credits.

Exploration of special issues or problems in landscape architecture. Topic and faculty vary.
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate critical thinking and the ability to explore ideas and synthesize information, both independently and in collaboration with interdisciplinary team members.
Audience: Undergraduate

2. Understand, apply and evaluate the principles, theories and research findings underlying landscape architecture.
Audience: Undergraduate

3. Integrate social, cultural, ecological and technological dimensions in solving design problems.
Audience: Undergraduate

LAND ARC 380 – PLANTS FOR ECOLOGICAL DESIGN I
2 credits.

Plants as the basis for ecological landscape design in urban and rural settings in late summer, fall, and early winter and their role in creating beautiful, resilient, and high performing outdoor spaces that enhance human health and well-being and provide a number of global ecosystem services. Study plants in their native and designed habitats to understand the relationships between and among plants and their environment. Identify the aesthetic, structural, functional, and cultural characteristics of key Wisconsin native plants and a variety of non-invasive horticultural species as well as the composition, structure, and functions of forest, wetland, and grassland communities. Express the essence and cultural meaning of plants and plant communities through hand and digital graphics and writing.
Requisites: LAND ARC 250, (BOTANY 100, BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY/BOTANY 152, or BIOCORE 381 and 382), and sophomore standing, or graduate/professional standing
Course Designation: Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the aesthetic, functional, and cultural characteristics of key native plants of Wisconsin's forests, wetlands and grasslands as well as a variety of horticultural species as they appear in late summer, fall, and early winter. Use them together to create beautiful, resilient and high performing outdoor spaces that enhance human health and well-being and provide global ecosystem services
Audience: Both Grad & Undergrad

2. Match the plant species used in design to the unique environmental conditions of each site so that they enhance and do not detract from beneficial ecosystem services.
Audience: Both Grad & Undergrad

3. Compile a personal plant portfolio consisting of a minimum of 50 woody and herbaceous plants and information on each plant's form, function and ecosystem contributions
Audience: Both Grad & Undergrad

4. Select plants for a landscape design using a process that begins with and is guided by an understanding of the composition, structure, and dynamics of the natural plant communities found in the region
Audience: Both Grad & Undergrad

5. Perform a literature review of current understandings of the ecosystem services provided by specific plants or propose an experiment or monitoring system to measure ecosystem services in the field.
Audience: Graduate

6. Use hand graphics, notes, and mapping and sampling techniques to illustrate the character of individual plants and the composition and structure of plant communities in the field.
Audience: Both Grad & Undergrad

7. Apply sustainability principles and/or frameworks to address the challenges of creating sustainable cities and communities, and prevent the extinction of species
Audience: Both Grad & Undergrad

8. Use sustainability principles for developing personal goals and professional values
Audience: Both Grad & Undergrad

LAND ARC 381 – PLANTS FOR ECOLOGICAL DESIGN II
1 credit.

Plants as the basis for ecological landscape design in urban and rural settings. Study plants in their native and designed habitats to understand the relationships between and among plants and their environment in late winter and early spring. Identify the aesthetic, functional, and cultural characteristics of key Wisconsin native plants and plant communities as well as a variety of non-invasive horticultural species. Discuss how to use plants together in settings with environmental conditions to which they are adapted in order to create resilient and high-performing outdoor spaces that enhance human health and well-being and provide a number of global ecosystem services.
Requisites: LAND ARC 380 or Graduate/professional standing
Course Designation: Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the abilities of plant species to establish, grow and successfully meet design goals based on ultimate size and shape at various life stages, rate of growth, ecological relationships, and aesthetic characteristics of leaves, bark, flower, fruit, habit, and form in both urban and rural settings.
Audience: Both Grad & Undergrad

2. Select plants for a landscape design using a process that begins with and is guided by an understanding of the composition, structure, and dynamics of the natural plant communities found in the region
Audience: Both Grad & Undergrad

3. Use hand graphics, notes, and mapping and sampling techniques to illustrate the character of individual plants and the composition and structure of plant communities in the field to compile a personal plant portfolio for future reference consisting of a core set of 50 or more plant species in late winter and early spring growing conditions
Audience: Both Grad & Undergrad

4. Perform a literature review of current understandings of the ecosystem services provided by specific plants or propose an experiment or monitoring system to measure services in the field.
Audience: Graduate

5. Apply sustainability principles and/or frameworks to address the challenges of creating sustainable cities and communities, and prevent the extinction of species
Audience: Both Grad & Undergrad

6. Use sustainability principles for developing personal goals and professional values
Audience: Both Grad & Undergrad

LAND ARC 397 – INTERNSHIP IN LANDSCAPE ARCHITECTURE
1 credit.

Integrate knowledge and theory learned in the classroom with practical application and skills development in a professional setting. Includes applied experience and making professional connections in the field of landscape architecture. Apply landscape architecture concepts, practice problem solving-skills, explore multidisciplinary approaches, develop team-work and interpersonal skills, access and use information resources, reflect upon or address ethical and professional issues.
Requisites: Sophomore standing and declared in Landscape Architecture BLA
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Workplace - Workplace Experience Course
Repeatable for Credit: Yes, for 3 number of completions
Last Taught: Summer 2025
Learning Outcomes: 1. Understand and be able to articulate the day-to-day workings of office culture, including professionalism, ethical office conduct, and proper methods of communication in landscape architecture
Audience: Undergraduate

2. Describe and apply professional relationships with clients and with other business partners (e.g., contractors, product vendors)
Audience: Undergraduate

3. Competently apply landscape architecture concepts in a professional work environment
Audience: Undergraduate

4. Demonstrate ability to apply design theories to solve practical design problems at a variety of scales
Audience: Undergraduate

5. Demonstrate ability to apply design communication skills in a professional setting
Audience: Undergraduate

LAND ARC 400 – STUDY ABROAD IN LANDSCAPE ARCHITECTURE
1-6 credits.

Provides an area equivalency for courses taken on Madison Study Abroad Programs that do not equate to existing UW courses. Current enrollment in a UW-Madison study abroad program
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions

LAND ARC 460 – ADVANCED VISUAL COMMUNICATION IN LANDSCAPE ARCHITECTURE
3 credits.

Focuses on the symbolic and representational computer graphics that are essential elements of design communication in landscape architecture. Reviews the strengths and weaknesses of hand and digital media and the use of both when appropriate. Topics and assignments include advanced hand sketching and graphics, computer graphic techniques, digital photography, advanced digital color theory and rendering, digital image processing, CAD drafting, 2D/3D modeling, image compositing, media formats, and video.
Requisites: LAND ARC 261
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply graphic software programs throughout each stage of the design process.
Audience: Undergraduate

2. Transform design concepts into precise technical drawings and graphical representations.
Audience: Undergraduate

3. Analyze the interrelationships among various graphic software programs within digital workflows, proficiently managing the import and export of design data during transitions.
Audience: Undergraduate

4. Evaluate industry best practices and innovate by creating more effective and personalized processes, either alongside or in departure from traditional drafting and graphic production tools.
Audience: Undergraduate

5. Apply fundamental techniques in drafting, plotting, rendering, and documentation using digital graphic software. Apply advanced composition skills in written,visual, and oral communication to clearly and impactfully deliver design and planning concepts to a diverse audience.
Audience: Undergraduate

6. Develop originality through proficient digital drafting and rendering skills, creating unique works while effectively conveying ideas through visual, written, and oral communication.
Audience: Undergraduate

7. Explore fundamental visual communication principles through exercising one's graphic capabilities, practicing industry-standard visual communication protocols, and cultivating self-learning abilities.
Audience: Undergraduate

LAND ARC/URB R PL 463 – EVOLUTION OF AMERICAN PLANNING
3 credits.

The nature and cultural significance of contemporary methods for the systematic formulation of public policies for community, metropolitan, and state development through comprehensive planning. Historic roots, recent trends and new directions in American planning concepts, institutions and professional specializations.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Evaluate urban form and design using ideas from planning history and contemporary practice.
Audience: Undergraduate

2. Explain the legal, institutional, economic, political or moral justifications for planning.
Audience: Undergraduate

3. Analyze planning as a collective enterprise in relation to individual freedom, politics, autonomy, and private property.
Audience: Undergraduate

4. Explain the concept of the public interest in relation to planning.
Audience: Undergraduate

5. Describe the role of urban planners and the tensions planners face as professionals.
Audience: Undergraduate

6. Evaluate the relevant scales for urban planning, e.g., Individual parcels? Neighborhoods? Communities? Municipalities? Counties? States? Regions? Nations? Watersheds?
Audience: Undergraduate

7. Explain suburbs and the process of suburbanization.Describe the role of race and racism in shaping cities and metropolitan regions.
Audience: Undergraduate

LAND ARC/CHICLA 475 – LATINO URBANISM: DESIGN AND ENGAGEMENT IN THE AMERICAN CITY
3 credits.

Urban design in the 21st century American city explores a new understanding of urban placemaking and development. Explores the intersections of culture, place, and design to critically address how the socioeconomic dynamics that underlie demographic shifts in the U.S. are influencing urban change in the American landscape. Focuses on the evolution and ways by which Latinos shape the built environment, both in the public realm and in the home.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze the role that design, planning, and public engagement have in addressing the needs of Latino communities in the U.S
Audience: Undergraduate

2. Evaluate through a historical lens how socio-economic conditions of Latinos influence choices in the contemporary American city
Audience: Undergraduate

3. Use real world examples to demonstrate how diversity and culture can impact regions, governments, and economies for producing a just city
Audience: Undergraduate

4. Understand the concept of justice in the city through both qualitative and quantitative measure
Audience: Undergraduate

5. Explain the social, economic, and/or environmental dimensions of the sustainability challenges as they relate to planning for Latino communities.

Audience: Undergraduate

6. Analyze the causes of and solutions for the sustainability challenge of marginalized population groups.
Audience: Undergraduate

LAND ARC 511 – GEODESIGN METHODS AND APPLICATIONS
3 credits.

Explore and apply methods and technologies used in the geodesign framework that emphasize collaboration among the design professions, the natural and social sciences, and community stakeholders. Exercises will focus on scenarios within the built and natural environment.
Requisites: LAND ARC 311, GEOG/CIV ENGR/ENVIR ST 377, or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Determine and articulate processes and approaches of a geodesign framework
Audience: Both Grad & Undergrad

2. Assemble, analyze, and share information within each geodesign model
Audience: Both Grad & Undergrad

3. Build and deploy tools for data collection and citizen engagement
Audience: Both Grad & Undergrad

4. Create design iterations, evaluations, and impact analyses using geodesign tools
Audience: Both Grad & Undergrad

5. Apply sustainability principles and/or frameworks to address the challenge of adaptation and landscape change within the built and natural environment
Audience: Both Grad & Undergrad

6. Analyze sustainability issues and/or practices using a systems-based approach
Audience: Both Grad & Undergrad

7. Evaluate published literature related to geodesign principles.
Audience: Graduate

LAND ARC 525 – SOCIAL JUSTICE AND THE URBAN LANDSCAPE
3 credits.

Examines the cultural, social and political interactions that occur in urban landscapes including parks, plazas, streets and other public open spaces. An examination of past and present landscapes as sites of the struggle for social justice. The focus is on urban landscapes of the United States.
Requisites: Junior standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022
Learning Outcomes: 1. Understand how urban landscapes shape struggles for social justice
Audience: Undergraduate

2. Acquire and apply skills with which to analyze the social dimensions of urban landscapes
Audience: Undergraduate

3. Recognize and understand how specific design features influence social relations
Audience: Undergraduate

4. Describe how landscape design styles and ideologies are constitutive of social relations through time and how these continue to operate in contemporary urban landscapes
Audience: Undergraduate

5. Apply concepts and theories of social justice to analyze urban landscape design in terms of race, ethnicity, immigration status, gender, and socioeconomic status, among others
Audience: Undergraduate

6. Apply visual methodologies to reveal the meaning of design drawings, photographs, art as well as assemblages such as landscapes, websites, news articles, videos among others
Audience: Both Grad & Undergrad

7. Apply discourse theory to the web of landscape representations to explain struggles for social justice
Audience: Graduate

LAND ARC/ENVIR ST/GEOG/URB R PL 532 – APPLICATIONS OF GEOGRAPHIC INFORMATION SYSTEMS IN PLANNING
3 credits.

Explores planning-related Geographic Information System (GIS) data, applications, analytical tools, and implementation issues.
Requisites: GEOG/CIV ENGR/ENVIR ST 377 or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Identify how planning agencies use GIS.
Audience: Both Grad & Undergrad

2. Explain the nature, characteristics, and possible ways of analyzing spatial data in a planning context.
Audience: Both Grad & Undergrad

3. Communicate geospatial data and analyses effectively.
Audience: Both Grad & Undergrad

4. Obtain and analyze geospatial data using a range of spatial analysis tools for a number of planning practices.
Audience: Both Grad & Undergrad

5. Conduct site-selection and land-suitability analysis.
Audience: Both Grad & Undergrad

6. Identify ethical issues surrounding access to and use of geospatial data.

Audience: Both Grad & Undergrad

7. Analyze and provide written feedback on undergraduate student presentations.
Audience: Graduate

8. Produce a memo on land-suitability analysis.
Audience: Graduate

LAND ARC 550 – PROFESSIONAL PRACTICE IN LANDSCAPE ARCHITECTURE
3 credits.

Introduction to operational procedures used in professional offices ranging from private landscape architectural design firms to public agencies.
Requisites: Senior standing and declared in Landscape Architecture BLA
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the many forms of professional practice in Landscape Architecture.
Audience: Undergraduate

2. Identify the different practice types through field trips and professional office visits.
Audience: Undergraduate

3. Identify a preferred type of practice and create a career plan.
Audience: Undergraduate

4. Describe the different parts of professional practice that are included in the national licensing exam (LARE) as an introduction to preparing to take the exam.
Audience: Undergraduate

5. Apply the principles of ethical professional practice to the design process.
Audience: Undergraduate

LAND ARC/CIV ENGR/ENVIR ST 556 – REMOTE SENSING DIGITAL IMAGE PROCESSING
3 credits.

Techniques of enhancement and quantification of remote sensing imagery. Emphasis on processing and analyzing data gathered by airborne and satellite sensors. Techniques to quantitatively analyze data from photography, electro-optical scanners, satellite systems, and radar and passive microwave systems. Applications to: agriculture and forestry, geology and soils, water quality, and urban and regional planning.
Requisites: LAND ARC/ENVIR ST/F&W ECOL/G L E/GEOG/GEOSCI 371, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

LAND ARC 560 – PLANTS AND ECOLOGY IN DESIGN
4 credits.

Explores the process of plant selection and placement in the landscape. The desired landscape will be ecologically appropriate to the setting, sustainable, functional in response to goals, and aesthetically pleasing. Acquire an awareness and understanding of the physical characteristics of plant materials and a sensitivity to their needs based on past and present. Emphasis on the recognition of the philosophy of planting design as a dynamic and changing spatial art and science, the relationship between environment and plants, application of design composition principles to plant selection and placement, and functional and utilitarian uses of plants; i.e., the opportunities and constraints for plants in the designed landscape.
Requisites: Declared in Landscape Architecture BLA and PLANTSCI/LAND ARC 263
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Create designs that use ecological principles and plants' aesthetic and functional qualities as key constituents of form-making and placemaking.
Audience: Undergraduate

2. Create designs for holistic ecological impacts beyond conventional utilitarian human centered criteria.
Audience: Undergraduate

3. Identify and record plant species found on a design site as part of SWOT analysis.
Audience: Undergraduate

4. Produce portfolio-quality visual design documentation with a variety of graphic tools, including computer and hand illustrations, well-drafted planting plans and plant schedules that are easily interpreted and conform to professional standards.
Audience: Undergraduate

5. Use a personal design process to create unique design concepts that facilitate strong project approaches.
Audience: Undergraduate

6. Compose and revise multiple design scenarios and iterations to continually improve a concept.
Audience: Undergraduate

7. Engage in constructive design dialogue to advance your approach to design.
Audience: Undergraduate

LAND ARC 561 – HOUSING AND URBAN DESIGN
4 credits.

An application of landscape design principles and problem-solving methods to housing and urban issues with attention to physical site design, land-use controls, and the relationship between housing and associated land uses. The built environment is continuously changing through multiple land development-and redevelopment-decisions. Public policies on housing, transportation, mortgage financing, and taxation, in conjunction with changing demographics and lifestyle preferences, are just some of the factors that influence the evolving structure and function of the built environment. Landscape architects can play important roles--through design, civic engagement, and policy advocacy--in making our cities and suburbs healthier and more sustainable. Studio projects focus on the central city and/or suburbs.
Requisites: LAND ARC 321
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023

LAND ARC 562 – URBAN DESIGN AND OPEN SPACE SYSTEMS
4 credits.

With a focus on public open spaces as shared social places, emphasizes the social dimensions and connectedness of urban design and open space systems through perspectives from allied disciplines, such as landscape architecture, architecture, urban planning, real estate development, urban ecology, civil engineering, and the visual arts. Integrates human activity requirements and experiences with physical (or built) and natural site features. Builds upon technical design skills developed in prior studio work, paying close attention to form-giving, place-making, and sustainability at the site and neighborhood scale.
Requisites: LAND ARC 321 and 560
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify how land use regulations and other public policies shape the built environment and which, in turn, influence human health, safety, and well-being
Audience: Undergraduate

2. Describe how networks of formal and informal open spaces function in a variety of urban contexts and are planned and designed by interdisciplinary teams
Audience: Undergraduate

3. Describe how individuals and social groups interact in and respond to particular open space settings and land uses
Audience: Undergraduate

4. Illustrate urban design principles and best practices that influence architectural massing and placement in relationship to transportation and open spaces systems
Audience: Undergraduate

5. Demonstrate how open space can function as sustainable social, economic, and environmental infrastructure systems that support human health and well-being
Audience: Undergraduate

LAND ARC 563 – DESIGNING SUSTAINABLE AND RESILIENT REGIONS
4 credits.

Exploration of broad scale design issues to develop synthesis and design skills. Uses spatial form and bioregional cultural, ecological and environmental concepts to solve land use and conservation problems. Regional design requires advanced techniques for inventory, analysis, and design to help in understanding complex trends, policy and design impacts, hazard mitigation, design intervention suitability, design guidelines, and systems level design. These techniques help us explore the relationships between regions and sites, especially regional implications of site design decisions and site design impacts on regional characteristics and systems.
Requisites: LAND ARC 562
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the significance and complexity of a regional landscape and how it serves as context for a smaller study area (e.g. the relationship of place to its natural and cultural surroundings).
Audience: Undergraduate

2. Appreciate, respect, and empathize with project clients and reconcile client needs with the creative potentials of a region.
Audience: Undergraduate

3. Analyze and describe natural and cultural processes in a regional study area, especially the forces shaping and transforming the region over time.
Audience: Undergraduate

4. Discover, describe, and analyze forms, patterns, and materials existing in a region; evaluate their potential for use as land use determinants or design inspiration.
Audience: Undergraduate

5. Evaluate issues of scale (e.g. ecological, cultural, measurement, visual, experiential, clients, and users) and potential implications for landscape planning and regional design decisions and on selection of tools and techniques.
Audience: Undergraduate

6. Evaluate and apply tools and techniques that are appropriate for development and communication of regional design decisions (e.g. research, interviews, literature review, inventory, interpretation, suitability analysis, GIS spatial analysis, preservation, conservation, restoration, visualization, representation, and presentation).
Audience: Undergraduate

7. Synthesize, evaluate, and apply sources of creativity and inspiration in the landscape planning and regional design process (e.g. precedents, innovation, collaboration, observation, interviews; rational, intuitive, design typologies, and arbitrary bases for landscape planning and design decisions)
Audience: Undergraduate

8. Communicate information clearly, concisely, and effectively throughout the planning and design process (e.g., from inventory & analysis through concepts and final recommendations).
Audience: Undergraduate

LAND ARC/F&W ECOL/ZOOLOGY 565 – PRINCIPLES OF LANDSCAPE ECOLOGY
2 credits.

Emphasizes the importance of spatial patterns at broad scales. Concepts and applications are covered.
Requisites: (ZOOLOGY/BOTANY/F&W ECOL 460 or F&W ECOL 550) and (STAT 301, 371, or F&W ECOL/STAT 571), or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019

LAND ARC/ENVIR ST 581 – PRESCRIBED FIRE: ECOLOGY AND IMPLEMENTATION
3 credits.

Covers the use of live fire in land management and provides a background in fire ecology, fire behavior, fire effects, and the prediction of fire behavior for wetland, prairie and savanna fuels. Instruction includes field training with live fire exercises and the use of fire management equipment. Participate in prescribed burns outside of scheduled class times. Confers certificates of completion that qualify an individual to participate on prescribed fire crews with public and private sector organizations.
Requisites: Junior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand fire ecology, the role that fires play in shaping fire-adapted ecosystems, and the use of prescribed fire for land management.
Audience: Both Grad & Undergrad

2. Qualify for working on any prescribed burn or fire suppression crew located anywhere in the U.S., and become familiar with organizations providing experiences using prescribed fire.
Audience: Both Grad & Undergrad

3. Become familiar with the restoration history, including the role of fire, for the UW Arboretum.
Audience: Both Grad & Undergrad

4. Demonstrate safe and appropriate use of Protective Personal Equipment (PPE) for fire.
Audience: Both Grad & Undergrad

5. Demonstrate proficient knowledge of national standards for participating in prescribed burn or fire suppression crews anywhere in the U.S.
Audience: Both Grad & Undergrad

6. Explain the social, economic, and/or environmental dimensions of the sustainability challenge(s) of fire for land management.
Audience: Both Grad & Undergrad

7. Apply sustainability principles and/or frameworks to addressing the challenge and fundamental concepts related to fire ecology in the Upper Midwest.
Audience: Both Grad & Undergrad

8. Gain enhanced knowledge and skills for fire management leadership.
Audience: Graduate

9. Demonstrate applied knowledge of fire ecology and the effects of fire on plant, fungi or animal communities.
Audience: Graduate

LAND ARC 590 – SPECIAL TOPICS
1-4 credits.

Exploration of special issues or problems in landscape architecture.
Requisites: Junior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2022
Learning Outcomes: 1. Demonstrate critical thinking and the ability to explore ideas and synthesize information, both independently and in collaboration with interdisciplinary team members to identify and solve complicated landscape and planning problems.
Audience: Both Grad & Undergrad

2. Understand, analyze, and apply design and planning theories and principles to urban and rural landscapes to benefit human living conditions.

Audience: Both Grad & Undergrad

3. Integrate humanistic, scientific, legal, political, economic, social, ecological, and technological dimensions in solving novel design and planning problems concerning the betterment of rural and urban natural and cultural landscapes.
Audience: Both Grad & Undergrad

4. Demonstrate advanced critical thinking and the ability to explore ideas in depth and synthesize information with a high degree of competence.
Audience: Graduate

5. Demonstrate an advanced understanding of landscape spaces, functions, and dynamics, as well as interactions between people and the built and natural environment.
Audience: Graduate

6. Engage critically with the scholarship and theory of landscape architecture.
Audience: Graduate

LAND ARC 610 – LANDSCAPE ARCHITECTURE CAPSTONE I
3 credits.

Develop a comprehensive design and planning proposal that defines a real-world client's needs, program, goals, and objectives from a regional to site scale. Covers project research, site visits, literature review, precedent studies, inventory and analysis mapping, and programmatic development studies.
Requisites: LAND ARC 562
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Acquire base materials and data, and prepare a GIS database
Audience: Undergraduate

2. Manage project relationships with clients and other stakeholder groups
Audience: Undergraduate

3. Conduct design and planning critiques of peer projects
Audience: Undergraduate

4. Inventory and analyze relevant aspects of the region, community, and site (historic to present)
Audience: Undergraduate

5. Analyze client goals and develop a list of preliminary program for a framework plan
Audience: Undergraduate

6. Define the project goals, scope, and evaluation criteria
Audience: Undergraduate

7. Produce a critical review of the literature relevant to your research topic
Audience: Undergraduate

8. Produce a critical review of precedent projects relevant to your type of project and program
Audience: Undergraduate

9. Produce an initial community framework plan with programmatic spatial recommendations
Audience: Undergraduate

10. Produce final base materials for community and site scale design and planning
Audience: Undergraduate

11. Present and defend capstone project proposal
Audience: Undergraduate

LAND ARC 611 – LANDSCAPE ARCHITECTURE CAPSTONE II
4 credits.

Problems in landscape design, planning, and management of projects from a regional to site scale. Provides an opportunity for synthesis of the knowledge, skills, and approaches learned in previous course work.
Requisites: LAND ARC 610
Course Designation: Gen Ed - Communication Part B
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate competence and critical judgement in applying intellectual and technical skills necessary for site and landscape-scale design, in particular skills of problem-solving using site inventory/analysis; spatial/temporal analysis; programming; synthesis; oral, written, and visual communication; construction implementation; and post-occupancy evaluation.
Audience: Undergraduate

2. Demonstrate critical thinking and the ability to explore ideas and synthesize information, both independently and in collaboration with interdisciplinary team members to identify and solve complicated landscape design and planning problems.
Audience: Undergraduate

3. Understand, apply, and evaluate the principles, theories, and recent research findings in the discipline of landscape architecture.
Audience: Undergraduate

4. Integrate humanistic, scientific, legal, political, economic, social, ecological, and technological dimensions in solving novel design and planning problems concerning the betterment of rural and urban natural and cultural landscapes.
Audience: Undergraduate

5. Understand, analyze, and apply design and planning theories and principles to urban and rural landscapes to benefit human living conditions.

Audience: Undergraduate

LAND ARC 621 – DESIGNING HEALTHY COMMUNITIES SEMINAR
3 credits.

Sustainable community planning and design principles aimed at promoting human health and wellbeing as it relates to the quality of the physical environment. Special topics include access to settings that promote physical activity, social interaction and mental restoration; walk- and bikeability; access healthy food, complete streets, place-making, and biophilic design, active living assessment tools, and architectural sustainability certification systems focusing on the health benefits of good community design.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021
Learning Outcomes: 1. Think critically about the impact the physical environment has on people and the role environmental designers play in creating healthy places.
Audience: Graduate

2. Identify and summarize relevant literature by noted authors in the field and encourage them to seek further knowledge by exploring research, precedents and best-case scenarios.
Audience: Graduate

3. Demonstrate knowledge about health problems that intersect with the physical environment.
Audience: Graduate

4. Integrate environment-health performance standards and metrics and their functional value in design programming.
Audience: Graduate

5. Explain the social, economic, and/or environmental dimensions of the sustainability challenge(s) of active living in the built environment.
Audience: Graduate

6. Apply sustainability principles and/or frameworks to addressing the challenge of health promotion through planning and design of public open space.
Audience: Graduate

LAND ARC/DS 639 — CULTURE AND BUILT ENVIRONMENT
3 credits.

Explores cultural values embedded in buildings through understanding physical configurations, social organizations, practiced/symbolic/representational aspects of buildings. Covers a wide range of cultures and the built environments they produce including examples from the Americas, the Middle East, as well as those of the many ethnic minorities in the U.S.
Requisites: Junior standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

LAND ARC 668 — RESTORATION ECOLOGY
3 credits.

Restoration is an approach to the conservation of native species, plant communities, and ecosystems. It is an interdisciplinary global enterprise practiced by private and public sector professionals and dedicated volunteers of all ages. Covers both the theory and practice of restoration ecology and examine the current opportunities, challenges, and controversies that underlie the field. The goal may be to preserve nature, but restoration is a fundamentally human enterprise-it is accomplished for and by people. Therefore we cover information from ecology, sociology, and the humanities.
Requisites: BIOCORE 381, ZOOLOGY/BIOLOGY/BOTANY 152, ZOOLOGY/BIOLOGY 102, BIOLOGY/BOTANY 130, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the scope, opportunities and limitations of contemporary restoration ecology, describe its interdisciplinary roots in theory and practice, and discuss its relationship to other conservation practices.
Audience: Both Grad & Undergrad

2. Explain what we know and don't know about restoration ecology, describe the several modes of inquiry that contribute to our knowledge, and gain hands-on experience with several of the procedures involved.
Audience: Both Grad & Undergrad

3. Explain the reasoning behind the collaborative, interdisciplinary, iterative and adaptive restoration problem-solving process.
Audience: Both Grad & Undergrad

4. Explain the importance of working with people and identify when during a restoration project collaboration occurs.
Audience: Both Grad & Undergrad

5. Work with a team to create key components of a restoration project for an actual site, and present them in a formal written document using text, graphics, and photographs.
Audience: Both Grad & Undergrad

6. Present the study findings to an audience of peers, faculty, and stakeholders, and apply feedback
Audience: Both Grad & Undergrad

7. Apply current principles, theories, concepts, and practices of restoration ecology to their own research projects, and/or to evaluate and suggest solutions to contemporary issues regarding the preservation, restoration, or management of native plant communities.
Audience: Graduate

LAND ARC 677 – CULTURAL RESOURCE PRESERVATION AND LANDSCAPE HISTORY
3 credits.

Provides an introduction to cultural landscape studies as a corollary to cultural conservation in public folklore, environmental planning, natural and cultural resource management, landscape architecture, and the history of landscape architecture. Includes varied concepts of cultural landscape, key historical and cultural landscape research methodologies, and a range of preservation and conservation types involving cultural landscapes, traditional cultural properties, and intangible and tangible cultural heritage. Observe, research, and write about cultural landscapes, gain an understanding of cultural, historical, and natural dynamics of the (built) environment, and become acquainted with aspects of cultural conservation and landscape preservation nationally and internationally.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Know, critique, and apply the National Park Service's cultural landscape terms, definitions, and descriptive tools for cultural landscape evaluation and preservation.
Audience: Both Grad & Undergrad

2. Identify key national cultural resource preservation programs, policies, regulatory instruments, and sites.
Audience: Both Grad & Undergrad

3. Describe common techniques of national cultural landscape documentation, preservation, and interpretation, including those advocated in the National Register's Traditional Cultural Properties Bulletin 38, NPS Preservation Brief 36, and the Historic American Landscapes Survey (HALS).
Audience: Both Grad & Undergrad

4. Engage in debates about how cultural landscape preservation has served some interests at the expense of others.
Audience: Both Grad & Undergrad

5. Explain emerging landscape preservation practices focused on equity and inclusion.
Audience: Both Grad & Undergrad

6. Apply cultural landscape theories, concepts, and research to their own research projects
Audience: Graduate

7. Critique cultural landscape preservation and conservation nomination requirements, reporting formats, and submission and review processes across varied local, state, federal, and international preservation programs
Audience: Graduate

LAND ARC 681 – SENIOR HONORS THESIS
2-4 credits.

Individual mentored study for seniors completing theses for Honors in the Major as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2021

LAND ARC 682 – SENIOR HONORS THESIS
2-4 credits.

Individual mentored study for seniors completing theses for Honors in the Major as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2022

LAND ARC 691 – SENIOR THESIS
4 credits.

Individual mentored study for seniors completing theses, as arranged with a faculty member.
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Spring 2001

LAND ARC 692 – SENIOR THESIS
4 credits.

Individual mentored study for seniors completing theses, as arranged with a faculty member.
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Spring 1996

LAND ARC/ENVIR ST/SOIL SCI 695 – APPLICATIONS OF GEOGRAPHIC INFORMATION SYSTEMS IN NATURAL RESOURCES
3 credits.

Modern GIS desktop and web-based workflows, analyses, and visualizations related to natural resource and environmental planning issues and communication. Guest lectures from agency and industry professionals.
Requisites: LAND ARC 311, ENVIR ST/CIV ENGR/GEOG 377, or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop and apply appropriate geospatial analysis workflows related to the study and conservation of natural resources.
Audience: Both Grad & Undergrad

2. Identify and evaluate sources of primary and secondary geospatial data.

Audience: Both Grad & Undergrad

3. Develop methods for collecting primary geospatial data
Audience: Both Grad & Undergrad

4. Communicate analytical results in visual and graphical forms.
Audience: Both Grad & Undergrad

5. Evaluate literature related to geospatial technologies in environmental science and natural resource issues.
Audience: Graduate

LAND ARC 699 – SPECIAL PROBLEMS-LANDSCAPE ARCHITECTURE
1-5 credits.

Independent study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

LAND ARC 710 – THEORIES OF LANDSCAPE CHANGE
2 credits.

Theories of landscape change in the arts and sciences. Contributions of the scientific method and humanistic frameworks to major issues in landscape architecture.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Define and use theory as a way of knowing, and differentiate it from other forms of knowledge.
Audience: Graduate

2. Compare and contrast explanatory and normative theory, and discuss the kinds of issues in which each is applied.
Audience: Graduate

3. Describe the contributions of the scientific framework and humanist approaches to major issues in landscape studies.
Audience: Graduate

4. Compare different theories of landscape change with regard to their positions on ontology, epistemology, methodology, and universality.
Audience: Graduate

5. Discuss various perspectives and explanations as to how landscapes change.
Audience: Graduate

LAND ARC 720 – CRITICAL INQUIRY INTO LANDSCAPE DESIGN EXPRESSION
2 credits.

Normative design theory as it relates to historical and contemporary aesthetic expression in landscape design. Review of critical theory and meaning associated with a broad landscape architecture typology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Explain and evaluate how groups of people (academics, intellectuals, critics, designers, etc.) create, define, and defend normative positions.
Audience: Graduate

2. Explain how normative theories in landscape architecture have changed through time.
Audience: Graduate

3. Explain how values are expressed in physical form in the landscape.
Audience: Graduate

4. Defend a normative position with regard to a landscape project.
Audience: Graduate

LAND ARC 740 – RESEARCH IN LANDSCAPE ARCHITECTURE
3 credits.

Overview of research: Logic and language of the process, substantive issues, criticism of research literature, developments of detailed proposals.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022

LAND ARC/ANTHRO/ART HIST/DS/HISTORY 764 – DIMENSIONS OF MATERIAL CULTURE
4 credits.

This course introduces students to the interdisciplinary field of material culture studies. It is intended for students interested in any professional endeavor related to material culture, including careers in museums, galleries, historical societies, historic preservation organizations, and academic institutions. During the semester, students have varied opportunities to engage with and contemplate the material world to which people give meaning and which, in turn, influences their lives. Sessions combine in some way the following: presentations from faculty members and professionals who lecture on a phase of material culture related to his/her own scholarship or other professional work; discussion of foundational readings in the field; visits to collections and sites on campus and around Madison; discussion of readings assigned by visiting presenters or the professors; and exams and short papers that engage material culture topics.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

LAND ARC 866 – SEMINAR IN NATURAL PLANT COMMUNITY RESTORATION AND MANAGEMENT
1 credit.

Presentations on topics related to plant community management and restoration.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Critically evaluate current ideas, questions, issues, research methodologies, and underlying philosophies within the theory and practice of restoration ecology.
Audience: Graduate

2. Explain topics relating to the past, present, and future of restoration in the Midwest.
Audience: Graduate

3. Synthesize and analyze major course themes.
Audience: Graduate

LAND ARC 940 – GRADUATE SEMINAR
1-2 credits.

Individual research, group discussion and workshop covering selected problems relating to the environment and landscape architecture.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024
Learning Outcomes: 1. Engage in/lead discussions about scholarship and gain insights about new ideas within the fields of landscape design, planning, conservation, and restoration.
Audience: Graduate

2. Present research/design projects to engage in discussions that are appropriate to the project's stage of development.
Audience: Graduate

3. Review the presentations of others and offer constructive comments to the presenter.
Audience: Graduate

4. Locate, summarize, critique, and contextualize scholarly journal articles, and present their findings to an audience of their peers.
Audience: Graduate

LAND ARC 990 – RESEARCH
1-12 credits.

Individual mentored research and study for completing theses, as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

LAND ARC 999 – INDEPENDENT STUDIES
1-3 credits.

Opportunity to explore concepts or issues of interest.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

LATIN (CLASSICS) (LATIN)

LATIN 103 – FIRST SEMESTER LATIN
4 credits.

Forms and syntax, with simple translation.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize, identify, and explain basic forms of the classical Latin language.
Audience: Undergraduate

2. Recognize, identify, and explain basic syntax of the classical Latin language.
Audience: Undergraduate

3. Recognize, identify, and explain basic vocabulary of the classical Latin language.
Audience: Undergraduate

LATIN 104 – SECOND SEMESTER LATIN
4 credits.

Forms and syntax, with translation of easy prose.
Requisites: LATIN 103
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize, identify, and explain most forms of the classical Latin language.
Audience: Undergraduate

2. Recognize, identify, and explain most syntax of the classical Latin language.
Audience: Undergraduate

3. Recognize, identify, and explain most vocabulary of the classical Latin language.
Audience: Undergraduate

LATIN 305 – THIRD SEMESTER LATIN
4 credits.

Brief review of Latin grammar and vocabulary. Extensive reading from several authors.
Requisites: LATIN 104, 391, or graduate/professional standing
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize, identify, and explain all forms of the classical Latin language.
Audience: Undergraduate

2. Recognize, identify, and explain all syntax of the classical Latin language.
Audience: Undergraduate

3. Recognize, identify, and explain all vocabulary of the classical Latin language.
Audience: Undergraduate

LATIN 306 – FOURTH SEMESTER LATIN
4 credits.

Close literary analysis of the structure, style, and language of several Roman poets and prose writers. A critical rather than a purely historical approach to these authors.
Requisites: LATIN 305 or graduate/professional standing
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply knowledge of forms, syntax, and vocabulary to the reading of classical Latin texts.
Audience: Undergraduate

2. Demonstrate accuracy in translation of classical Latin texts.
Audience: Undergraduate

3. Demonstrate basic competency in reading continuous classical Latin texts.
Audience: Undergraduate

LATIN 391 – ELEMENTARY INTENSIVE LATIN
4 credits.

An intensive introduction to the grammar and vocabulary of Classical Latin, the language of ancient Rome. Complete the equivalent of LATIN 103 104 in a single semester. Gain skills in preparation for reading Latin authors in the original. While focus is primarily on written grammar and translation, also touches on aspects of Roman culture, history and literature.
Requisites: Not open to students with credit for LATIN 103 or 104
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize, identify, and explain most forms of the classical Latin language.
Audience: Undergraduate

2. Recognize, identify, and explain most syntax of the classical Latin language.
Audience: Undergraduate

3. Recognize, identify, and explain most vocabulary of the classical Latin language.
Audience: Undergraduate

4. Through intensive study, acquire and demonstrate skills necessary for reading Latin authors.
Audience: Undergraduate

LATIN 401 – READINGS IN LATIN LITERATURE
3 credits.

Writers of the Republic studied in a historical and cultural context.
Requisites: LATIN 306 or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Frgn Lang - 5th + semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply knowledge of forms, syntax, and vocabulary to the reading of classical Latin texts.
Audience: Both Grad & Undergrad

2. Apply competency in reading continuous classical Latin texts.
Audience: Both Grad & Undergrad

3. Demonstrate basic critical reading skills of classical Latin texts.
Audience: Both Grad & Undergrad

4. Demonstrate competency in reading continuous Latin texts related to the student's area of research.
Audience: Graduate

LATIN 505 – ELEMENTARY PROSE COMPOSITION
3 credits.

Survey of Latin syntax and idioms.
Requisites: LATIN 302 or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019
Learning Outcomes: 1. Analyze ancient classical Latin texts.
Audience: Undergraduate

2. Interpret ancient classical Latin texts.
Audience: Undergraduate

3. Evaluate ancient classical Latin texts.
Audience: Undergraduate

4. Explain and assess the position of the course topic in relation to the classical and near eastern tradition.
Audience: Undergraduate

5. Demonstrate competence in current scholarly approaches to course readings.
Audience: Graduate

LATIN 515 – VERGIL
3 credits.

Through intensive translation and discussion of Vergil's Latin, hone ability to translate, interpret, and discuss Latin poetry.
Requisites: LATIN 302 or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019
Learning Outcomes: 1. Analyze ancient classical Latin texts.
Audience: Undergraduate

2. Interpret ancient classical Latin texts.
Audience: Undergraduate

3. Evaluate ancient classical Latin texts.
Audience: Undergraduate

4. Explain and assess the position of the course topic in relation to the classical and near eastern tradition.
Audience: Undergraduate

5. Demonstrate competence in current scholarly approaches to course readings.
Audience: Graduate

LATIN 519 – LATIN POETRY
3 credits.

Latin poetry of the Republic and/or Empire.
Requisites: LATIN 302 or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze ancient classical Latin texts.
Audience: Undergraduate

2. Interpret ancient classical Latin texts.
Audience: Undergraduate

3. Evaluate ancient classical Latin texts.
Audience: Undergraduate

4. Explain and assess the position of the course topic in relation to the classical and near eastern tradition.
Audience: Undergraduate

5. Demonstrate competence in current scholarly approaches to course readings.
Audience: Graduate

LATIN 520 – ROMAN DRAMA
3 credits.

Plautus, Terence, Seneca, fragmentary remains of Republican drama, and classical and post-classical receptions. Includes discussion of genre, performance, and sociohistorical context
Requisites: LATIN 302 or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

LATIN 523 – ROMAN SATIRE
3 credits.

One or a combination of: fragments of Lucillius; Horace; Persius, Juvenal; later satire poets.
Requisites: LATIN 302 or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2019
Learning Outcomes: 1. Analyze ancient classical Latin texts.
Audience: Undergraduate

2. Interpret ancient classical Latin texts.
Audience: Undergraduate

3. Evaluate ancient classical Latin texts.
Audience: Undergraduate

4. Explain and assess the position of the course topic in relation to the classical and near eastern tradition.
Audience: Undergraduate

5. Demonstrate competence in current scholarly approaches to course readings.
Audience: Graduate

LATIN 524 – ROMAN NOVEL
3 credits.

One or a combination of : Petronius, Cena Trimalchionis, Satyricon; Apuleius, Cupid and Psyche, Metamorphoses; other Roman novels.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

LATIN 539 – LATIN HISTORICAL WRITERS
3 credits.

One of the following: (a) Cicero, Epistles, (b) Pliny, Epistles, (c) Caesar, (d) Sallust, (e) Livy, (f) post Augstan historians, (g) historians of the late Empire.
Requisites: LATIN 302 or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022
Learning Outcomes: 1. Analyze ancient classical Latin texts.
Audience: Undergraduate

2. Interpret ancient classical Latin texts.
Audience: Undergraduate

3. Evaluate ancient classical Latin texts.
Audience: Undergraduate

4. Explain and assess the position of the course topic in relation to the classical and near eastern tradition.
Audience: Undergraduate

5. Demonstrate competence in current scholarly approaches to course readings.
Audience: Graduate

LATIN 549 – LATIN PHILOSOPHICAL WRITERS
3 credits.

One of the following: (a) Cicero's philosophical works, (b) Seneca, (c) Latin patristic writers.
Requisites: LATIN 302 or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023
Learning Outcomes: 1. Analyze ancient classical Latin texts.
Audience: Undergraduate

2. Interpret ancient classical Latin texts.
Audience: Undergraduate

3. Evaluate ancient classical Latin texts.
Audience: Undergraduate

4. Explain and assess the position of the course topic in relation to the classical and near eastern tradition.
Audience: Undergraduate

5. Demonstrate competence in current scholarly approaches to course readings.
Audience: Graduate

LATIN 559 – LATIN ORATORY
3 credits.

One of the following: (a) Cicero, Orations, (b) Roman rhetoric.
Requisites: LATIN 302 or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2020

LATIN/MEDIEVAL 563 – MEDIAEVAL LATIN
3 credits.

Introduction to chronological, geographical, and generic range of post-classical Latin, including not only the "medieval" period but the late antique, Renaissance, and beyond.
Requisites: LATIN 306 or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023
Learning Outcomes: 1. Analyze ancient classical Latin texts.
Audience: Undergraduate

2. Interpret ancient classical Latin texts.
Audience: Undergraduate

3. Evaluate ancient classical Latin texts.
Audience: Undergraduate

4. Explain and assess the position of the course topic in relation to the classical and near eastern tradition.
Audience: Undergraduate

5. Demonstrate competence in current scholarly approaches to course readings.
Audience: Graduate

LATIN 571 – ADVANCED READINGS IN LATIN LITERATURE
3 credits.

Advanced practice in analyzing, evaluating, and interpreting ancient Latin texts.
Requisites: LATIN 401 or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Analyze ancient Latin texts
Audience: Both Grad & Undergrad

2. Evaluate ancient Latin texts
Audience: Both Grad & Undergrad

3. Interpret ancient Latin texts
Audience: Both Grad & Undergrad

4. Explain and assess the position of the covered texts in relation to the classical and near eastern tradition
Audience: Both Grad & Undergrad

5. Demonstrate competence in current scholarly approaches to course readings
Audience: Graduate

LATIN 681 – HONORS THESIS
3 credits.

Individual mentored study for students completing theses for Honors in the Major as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2019
Learning Outcomes: 1. Analyze, interpret, and evaluate ancient classical Latin texts.
Audience: Undergraduate

2. Explain and assess the position of the course topic in relation to the classical and near eastern tradition.
Audience: Undergraduate

3. Produce an original scholarly project based on ancient Greek, Roman, or Near Eastern society and culture.
Audience: Undergraduate

LATIN 682 – SENIOR HONORS THESIS
3 credits.

Individual mentored study for seniors completing theses for Honors in the Major as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2020

LATIN 691 – SENIOR THESIS
3 credits.

Individual mentored study for seniors completing theses, as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Analyze, interpret, and evaluate ancient classical Latin texts.
Audience: Undergraduate

2. Explain and assess the position of the course topic in relation to the classical and near eastern tradition.
Audience: Undergraduate

3. Produce an original scholarly project based on ancient Greek, Roman, or Near Eastern society and culture.
Audience: Undergraduate

LATIN 692 – SENIOR THESIS
3 credits.

Individual mentored study for seniors completing theses, as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2022

LATIN 699 – DIRECTED STUDY
1-3 credits.

Advanced directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024
Learning Outcomes: 1. Analyze ancient classical Latin texts.
Audience: Both Grad & Undergrad

2. Interpret ancient classical Latin texts.
Audience: Both Grad & Undergrad

3. Evaluate ancient classical Latin texts.
Audience: Both Grad & Undergrad

4. Produce an original scholarly project based on ancient Greek, Roman, or Near Eastern society and culture.
Audience: Both Grad & Undergrad

5. Explain and assess the position of the topic in relation to the classical and near eastern tradition.
Audience: Graduate

LATIN 890 – INDIVIDUAL RESEARCH THESIS
1-12 credits.

Mentored reading, writing, and research for students with dissertator status.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

LATIN 950 – SEMINAR-ORATORY
3 credits.

Examine topics relevant to the ancient and modern worlds through analysis of Latin texts.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

LATIN 970 – ADVANCED SEMINAR IN LATIN LITERATURE
3 credits.

Advanced study in ancient Latin language, secondary scholarship, and ancient modern literary interpretation.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Analyze ancient classical Latin texts
Audience: Graduate

2. Evaluate ancient classical Latin texts
Audience: Graduate

3. Interpret ancient classical Latin texts
Audience: Graduate

4. Explain and assess the position of the covered texts in relation to the classical and near eastern tradition
Audience: Graduate

5. Demonstrate competence in current scholarly approaches to course readings
Audience: Graduate

LATIN AMERICAN, CARIBBEAN, AND IBERIAN STUDIES (LACIS)

LACIS/HISTORY/INTL ST 242 – MODERN LATIN AMERICA
3-4 credits.

A broad overview of Latin American history in the modern period, since independence but with a primary focus on the twentieth century. Particular emphasis will be placed on the socioeconomic, cultural, and political structures and processes that shaped and continue to influence life in Latin America. Key issues such as colonialism, nationalism, democracy, and revolution will be examined critically in light of broad comparative themes in Latin American and world history. Among the topics to be explored in detail will be the Mexican and Cuban revolutions, populism and dictatorship, socialism and neoliberalism, and drugs and migration.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2021
Learning Outcomes: 1. Describe the contours of Latin American history in the period since independence
Audience: Undergraduate

2. Apply and use key concepts relevant to Latin American history, such as imperialism, inequality, populism, socialism, neoliberalism
Audience: Undergraduate

3. Read for a dedicated purpose across different genres and forms of writing
Audience: Undergraduate

4. Apply historical reasoning to understand the origins of present-day issues
Audience: Undergraduate

5. Communicate effectively through presentations, discussion, and written work
Audience: Undergraduate

LACIS/HISTORY 243 – COLONIAL LATIN AMERICA: INVASION TO INDEPENDENCE
3-4 credits.

An introductory survey of colonial Latin American history, from the late fifteenth to the early nineteenth century. Examines developments in Spanish and Portuguese America by reading both secondary and primary sources. Beginning with fifteenth-century Europe, the Americas and West Africa, discusses European expansion and invasion, first contacts between the so-called Old and the so-called New Worlds, as well as the role of religion, sexuality, gender, labor and production, trade and exchange, and politics. Each week, a central question will address the topic for that week. Become familiar with and contextualize key processes and events in colonial Latin American history and learn about the nature of colonization. Identify and evaluate historical arguments. Practice interpreting primary sources and building historical arguments about them.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the contours of Latin American history in the period between invasion and independence
Audience: Undergraduate

2. Apply and use key concepts relevant to colonial Latin American history, such as colonialism, genocide, corporate society, transatlantic slave trade, independence movements
Audience: Undergraduate

3. Read for a dedicated purpose across different genres and forms of writing
Audience: Undergraduate

4. Apply historical reasoning to understand both the epistemology of early modern people and the origins of present-day issues
Audience: Undergraduate

5. Communicate effectively through presentations, discussion, and written work
Audience: Undergraduate

LACIS/AFROAMER/ANTHRO/C&E SOC/GEOG/HISTORY/POLI SCI/SOC/SPANISH 260 – LATIN AMERICA: AN INTRODUCTION
3-4 credits.

Latin American culture and society from an interdisciplinary perspective; historical developments from pre-Columbian times to the present; political movements; economic problems; social change; ecology in tropical Latin America; legal systems; literature and the arts; cultural contrasts involving the US and Latin America; land reform; labor movements; capitalism, socialism, imperialism; mass media.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Analyze Latin American culture and society from an interdisciplinary perspective.
Audience: Undergraduate

2. Examine historical developments from pre-Columbian times to the present.
Audience: Undergraduate

3. Identify political movements, economic problems, social change, and ecology in Latin America.
Audience: Undergraduate

LACIS/CHICLA/HISTORY/POLI SCI 268 – THE U.S. & LATIN AMERICA FROM THE COLONIAL ERA TO THE PRESENT: A CRITICAL SURVEY
3 credits.

A critical examination of US-Latin American relations from the colonial era to the present, tracing the emergence and evolution of the United States as a hemispheric and global power and its political and economic impact on Latin America. Primary attention will be focused on US relations with Mexico, Central America and the Caribbean, but other Latin American countries will figure prominently during certain episodes.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2020
Learning Outcomes: 1. Critically examine US-Latin American relations from the colonial era to the present.
Audience: Undergraduate

2. Examine tracing the evolution of the United States as a hemispheric and global power and its political and economic impact on Latin America.
Audience: Undergraduate

3. Discuss US relations with Mexico, Central America and the Caribbean.
Audience: Undergraduate

LACIS/SPANISH 285 – RACE AND CULTURE IN THE AMERICAS
3 credits.

Examine how the experiences of marginalized groups in the U.S. are profoundly intertwined with hemispheric historical processes. Review the categories that emerged to conceptualize human difference as European colonizers dispossessed indigenous peoples of their lands and inaugurated the forced migration and enslavement of peoples from Africa. Focus on how race was transformed after the revolutions of independence, exploring key concepts such as the one drop rule, mestizaje, racial democracy, and color-blindness. Explore how race intersects with gender, class, and migration, as well as with slavery, anti-colonial struggles, and US expansionism. Examine common assumptions in comparisons of race relations -e.g., the idea of a more more "fluid" understanding of race in Latin American countries, versus the binary models of the U.S.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Identify different forms in which race and ethnicity have been constructed across the Americas, the ways in which the histories of certain groups have been devalued or overlooked, and the implications for our present.
Audience: Undergraduate

2. Identify different understandings of race and ethnicity –for example, the tension between cultural difference and structural domination– and question assumptions commonly held in political discourse, media, arts, and literature.
Audience: Undergraduate

3. Discuss with one another how race and ethnicity condition experiences of social mobility, justice, and a sense of community, reflecting an increasingly multicultural global environment.
Audience: Undergraduate

4. Recognize social inequalities and intervene in contemporary discussions on racism through an appropriate use of evidence, critical tools, and analysis.
Audience: Undergraduate

5. Identify how different disciplinary frameworks (ethnic studies, Latinx Studies, and critical race theory, etc.) can be used to understand the racialized nature of the major questions of the present, including climate change, public health, surveillance, violence, and mass incarceration.
Audience: Undergraduate

6. Present research in a clear, concise, and engaging manner.
Audience: Undergraduate

7. Produce evidence-based, original arguments through both written and oral assignments.
Audience: Undergraduate

LACIS/CHICLA/ED POL 342 – EDUCATION ACROSS THE AMERICAS: EMPIRE, CAPITALISM, AND RESISTANCE
3 credits.

Examines educational inequality across the Americas through the lens of imperialism, different forms of colonialism, and capitalism. By exploring the logics and actions of different education stakeholders, critically examine how educational policy across the hemisphere has a shared history of oppression and contestation.
Requisites: Sophomore standing
Course Designation: Gen Ed - Communication Part B
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Draw from different sources to evaluate the transnational contexts of education policy and pose relevant questions about hemispheric educational issues
Audience: Undergraduate

2. Use clear understandings of terms such as imperialism, colonialism, capitalism, racism, and transnationalism to explain unequal educational processes
Audience: Undergraduate

3. Formulate and communicate research-based arguments on topics in education policy using academic literature, including primary and secondary sources
Audience: Undergraduate

4. Produce expository and argumentative texts and draw from this work to produce a podcast
Audience: Undergraduate

LACIS/CHICLA/HISTORY/POLI SCI 355 – LABOR IN THE AMERICAS: US & MEXICO IN COMPARATIVE & HISTORICAL PERSPECTIVE
3 credits.

Provides a critical examination of the history of labor and working people in the Americas, from the colonial era to the present. It focuses on the experience of the United States and Mexico, offering a comparative perspective on their distinct but also shared (and increasingly linked) histories. The seminar proceeds chronologically, highlighting major episodes in the evolution of labor systems in the two countries, beginning with the colonial labor systems implemented by the Spanish and British empires following the European conquest of the Western Hemisphere. Among other topics, we will examine the pivotal role of slavery and other forms of forced labor, the impact of the industrial revolution, the emergence and expansion of corporate capitalism and the labor unrest it provoked in the post-civil war U.S., the role of labor in the Mexican Revolution and its aftermath, the impact of the Great Depression and labor incorporation on the post-WWII social and political order of both countries, the breakdown of that order and the move to neo-liberalism in the 1970s and 1980s, and the emergence of an increasingly integrated North American production system and its consequences for labor and working people on both sides of the US-Mexico border.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2021

LACIS/ANTHRO 361 – ELEMENTARY QUECHUA
4 credits.

Phonology and morphology; concentration on the acquisition of conversational skills; reading of texts of graded difficulty.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

LACIS/ANTHRO 362 – ELEMENTARY QUECHUA
4 credits.

Continued introduction to phonology and morphology; concentration on the acquisition of conversational skills; reading of texts of graded difficulty.
Requisites: LACIS/ANTHRO 361
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

LACIS/ANTHRO 363 – INTERMEDIATE QUECHUA
4 credits.

Advanced morphology and syntax; advanced conversation and composition; cultural background of Quechua speaking peoples through reading of myths, legends and folktales.
Requisites: LACIS/ANTHRO 362
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023

LACIS/ANTHRO 364 – ADVANCED QUECHUA
4 credits.

Continuation of advanced conversation and composition; cultural background of Quechua-speaking peoples through reading of myths, legends, folktales; problems in dialectology.
Requisites: LACIS/ANTHRO 363
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

LACIS/ILS 367 – THE LITERATURE OF MIGRATION AND THE MIGRANT EXPERIENCE IN THE AMERICAS
3 credits.

Explores literature to understand representations and experiences of migration within the United States, and in the Americas more broadly, over time and across cultures. Focusing on literature and employing historical and psychoanalytic interpretive approaches, critically analyze artistic and literary representations of the migrant experience. Topics include: the relationships between literature, art, and migration; the role of migrants in constructing the United States; the role of art and literature in the empowerment of marginalized groups. Analyze literary texts in their contexts using tools of literary analysis and express ideas about literary texts and art from a critical perspective.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Evaluate literature in its relationship to migration by means of various communicative, deliberative, and persuasive argumentation.
Audience: Undergraduate

2. Identify in literature historical patterns of migration within the US and the Americas and their importance to understand current national culture and tensions.
Audience: Undergraduate

3. Understand through literature concepts and theories and apply them to the interpretation of literature across cultures.
Audience: Undergraduate

4. Recognize, analyze, and evaluate in literature the intersections between culture and other socially meaningful categories, such as race, class, gender, identity, ethnicity, disability, and sexuality as they are represented within literature .
Audience: Undergraduate

LACIS/ANTHRO 376 – FIRST SEMESTER YUCATEC MAYA
4 credits.

Introduction to Yucatec Maya language. Focus on acquiring vocabulary and grammar for basic conversational proficiency. Taught through in-class oral and aural exercises, language tapes, and primary texts. Learn about Maya culture, history, folklore, and language politics.
Requisites: None
Course Designation: Breadth - Humanities
Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

LACIS/ANTHRO 377 – SECOND SEMESTER YUCATEC MAYA
4 credits.

Continued introduction to Yucatec Maya language. Focus on acquiring vocabulary and grammar for basic conversational proficiency. Taught through in-class oral and aural exercises, language tapes, and primary texts. Learn about Maya culture, history, folklore, and language politics.
Requisites: LACIS/ANTHRO 376
Course Designation: Breadth - Humanities
Frgn Lang - 2nd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

LACIS 440 – TOPICS IN LATIN AMERICAN, CARIBBEAN, AND IBERIAN STUDIES
1-4 credits.

An examination of specific topics related to the Latin American, Caribbean, and Iberian region. Topics vary each semester, but may include specific themes in history, literature, media, political science, sociology, culture, politics, social work, and agriculture.
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

LACIS 681 – SENIOR HONORS THESIS
3 credits.

Mentored individual research and study for students completing a thesis in an Honors program.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2016

LACIS 682 – SENIOR HONORS THESIS
3 credits.

Mentored individual research and study for students completing a thesis in an Honors program.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2011

LACIS 698 – DIRECTED STUDY
1-6 credits.

Advanced directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2019

LACIS 699 – DIRECTED STUDY
1-6 credits.

Advanced directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

LACIS/A A E/ANTHRO/C&E SOC/GEOG/HISTORY/POLI SCI/PORTUG/SOC/SPANISH 982 – INTERDEPARTMENTAL SEMINAR IN THE LATIN-AMERICAN AREA
1-3 credits.

Interdisciplinary inquiry in Latin American society and culture.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

LAW (LAW)

LAW 601 – INTRODUCTION TO AMERICAN LAW
3 credits.

An introduction to the American common law tradition and to the American legal system. Open only to Law LLM students or Visiting International students in the Law LLM Pathway.
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand the overall structure of U.S. law and the U.S. legal system so that they can place other more detailed courses and later experiences with U.S. law in context.
Audience: Undergraduate

2. Gain experience analyzing original U.S. legal decisions
Audience: Undergraduate

3. Understand the basic principles underlying several areas of U.S. law and legal procedure
Audience: Undergraduate

LAW 602 – LEGAL SOURCES
3 credits.

Overview of the institutions and entities that create legal documents in the U.S.; how these documents are organized and found in a law library; introduction to common law case analysis. Open only to Law LLM students or Visiting International students in the Law LLM Pathway.
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand the sources of law in the U.S. legal system and how they are organized.
Audience: Undergraduate

2. Understand the structure and relationship between state and federal court systems.
Audience: Undergraduate

3. Understand how to analyze cases and statutes and how to apply them to resolve legal issues.
Audience: Undergraduate

4. Understand how to write a predictive analysis in memorandum format regarding the research and resolution of a legal issue.
Audience: Undergraduate

5. Understand how to use standard research tools to find primary and secondary legal authorities, and how to evaluate the weight of these authorities.
Audience: Undergraduate

6. Understand when and how to cite legal authorities.
Audience: Undergraduate

LAW/LEGAL ST/SOC 641 – SOCIOLOGY OF LAW
3-4 credits.

Theory and research on the social origins, processes and effects of law; examination of law-related behavior, legal institutions, law and social structure, and law and social change; linkage to contemporary theoretical and political debates.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

LAW 711 – CONTRACTS
4 credits.

Creation of promissory liability; interpretation of words and conduct; exchange, reliance or formality as necessary for creation of promissory liability; remedies for breach of contract; unfairness as a reason for avoiding contractual liability.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze fact patterns to determine whether enforceable contracts exist
Audience: Graduate

2. Determine what terms are contained in any contracts and what legal remedies are available in the event of contract breach
Audience: Graduate

3. Read and interpret key sources of contract law
Audience: Graduate

LAW 714 – CIVIL PROCEDURE
4 credits.

Development of the modern civil action including pleading, discovery, and the pretrial conference; the trial; motions after verdict and judgment; appeals; state and federal procedures.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate understanding of rules that provide the framework for resolving federal civil disputes during the pretrial period of litigation
Audience: Graduate

2. Build real world competencies through participation in advocacy exercises that reinforce civil procedure rules
Audience: Graduate

3. Improve legal writing through writing assignments that reinforce course material
Audience: Graduate

4. Appreciate the strategic choices one faces as an attorney
Audience: Graduate

5. Prepare for any position that relates to litigation or requires advocacy skills
Audience: Graduate

LAW 715 – TORTS
4 credits.

Introduction to torts. Roughly defined as civil wrong, independent of contract. Liability for physical and emotional harms inflicted by intentional misconduct or negligence, or without fault, and development of concepts and techniques in analyzing and solving tort problems.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate knowledge of some policies underlying Tort law
Audience: Graduate

2. Demonstrate knowledge of how the common law develops
Audience: Graduate

3. Demonstrate knowledge of how common law differs from statutory or regulatory law
Audience: Graduate

4. Demonstrate proficiency in extracting legal rules and rationales from cases and applying those rules to new fact patterns
Audience: Graduate

5. Demonstrate proficiency and good judgment in analyzing and interpreting cases
Audience: Graduate

6. Improve discussion skills, including listening, turn-taking, learning through interaction, orally presenting reasons and drawing conclusions based on reason
Audience: Graduate

LAW 721 – ADVANCED CONTRACTS
3-4 credits.

Nature of the obligations assumed by entering a contract; the power of parties to control this obligation; rights of those not a party to a contract.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Build upon and apply the doctrinal elements not covered in introductory contracts course
Audience: Graduate

2. Examine and apply different practice settings for contracts law, including supply chain management, a rising area of contracts practice
Audience: Graduate

3. Develop skills as a legal researcher, through application of a step-wise approach to propose, refine, and edit a legal research paper topic
Audience: Graduate

LAW 722 – LEGAL ANALYSIS, ADVOCACY, & WRITING I
3 credits.

Learn to formulate precise legal issues; analyze complex facts; find relevant law; identify, evaluate, and apply legal rules in creative and nuanced ways; and effectively communicate answers in writing.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Read legal sources critically and accurately to identify relevant information
Audience: Graduate

2. Analyze and synthesize cases and statutes to formulate controlling rules

Audience: Graduate

3. Apply legal rules to a client's facts to predict legal consequences
Audience: Graduate

4. Find relevant legal authority using a variety of research strategies, considering the weight and hierarchy of authorities within the American legal system
Audience: Graduate

5. Write clearly and concisely in different professional contexts
Audience: Graduate

6. Write objective memoranda of law using appropriate format, organization, and citation
Audience: Graduate

LAW 723 – LEGAL ANALYSIS, ADVOCACY, & WRITING II
3 credits.

Learn persuasive legal writing and oral presentation skills and the ethics and strategies of effective written and oral advocacy on behalf of a client. Prepare a trial-level brief and an appellate brief and work on legal correspondence and basic transactional drafting skills. Explore advanced legal research sources and refine research skills with projects in a variety of different subject areas and procedural contexts.
Requisites: LAW 722
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Learn and utilize a variety of techniques to write persuasive legal documents
Audience: Graduate

2. Choose and use legal authority appropriately to build a legal argument
Audience: Graduate

3. Write trial-level and appellate briefs using appropriate format, organization, and citations
Audience: Graduate

4. Develop the skills to research complex legal issues efficiently, using an array of sources and strategies
Audience: Graduate

5. Apply basic principles of transactional drafting
Audience: Graduate

6. Present an oral argument on behalf of a client
Audience: Graduate

LAW 724 – PROPERTY
4-5 credits.

Foundation for advanced courses. Personal property and real property (land law); concepts of ownership and transfer of chattels (personal property), such as bailments, liens, pledges and gifts; historical introduction to law of real property precedes detailed study of nature of various ownership interests in land, called estates; landlord-tenant law; some preliminary treatment of land transfer (conveyancing).
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

LAW 725 – INTRODUCTION TO CRIMINAL PROCEDURE
3 credits.

Various aspects of criminal procedure and criminal justice administration. Constitutional limitations upon criminal justice practices.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

LAW 726 – CRIMINAL LAW AND PROCEDURE
4 credits.

Problems in defining what conduct should be subject to criminal penalties; the limitations of criminal law as a means for prevention and control of undesirable conduct.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Read and interpret criminal statutes
Audience: Graduate

2. Demonstrate knowledge of key concepts in criminal law
Audience: Graduate

3. Apply criminal law rules to criminal law problems
Audience: Graduate

4. Demonstrate understanding of the social values, beliefs, and policies that motivate criminal law rules
Audience: Graduate

5. Critically evaluate criminal law rules in light of those values, beliefs, and policies
Audience: Graduate

LAW 729 – ASSET MANAGEMENT & FINANCIAL PLANNING FOR LAWYERS
3 credits.

Become a savvy consumer of financial services and a financially street-smart trust and estate attorney. Master the fundamentals of investing; diving into stocks, bonds, mutual funds, exchange traded funds, hedge funds, private equity, commodities, and venture capital. Gain exposure to key finance, risk, and tax concepts related to investment portfolio structure. Develop a familiarity with the pros and cons of financial products and investments ranging from life insurance to annuities to real estate investment trusts. Explore the financial planning process to answer two questions: How much money do you need? When do you need it? Most importantly, hone your reasoning abilities to navigate your and your clients financially challenging life transitions.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Instill a working knowledge of financial concepts sufficient to astutely weight the benefits and detriments of different financial advisors, financial services, investment portfolios, and financial products
Audience: Graduate

2. Enhance the ability to reason through challenging life transitions by applying, when appropriate, financial concepts in emotionally charged situations
Audience: Graduate

3. Grow confidence in sound financial decision making as it relates to the administration of personal and trust assets to achieve goals
Audience: Graduate

LAW 730 – FEDERAL LAW AND INDIAN TRIBES
2-3 credits.

The study of the relationships between Federal, state, and tribal governments, the source and scope of their respective sovereignties, and time.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

LAW 731 – CONSTITUTIONAL LAW
4 credits.

An introduction to the constitutional law of the United States covering the basic structure of government in the United States, with emphasis on the federal government. Includes the role of the federal courts and the doctrine of judicial review; the rise of federal power, as reflected particularly in shifting definitions of "interstate commerce," the doctrine of separation of powers, with emphasis on current issues of legislative and executive branch authority; and judicial and other limitations on the exercise of authority by the states as well as selected rights protected in the Amendments to the Constitution.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize and apply basic principles of constitutional law.
Audience: Graduate

2. Develop an understanding of the historical context and development of constitutional doctrine in the United States.
Audience: Graduate

3. Identify and apply the different forms of constitutional interpretation applied by the Supreme Court.
Audience: Graduate

4. Articulate key arguments for and against significant constitutional questions.
Audience: Graduate

LAW 732 – REAL ESTATE TRANSACTIONS I
3-4 credits.

Basic legal elements of real estate transfer and finance; options, binder contracts, requirements as to writing, rights and duties between vendor and vendee, basic land contract and mortgage law and remedies, and the real estate recording system.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

LAW 734 – TRUSTS AND ESTATES
2 credits.

Examination of legal and real-world aspects of transmission of property, usually at death. Covers such topics as intestate succession (dying without a will), wills, trusts and will substitutes, limitations on the disposition of assets and the impact of the Marital Property Act, powers of attorney and end-of-life decision making, and basic issues in the taxation of gifts and transfers at death. In addition to legal fundamentals, strong focus on legal practice-i.e., on how the law plays out on the ground.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate thorough understanding of the core elements of the law of intestacy, wills, trusts, and non-probate transfers.
Audience: Graduate

2. Demonstrate thorough understanding of the core elements of law protecting the rights of the surviving spouse, and how these differ in common law and community property states.
Audience: Graduate

3. Demonstrate thorough understanding of the core considerations involved in creating and using advance directives.
Audience: Graduate

4. Demonstrate thorough understanding of the core elements of community property and Wisconsin marital property law, and the ways this area of law affects the analysis of course topics. No prior knowledge of marital property law will be assumed.
Audience: Graduate

5. Demonstrate a very basic understanding of the transfer tax and income tax issues that affect estate planning. No prior knowledge of tax law will be assumed.
Audience: Graduate

6. Demonstrate the ability to recognize the basic ethical and professional issues that emerge in the practice of estate planning, including the ability to recognize the limits of one's expertise.
Audience: Graduate

7. Demonstrate understanding of the real world context in which all course activities take place and the ways in which the activities of ordinary people affect legal planning and outcomes.
Audience: Graduate

LAW 736 – SECURED TRANSACTIONS
3 credits.

Focuses on Article 9 of the Uniform Commercial Code, Secured Transactions; with some additional emphasis on Article 6, Bulk Sales; and Article 7, Documents of Title.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

LAW 737 – MARITAL PROPERTY
1-2 credits.

Develop a strong understanding of Wisconsin Marital Property law and how its principles impact ownership of property. Compare marital property law to common law ownership and review the differences between marital property and division in divorce.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Distinguish between marital/community property ownership systems and common law ownership.
Audience: Graduate

2. Recognize how property is classified under Wisconsin law and explain why classification is important.
Audience: Graduate

3. Distinguish between marital property and division in divorce.
Audience: Graduate

LAW 738 – ESTATE AND GIFT TAXATION
1-2 credits.

Introduces basic federal estate and gift tax policy, statutes, and planning concepts relevant to estate and trust planning and administration.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate thorough understanding of the core concepts of the federal transfer tax system.
Audience: Graduate

2. Demonstrate thorough understanding of the core elements of the primary federal transfer tax statutes, how those statutes operate and how they interrelate.
Audience: Graduate

3. Demonstrate a basic understanding of the transfer tax and income tax issues that affect estate and trust planning.
Audience: Graduate

4. Demonstrate understanding of the real world context in which all tax planning activities take place and the ways in which the activities of ordinary people affect legal planning and outcomes.
Audience: Graduate

LAW 740 – ADVANCED CONSTITUTIONAL LAW
3-4 credits.

Focuses on rights of citizens against state and federal governments, the nature of due process and equal protection of the law, to include discussions around the right to privacy, freedoms of expression, association, religion, the right bear arms, and protection of civil rights and freedom from invidious discrimination. What is the content of these rights? What methods should judges use to figure out the answer? What role does or should the judiciary have in enforcing those rights?
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explore different theories of constitutional interpretation such as originalism, process theory, and living constitutionalism
Audience: Graduate

2. Engage in debates about the legitimacy of judicial review in a democracy
Audience: Graduate

3. Develop argumentation and debate skills specific to executing a case in court
Audience: Graduate

LAW 741 – BUSINESS ORGANIZATIONS: PUBLIC CORPORATIONS
3 credits.

Law of business corporations; problems of control, management, and procurement and maintenance of capital; an introduction to securities regulation.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify the fundamental sources of corporate law as well as the doctrinal analysis of major cases, including close reading of major Delaware law cases
Audience: Graduate

2. Identify the economics of corporate transactions and the practical impact of corporate law on business structuring and practice
Audience: Graduate

3. Demonstrate knowledge of the types of basic legal documents used in corporate settings
Audience: Graduate

4. Develop a strong understanding of how corporate law theories impact the shaping of the legal landscape
Audience: Graduate

LAW 742 – TAXATION I
3-5 credits.

Federal income taxation; basic rules, theory and policy.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

LAW 743 – NEGOTIATIONS
2-4 credits.

Examines a range of processes encountered by lawyers, including negotiation of, inter alia, injury claims, criminal charges, family disputes, and commercial disputes, as well as participation of their parties (mediators, judges).
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

LAW 744 – ADMINISTRATIVE LAW
3 credits.

Role of the administrative process in society; emphasizes common powers and procedures; relationships among the legislative, judicial, executive and administrative agencies in the development of public policy.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

LAW 745 – LABOR RELATIONS LAW
3 credits.

Regulation of organization and representation of employees; collective bargaining, and employer and union practices; proceedings under the National Labor Relations Act and related federal statutes and analogous state acts.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

LAW 746 – LEGISLATION
3 credits.

Use of statutes and legislative materials in litigation and decision; problems of the lawyer in the interpretation of statutes, in representation of the client before legislative bodies, and in the presentation and argument of statutory authorities to a court.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

LAW 747 – EMPLOYMENT LAW
3 credits.

Broadly explores the role of law in policy development and regulation of the individual employment relationship with a focus on hiring and firing, leave, privacy, health and safety, unemployment insurance, and compensation. Content is largely exclusive of questions of discrimination and collective bargaining.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize and understand key doctrines and concepts rooted in common law, statutes, regulations, policy, and customs that govern the relationship between individual employees and their employers
Audience: Graduate

2. Develop a facility for interpreting these doctrines and concepts and applying them to realistic scenarios
Audience: Graduate

3. Identify and discuss key debates regarding the virtues and limits of these doctrines and concepts as means of regulating the employment relationship
Audience: Graduate

4. Discuss the history and contemplate the future of law and policy in this realm
Audience: Graduate

LAW 748 – ANTITRUST
3-4 credits.

Law relating to trade regulation and competitive practices; anti-trust and comparable laws dealing with monopoly, restraint of trade, and unfair methods of competition.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

LAW 749 – TRADEMARKS
2-3 credits.

Practical introduction to a neglected but socially and economically important field. Interaction of a developing common and federal law with the behavior and interests of businesspersons and consumers.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022

LAW 750 – LEGISLATION AND REGULATION
3 credits.

Legislation and regulation play the dominant role in shaping law in the modern American legal system. All lawyers, irrespective of the area of law must understand statutes and regulations. An introduction providing a deeper understanding of these forms of law and the institutions that make this law, and to help them better appreciate the role that lawyers play in the American legal system as it operates in practice. To think like a lawyer, and hence to represent or advise clients, requires an ability to do so in the context of the regulatory state.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Explain the role of legislatures, administrative agencies, and courts in the U.S. legal system
Audience: Graduate

2. Explain the relationship between and among these institutions
Audience: Graduate

3. Describe the role that lawyers play in furthering their clients' interests in each of these institutions
Audience: Graduate

4. Explain the differences in the forms of legal argument that occur in these different institutions
Audience: Graduate

5. Relay how courts interpret statutes
Audience: Graduate

6. Describe how administrative agencies interpret and implement statutes

Audience: Graduate

7. Describe how courts oversee the interpretation and implementation of statutes by administrative agencies
Audience: Graduate

LAW 751 – PATENT LAW
2-4 credits.

Survey of the law of industrial property, including the law of patents and trade secrets.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

LAW 752 – COPYRIGHT LAW
2-4 credits.

Survey of state and federal laws affecting a variety of intellectual and creative products.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

LAW 753 – INTRODUCTION TO INTELLECTUAL PROPERTY LAW
3-4 credits.

Survey of the laws of patents, copyrights, trade secrets, trademarks. Discussion of relationship of these laws to the laws of property, trade regulation, and privacy. Exploration of competing or complementary policy rationales for each intellectual property area.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

LAW 754 – TECHNOLOGY LAW
3 credits.

Examines how the legal system and technology interact. Topics include the economic and social impacts of technology; the uncertainties technology raises for the law; the strategies through which courts, legislatures, administrative agencies, and international institutions resolve these uncertainties; and efforts by incumbent and newcomer industries to use the legal system to advance their interests. Technologies discussed may include smartphones, autonomous weapon systems, domestic drones, robotics, driverless cars, cyberwarfare, the railroad, the internet of things, social media, big data analytics, the sharing economy, generative AI, and other breaking developments.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Articulate the recurring law and policy questions raised by new technologies
Audience: Graduate

2. Identify the strengths and limitations of legal responses including law-by-analogy, making new law, and reconfiguring legal institutions
Audience: Graduate

3. Evaluate legal challenges and appropriate responses with respect to specific technologies at the center of current regulatory debates
Audience: Graduate

LAW 760 – ROLE OF THE POLICE IN A FREE SOCIETY
3 credits.

Major problems especially in large urban areas. Specific aspects of the police function, such as their role in responding to serious deviant conduct, to self-destructive behaviour, to community conflict, and to the need for protecting constitutional rights and democratic processes. Problems that arise in defining police authority, in reviewing and controlling police discretion, and in seeking to achieve accountability of the police to the citizenry.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2019

LAW 765 – EQUAL EMPLOYMENT LAW
3-4 credits.

The growth, development, and implementation of equal employment opportunity law.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023

LAW/NURSING 768 – HEALTH JUSTICE CLINIC
1-7 credits.

Interdisciplinary health advocacy clinic providing broad individual and system advocacy for patients facing life changing health events. Advocacy topics include: medical decision-making, insurance, medical debt, disability and related policies and laws.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and describe personal values and beliefs related to patient advocacy.
Audience: Graduate

2. Identify how racism, sexism, homophobia, transphobia, ablism and other forms of oppression impact clients and the delivery of health care in the US.
Audience: Graduate

3. Communicate effectively in writing and in conversation to a range of audiences including patients.
Audience: Graduate

4. Recognize opportunities for advocacy in individual client situations.
Audience: Graduate

5. Design effective advocacy plans to address client needs.
Audience: Graduate

6. Recognize ethical dilemmas and develop informed plans for ethical practice.
Audience: Graduate

LAW 771 – SELECTED TOPICS IN ESTATE PLANNING
1-3 credits.

Intermediate and advanced topics in estate planning; topics reflect interests of available faculty and students.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

LAW 772 – THE USE OF TRUSTS IN ESTATE PLANNING
2-3 credits.

Survey of common uses of trusts in estate planning, with a focus on drafting of appropriate provisions to accomplish estate planning objectives.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

LAW 785 – INTRODUCTION TO ISLAMIC LAW & JURISPRUDENCE
2-3 credits.

Provides an understanding of the internal workings of Islamic law at its theoretical roots. Analyzes the various methodologies that are represented in Islamic legal literature, identify modern manifestations of these methodologies in contemporary Muslim discourses. Attention to the specific doctrinal areas of Islamic family law and criminal law. Contextualizes the subject of Islamic law within various governmental and constitutional structures, beginning with the classical period, continuing through colonialism and reaching into the present day.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

LAW 790 – LAW OF DEMOCRACY
3 credits.

Examine the laws that structure the U.S. democratic system, including voting rights, electoral districting, the regulation of political parties, and campaign finance. Addresses the key constitutional principles and federal statutory provisions that govern these areas, with special emphasis on recent legal developments. In addition to covering doctrine, consider the theoretical underpinnings of the electoral system, the role of courts in overseeing the system, and proposals for reform.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand and apply the key legal doctrines and rules that structure our democratic system, including the law governing the right to vote, electoral districting, political parties, and the financing of campaigns
Audience: Graduate

2. Recognize the complex ways in which laws governing the democratic process interact with one another to shape our politics and policies
Audience: Graduate

3. Examine and discuss the dilemmas the judiciary faces when it is asked to intervene in democratic disputes
Audience: Graduate

4. Compare and contrast the benefits and drawbacks of our existing legal regime and of potential reforms and alternatives
Audience: Graduate

LAW 795 – STATE AND LOCAL GOVERNMENT LAW
3 credits.

Study the allocation of authority within and between state and local governments. Begin with analysis of state constitutions and the three branches of state government. Study how state and local governments interact, covering home rule and intrastate preemption as well as conflicts between localities. Analyze how local governments are financed. Consider the practical, normative, and theoretical implications of current doctrines and policies and explore how state and local government law plays out in the context of contemporary disputes, including over housing, education, and more.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define and explain the distinctive features of state constitutions and state government institutions
Audience: Graduate

2. Define and explain how state and federal constitutional law shape the structure and powers of state and local governments
Audience: Graduate

3. Define and explain the legal rules that define the relationships between states and local governments and among local governments
Audience: Graduate

4. Discuss, practically and normatively, the allocation of power between state and local governments
Audience: Graduate

LAW 796 – CRIMINAL DEFENSE PRACTICE
3 credits.

Preparation for the Public Defender Project summer externship with the Wisconsin State Public Defender. Covers basic lawyering skills like client interviewing and counseling, investigation and negotiation, and various aspects of criminal defense practice in Wisconsin including initial appearances, preliminary hearings, discovery, sentencing and revocation hearings.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and apply interview techniques that both ascertain essential facts and facilitate the development of a good attorney-client relationship.
Audience: Graduate

2. Develop an investigation plan based on the relevant law and facts in a specific case.
Audience: Graduate

3. Develop a theory of a case that can be used during both negotiation and litigation.
Audience: Graduate

4. Develop a negotiation plan to effectively engage in plea bargaining on behalf of a defendant in a criminal case.
Audience: Graduate

5. Explain and apply relevant factual details related to initial appearances, preliminary hearings, discovery, sentencing and revocation hearings as needed for successful defense practice.
Audience: Graduate

6. Recognize and relay basic criminal procedure in Wisconsin.
Audience: Graduate

LAW 797 – PROSECUTION FUNCTION
3 credits.

Focus on understanding the role of the prosecutor in the criminal justice system; developing skills related to making informed charging decisions, drafting charging instruments, effective motion practice, and representation of the state in various court proceedings such as initial appearances, guilty pleas, sentencing, and post-conviction motions.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the history of the American prosecutor and the varied reactive and proactive approaches to the prosecution function
Audience: Graduate

2. Develop a command of substantive law doctrine in Wisconsin
Audience: Graduate

3. Develop a command of the procedural requirements in Wisconsin criminal cases based constitutional law, statutes, and local practices
Audience: Graduate

4. Develop an in-depth understanding of how local justice systems are organized and how the various shareholders interact and share authority
Audience: Graduate

5. Develop an understanding of the complexity and importance of the charging decision
Audience: Graduate

6. Differentiate the direct and collateral consequences of different enforcement strategies on perpetrators, victims and the community
Audience: Graduate

7. Develop an understanding of professionalism – to conduct oneself with integrity, courtesy, punctuality, and quality in work and in interactions with others
Audience: Graduate

8. Identify and apply the skills necessary to function as a trial level state prosecutor
Audience: Graduate

9. Formulate strategies for effective self-directed learning in anticipation of summer externships
Audience: Graduate

LAW 798 – PROFESSIONAL RESPONSIBILITY AND CRIMINAL PRACTICE
2-3 credits.

Covers the Wisconsin Rules of Professional Conduct as specifically applied to criminal defense practice. Topics covered include perjured testimony, confidentiality, client counseling, witness interviewing, handling evidence, hard bargaining, statements regarding judicial qualifications and contempt of court.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply the Rules of Professional Conduct to factual situations that typically arise when representing clients charged with crimes.
Audience: Graduate

2. Articulate the ethical rules regarding the regulation of the attorney-client relationship in a way that is accurate and understandable to a client.
Audience: Graduate

3. Make well-reasoned and ethically sound choices when confronted with situations where ethical rules are in conflict.
Audience: Graduate

4. Develop strategies for dealing with unethical behavior in judges and prosecutors.
Audience: Graduate

5. Identify the ethical obligations of defense attorneys when they have excessive caseloads.
Audience: Graduate

6. Understand the unique ethical challenges faced by lawyers who regularly represent indigent criminal defendants.
Audience: Graduate

LAW 801 – EVIDENCE
3-4 credits.

Concepts of relevancy and policy in admission of evidence; hearsay, opinions, and other exclusionary rules; examination of witnesses, judicial notice, and procedural considerations.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply the Rules of Evidence to determine the admissibility of evidence in a litigation context.
Audience: Graduate

2. Consider and incorporate the effects of the Rules of Evidence when structuring transactions and interactions even where there is no litigation.
Audience: Graduate

3. Articulate how the Rules of Evidence are shaped by, and in turn reinforce, our adversary system of justice.
Audience: Graduate

4. Determine appropriate strategy and make decisions in the course of legal representation in light of the Rules of Evidence.
Audience: Graduate

LAW 802 – ADVANCED CIVIL PROCEDURE
3-4 credits.

Study a set of procedural concepts that are fundamental to legal practice in the U.S., including jurisdiction over parties, subject matter jurisdiction, and federal-state conflict of laws. In addition to learning key doctrines, engage in a theoretical inquiry into explanations of and justifications for those doctrines.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify which courts have jurisdiction over a given case and explain why
Audience: Graduate

2. Resolve questions concerning which body of law applies to a given case
Audience: Graduate

3. Distinguish substantive from procedural law and explain why the distinction matters
Audience: Graduate

4. Identify plurality decisions and appreciate the problems that they pose for the doctrine of precedent
Audience: Graduate

5. Develop an understanding of the difference between “published” and “unpublished” decisions
Audience: Graduate

6. Clearly and accurately apply the doctrines we cover to fact patterns, identify legal grey areas, and make compelling arguments about how cases in these grey areas should be resolved
Audience: Graduate

7. Identify and evaluate venue options
Audience: Graduate

LAW 805 – STATUTORY INTERPRETATION
3 credits.

Learn the basics of the federal legislative process and develop an understanding of the fundamentals of how courts interpret statutes in a variety of areas of law. Focus on applying the courts' techniques, learning to make arguments in favor of or against particular interpretations of a given statute based on the specific techniques courts use, and recognizing the relative strength of different arguments.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the basics of the federal legislative process
Audience: Graduate

2. Learn and apply the fundamentals statute interpretation by the courts
Audience: Graduate

3. Employ the techniques of statutory interpretation to interpret statutes
Audience: Graduate

4. Practice making arguments in favor of or against particular interpretations of a given statute based on the specific techniques courts use
Audience: Graduate

5. Recognize the relative strength of different arguments
Audience: Graduate

LAW 808 – ADVANCED LEGAL WRITING
2-3 credits.

Uses simulated practice scenarios to teach students how to analyze the law and convey that legal analysis in a manner that is precise, accurate, clear, and concise.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Read legal sources critically and accurately to identify relevant information
Audience: Graduate

2. Apply legal rules to a client’s facts to predict legal consequences
Audience: Graduate

3. Write clearly and concisely in different professional contexts
Audience: Graduate

LAW 811 – ACCOUNTING FOR LAWYERS
3 credits.

Principles of accounting for lawyers.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand and apply the double#entry bookkeeping process that produces financial statements
Audience: Graduate

2. Read, analyze, and apply financial statements (and the notes that accompany those statements) in business and legal contexts
Audience: Graduate

3. Apply the latitude and judgment that management exercises to arrive at reported numbers and to know the potential economic and legal consequences of those choices
Audience: Graduate

4. Recognize and understand financial accounting issues important to every lawyer
Audience: Graduate

5. Appropriately apply accounting terminology or concepts when drafting or negotiating agreements or settlement agreements
Audience: Graduate

6. Recognize potential “red flags” that suggest financial difficulties##or even financial fraud
Audience: Graduate

7. Recognize opportunities to obtain accounting#related information about an underlying legal situation and, when appropriate, to be familiar with potential ways to use that information in litigation
Audience: Graduate

LAW 814 – APPELLATE ADVOCACY
1-3 credits.

Introduction to federal appellate practice and procedure. Learn the fundamentals of appellate argument and brief writing, with multiple opportunities to practice and improve these skills.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023
Learning Outcomes: 1. Develop familiarity with the specific skills necessary to practice effective appellate advocacy
Audience: Graduate

2. Practice effective appellate brief writing and revision
Audience: Graduate

3. Practice effective oral argumentation skills
Audience: Graduate

LAW 815 – MOOT COURT
1-4 credits.

Practice and refine research, writing, and revision specific to the appeal process. Participate in simulated appellate oral arguments and receive feedback and coaching.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Develop skills/strategies for making effective legal arguments
Audience: Graduate

2. Plan, organize, and prepare briefs and develop skills necessary for effective oral argument
Audience: Graduate

3. Recognize and employ core principles of collaboration and working productively in teams
Audience: Graduate

LAW 817 – BUSINESS ORGANIZATIONS: PARTNERSHIP, LLC, AND CLOSELY HELD CORPORATIONS
3 credits.

Law of agency, partnership, limited liability companies, and closely held corporations.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize the primary legal forms for doing business in the United States, from the basic relationship of principal and agent, through the general partnership, to the corporation
Audience: Graduate

2. Identify how fiduciary duties interact with contracting and with statutory norms in structuring entity governance
Audience: Graduate

3. Recognize the basic drivers of business entity choice, especially limited liability, tax treatment, and financing
Audience: Graduate

4. Compare and contrast a wide range of business relationships and their legal structures
Audience: Graduate

LAW 820 – CONFLICT OF LAWS
3-4 credits.

Rules applied by courts in recognizing and enforcing rights involving elements which occurred in a sister state or foreign country.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

LAW 821 – BANKRUPTCY LAW
2-4 credits.

Consumer credit regulation, enforcement of judgments, attachments, garnishments, fraudulent conveyances, assignments for the benefit of creditors, and bankruptcy.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

LAW/SOC WORK 822 – FAMILY LAW: MARRIAGE AND DIVORCE
2-4 credits.

Marriage and less formal spousal relationships, husband-wife relationships in on-going marriage; divorce and its economic and custody consequences; post-divorce relationships.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

LAW/SOC WORK 823 – FAMILY LAW: PARENT AND CHILD
3-4 credits.

The relationship of parent and child; the rights of unmarried mothers and fathers and their children; parental rights to custody vis a vis third parties; parents' rights to make decisions affecting children; neglect; termination of parental rights; the foster care system and adoption.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

LAW 824 – FEDERAL JURISDICTION
3 credits.

Examines the structure and authority of the federal courts and the relationship between those courts and other governmental institutions.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

LAW 825 – INSURANCE LAW
3-4 credits.

Substantive law of property, life and liability insurance, including study of the fire and automobile forms; regulation of insurance companies, policies and practices.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

LAW 827 – INTERNATIONAL LAW
2-3 credits.

Problems in private and governmental practice affected by international relations; the law applicable to questions of recognition and non-recognition of governments and nations; interpretation of treaties and other international agreements; jurisdiction of nations; effect of peace and war; formation, operation and function of various international agreements, and matters of international claims.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

LAW 828 – INTERNATIONAL BUSINESS TRANSACTIONS
3 credits.

Problems inherent in international commercial transactions; risks, benefits, and assumptions underlying business with or in a foreign country; international commercial transactions, investments and claims.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate and describe some of the primary legal issues that arise in an international sale of goods transaction.
Audience: Graduate

2. Describe and explain the function, structure, and operation of a letter of credit.
Audience: Graduate

3. Explain the choice of law/private international law process and its significance in international commercial contracts.
Audience: Graduate

4. Identify and summarize the main alternatives to cross-border trade as a means of conducting international business.
Audience: Graduate

5. Identify and explain at least six sources of the “law” which may apply to international business transactions.
Audience: Graduate

LAW/URB R PL 830 – LAND USE CONTROLS
3 credits.

Limitations imposed upon the use of privately owned land by the court-made law of nuisance, by private covenant, and by public action; master plan, official map, subdivision regulation, zoning, and urban redevelopment.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze the legal and institutional contexts within which planning occurs.
Audience: Graduate

2. Describe the operation and functioning of the legal system and its impact on planning.
Audience: Graduate

3. Use legal research skills to perform specific tasks required in the practice of planning.
Audience: Graduate

4. Find and analyze information from primary and secondary legal resources.
Audience: Graduate

5. Write legal documents related to plan creation, implementation, and enforcement.
Audience: Graduate

6. Recognize ethics of public decision-making including the AICP Code of Ethics and state rules related to the unauthorized practice of law.
Audience: Graduate

7. Examine the role of officials, stakeholders, and community members in planning in a democratic society.
Audience: Graduate

8. Recognize sustainability, environmental quality, social justice, economic, and cultural factors in planning
Audience: Graduate

LAW 838 – REAL ESTATE TRANSACTIONS II
2-3 credits.

Acquire an understanding of legal agreements associated with real estate investing, legal aspects of real estate financing, the zoning process, and documentation of real estate entitlements.
Requisites: LAW 732
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop an understanding of the various and numerous legal agreements associated with real estate investing, especially purchase and sale agreements, loan agreements and leases.
Audience: Graduate

2. Explain and apply the legal aspects of real estate financing, particularly with regard to real estate loan documentation.
Audience: Graduate

3. Develop a basic understanding of zoning process and the documentation of real estate entitlements.
Audience: Graduate

LAW 840 – TAXATION II
2-4 credits.

Overview of the federal income taxation of partnerships, LLCs, and corporations, with a focus on issues of real property ownership and transfers.
Requisites: LAW 742
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

LAW 845 – WATER RIGHTS LAW
2-3 credits.

Acquisition and nature of private rights in water comparing the riparian and appropriation legal systems; public rights as limitations on private rights, the firming up of rights by grant, contract, compulsory purchase and prescription and the administrative systems for water quality management.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

LAW 848 – INTRODUCTION TO ENVIRONMENTAL LAW
3 credits.

Overview of major environmental statutes, regulations and cases, and their implementation by regulatory agencies, as well as currently applicable common-law doctrine.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

LAW 849 – PRE-TRIAL ADVOCACY
3 credits.

The skills that lawyers use up until the time of trial.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

LAW 850 – PROFESSIONAL RESPONSIBILITIES
1-3 credits.

The ethical and professional responsibility of practicing lawyers.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

LAW 852 – TRIAL ADVOCACY
2-4 credits.

Techniques involved in the examination of witnesses, including the lawyer's preparation, the preparation conference with the witness, direct examination, cross examination, objections, and the introduction of exhibits. Teaching methods include demonstrations by trial lawyers and practice sessions by the students under the supervision of trial lawyers.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

LAW 853 – MOCK TRIAL
1-4 credits.

Basic trial skills and competition practice that vary by topic; may include combination of traditional lectures, classroom demonstrations, and weekly sessions where you work closely with faculty members, lawyers, and judges. Prepare for mock trial competition.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Develop an understanding of the phases of a trial.

Audience: Graduate

2. Develop the skills necessary to execute effective trial conduct.
Audience: Graduate

3. Recognize and apply professional and ethical behavior throughout trial practice.
Audience: Graduate

LAW 854 – CLINICAL PROGRAM
1-10 credits.

Provides hands-on lawyering experiences with real people - clients, victims, witnesses, family members, lawyers, and judges - enhancing understanding of the roles and responsibilities of practicing attorneys.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and apply substantive and procedural family law to their cases, including common law, state statutes, and state administrative regulations
Audience: Graduate

2. Gather, examine, and analyze facts; distinguish the legal and non-legal issues; and explain the relationship between the facts and issues identified either verbally or in a written memo
Audience: Graduate

3. Articulate various legal and strategic options facing a client, how opposing parties will respond to actions taken by the client and explain those options and the expected result to the client
Audience: Graduate

4. Develop and refine their own personal definition of what it means to be a legal professional, incorporating the rules of professional conduct and their personal values
Audience: Graduate

5. Competently and ethically interview and counsel clients
Audience: Graduate

6. Competently and ethically represent clients in court and/or in administrative proceedings as appropriate in client matters
Audience: Graduate

LAW 855 – FIELD PLACEMENT
1-10 credits.

A unique, hands-on opportunity to participate in the many facets of legal practice, including (but not limited to) litigation, drafting, policy creation and implementation, and the regulatory process. Under the supervision of on-site externship supervisory attorneys, and through reflection led by Law School faculty, gain first-hand understanding of working in the legal community.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Integrate legal knowledge and skills into practical legal experience.
Audience: Graduate

2. Reflect on legal experiences to assess skills.
Audience: Graduate

3. Develop professional identity.
Audience: Graduate

LAW 860 – ADVANCED CRIMINAL PROCEDURE
2-3 credits.

Various important procedural problems arising in federal and state criminal proceedings.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

LAW 862 – LEGAL ASSISTANCE TO INCARCERATED PEOPLE
1-10 credits.

Represent people in prison in Wisconsin seeking relief from excessive sentences; may include people suffering from severe mental illness. Interview clients at correctional institutions, conduct legal and factual research, draft letters and motions, and possibly deliver oral argument in court; work on motions for sentence modification, petitions for sentence adjustment, and parole advocacy; reflect on the lawyer's role in the criminal legal system, explore the causes of the disparate impact of criminal punishment on marginalized populations.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify client goals and assist them in achieving these goals.
Audience: Graduate

2. Develop proficiency in factual investigation, issue spotting and legal research and writing, including advocacy and client communication.
Audience: Graduate

3. Collaborate with clients, other students, supervisors, and other actors in the criminal legal system.
Audience: Graduate

4. Recognize ethical issues and resolve or respond to them within the Rules of Professional Responsibility.
Audience: Graduate

5. Engage in self-assessment and reflection about the clinical work, the role of lawyers, and the criminal legal system.
Audience: Graduate

LAW 868 – STATE AND LOCAL TAXATION
2-4 credits.

Survey of state and local tax law, principally income taxes, sales and use taxes, and property taxes. Explores the typical statutory structures under which these taxes are imposed. Significant emphasis will be given to policy issues faced by state and local governmental bodies.
Requisites: LAW 742
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020

LAW 870 – INTERNATIONAL TAX
3 credits.

International taxation concepts and issues including jurisdiction rules, tax avoidance and evasion, fiscal relations between industrialized countries and less developed countries; host country taxation of foreign persons and home country taxation of foreign income.
Requisites: LAW 742
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

LAW 871 – INTERNATIONAL TRADE LAW
3 credits.

Legal institutions affecting international transactions with a focus on U.S. laws and the principal treaties involved.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

LAW 873 – IMMIGRATION LAW
3 credits.

Survey of the immigration law of the United States.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

LAW 895 – WISCONSIN INTERNATIONAL LAW JOURNAL
1-4 credits.

A student-published law journal that serves as a forum for the discussion and analysis of important issues in international law. Review, select, and edit the articles and participate in every stage of the publication process. Research, write, and edit original analyses or commentary on current legal issues.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and utilize an array of high-quality sources and strategies to expand research skills
Audience: Graduate

2. Discern a novel and relevant legal issue through preemption checks, as well as audience needs
Audience: Graduate

3. Develop and refine advocacy and scholarly writing skills while learning to integrate feedback through the editing and revision processes
Audience: Graduate

4. Critically analyze and appraise written work for inclusion into a journal issue, employing collaborative decision-making
Audience: Graduate

5. Generate and edit appropriate citations to legal sources, paying special attention to format for publication
Audience: Graduate

6. Compose, share, and receive appropriate and relevant feedback with peers, authors, and editors during the editing process
Audience: Graduate

LAW 896 – WISCONSIN JOURNAL OF LAW, GENDER, AND SOCIETY
1-4 credits.

A student-published journal dedicated to examining the intersection of law and society. The journal publishes cutting-edge scholarship that explores how law shapes, and is shaped by, issues of gender, race, sexual orientation, socioeconomic status, and other intersecting identities.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and utilize an array of high-quality sources and strategies to expand research skills
Audience: Graduate

2. Discern a novel and relevant legal issue through preemption checks, as well as audience needs
Audience: Graduate

3. Develop and refine advocacy and scholarly writing skills while learning to integrate feedback through the editing and revision processes
Audience: Graduate

4. Critically analyze and appraise written work for inclusion into a journal issue, employing collaborative decision-making
Audience: Graduate

5. Generate and edit appropriate citations to legal sources, paying special attention to format for publication
Audience: Graduate

6. Compose, share, and receive appropriate and relevant feedback with peers, authors, and editors during the editing process
Audience: Graduate

LAW 897 – LAW REVIEW
1-4 credits.

A journal of legal analysis and commentary. Review, select, and edit accepted scholarly articles and participate in every stage of the publication process. Research, write, and edit original analyses or commentary on current legal issues.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and utilize an array of high-quality sources and strategies to expand research skills
Audience: Graduate

2. Discern a novel and relevant legal issue through preemption checks, as well as audience needs
Audience: Graduate

3. Develop and refine advocacy and scholarly writing skills while learning to integrate feedback through the editing and revision processes
Audience: Graduate

4. Critically analyze and appraise written work for inclusion into a journal issue, employing collaborative decision-making
Audience: Graduate

5. Generate and edit appropriate citations to legal sources, paying special attention to format for publication
Audience: Graduate

6. Compose, share, and receive appropriate and relevant feedback with peers, authors, and editors during the editing process
Audience: Graduate

LAW 901 – FIRST AMENDMENT
3-4 credits.

Explores American constitutional law governing speech, association, the press, and religion. It focuses on the leading First Amendment cases that have created the most expansive protection for expression anywhere in the world. Consider not only the reasons for protecting these rights, but also countervailing interests - such as public safety, national security, and equality - that may justify restrictions on expression. Consider arguments that the U.S. Supreme Court has gone too far in protecting some forms of speech and association, such as false statements, sexually explicit materials, hate speech, and corporate political spending.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Learn First Amendment doctrine, including freedom of speech, freedom of association, freedom of the press, and religion.
Audience: Graduate

2. Develop the analytic, strategic, and communication skills needed to succeed as lawyers, including applying the law to other contexts, as well as the formulation of logical and rigorous arguments.
Audience: Graduate

3. Think critically and creatively about how the law is applied.
Audience: Graduate

LAW 904 – SELECTED PROBLEMS IN CONSTITUTIONAL LAW
2-4 credits.

Select topics relating to the study of local, state, or federal constitutional law.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize the historical background and evolving social contexts of local, state, or federal constitutions and associated amendments
Audience: Graduate

2. Recognize and practice application of relevant articles and sections as necessary for interpretation of constitutional law
Audience: Graduate

3. Practice written and oral communication through application of relevant constitutional doctrine
Audience: Graduate

LAW 913 – MENTAL HEALTH LAW
2-3 credits.

Introduction to cases, statutes, and legal doctrines related to rights, treatment, and hospitalization and incarceration of mentally ill persons. Includes topics such as involuntary civil commitment; the historical arc of psychiatric hospitals; competency to stand trial assessment and restoration; insanity defense evaluations; moral panics and socio-legal repercussions; right to refuse psychiatric treatment; effectiveness of psychotropic medicine; dangerousness and risk; social science research of eyewitness memory, interrogation and confessions, and jury decision-making; juveniles and treatment; regulation of the mental health system and mental health providers; confidentiality and duty to protect clients; policing functions; and personal mental health for lawyers.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Identify and explain the complex intersection between the law and mental health issues
Audience: Graduate

2. Develop an understanding of the role of lawyers when there are criminal/civil issues involving mental health problems
Audience: Graduate

3. Explore several specific nettlesome psycho-legal topics and evaluate how the legal system reaches dispositions in these areas
Audience: Graduate

4. Develop a deeper and more realistic understanding of mental health law issues, with regard to how lawyers work inside and around the clinical paradigm in their representation of clients - i.e., mental health evaluation and treatment
Audience: Graduate

LAW 914 – SECURITIES REGULATION
3 credits.

Problems under the Securities and Exchange Act and other federal and state regulatory measures; operation of the S.E.C.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

LAW 915 – SELECTED PROBLEMS IN CRIMINAL JUSTICE ADMINISTRATION SEMINAR
2-3 credits.

Topics reflect interests of instructor and students.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

LAW 916 – SENTENCING AND CORRECTIONS
3 credits.

Using a variety of interdisciplinary readings, ranging from fiction to philosophy to psychology, examine the types of punishment used by the America criminal justice system, and the varied justifications offered for them.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Identify and explain the traditional purposes of punishment, tensions between them, and how they manifest in today's criminal justice system
Audience: Graduate

2. Identify and explain the kinds of sanctions imposed by American courts and the uses and limitations of each
Audience: Graduate

3. Develop the skills necessary to successfully use interdisciplinary research to augment understanding of the legal implications of sentencing and correctional issues, and better advocate for clients
Audience: Graduate

LAW 917 – INTERNATIONAL COMMERCIAL ARBITRATION
3 credits.

Provides introduction to international commercial arbitration, arguably the most important means of resolving international commercial disputes. Learn and apply the rules governing international commercial arbitration, research and write a professional-quality claimant's memorandum based on a current problem.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Learn and apply the rules governing international commercial arbitration
Audience: Graduate

2. Conduct research identifying relevant arbitral awards and scholarly commentary on international commercial arbitration using the UW law library and the Kluwer Arbitration online resource
Audience: Graduate

3. Draft a high-quality legal argument in the style and formatting suitable for professional use/application
Audience: Graduate

LAW 918 – SELECTED PROBLEMS IN INTERNATIONAL LAW-SEMINAR
2-3 credits.

Topics reflect interests of instructor and students.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

LAW 919 – INTERNATIONAL HUMAN RIGHTS LAW
3 credits.

Provides an introduction to international human law. Examines its history, evolution, structure, remedies and effectiveness and the relationship with other areas of international law. Discussion of legal and institutional framework at international and regional levels-UN human rights institutions (Charter-based and treaty-based) and regional systems of human rights.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate an understanding of international human rights law and its application
Audience: Graduate

2. Compare and contrast the international human rights law system and regional human rights systems
Audience: Graduate

3. Critically assess specific areas of international human rights law with regard to specific issues such as genocide and torture as well as vis-a-vis marginalized/vulnerable groups such as women, children and indigenous groups
Audience: Graduate

4. Examine the principles governing human rights, substantive and procedural rights as well the major human rights treaties
Audience: Graduate

5. Examine the linkages with other areas such as economic development, poverty, socio- economic rights, and sustainable development
Audience: Graduate

6. Evaluate emerging rights such as environmental rights and rights of nature
Audience: Graduate

LAW 920 – CLIMATE CHANGE, HUMAN RIGHTS, AND THE ENVIRONMENT
3 credits.

Examines the link between climate change and human rights, the pros and cons of using a human rights approach and the specific challenges that climate change poses to the international legal system such as the disappearance of states, displacement and mass movement of people, and adjudication. Discuss the plight of vulnerable populations especially, indigenous peoples, women, and climate "refugees" within a human rights framework.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Develop an understanding of the relationship between environmental degradation, climate change and human rights
Audience: Graduate

2. Develop an understanding of the pros and cons of using a human rights approach to environmental issues and especially, climate change
Audience: Graduate

3. Gain knowledge of the relevant international law principles and mechanisms applicable to global climate change
Audience: Graduate

4. Gain knowledge of how a claim under international human rights law can be brought for damage caused by environmental issues in general and climate change in particular
Audience: Graduate

5. Examine the linkages with other areas such as economic development, poverty, socio-economic rights, and sustainable development
Audience: Graduate

LAW 921 – INTERNATIONAL ENVIRONMENTAL LAW AND POLICY
3 credits.

Discussion of the root causes of global environmental problems, the international legal framework and principles, and the role of sustainable development in addressing these environmental issues. Discussion of specific international environmental legal regimes such as biodiversity, movement of hazardous waste, climate change and international trade as well as governance mechanisms, the role of non-state actors and dispute resolution.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop an understanding of the role of international law in protecting the global environment
Audience: Graduate

2. Gain knowledge of existing international mechanisms and law in protecting different segments of the environment
Audience: Graduate

3. Develop an understanding of the interdisciplinary nature of environmental protection and linkages with issues such as economic development, poverty, trade and investment, and socio-economic rights including global pandemics
Audience: Graduate

4. Develop an understanding of the disproportionate impact of environmental degradation on vulnerable and marginalized communities and how these vulnerabilities intersect and compound
Audience: Graduate

5. Gain knowledge of the role of sustainable development in addressing intersecting issues
Audience: Graduate

LAW 922 – SELECTED PROBLEMS IN JURISPRUDENCE-SEMINAR
2-3 credits.

Topics reflect interests of instructor and students.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

LAW 926 – SELECTED PROBLEMS OF TORT LAW-SEMINAR
2-3 credits.

Topics reflect interests of instructor and students.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2022

LAW 928 – SELECTED PROBLEMS IN LAND LAW-SEMINAR
2-3 credits.

Topics reflect interests of instructor and students.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

LAW 935 – HEALTH LAW
2-3 credits.

Provides an overview of the complex laws governing the health care industry and the practical realities of lawyers specializing in this practice area. Covers the key laws and regulations that comprise the practice of health care law.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the major federal and Wisconsin laws governing health care.
Audience: Graduate

2. Apply these laws to practical common health care scenarios.
Audience: Graduate

3. Recognize the practical realities facing health care entities in an ever-changing environment.
Audience: Graduate

LAW 937 – ADOPTION LAW AND POLICY
2-3 credits.

Addresses the fundamental and evolving issues arising when adoptive families are created by law and considers the historical, societal and geopolitical elements shaping adoption law. Study state, federal and international regulations governing adoption, including constitutional limitations on regulation and practice. Examine the role and ethical obligations of attorneys, social workers and physicians in adoption practice. Examine the legal system's regulation of "gray market" adoptions and explore current challenges related to adoption of Native American children and the Indian Child Welfare Act, adoption by queer individuals, adoption of children from foster care, and openness in adoption.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Identify adoption law issues and understand underlying legal theories.
Audience: Graduate

2. Apply the law to various factual scenarios and develop a contextual framework for analyzing adoption law issues.
Audience: Graduate

3. Develop an understanding of how the history and evolution of adoption law, policy and practice relates to and is influenced by the broader social, economic and geopolitical context in which it is situated.
Audience: Graduate

4. Formulate policy goals to address the legal needs surrounding families and children.
Audience: Graduate

5. Evaluate and critically analyze adoption law and the family regulation system.
Audience: Graduate

6. Conduct original research about proposed adoption legislation and write an analytical research paper.
Audience: Graduate

7. Develop an understanding of the role, ethical obligations, and strategic choices of lawyers in adoption law matters.
Audience: Graduate

LAW 938 – DOMESTIC VIOLENCE LAW
3 credits.

Focuses on state and federal laws, policy and practices impacting victims and perpetrators of domestic violence. Topics examined include dynamics of domestic abuse; restraining orders; mandatory arrest law via law enforcement, prosecution defense responses; family law, including custody/physical placement, mediation, effects on children who witness violence; relief for battered immigrants, and human trafficking.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Identify and address the dynamics of domestic violence that may be present in clients and cases.
Audience: Graduate

2. Develop an understanding of and begin to employ best practice for providing trauma-informed legal services for survivors of domestic violence.
Audience: Graduate

3. Identify, explain, and apply Wisconsin statute and case-law addressing domestic violence.
Audience: Graduate

LAW 939 – SELECTED PROBLEMS IN FAMILY LAW-SEMINAR
2-3 credits.

Topics reflect interests of instructor and students.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

LAW 940 – LAW AND CONTEMPORARY PROBLEMS
1-3 credits.

Topics reflect current issues relevant to the practice of law.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize the historical, cultural, and contemporary contexts of a given topic.
Audience: Graduate

2. Describe and apply relevant core principles and sources of law.
Audience: Graduate

3. Develop skills in critical thinking and analysis.
Audience: Graduate

LAW 942 – EUROPEAN UNION LAW
1-2 credits.

Introduction to European Union (EU) law, including the relationship between EU and Member State law, EU institutions, the law of the common market (i.e., free movement of goods, persons, services and capital) and environmental law and social policy.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Develop an understanding of the basic historical, political, and structural basis of European public law.
Audience: Graduate

2. Identify the basic similarities and differences between a civil-law system and the U.S. common-law system.
Audience: Graduate

3. Identify the similarities and differences between how judges in the U.S. and Europe approach constitutional questions.
Audience: Graduate

4. Explain how both the United States and European Union member states approach particular constitutional questions.
Audience: Graduate

LAW 950 – LAWYERING SKILLS
1-6 credits.

An introduction to, and skills training in, a number of areas of general law practice. Hone skills in interviewing, counseling, negotiation, and legal writing.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize and practice skills and techniques for use during first years of law practice.
Audience: Graduate

2. Develop skills and employ resources necessary to respond to basic, recurring issues in multiple areas of general legal practice.
Audience: Graduate

3. Practice professional communication.
Audience: Graduate

LAW 953 – SELECTED PROBLEMS IN BUSINESS ORGANIZATION-SEMINAR
1-3 credits.

In business planning and business organizations including proprietorships, partnerships, corporations and trusts.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

LAW 954 – CORPORATE FINANCE LAW
3 credits.

Presents the basics of finance for business lawyers, and the law and legal strategy surrounding the creation of debt instruments.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2018

LAW 955 – PUBLIC SECTOR LABOR RELATIONS LAW SEMINAR
2-3 credits.

Legal and public policy issues relating to public sector unionism in a multiplicity of jurisdictions, including representation questions, scope of bargaining, limitations on the right to strike, impasse procedures, and grievance arbitration.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2019

LAW 957 – INTRODUCTION TO ESTATE PLANNING
2-3 credits.

Issues related to estate planning; including function of the lawyer, ethical issues, estates not subject to tax, basic elements of tax-oriented planning, living trusts, health care issues, gift strategies.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

LAW 981 – LAW AND MODERNIZATION IN THE DEVELOPING WORLD SEMINAR
2-3 credits.

Law as a system of social engineering in the economic and social modernization of developing countries. Problems of developing rules with a high probability of inducing behavior likely to lead to modernization.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

LAW 988 – SELECTED PROBLEMS IN ENVIRONMENTAL LAW-SEMINAR
2-3 credits.

Topics reflect interests of instructor and students.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

LAW 989 – ENVIRONMENTAL LAW AND PRACTICE
3 credits.

Presents environmental statutes, cases, and regulations, and discusses their implementation. Focuses on both law and practice. Provides a survey of substantive environmental law and their application in permitting, commercial transactions and enforcement.
Requisites: Declared in Law JD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

LAW 990 – DIRECTED RESEARCH
1-12 credits.

Faculty supervision on research; scope and subject arranged between student and faculty.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

LAW 991 – DIRECTED READING
1-3 credits.

Independent readings from a list prepared by instructor. Subject matter determined by agreement between instructor and student.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

LEGAL STUDIES (LEGAL ST)

LEGAL ST/SOC 131 – CRIMINAL JUSTICE IN AMERICA
3-4 credits.

Day-to-day functioning of the elements of the criminal justice system in the U.S. Nature of crime in the U.S., ideas about causes and solutions. Emphasis on the sociology of the components of criminal justice system--organization and roles of police, lawyers, court and correctional personnel.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Assess evidence and critically evaluate research-based arguments concerning criminal justice in academic journals, policy studies, or popular media.
Audience: Undergraduate

2. Build arguments clearly and effectively and critically analyze evidence in both oral presentations and papers.
Audience: Undergraduate

3. Think critically about the functioning of law and its effects on society, going beyond the surface of crime as a social phenomenon, discovering the "why" and "how" of the socio-legal order, and assessing alternate explanations for phenomena.
Audience: Undergraduate

4. Analyze sentencing and carceral practices of the United States criminal legal system in the context of larger political, social, legal, and economic forces.
Audience: Undergraduate

5. Evaluate social phenomena and diversity in global perspective, comparing how different cultures, groups, and societies understand and respond to crime.
Audience: Undergraduate

6. Work effectively in groups, responding to group dynamics among people from different backgrounds with different strengths and weaknesses.
Audience: Undergraduate

LEGAL ST/RP & SE 135 – DISABILITY AND THE CRIMINAL JUSTICE SYSTEM
3 credits.

Explores the interaction between the criminal justice system and disability. Explores common experiences of persons with disability such as limited access to community services, poverty, and homelessness and the connection of these experiences to mass incarceration. Explores federal disability rights laws and the implementation of these laws in education, legal, and incarceration settings. Introduction to criminal justice reform to address the experiences of persons with disabilities in this system.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the causes for over-incarceration of people with disabilities in the United States
Audience: Undergraduate

2. Demonstrate knowledge and understanding of the federal and state polices related to the incarceration and community monitoring of persons with disabilities who have been involved in the criminal justice system
Audience: Undergraduate

3. Demonstrate knowledge of roles and functions that rehabilitation professionals fill within the criminal justice system
Audience: Undergraduate

4. Demonstrate knowledge of treatment programming for individuals with disabilities who are incarcerated and the efficacy of different interventions in increasing community re-integration
Audience: Undergraduate

5. Demonstrate knowledge of community supports for individuals with disabilities subsequent to their release from institutional care
Audience: Undergraduate

6. Develop an awareness of the ethical standards of professional practice that rehabilitation professionals working with individuals with disabilities within the legal system
Audience: Undergraduate

LEGAL ST/ENGL 160 – TRUTH AND CRIME
3 credits.

Examines the development, scope, and effects of the "True Crime" genre in the United States. Using literary analysis and legal studies methods, explore various areas of the genre (written, podcasts, documentaries, etc.) and try to find answer as to why we are so compelled by true crime narratives and what true crime's "truth" is. Untangle the complex relationship between law and narrative (background on each will be provided) and the various epistemological systems it combines, including the role of science and technology. Gain a detailed understanding of what our culture's relationship to "real life" crime narratives tells us about the fundamental and complex role criminality plays in defining us as a society.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the fundamentals of legal narrative and its relationship to criminal law functions (what are the elements of a crime, and what is "evidence"?)
Audience: Undergraduate

2. Identify the ways the legal system is subject to human, social, and literary construction—not only in a theoretical sense but through actual cases.
Audience: Undergraduate

3. Analyze the various ways in which media "tells" crime stories and what the potential motivation for these stories might be.
Audience: Undergraduate

4. Develop a nuanced understanding of the true crime genre through a close examination of exemplary representations of the genre (literature, podcasts, documentaries, etc.)
Audience: Undergraduate

LEGAL ST/JEWISH/RELIG ST 203 – JEWISH LAW, BUSINESS, AND ETHICS
3 credits.

Explores the development of Jewish law from antiquity to modernity, with a focus on legal questions related to business practices and ethics. Consider issues ranging from ethical practices in agriculture to how to run a modern multi billion-dollar kosher industry; from the ethics of Jews celebrating Thanksgiving to regulations governing the preparation, consumption, and sale of coffee.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. articulate the general development and evolution of Jewish law
Audience: Undergraduate

2. apply different strategies that different Jewish communities have used to regulate business and ethical practices
Audience: Undergraduate

3. analyze, in both written and oral form, Jewish legal texts
Audience: Undergraduate

4. apply Jewish legal principles to new material
Audience: Undergraduate

LEGAL ST/POLI SCI 217 – LAW, POLITICS AND SOCIETY
3-4 credits.

Introduction to the legal process. Examination of the various concepts of law, the perennial problems of the law, legal reasoning, and the nature and function of law and the courts.
Requisites: Freshman or sophomore standing only
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Increase knowledge about the components of the U.S. legal system.
Audience: Undergraduate

2. Understand how disputes evolve in the context of the U.S. legal system.

Audience: Undergraduate

3. Improve ability to synthesize social science readings and formulate arguments in written and oral form.
Audience: Undergraduate

4. Improve oral advocacy skills through active classroom discussion.
Audience: Undergraduate

LEGAL ST/HISTORY 235 — PRISONS: FROM ANTIQUITY TO SUPERMAX
3-4 credits.

Examines the development of prisons from the ancient Mediterranean world to the present in the US and Europe. Pays particular attention to the way in which imprisonment has been used against marginalized populations. Examines the development of carceral tactics across a number of registers, including the prison as an ancient political tactic, the economic logic of early modern debtors' prisons, the relationship of prisons and workhouses to forms of capitalism, prisons and colonial expansion, the relationship between mass incarceration and democratic forms of government, as well as the connections between the abolition of slavery and modern carceral practices. Also looks at the legal and constitutional limitations that have been put on imprisonment by the American legal system. Relies on interdisciplinary approaches to the study of prisons, including History, law, literature, and political theory.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze and articulate arguments about how social, political, and cultural phenomena shape law and legal systems, and in particular shape practices of imprisonment.
Audience: Undergraduate

2. Analyze and articulate arguments about the impact of imprisonment on social practices and political organization.
Audience: Undergraduate

3. Explain how legal ideas and ideologies have changed over time and have shaped law and legal systems.
Audience: Undergraduate

4. Find, interpret, and utilize resources relevant to law and society.
Audience: Undergraduate

5. Construct clear and persuasive arguments about legal systems and imprisonment.
Audience: Undergraduate

LEGAL ST/CURRIC/ED POL 250 — INCARCERATION AND EDUCATION
3 credits.

Investigates how the systems of incarceration and education operate alongside, within, around and through one another. Provides a historical examination of how education and incarceration have interacted. Examines how prisons operate as 'teaching institutions,' what it teaches all of us impacted by it, and what interventions have been designed to facilitate particular kinds of learning. Presents firsthand accounts of those who work and live in the carceral system currently.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze the relationship between schooling and incarceration including issues related to discipline, gender, and disability
Audience: Undergraduate

2. Articulate and evaluate your understanding of experiences of incarceration including the sources, assumptions, and implications behind your understanding
Audience: Undergraduate

3. Synthesize the lived experiences of diverse individuals impacted by incarceration to understand the range of forms learning takes place inside carceral facilities;
Audience: Undergraduate

4. Evaluate different policies and practices that operate at the intersections of education and incarceration.
Audience: Undergraduate

LEGAL ST/HISTORY 261 – AMERICAN LEGAL HISTORY TO 1860
3-4 credits.

Surveys the development of American law down to the U.S. Civil War. Reviews the English historical background, and examines how law changed in colonial America, culminating in the framing of the U.S. Constitution. Explores how territorial expansion, democracy, and slavery shaped nineteenth-century American law. Emphasis is on how law interacts with political, social, and cultural change, with a focus on the origins of modern civil and constitutional rights.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze how the social, political, and cultural context of England and colonial America helped to shape early American legal and political systems.
Audience: Undergraduate

2. Analyze how early legal and political systems impacted Americans of all types: men and women; landowners and the poor; settlers and indigenous people; free people, servants, and slaves.
Audience: Undergraduate

3. Assess how and why the Declaration of Independence, the U.S. Constitution, and other founding documents were shaped by traditions of representative government, Common Law, and the political philosophies of republicanism and liberalism.
Audience: Undergraduate

4. Find, interpret, and utilize resources relevant to early American law and society, including colonial charters, slave codes, the Declaration of Independence, the U.S. Constitution, and Supreme Court decisions.
Audience: Undergraduate

5. Analyze legal arguments in historical context, write clearly and persuasively, and construct original arguments.
Audience: Undergraduate

LEGAL ST/HISTORY 262 – AMERICAN LEGAL HISTORY, 1860 TO THE PRESENT
3-4 credits.

Surveys the development of American law from the Civil War to the early Twenty-First Century. After a review of the U.S. Constitution and its modification by the Civil War amendments, examine the legal dimensions of such topics as race relations and the Civil Rights movement, the growth of modern business, the New Deal, labor rights, the women's movement, the individual rights revolution of the postwar period, and the contemporary conservative reaction. Emphasis on how law interacts with political, social, and cultural change.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze how social, political, and cultural phenomena, such as the Civil War, industrialization, and the rise of modern mass education and administrative government shaped U.S. law and legal systems.
Audience: Undergraduate

2. Analyze how changes in U.S. legal and political systems impacted Americans, both as individuals of all sexes, races, and classes and as members of families and business and civic organizations.
Audience: Undergraduate

3. Assess how twentieth-century changes in legal ideas and ideologies have affected understandings of the law, the U.S. Constitution, and broader legal and political systems.
Audience: Undergraduate

4. Find, interpret, and utilize resources relevant to law and society, including political speeches, state and federal laws, and decisions of federal courts and of the Supreme Court.
Audience: Undergraduate

5. Analyze legal arguments in historical context, write clearly and persuasively, and construct original arguments.
Audience: Undergraduate

LEGAL ST 325 – WRONGFUL CONVICTIONS
3 credits.

Study of evidentiary causes of wrongful convictions, including eyewitness misidentifications, false confessions, the use of jailhouse informants, and flaws in forensic science. Procedural and institutional causes of wrongful convictions, and within this context, question whether constitutional rights adequately protect against illegitimate outcomes. Explore potential ways to broaden conceptions of wrongful convictions, looking at mass surveillance, mass prosecution, mass conviction, sentencing severity, and the system's racially disproportionate impact at all intercept points.
Requisites: LEGAL ST/SOC 131 or 217
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Demonstrate an understanding of what constitutes and what causes wrongful convictions.
Audience: Undergraduate

2. Identify methods of investigating crime, and understand how the use of these methods may lead to inaccurate results.
Audience: Undergraduate

3. Demonstrate an understanding of procedural/institutional conditions that limit a defendant's access to information.
Audience: Undergraduate

4. Summarize the constitutional rights of criminal defendants, and identify institutional forces that limit the ability of criminal defendants to avail themselves of these protections.
Audience: Undergraduate

5. Display an understanding of structural issues that inform a broader understanding of wrongful convictions.
Audience: Undergraduate

LEGAL ST/POLI SCI 352 – TRANSITIONAL JUSTICE IN WORLD POLITICS
3-4 credits.

Provides an introduction to the study of transitional justice (TJ), or how institutions - local, domestic, and international - address the legacies of human rights abuses. Explore several key questions motivating the study of transitional justice: Why do societies pursue accountability for past repression in general? How do transitioning societies go about these pursuits? What effects might TJ policies have on prospects for democracy, rule of law, and future human rights abuses? Special attention to how local and global politics interact to influence both the development and the effects of different transitional justice policies.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the history and political foundations of transitional justice
Audience: Undergraduate

2. Describe and differentiate between transitional justice mechanisms at the international, domestic, and local level
Audience: Undergraduate

3. Explain the role of different international and domestic actors in designing and implementing transitional justice
Audience: Undergraduate

4. Analyze and evaluate the implications of different transitional justice mechanisms for democracy, peace, and stability
Audience: Undergraduate

LEGAL ST 400 – TOPICS IN LEGAL STUDIES AND THE SOCIAL SCIENCES
3-4 credits.

Addresses a variety of issues linking various social sciences perspectives to the central themes of law and legal institutions.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze how social, political, and cultural phenomena shape law and legal systems.
Audience: Both Grad & Undergrad

2. Analyze the social, political, and cultural impacts of law at the societal and individual levels.
Audience: Both Grad & Undergrad

3. Assess how legal ideas and ideologies have changed over time and have shaped law and legal systems.
Audience: Both Grad & Undergrad

4. Find, interpret, and utilize resources relevant to law and society.
Audience: Both Grad & Undergrad

5. Analyze legal arguments and information in broad social and historical contexts, write clearly and persuasively, and construct original arguments.
Audience: Both Grad & Undergrad

6. Analyze research methods, engage critically with scholarly literature, and assess debates among scholars and others who have shaped understandings of this topic and field.
Audience: Graduate

LEGAL ST/GEN&WS/SOC 406 – LAW, SEXUALITY, & SOCIETY
3-4 credits.

Examines the legal and social development and implications of laws governing sexual behavior, human reproduction, media, privacy, and topics related to sexuality, sex and gender. Includes historical analyses of laws connected to present day regulations of sexuality, demonstrating the origins of many of the world's most frequently debated civil rights issues. Chief focus on the United States legal system, with some content including examinations of institutions around the world. Investigates taken-for-granted knowledge and assumptions about sexuality and look at legal, cultural and social constructions of sex in society. Covers intersectional social implications, including race, (dis)ability, class, etc. Topics include: obscenity, pornography, sex work, sexual surrogacy, birth control, abortion, sex education, sexual violence, sex offenders, sexual citizenship rights, trans and intersex legal topics.
Requisites: GEN&WS 101, 102, 103 or SOC/LEGAL ST 131
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss social theory about law and human behavior, particularly human sexuality
Audience: Undergraduate

2. Explain historical roots of modern sexuality-related laws and legal systems worldwide
Audience: Undergraduate

3. Analyze topics related to sexuality and society; constructing arguments based on academic, peer-reviewed research
Audience: Undergraduate

4. Examine sociolegal governance over a wide variety of sexual behaviors and gender/sex topics in a critical, thorough, and thoughtful manner
Audience: Undergraduate

5. Comprehend and apply legal history, precedent, and course concepts to specific sociolegal cases concerning sexuality
Audience: Undergraduate

LEGAL ST 407 – JURISPRUDENCE AND SOCIAL ISSUES
3 credits.

Examines fundamental questions about the nature and content of law, addressing both analytic and normative jurisprudence. Questions in analytic jurisprudence include: What does it mean for something to be the law? Why are some things a matter of law, while others are not? What is the relationship between law and morality? Is the law exhausted by the meaning of words in constitutions and statutes? Questions of normative jurisprudence concern the proper content of law, such as, what should the law permit, prohibit, and promote? These questions are examined by looking at a number of topics that are at issue in U.S. (and other nations') laws. These will include interpreting criminal law statutes, policies promoting public welfare, and the justifications for property, especially intellectual property rights.
Requisites: SOC/LEGAL ST 131, POLI SCI/LEGAL ST 217, or graduate/professional standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Demonstrate familiarity with major issues in jurisprudence and the ability to examine critically various ways of understanding the nature and content of law
Audience: Both Grad & Undergrad

2. Demonstrate knowledge about how ideas and ideologies have changed over time and have shaped social and moral arguments concerning the law

Audience: Both Grad & Undergrad

3. Develop ability to articulate and discuss complex issues and arguments surrounding legal, social, and moral questions
Audience: Both Grad & Undergrad

4. Demonstrate the ability to analyze information, to write clearly and persuasively, and to construct original arguments
Audience: Both Grad & Undergrad

5. Demonstrate an advanced understanding of the legal, political, and philosophical contexts and current scholarly debates concerning jurisprudence.
Audience: Graduate

LEGAL ST 409 – HUMAN RIGHTS IN LAW AND SOCIETY
3 credits.

Introduction to the theory, the politics and the sociology of human rights. Main themes: international human rights legal regime, questions of why human rights have become "legalized," and what the consequences of this legalization are on the ground.
Requisites: LEGAL ST/SOC 131, POLI SCI/LEGAL ST 217, or Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Articulate and analytically discuss the origins, structure, justification, and impact of the international human rights system. Students will know the main international institutions and treaties governing human rights in our world, as well as the main policy debates about human rights.
Audience: Both Grad & Undergrad

2. Articulate and analytically discuss human rights' potential and limits in creating social and political change.
Audience: Both Grad & Undergrad

3. Recognize the challenges facing human rights law and institutions in light of the changing geopolitical world order.
Audience: Both Grad & Undergrad

4. Articulate and critically discuss the distinct ways in which various academic disciplines approach the same topic, revealing the structure of how we create knowledge.
Audience: Both Grad & Undergrad

5. Identify opportunities for employment or further study, assess their qualifications for these opportunities, and identify strategies for gaining the necessary knowledge and experience.
Audience: Graduate

6. Develop and maintain portfolios of their written work and educational experiences to aid them in preparing applications and to learn how to present their materials.
Audience: Graduate

LEGAL ST/GEN&WS 422 – WOMEN AND THE LAW
3 credits.

Legal system, laws, and proposed legislation that have specific impact on the lives of women. Topics investigated in both the social and legal contexts.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Demonstrate an understanding of feminist legal theories and methodologies and apply them to real-world cases and historical legal scenarios.
Audience: Both Grad & Undergrad

2. Examine historical roots of modern gendered/sexed legal systems in the United States and worldwide.
Audience: Both Grad & Undergrad

3. Identify key court cases related to gender and civil rights; summarize the major holdings of those cases.
Audience: Both Grad & Undergrad

4. Investigate and research original projects about sex and society, construct research arguments, and plan legal/policy brief proposals.
Audience: Both Grad & Undergrad

5. Analyze sociolegal governance trends/patterns in the U.S. and internationally over a wide variety of sex/gender topics, including family rights, economic and financial rights, employment, voting, politics, sexuality, sport, education, abortion, birth control, and health.
Audience: Both Grad & Undergrad

6. Effectively present legal arguments in oral form, using the "Before the Courts" style, and in written form, using the style of law review articles.
Audience: Graduate

LEGAL ST/GEN&WS/SOC 425 – CRIME, GENDER AND JUSTICE
3 credits.

Focuses on the intersection between gender, crime and justice from a cross-cultural perspective. The gendered nature of the criminal justice system, female experiences of crime, prosecution and incarceration as well as the extent to which women are victims, offenders, and participants in the criminal justice system will be explored. Special emphasis will be placed on the theoretical implications of offending behavior and the intersection of gender with sexuality, race, ethnicity and class. The goal of this course is to provide a foundation for critically assessing the often controversial issues surrounding race, gender, crime, and criminal justice in society.
Requisites: SOC/LEGAL ST 131, GEN&WS 101, 102, 103 or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze the U.S. criminal justice system, including incarceration, sentencing, and policing, through the lens of gender studies
Audience: Undergraduate

2. Identify and describe criminological theories, specifically those focused on gender, race, class, and feminist academic thought
Audience: Undergraduate

3. Explore inequalities amongst gender groups and various other social intersections (race, class, ability, sexuality, age, parenthood, etc).
Audience: Undergraduate

4. Investigate topics related to gender and justice by conducting thorough literature reviews and preparing policy briefs with recommendations for legal change.
Audience: Undergraduate

5. Examine and discuss real-world experiences in criminal justice systems, both in the U.S. and abroad.
Audience: Undergraduate

LEGAL ST/HISTORY 426 – THE HISTORY OF PUNISHMENT
3-4 credits.

Examines punishment across a vast range of historical traditions, examining how wrongdoing and punishment have been figured in law, literature, art and philosophy. Examines ancient, medieval and modern traditions.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

LEGAL ST/ENVIR ST/HISTORY 430 – LAW AND ENVIRONMENT: HISTORICAL AND CONTEMPORARY PERSPECTIVES
3 credits.

Explores environmental studies through a focus on law and legal history. Although its main concentration is on U.S. environmental law, the course will begin and end with broader historical and global perspectives. Topics include a survey of English, European, and early American legal approaches to land use, natural resources, and pollution through World War II as well as an examination of the development and practice of contemporary U.S. environmental law and consideration of the recent emergence of international environmental law.
Requisites: Sophomore standing
Course Designation: Gen Ed - Communication Part B
Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze and articulate their own arguments about how social, political, and cultural phenomena shape law and legal systems.
Audience: Both Grad & Undergrad

2. Analyze and articulate their own arguments about the social, political, and cultural impacts of law at the societal and individual levels.
Audience: Both Grad & Undergrad

3. Demonstrate knowledge about how legal ideas and ideologies have changed over time and have shaped law and legal systems.
Audience: Both Grad & Undergrad

4. Demonstrate their abilities to find, interpret, and utilize resources relevant to law and society.
Audience: Both Grad & Undergrad

5. Demonstrate their abilities to analyze information, to write clearly and persuasively, and to construct original arguments.
Audience: Both Grad & Undergrad

6. Analyze the causes of and solutions for the sustainability challenge of the conservation of natural resources, especially insofar as their governance involves and impacts local stakeholders.
Audience: Both Grad & Undergrad

7. Analyze the social, economic, legal, political, and environmental dimensions of the sustainability challenge of regulating and governing biodiversity, clean air and water, and other, larger earth systems (such as climate).
Audience: Both Grad & Undergrad

8. Demonstrate an advanced understanding of the historiography or other scholarly debates that have shaped the study of conservation and environmental law.
Audience: Graduate

LEGAL ST/AFROAMER 435 – CIVIL RIGHTS: POLICING, PRISONS, VOTING, HOUSING, EMPLOYMENT
3-4 credits.

Exploration of civil rights. Question what it means to discriminate (on the basis of race, sex, national origin, religion, and disability), how we might investigate and detect acts of discrimination, and the legal constraints on governmental efforts to remedy discrimination in employment, housing, and voting. Explore the intersection of government power and civil rights. Examine how the government targets groups during times of national crisis. Consider what constitutes acceptable conditions of incarceration for prisoners. Finally, learn police use-of-force doctrine, and discuss the challenge of protecting both officer and civilian safety.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify key historical events that led to the conception and creation of civil rights.
Audience: Both Grad & Undergrad

2. Identify constitutional justifications for the use of federal authority to legislate in the area of civil rights.
Audience: Both Grad & Undergrad

3. Summarize statutes and cases that protect against discrimination in employment, housing, and voting.
Audience: Both Grad & Undergrad

4. Demonstrate an understanding of major civil rights controversies surrounding political detainees, prison inmates, and those subject to police force during street encounters.
Audience: Both Grad & Undergrad

5. Demonstrate an advanced understanding of the historical context, constitutional arguments, and current scholarly debates concerning civil rights law.
Audience: Graduate

LEGAL ST/CHICLA/SOC 440 – ETHNICITY, RACE, AND JUSTICE
3-4 credits.

An examination of ethnicity, race, and justice, with a specific emphasis on US Latinos, the largest minority group in the United States.
Requisites: C&E SOC/SOC 140, 210, 211, SOC 181, FOLKLORE/AFROAMER/AMER IND/ASIAN AM/CHICLA 102, CHICLA 201, CHICLA 210, CHICLA 230, POLI SCI/CHICLA 231, HISTORY/CHICLA/GEN&WS 245, LEGAL ST/SOC 131, or POLI SCI/LEGAL ST 217
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Discuss ethnic and racial differences in crime and criminal justice outcomes and analyze these patterns through the application of theory and empirical data in the social sciences.
Audience: Undergraduate

2. Engage major theoretical debates in social and legal scholarship. Why are there racial/ethnic disparities in crime and violence? How and why have these disparities changed over time? Are minorities treated differently by legal officials? Has mass incarceration mitigated or exacerbated racial and ethnic inequality? How has the Supreme Court viewed issues of ethnicity, race, and the law?
Audience: Undergraduate

3. Competently interpret representations of data and critically analyze study design in published research on ethnicity, race, and justice.
Audience: Undergraduate

4. Critically assess the often-controversial issues surrounding ethnicity, race, crime, and the law in society, drawing on readings and class discussion.
Audience: Undergraduate

LEGAL ST/ELPA 442 – CIVIL RIGHTS LAWS, THE COURTS, AND PUBLIC EDUCATION
3 credits.

Examines several legal issues confronting students and educators within the U.S. education system with a particular focus on race discrimination. Examines how civil rights laws and constitutional provisions can help create more equitable schooling experiences for students and educators from historically marginalized populations. Identifies pragmatic approaches to the law, and explores issues of the democratic underpinnings of education.
Requisites: Junior standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Analyze the U.S. constitutional provisions and civil rights laws in the U.S. that impact U.S. public education, demonstrating an awareness of history's impact on the past and present.
Audience: Both Grad & Undergrad

2. Describe various legal documents related to education, recognizing how assumptions about minoritized populations may play out in school policy.
Audience: Both Grad & Undergrad

3. Explain and engage in discussions about racial injustice through the discussion of case law, demonstrating a consciousness or awareness of how the issue impacts themselves and others in a public school setting.
Audience: Both Grad & Undergrad

4. Identify ways to become more effective participants in a multiracial society through the examination of current issues and social movements rooted in education law and policy.
Audience: Both Grad & Undergrad

5. Examine issues in civil rights law in education using peer-reviewed research
Audience: Graduate

LEGAL ST/CHICLA/SOC 443 – IMMIGRATION, CRIME, AND ENFORCEMENT
3-4 credits.

A study of immigration, crime, and border enforcement, engaging both historical and present-day debates, focusing on Latino immigration and the U.S.-Mexico border.
Requisites: C&E SOC/SOC 140, 210, 211, SOC 181, FOLKLORE/AFROAMER/AMER IND/ASIAN AM/CHICLA 102, CHICLA 201, CHICLA 210, CHICLA 230, POLI SCI/CHICLA 231, HISTORY/CHICLA/GEN&WS 245, LEGAL ST/SOC 131, or POLI SCI/LEGAL ST 217
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Discuss trends in immigration, crime, and border enforcement in recent decades and analyze these patterns through the application of theory in the social sciences and empirical data.
Audience: Undergraduate

2. Engage major theoretical debates in migration scholarship. Why do people (not) move? How are migration decisions made? What effect does migration have on (a) receiving societies, (b) sending societies, and (c) migrants themselves? How is migration organized by gender? What differentiates forced and unforced migration? How are immigrants incorporated into new societies?
Audience: Undergraduate

3. Develop a broader understanding of border enforcement through critical analysis of immigration policies and practices from an international perspective. That is, are recent trends in border enforcement unique to the United States?
Audience: Undergraduate

4. Critically assess the often-controversial issues surrounding ethnicity, race, crime, and the law in society, drawing on readings and class discussion.
Audience: Undergraduate

LEGAL ST 444 – LAW IN ACTION
3 credits.

A review of the interaction of law (judicial decisions, legislation, administrative actions) with public policy by studying the approaches used to resolve a number of significant issues by use of law and examining the actual impact of such efforts.
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Evaluate how law operates across different areas of practice
Audience: Undergraduate

2. Recognize the role of legal institutions, actors, and processes in specific contexts
Audience: Undergraduate

3. Articulate how different groups are situated unequally in relation to the law
Audience: Undergraduate

4. Explain the ways politics, culture, and society shape the working of law
Audience: Undergraduate

5. Compose effective arguments supported by evidence and critical thinking skills
Audience: Undergraduate

6. Recognize and access different kinds of legal documents and other legal resources
Audience: Undergraduate

LEGAL ST/POLI SCI 445 – LEGAL WRITING, FROM COUNSELOR TO ADVOCATE
3 credits.

Introduction to legal reasoning, writing, and research. Draft memos and briefs based on fictional case files and independent legal research, simulating the practice of law. Topics include precedent, sources of law, reading and interpreting legal texts, objective legal analysis, persuasion, and oral argument.
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Read legal sources critically and accurately to identify relevant information.
Audience: Undergraduate

2. Recognize the weight and significance of legal authorities within the American legal system.
Audience: Undergraduate

3. Analyze and synthesize legal authorities to explain and formulate controlling rules.
Audience: Undergraduate

4. Apply legal rules to a set of facts—both to predict legal consequences and to advocate for a preferred result.
Audience: Undergraduate

5. Use research strategies to find controlling and persuasive legal authority.
Audience: Undergraduate

6. Write clearly and concisely about the law in different professional contexts, including objective office memoranda and persuasive legal briefs.
Audience: Undergraduate

7. Articulate legal analyses and argue legal positions via oral communication and advocacy.
Audience: Undergraduate

LEGAL ST 450 – TOPICS IN LEGAL STUDIES AND THE HUMANITIES
3-4 credits.

Addresses a variety of issues linking various humanities perspectives to the central themes of law and legal institutions.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze how social, political, and cultural phenomena shape law and legal systems.
Audience: Both Grad & Undergrad

2. Analyze the social, political, and cultural impacts of law at the societal and individual levels.
Audience: Both Grad & Undergrad

3. Assess how legal ideas and ideologies have changed over time and have shaped law and legal systems.
Audience: Both Grad & Undergrad

4. Find, interpret, and utilize resources relevant to law and society.
Audience: Both Grad & Undergrad

5. Analyze information, write clearly and persuasively, and construct original arguments.
Audience: Both Grad & Undergrad

6. Analyze research methods, engage critically with scholarly literature, and assess debates among scholars and others who have shaped understandings of this topic and field.
Audience: Graduate

LEGAL ST/SOC 451 – RACE, FAMILY & THE STATE
3 credits.

Examines the politics of state involvement in family life in America, particularly in poor and minoritized families. Investigates the state's role in the regulation of the family through systems of governance such as criminal justice, immigration, and welfare that shape the legal possibilities for family life. Incorporates sociological, historical, and legal scholarship to critically assess the structural influences shaping the experiences, choices, and legal possibilities for families of color.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Identify and describe key social science theories of race, ethnicity, and racism.
Audience: Undergraduate

2. Articulate how the concept of family is a social construct.
Audience: Undergraduate

3. Enumerate the ways state institutions intervene in family life, and how the role of race and racism these processes.
Audience: Undergraduate

4. Explain how cultural assumptions about the meanings and purpose attached to families influence policy making.
Audience: Undergraduate

5. Apply sociological research findings to evaluate family policy positions
Audience: Undergraduate

6. Communicate contemporary family policy issues to non-specialists through public speaking and writing.
Audience: Undergraduate

LEGAL ST/HISTORY 459 – RULE OF LAW: PHILOSOPHICAL AND HISTORICAL MODELS
3-4 credits.

From the perspectives of history and political theory, examines the multiple meanings of the idea of the rule of idea, and its uses in American history. Explore prominent critiques of the rule of law ideal.
Requisites: Junior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

LEGAL ST/L I S 460 – SURVEILLANCE, PRIVACY, AND POLICE POWERS
3 credits.

Examines individual privacy and government information collection in law enforcement, security, public health, administrative law, and other contexts from a variety of disciplinary perspectives.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

LEGAL ST 473 – HEALTH IMPACTS OF UNMET SOCIAL NEEDS
3 credits.

Engage in service learning through direct work with patients in the Community Resource Navigator Program. Develop a better understanding of how social determinants of health equity affect peoples' lives. Partner with patients to identify social and legal services, assist patients in connecting to needed resources, follow up with patients to be sure that the connection was made and evaluate the quality of the resources provided. Reflect on experiences in the clinic and further explore how social location impacts health, legal and social service delivery. Working directly in local primary care clinics will provide the opportunity to communicate directly with the health care team to problem solve barriers patients are facing in accessing resources for their social needs.
Requisites: Consent of instructor
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

LEGAL ST/HISTORY 476 – MEDIEVAL LAW AND SOCIETY
3 credits.

Introduction to the central historical developments of law and legal institutions in the European middle ages (400-1500).
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2023

LEGAL ST/HISTORY 477 – HISTORY OF FORENSIC SCIENCE
3 credits.

Examines the diverse paths followed by forensic science (including medical jurisprudence or forensic medicine) in various times and places, focusing on the English-speaking world from the nineteenth century until the present. Explore the many ways that law and science have worked together--or at cross-purposes--to generate and assess evidence at the crime scene, in the lab, in the courtroom, and beyond.
Requisites: Sophomore standing and (LEGAL ST/HISTORY 261, SOC/LEGAL ST 131, or POLI SCI/LEGAL ST 217), or graduate/professional standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

LEGAL ST/HISTORY 510 – LEGAL PLURALISM
3 credits.

Historical and anthropological perspectives on non-state "law," or systems of rules generated by normative orders that lay beyond the state; case studies include the mafia, Tokyo tuna traders' court, orthodox Jewish diamond merchants, California gold miners' courts, Inuit song dueling.
Requisites: Sophomore standing and (LEGAL ST/HISTORY 261, SOC/LEGAL ST 131, or POLI SCI/LEGAL ST 217), or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

LEGAL ST/ED POL/ELPA 542 – LAW AND PUBLIC EDUCATION
3 credits.

Examines the legal issues related to the policy decisions and delivery of public education (elementary and secondary) in the United States. Learn how law impacts both curriculum development and curricular delivery, explore current legal controversies, constitutional issues, and learn about legal reasoning and analysis. Examines how both legislation and litigation affects public education. Particular attention is paid to law as public policy and the analysis of the same.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify various analytic frameworks that guide legal analysis.
Audience: Both Grad & Undergrad

2. Analyze the use of principles and/or frameworks to a situation or issue.
Audience: Both Grad & Undergrad

3. Understand the role of analytic frameworks in the development and implementation of law and policy.
Audience: Both Grad & Undergrad

4. Describe the many legal issues inherent in daily school practice.
Audience: Undergraduate

5. Discuss various legal principles.
Audience: Undergraduate

6. Examine the sources of law and the various interests that the law seeks to balance.
Audience: Undergraduate

7. Recognize and identify independently the many legal issues inherent in daily school practice.
Audience: Graduate

8. Explore and apply various legal practices and their application.
Audience: Graduate

9. Examine the sources of law and the various interests that the law seeks to balance, provide varying arguments in written form.
Audience: Graduate

10. Find and understand primary sources of legal authority (e.g. actual cases, statutes, and administrative rules).
Audience: Graduate

LEGAL ST 600 – SPECIAL TOPICS IN LEGAL STUDIES
1-3 credits.

Special seminars are designed for opportunities such as short international seminar courses, the summer forum, and other special opportunities.
Requisites: Junior standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze how social, political, and cultural phenomena shape law and legal systems.
Audience: Both Grad & Undergrad

2. Analyze the social, political, and cultural impacts of law at the societal and individual levels.
Audience: Both Grad & Undergrad

3. Assess how legal ideas and ideologies have changed over time and have shaped law and legal systems.
Audience: Both Grad & Undergrad

4. Find, interpret, and utilize resources relevant to law and society.
Audience: Both Grad & Undergrad

5. Analyze information, write clearly and persuasively, and construct original arguments.
Audience: Both Grad & Undergrad

6. Analyze research methods, engage critically with scholarly literature, and assess debates among scholars and others who have shaped understandings of this topic and field.
Audience: Graduate

LEGAL ST/LAW/SOC 641 – SOCIOLOGY OF LAW
3-4 credits.

Theory and research on the social origins, processes and effects of law; examination of law-related behavior, legal institutions, law and social structure, and law and social change; linkage to contemporary theoretical and political debates.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

LEGAL ST/L I S 645 – INTELLECTUAL FREEDOM
3 credits.

An examination of intellectual freedom in the United States including censorship, minors' rights, the Internet, privacy, and copyright with focus on theoretical questions related to the First Amendment to the U.S. Constitution, and historical developments.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

LEGAL ST/L I S 663 – INTRODUCTION TO CYBERLAW
3 credits.

The emphasis is on critical thinking about a broad variety of legal and policy problems that arise because of ever-changing information and communication technologies.
Requisites: Junior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

LEGAL ST 681 – SENIOR HONORS THESIS
3-4 credits.

Individual study for majors writing theses for honors degree.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025

LEGAL ST 682 – SENIOR HONORS THESIS
3-4 credits.

Individual study for majors writing theses for honors degree.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025

LEGAL ST 691 – SENIOR THESIS
3 credits.

Individual study for majors writing senior thesis (nonhonors).
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

LEGAL ST 692 – SENIOR THESIS
3 credits.

Individual study for majors writing senior thesis (nonhonors).
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

LEGAL ST/SOC 694 – CRIMINAL JUSTICE FIELD OBSERVATION
2-3 credits.

Field placements and seminar sessions to develop sociological understanding of criminal justice processes. Placement in criminal justice agencies and lectures and discussions applying concepts and theories to field experience.
Requisites: Declared in Criminal Justice certificate and LEGAL ST/SOC 131
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Workplace - Workplace Experience Course
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the role that mental health or substance abuse can play in one's contact with the criminal legal system.
Audience: Undergraduate

2. Assess how an individual's race and socio-economic class can impact the likelihood of contact with the American criminal legal system, as well as how it impacts their experience.
Audience: Undergraduate

3. Evaluate how consideration of a client's/ individual's cultural heritage and practices can improve one's effectiveness in providing services.
Audience: Undergraduate

4. Analyze the potential effects of trauma exposure on a practitioner or service provider and compare self-care strategies to deal with this.
Audience: Undergraduate

5. Conduct client interviews based on knowledge of the steps needed to prepare for interviews and document the information gathered.
Audience: Undergraduate

6. Describe the breadth of stakeholders to the work being conducted by community agencies.
Audience: Undergraduate

LEGAL ST 699 – DIRECTED STUDY
1-4 credits.

Directed study in legal studies.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

LIBRARY AND INFORMATION STUDIES (L I S)

L I S/COMP SCI 102 – INTRODUCTION TO COMPUTING
3 credits.

Provides a broad overview of computing at an introductory level, including topics such as security, robotics, and artificial intelligence. Increases understanding of how computers work and how algorithms solve problems. Design and implement creative applications in an introductory coding environment. Provides a broad overview of computing and algorithms without an emphasis on programming.
Requisites: MATH 96 or placement into MATH 141. MATH 118 does not fulfill the prerequisite. Not open to students with credit for COMP SCI 300 or 320
Course Designation: Gen Ed - Quantitative Reasoning Part A
Breadth - Natural Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop a fundamental understanding of the key concepts of computer science in a variety of contexts.
Audience: Undergraduate

2. Create art, music, stories, games and other programs in a visual, introductory programming language
Audience: Undergraduate

3. Understand how computers use algorithms to solve problems and act in intelligent ways.
Audience: Undergraduate

4. Understand how computers utilize large sets of data to provide insight and knowledge.
Audience: Undergraduate

5. Learn how software and hardware make modern computers work
Audience: Undergraduate

L I S 201 – THE INFORMATION SOCIETY
4 credits.

Examines important social, legal, and historical contexts of information and information technologies, and explores significant social, legal, and moral questions that surround those technologies.
Requisites: Satisfied Communications A requirement
Course Designation: Gen Ed - Communication Part B
Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

L I S 202 – INFORMATIONAL DIVIDES AND DIFFERENCES IN A MULTICULTURAL SOCIETY
3 credits.

Explores the impact of and barriers to access to information on the lives of low-income ethnic/racial minority communities in the United States. Provides introduction to contemporary information society from a sociological perspective.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

L I S 220 – DIGITAL FOOTPRINTS: PRIVACY AND TECHNOLOGY
3 credits.

Each of us leaves behind digital information traces, our "digital footprint", as we go about our daily lives. Learn about the different kinds of technologies involved in capturing this information, who owns it and controls it, and how it is used to make our lives easier and less private at the same time. Consider what information can be tracked and inferred about us based on our digital traces, what is gained (and lost) as individuals and society by allowing our digital footprints to continue to expand, and debate what future technologies and policies concerning this information should be like.
Requisites: Satisfied Communications A requirement or concurrent enrollment
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define "privacy" and describe what it means for them in their own lives
Audience: Undergraduate

2. Understand the basics of technologies involved in collecting and inferring digital information about people.
Audience: Undergraduate

3. Read and understand privacy policies, and consider how the use of different platforms and systems might impact their own privacy and the privacy of others.
Audience: Undergraduate

4. Think critically about how the future design of technologies and policies might impact privacy.
Audience: Undergraduate

L I S 301 – INFORMATION LITERACIES IN ONLINE SPACES
3 credits.

Explores information and digital literacies needed by today's online consumers and producers. Covers skills and topics related to access (digital divides, power relations in online communities, regulation), analysis (assessing credibility, evaluating risks, analyzing representation) and production (blogging, videosharing, gaming).
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2022

L I S 340 – TOPICS IN INFORMATION STUDIES - SOCIAL ASPECTS
3 credits.

Exploration of contemporary issues related to information in society. Subject will vary. Examples include, but not restricted to: Information Ethics, Digital and Print Culture, Global Information Flows.
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023

L I S 341 – TOPICS IN INFORMATION STUDIES - TECHNOLOGICAL ASPECTS
1-3 credits.

Exploration of information technology and information management subjects. Subjects will vary. Examples include, but not restricted to: A Social History of Information Infrastructure, Digital Productivity Tools and Debates, Digital Publishing Standards and Tools, Digital Preservation.
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2021

L I S 350 – HISTORY AND FUTURE OF BOOKS
3 credits.

Framed by a question about what books are, what books have been, and what books might be: past, present, and future. It assumes that "book" is a placeholder term for an object that becomes the site of questions and debates about a variety of media, expressions, and recording practices. A goal of the class is to understand the book as an active technology that shapes peoples, perceptions, and cultures rather than serving as a passive receptacle of them. This course will approach the book from a number of perspectives including book history, digital humanities, media studies, and human computer interaction, as well as examining industry-oriented interests such as e-reader manufacturing, book retail, and publishing.
Requisites: Satisfied Communications A requirement
Course Designation: Gen Ed - Communication Part B
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

L I S 351 – INTRODUCTION TO DIGITAL INFORMATION
3 credits.

Prepares students to use information technologies to solve problems and help people through implementing information infrastructures such as websites, databases and metadata. Students will explore information access, information representation, usability and information policy issues, and increase their understanding of the social impacts and social shaping of information infrastructures.
Requisites: Satisfied Communications A requirement
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

L I S 399 – INDEPENDENT READING AND RESEARCH
1-3 credits.

Concentrated work on a subject or problem of interest.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Investigate an information science topic in conjunction with other investigator(s) to develop a deep understanding of a research problem.
Audience: Undergraduate

2. Identify a research problem and develop a basic knowledge of the academic literature on this topic.
Audience: Undergraduate

L I S/COMP SCI/STAT 401 – UNDERGRADUATE COOPERATIVE EDUCATION
1 credit.

Full time work experience which combines classroom theory with practical knowledge related to Computer Sciences, Data Science, Statistics, or Information Science.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Workplace - Workplace Experience Course
Repeatable for Credit: Yes, for 3 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply academic experience gained through coursework in a professional setting.
Audience: Undergraduate

2. Experience the nature and demands of a professional career in computer science, information science, and/or statistics/data science
Audience: Undergraduate

3. Develop professional and transferable skills like time management, collaboration, problem-solving, and communication in the workplace.
Audience: Undergraduate

L I S 407 – DATA STORYTELLING WITH VISUALIZATION
3 credits.

Introduction to data visualization including how and why visualization can be an effective tool for summarizing, analyzing and communicating about data, the limitations and challenges in using data visualizations, including misrepresentation and bias and planning appropriate types of visualization(s) based on source data, audience, and goals. Instruction will include hands-on experience with popular visualization software platforms to develop visualizations and presentations.
Requisites: Sophomore standing and satisfied Quantitative Reasoning (QR) A requirement
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand theories of data visualization
Audience: Undergraduate

2. Explain how and why visualization can be an effective tool for summarizing, analyzing and communicating about data
Audience: Undergraduate

3. Understand and apply best practices for communicating about data for targeted and broad audiences
Audience: Undergraduate

4. Understand and apply theories and best practices for creating visualizations
Audience: Undergraduate

5. Design and develop informative and persuasive visualizations
Audience: Undergraduate

6. Identify and choose appropriate software for creating visualizations
Audience: Undergraduate

7. Choose appropriate visualization types based on source data, audience, and goal
Audience: Undergraduate

8. Critically analyze visualizations created by others for effectiveness and bias
Audience: Undergraduate

9. Understand the limitations and challenges of data visualization
Audience: Undergraduate

L I S 440 – NAVIGATING THE DATA REVOLUTION: CONCEPTS OF DATA & INFORMATION SCIENCE
3 credits.

Provides an introduction into the world of Data Science. Includes hands-on projects using scenarios involving analysis of real-world data and development of graphical visualizations. Introduces statistical tests, data management, data programming, data ethics and visualization of data.
Requisites: Satisfied Quantitative Reasoning (QR) A requirement, Satisfied Communications A requirement, and sophomore standing
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand and communicate the different types of data science projects, and be familiar with the tools and methods used in data science
Audience: Undergraduate

2. Apply data analysis to primary data sources to solve problems
Audience: Undergraduate

3. Communicate about data and analyses clearly and persuasively in written, spoken, and graphical/visualized form
Audience: Undergraduate

4. Identify probability distributions commonly used as foundations for statistical modeling
Audience: Undergraduate

5. Reason around ethical and privacy issues in data science conduct and apply ethical practices.
Audience: Undergraduate

L I S/AFRICAN/COM ARTS 444 – TECHNOLOGY AND DEVELOPMENT IN AFRICA AND BEYOND
3 credits.

Surveys the past 20 years of digital technology and communications culture on the African continent, cross-referenced with discourse on technology experiences in other parts of the developing world, through the framework of development studies. Readings include case studies of micro-tech practices as well as political and social use of new media, and government and NGO-led tech interventions. Information Communication Technology for Development (ICT4D) is a key area of focus. Cross-discipline areas include communications and media studies, African, Latin American and International area studies, as well as the social anthropology of technology and science, and design. Think critically about technology use in the context of different tech cultures from around the world. Apply this perspective towards new media solutions to social problems.
Requisites: Junior standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Identify canonical authors and texts, historical forms, genres, and structures in African culture studies and information and communication studies. Students will demonstrate their understanding of major theories, approaches, concepts and current and classical research findings.
Audience: Both Grad & Undergrad

2. Understand their own learning processes and possess the capacity to intentionally seek, evaluate and learn from information, and recognize and reduce bias in their thinking.
Audience: Both Grad & Undergrad

3. Communicate effectively through essays, oral presentations and discussion and project based work, so they may share their knowledge, wisdom and values with others across social and professional settings.
Audience: Both Grad & Undergrad

4. Write and speak across disciplinary boundaries with regard to existing research about Africa, the African diaspora and international development.

Audience: Graduate

5. Explain the social, economic, and/or environmental dimensions of the sustainability challenge(s) of the historic and contemporary challenges of development-oriented tech projects, and identify areas within ICT which could assist in their sustainability. [Sustainability]
Audience: Both Grad & Undergrad

6. Analyze sustainability issues and/or practices using a systems-based approach of information access and media communications within the sustainability framework with regards to environmental change, public infrastructure for clean water and sanitation, urban growth, education, governance and democracy, and public health. [Sustainability]
Audience: Both Grad & Undergrad

L I S/LEGAL ST 460 – SURVEILLANCE, PRIVACY, AND POLICE POWERS
3 credits.

Examines individual privacy and government information collection in law enforcement, security, public health, administrative law, and other contexts from a variety of disciplinary perspectives.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

L I S 461 – DATA AND ALGORITHMS: ETHICS AND POLICY
3-4 credits.

An introduction to ethical, legal and policy issues related to analytics, "big data" and algorithms to support decision making. Gain familiarity with major debates and controversies in a variety of contexts. Critically analyze course materials and apply moral reasoning and legal concepts to assess case studies and critique arguments made by others.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify, analyze, and evaluate moral problems relevant to data science
Audience: Undergraduate

2. Distinguish and explain different types of legal and moral concerns including harm, discrimination, procedural unfairness, respect for persons, and democratic legitimacy.
Audience: Undergraduate

3. Examine and critique the arguments, and to bring original and creative ideas to bear on those arguments in oral and written form.
Audience: Undergraduate

4. Understand and apply theories and concepts to problems in data and ethics in a variety of domains
Audience: Undergraduate

L I S 464 – APPLIED DATABASE DESIGN
3 credits.

Introduces the applications of databases to real-world data and information problems. Overview of the principles and practices of user-oriented database design, management, and application. Discussion and practice cover database application lifecycle, data modeling, relational database design, SQL queries, reports and other interfaces to database data, and database documentation.
Requisites: Sophomore standing and satisfied Quantitative Reasoning (QR) A requirement
Course Designation: Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand the technical vocabulary and concepts used to describe databases and related technologies
Audience: Undergraduate

2. Understand, and critically evaluate and implement the full spectrum database design process, from the initial user needs analysis, to conceptualization, development of schemas, and final production
Audience: Undergraduate

3. Apply normalization techniques to reduce data redundancy and improve data integrity
Audience: Undergraduate

4. Understand the concepts of de-normalization and its rationale in real-world applications
Audience: Undergraduate

5. Create, modify, and query relational databases using the SQL language
Audience: Undergraduate

6. Perform a real-world database design and implementation in MySQL
Audience: Undergraduate

7. Understand the concept of No-SQL database models and the difference between SQL and NO-SQL database
Audience: Undergraduate

L I S 470 – INTERACTION DESIGN STUDIO
3 credits.

Introduces interaction design, an approach to designing digital information systems that places humans and their needs at the center of the design process. Explores how core principles of design, design processes, cognition, information science and human values inform the design of interactive information systems. Discussion and practice apply the data-driven process of human-centered interaction design to develop new digital products and services.
Requisites: (Sophomore standing, satisfied Quantitative Reasoning (QR) A requirement, and satisfied Communications A requirement), or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the systematic design process of human centered interaction design.
Audience: Undergraduate

2. Apply core concepts to both critique the design of existing digital products and services and to create new design ideas.
Audience: Undergraduate

3. Engage in and respond to constructive critique with peers as part of design work.
Audience: Both Grad & Undergrad

4. Communicate design concepts clearly and persuasively in oral, written and visual communications.
Audience: Both Grad & Undergrad

5. Apply the systematic design process of human centered interaction design.
Audience: Graduate

6. Synthesize core concepts to both critique the design of existing digital products and services and to create new design ideas.
Audience: Graduate

7. Evaluate contemporary design best practices.
Audience: Graduate

L I S/COMP SCI 472 – INTRODUCTION TO WEB DEVELOPMENT
3 credits.

Applied web development introduces methods and tools for creating/maintaining secure and interactive web content. Topics include programming fundamentals to support core web concepts, application development essentials, and content management systems. Web best practices - such as accessibility, design, and critical thinking about relevant ethics and organization - will be incorporated throughout. Gain practical skills to design and implement websites using popular scripting languages and frameworks, content management systems (CMSs), and related tools.
Requisites: Junior standing, declared in Library and Information Studies MA, Information MS, or Capstone Certificate in Computer Sciences for Professionals. Not open to students with credit for COMP SCI 272.
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop understanding and application of current web scripting languages and development tools and frameworks.
Audience: Both Grad & Undergrad

2. Install, configure, and customize open source content management systems.
Audience: Both Grad & Undergrad

3. Understand and apply user experience and accessibility best practices in building accessible websites.
Audience: Both Grad & Undergrad

4. Design solutions to problems using multi-step scripting, logical operations, and functions.
Audience: Both Grad & Undergrad

5. Understand ethical issues and concerns related to website development and its related technologies.
Audience: Both Grad & Undergrad

6. Analyze the management challenges, and ethical considerations inherent in web development projects.
Audience: Both Grad & Undergrad

7. Critically evaluate and compare different frameworks and libraries for extending scripting capabilities.
Audience: Graduate

L I S/FOLKLORE 490 – FIELD METHODS AND THE PUBLIC PRESENTATION OF FOLKLORE
3 credits.

Combines a fieldwork practicum with scrutiny of the cultural, political, and ethical dimensions underlying the documentation and public presentation of folklore through festivals, exhibitions, publications, audio-visual productions, and digital archival collections.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand how to employ folkloristic fieldwork, archival methodologies, and community engagement in documenting and presenting local communities.
Audience: Both Grad & Undergrad

2. Explain key concepts of folklore studies in the context of wider public humanistic research.
Audience: Both Grad & Undergrad

3. Create a final project demonstrating critical thinking, civic knowledge, and collaboration with coordinating communities.
Audience: Both Grad & Undergrad

4. Understand how to coordinate effectively with community organizations to undertake multidisciplinary arts and humanities grant-funded project planning with public programming goals such as festivals, exhibitions, publications, audio-visual productions, and digital archival collections.
Audience: Graduate

L I S 500 – CODE AND POWER
3 credits.

Prepares students to analyze and critique the portrayal of race, gender and computing in various media outlets and to consider their own potential as contributors to the computing industries in light of media portrayals and their own self-perceptions. As students confront assumptions about gender race and computing, this course will also equip them with the skills necessary to confidently design, develop, and discuss web scripting aspects related to PHP website development.
Requisites: Junior standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

L I S 501 – INTRODUCTION TO TEXT MINING
3 credits.

Introduces computational methods and tools for processing, analyzing, and understanding text data. Topics include text data preparation and preprocessing, models of text content and meaning, exploratory text analytics, text classification, information extraction from texts, ethical issues in natural language processing (NLP), and related applications in information sciences and other fields. Develops practical skills to design and implement text mining solutions using popular NLP tools and programming packages.
Requisites: Junior standing and Satisfied Quantitative Reasoning (QR) A requirement or graduate/professional standing
Course Designation: Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand and apply the general natural language processing (NLP) pipeline to process text data
Audience: Both Grad & Undergrad

2. Understand and use computational models to represent text contents and meanings
Audience: Both Grad & Undergrad

3. Perform exploratory text analysis to understand the contents, topics, and characteristics of a text corpus
Audience: Both Grad & Undergrad

4. Design, implement, and evaluate solutions to categorize texts and extract information from texts
Audience: Both Grad & Undergrad

5. Understand ethical issues and concerns related to natural language processing and language technologies
Audience: Both Grad & Undergrad

6. Critically evaluate and compare different text mining solutions
Audience: Graduate

L I S 510 – HUMAN FACTORS IN INFORMATION SECURITY
3 credits.

Introduction to personal, social, and organizational concepts, skills, and processes related to the information security of individuals and organizations. Preparation to help individuals and organizations enhance their own security and privacy, especially but not exclusively online.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Communicate clearly and effectively to non-expert audiences about security vulnerabilities and security-related incidents.
Audience: Both Grad & Undergrad

2. Mitigate common human-centered risks to information security and privacy.
Audience: Both Grad & Undergrad

3. Develop awareness of the structure of the information security field, and career opportunities within it.
Audience: Both Grad & Undergrad

4. Build strategies and sources for current awareness of security issues.
Audience: Both Grad & Undergrad

5. Demonstrate understanding of professional competencies important for management of information organizations.
Audience: Graduate

6. Demonstrate understanding of societal, legal, policy or ethical information issues.
Audience: Graduate

7. Demonstrate understanding of issues surrounding marginalized communities and information.
Audience: Graduate

L I S/NURSING 517 – DIGITAL HEALTH: INFORMATION AND TECHNOLOGIES SUPPORTING CONSUMERS AND PATIENTS
3 credits.

Increases student understanding of appropriate and accurate materials for consumer health and family education; the ethical and organizational policy issues that arise when providing consumer and family health information in different settings; the role of the public media in disseminating health information; the health-related information needs and preferences of racial/ethnic minority populations. It also provides an introduction to health information technologies, from search engines to websites to apps, that put people in charge of managing their own health information.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

L I S 601 – INFORMATION: PERSPECTIVES AND CONTEXTS
3 credits.

Provides an introduction to major themes and topics in information studies as well as the language and literature of the field and related disciplines. This course is about information, information agencies, and being an information professional. We look at social, historical, ethical, legal and political issues surrounding information dissemination, use, control, and management.
Requisites: Graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

L I S 602 – INFORMATION: ORGANIZATION AND SEARCH
3 credits.

Introduces basic concepts and principles of information organization and online searching. Gain knowledge of information organization and retrieval theories and methods and knowledge of large database structures and database searching techniques. Critically examine the impact of information organization practices on organizations and culture. Learn how to develop information organizing systems and to evaluate and improve search systems.
Requisites: Graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

L I S 603 – RESEARCH AND ASSESSMENT FOR INFORMATION PROFESSIONALS
3 credits.

Introduces students to research, evaluation and assessment practices. Prepares students to design and implement a research or assessment project. Provides an overview of commonly employed data collection methodologies and introduces students to both qualitative and quantitative analysis approaches that may be employed in evaluation, assessment and research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

L I S/COMP SCI 611 – USER EXPERIENCE DESIGN 1
3 credits.

Introduction to the user experience design including key stages of the design process, design ethics, and the methods and tools involved at each stage of design. Conduct formative research on clients, users, use contexts and tasks. Gain experience with user research methodologies and learn to create intermediate design tools such as personas. Develop and present a design proposal for a chosen project.
Requisites: Declared in Information MS, Design + Innovation MS , or Capstone Certificate in User Experience Design
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply fundamental concepts and practices of user experience design
Audience: Graduate

2. Understand the ethics of design including practices of inclusive design and accessibility
Audience: Graduate

3. Conduct formative research to inform design
Audience: Graduate

4. Apply common user data collection methods
Audience: Graduate

5. Analyze and visualize processes across time and interfaces
Audience: Graduate

6. Create and apply common UX design tools such as personas, scenarios and user journey maps
Audience: Graduate

7. Effectively convey the output of user research and initial design through oral and written communication.
Audience: Graduate

L I S/COMP SCI 612 – USER EXPERIENCE DESIGN 2
3 credits.

Advanced study of UX design. Introduces processes of ideation, key concepts of visual design, conceptual and interaction design, low and high-resolution prototyping of design techniques. Applications include drafting designs based on user models and initial testing of prototypes.
Requisites: COMP SCI/L I S 611 and Declared in Information MS, Design + Innovation MS, or Capstone Certificate in User Experience Design
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop design ideas and communicate them through brainstorming, sketching, and modeling;
Audience: Graduate

2. Create designs that follow principles of and best practices in visual and interaction design;
Audience: Graduate

3. Prototype designs using rapid prototyping methods for communication and testing;
Audience: Graduate

4. Understand human perceptual, cognitive, and motor processes involved in interaction;
Audience: Graduate

5. Evaluate designs using expert- and empirical-evaluation methods;
Audience: Graduate

6. Integrate design, prototyping, and evaluation methods and principles into a process toward addressing a design problem
Audience: Graduate

7. Communicate their ideas to others, integrate feedback into their design work, and critique the work of others constructively.
Audience: Graduate

L I S/COMP SCI 613 – USER EXPERIENCE DESIGN 3
3 credits.

Conduct formal evaluations of the user experience (UX) or usability of a digital system. Gain familiarity with the evaluation and research process including key stages, tasks for each stage, common data collection and analysis methods, and common tools employed in the field. Gain experience with a variety of UX evaluation approaches. Collect pilot data and develop a proposal for further UX testing.
Requisites: COMP SCI/L I S 612 and Declared in Information MS, Design + Innovation MS, or Capstone Certificate in User Experience Design
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate understanding of a variety of UX testing approaches
Audience: Graduate

2. Plan and implement all phases of testing for a digital system including planning, data collection, analysis and reporting
Audience: Graduate

3. Demonstrate understanding of the relationship among research design, instruments, metrics, and data analysis
Audience: Graduate

4. Implement major testing approaches such as task-based, information architecture and accessibility
Audience: Graduate

5. Have knowledge of contemporary tools used for UX testing
Audience: Graduate

6. Communicate evaluation findings effectively and use data to improve systems design
Audience: Graduate

L I S/COMP SCI 614 – USER EXPERIENCE DESIGN CAPSTONE
1 credit.

Applies a design studio critique approach to produce a learning environment of collaborative and interdisciplinary peer critique and learning, in addition to provide expert feedback and suggestions. Present and defend the latest iteration of the user experience design project developed in earlier courses while learning about the professions associated with digital user experience design.
Requisites: COMP SCI/L I S 613 and declared in Design + Innovation MS, or the Capstone Certificate in User Experience Design
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Knowledge of, and ability to apply, data collection and analysis methodologies for user experience research.
Audience: Graduate

2. Knowledge of, and ability to apply, design principles and user behavior theories to digital environments.
Audience: Graduate

3. Create, critique and revise design prototypes based on testing data and feedback
Audience: Graduate

4. Effectively plan, manage and communicate a user experience design project.
Audience: Graduate

L I S 615 – SYSTEMS ANALYSIS AND PROJECT MANAGEMENT FOR INFORMATION PROFESSIONALS
3 credits.

Introduces established and evolving methodologies for the analysis, design, and development of information systems involving people, data/information and technologies. Introduces students to basic concepts and tools of project management. Learn to apply systems analysis and project management methods to solve real world problems involving information flows and interactions.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand and apply contemporary techniques and methodologies for systems analysis
Audience: Graduate

2. Understand and apply contemporary techniques and methodologies for project management
Audience: Graduate

3. Solve real-world information flow and information interaction problems with applying systems analysis and project management methodologies
Audience: Graduate

4. Effectively present analysis and solutions in both oral and written communications
Audience: Graduate

L I S 616 – RECORDS MANAGEMENT
1-3 credits.

An introduction to the role of records in society and to the principles and practices involved in managing records (both paper and electronic) in private and public sector organizations.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

L I S/MUSIC 619 – MUSIC RESEARCH METHODS AND MATERIALS
3 credits.

Historical and contemporary bibliography resources for musical scholarship; general reference tools of scholarly work and specific musicological works.
Requisites: Graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

L I S/CURRIC 620 – FIELD PROJECT IN LIBRARY AND INFORMATION AGENCIES
3 credits.

Analysis of field experience through seminars, individual conferences, required reading and consultations with cooperating librarians and information specialists. Enrollment limited.
Requisites: L I S 601 and 602 or concurrent enrollment
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

L I S 622 – CHILDRENS LITERATURE
3 credits.

Traditional sources to the present; criticism and evaluation; contemporary trends and issues. Techniques of reading guidance in school or public library in relationship to developmental interests, needs and skills of children.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

L I S 629 – MULTICULTURAL LITERATURE AND RESOURCES FOR CHILDREN AND YOUTH
3 credits.

Focuses on issues of diversity in literature and other media for children and young adults. Considers representation of ethnicities, socioeconomic status, gender, sexual orientation and (dis)ability. Issues addressed include authenticity, representation, cultural correctness, reader response and intellectual freedom. Students will gain skills to advocate for, promote, and assess multicultural resources; develop a collection; and understand issues related to cultural competence and reader response.
Requisites: Junior standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

L I S 631 – LITERATURE AND RESOURCES FOR YOUTH
3 credits.

A survey of media interests and needs of young adults including books, film, television, audio, and production technologies. Critically examines media trends, materials, selection criteria, recommendations, and censorship. Students will develop an ability to advocate for and promote materials according to intellectual, emotional, social and physical needs of young adults.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

L I S 632 – METADATA STANDARDS AND XML
3 credits.

An overview of the design and use of metadata for resource description and retrieval in digital environments. Learn to implement and evaluate standard schemes used in cultural heritage, commercial and other contexts including Dublin Core, MODS, VRA and others. Issues of information behavior, interoperability, quality control, vocabulary control and project management are covered.
Requisites: L I S 602
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

L I S 635 – REFERENCE AND INFORMATION SERVICE
3 credits.

Theories, principles and practices of reference and information services.
Requisites: L I S 601 and 602 or concurrent enrollment
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

L I S 639 – PEDAGOGICAL THEORY AND PRACTICE FOR INFORMATION PROFESSIONALS
3 credits.

Introduction to pedagogical theory, training tools, and teaching skills needed in a variety of informational instructional settings such as academic and public libraries, archival institutions, museums, and software training facilities. Applicable for students interested in information literacy instruction, online teaching, technology training, and group instruction..
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

L I S 640 – TOPICS IN LIBRARY AND INFORMATION STUDIES
1-3 credits.

Current issues in library and information studies that are not addressed in sufficient depth in existing courses or that combine facets of several existing courses.
Requisites: Junior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

L I S 642 – READING INTERESTS OF ADULTS
3 credits.

An examination of the nature and societal functions of a variety of mass media-generated adult reading materials, the standards by which they are judged, and their relationship to contemporary library and information science fields.
Requisites: Junior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021

L I S 644 – DIGITAL TOOLS, TRENDS AND DEBATES
3 credits.

Overview of information and communications technologies, digital media, and standards in relationship to information agencies, within the context of current societal controversies. Promotes technical knowledge of ICT and critical analysis of controversies surrounding ICT development, use and modification.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

L I S/LEGAL ST 645 – INTELLECTUAL FREEDOM
3 credits.

An examination of intellectual freedom in the United States including censorship, minors' rights, the Internet, privacy, and copyright with focus on theoretical questions related to the First Amendment to the U.S. Constitution, and historical developments.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

L I S 646 – INTRODUCTION TO INFO ARCHITECTURE AND INTERACTION DESIGN FOR THE WEB
3 credits.

Basic concepts in information architecture, digital interaction design, usability testing, navigation, evaluation, and accessibility through planning, design and development of a web based information product or service. Also covers introductory web development technologies.
Requisites: Junior standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply the theoretical principles of information architecture and web usability.
Audience: Undergraduate

2. Organize information logically and strategically.
Audience: Undergraduate

3. Apply knowledge of web design by building an accessible interactive website using HTML and CSS.
Audience: Undergraduate

4. Communicate information architecture concepts clearly and persuasively in oral, written, and visual communication.
Audience: Undergraduate

5. Define theoretical principles of information architecture and web usability.
Audience: Graduate

6. Describe web standards, usability and accessibility, project planning, project management, web evaluation, and website design as an ongoing, iterative process.
Audience: Graduate

7. Use teamwork to balance the desires of all parties involved in launching an organization's website, with concern for usability and accessibility, responsive design, and other web design principles and standards to create an effective website.
Audience: Graduate

8. Create, organize, and design websites that use information architecture principles, adhere to usability and accessibility guidelines, and are consistent with web standards, regardless of the type of website.
Audience: Graduate

L I S/ART HIST/HISTORY/JOURN 650 – HISTORY OF BOOKS AND PRINT CULTURE IN EUROPE AND NORTH AMERICA
3 credits.

History of books and print culture in the West from ancient times to the present. Focus on the influence of reading and writing on social, cultural, and intellectual life. Methodologies, theories, and sources for study of book and print culture history.
Requisites: Graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

L I S 651 – CATALOGING AND CLASSIFICATION
3 credits.

Basic cataloging and classification principles and suitable techniques. Includes descriptive cataloging, selected entry headings, Sears subject headings, Dewey Decimal Classification, book numbers, and cataloging with supplied copy including OCLC editing.
Requisites: L I S 602
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

L I S 654 – INFORMATION SERVICES MANAGEMENT
3 credits.

Survey of concepts and skills necessary to perform in an information services organization. Service needs assessment, goal and objective setting, staffing, budgeting and evaluation.
Requisites: Graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

L I S 655 – COLLECTION MANAGEMENT
3 credits.

Collection development designed to teach professional skills in selection and control of collections. Examines large societal forces affecting the ways librarians have traditionally built collections and contemporary changes in access and ownership.
Requisites: L I S 601 and 602 or concurrent enrollment
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

L I S 661 – INFORMATION ETHICS AND POLICY
3 credits.

Overview of modern ethical theories and how they inform information agency policies and practices; examines selected policy issues relating to information and communications; includes topics such as intellectual property, privacy, censorship, equity of access.
Requisites: Junior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

L I S/LEGAL ST 663 – INTRODUCTION TO CYBERLAW
3 credits.

The emphasis is on critical thinking about a broad variety of legal and policy problems that arise because of ever-changing information and communication technologies.
Requisites: Junior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

L I S 665 – TOPICS IN RACE AND ETHNICITY IN THE INFORMATION SOCIETY
3 credits.

Discusses issues in the provision of information services in a multiethnic and multilingual society. It also discusses the role of information institutions in promoting and preserving ethnic heritage.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2019

L I S 668 – DIGITAL CURATION AND COLLECTIONS
3 credits.

Core concepts and new developments in digital curation, preservation and digital collections. Topics include: digitization of various media; digital preservation; media archeology; basics of research data management; digital collection technologies and workflows; intellectual-property issues; metadata as applied in digital collections; digital collections planning and evaluation; trusted digital repositories; funding of digital collection projects and sustainability.
Requisites: Graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

L I S/JOURN 677 – CONCEPTS AND TOOLS FOR DATA ANALYSIS AND VISUALIZATION
3 credits.

An introduction to information and data visualization: introduction to major concepts, instruction in specific tools for data analysis and visualization, and application of skills in a final project.
Requisites: None
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

L I S 678 – PRESERVATION AND CONSERVATION OF LIBRARY AND ARCHIVES MATERIALS
3 credits.

Basic concepts, principles, and approaches to protection and care of library and archives material, including nature and structure of paper- and plastic-based materials, deterioration, preservation management, disaster prevention, reformatting, and repair.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

L I S/COM ARTS 705 – INTRODUCTORY ANALYTICS FOR DECISION MAKING
3 credits.

Introduces key stages in the processes of gathering and analyzing data for decision making, including tasks, methods, and tools used at each stage. Topics include developing the research question from organizational goals, choosing appropriate data collection methods, sampling, basics of measurement and question design, managing and visualizing data, descriptive statistics and basic inferential statistics such as correlations, regressions, and ANOVA.
Requisites: Graduate/professional standing or Declared in Analytics for Decision Making capstone certificate
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

L I S 706 – DATA MINING PLANNING AND MANAGEMENT
3 credits.

Prepares students to plan, manage and assess a data mining project in light of organizational strategic goals. Introduces stages of a data mining project, data mining project evaluation frameworks, and principles of data ethics related to data mining. Learn and apply introductory data mining tools and techniques for data clustering, dividing data into classes, making predictions and identifying networks.
Requisites: L I S/COM ARTS 705
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. formulate questions related to existing organizational goals or challenges, identify sources of data to answer those questions, and design and implement a data analysis plan to answer the questions
Audience: Graduate

2. demonstrate competency with a range of data collection and analysis techniques and tools appropriate to organizational decision making and assessment including the basics of data mining
Audience: Graduate

3. effectively communicate the rationale for a data project and the results of their analysis across different types of media and using best practices of textual and visual communications.
Audience: Graduate

4. articulate the possible information value and the limitations of data and analytics projects including data mining projects based on understanding of data quality, data availability, metadata functionality and other data management issues.
Audience: Graduate

L I S 707 – DATA VISUALIZATION AND COMMUNICATION FOR DECISION MAKING
3 credits.

Introduces key concepts in data visualization and communication including how and why visualization can be an effective tool for summarizing, analyzing and communicating about data, and limitations and challenges of using visualization techniques. Students will use contemporary software to develop visualization dashboards and presentations as well as plan appropriate types of visualization(s) based on source data, audience, and goals, evaluate visualizations for effectiveness and bias.
Requisites: Graduate/professional standing or Declared in Analytics for Decision Making capstone certificate
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

L I S 711 – DATA MANAGEMENT FOR INFORMATION PROFESSIONALS
3 credits.

Preparation to effectively and ethically manage, organize and protect the data in organizational settings. Covers major topics of data management addressed by the Certified Data Management Professional certification. Assess, construct and implement workflows, organizational policies and data architecture to improve data quality and security. Learn to clean and organize data for effective retrieval and use. Learn tools and techniques to support data interoperability, and gain understanding of contemporary data management ethical and policy issues.
Requisites: Graduate Students Only
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify common organizational data governance objectives and describe strategies to meet them
Audience: Graduate

2. Apply practices for provenance, security, storage and metadata within different organizational settings
Audience: Graduate

3. Apply basic data manipulation and cleaning techniques and tools to various types of data
Audience: Graduate

4. Demonstrate understanding of legal, policy and ethical issues related to data management
Audience: Graduate

5. Demonstrate professional communications and teamwork capacities and the ability to use collaborative technologies to work collaboratively with others
Audience: Graduate

6. Integrate data, information technologies, and an understanding of human information behavior to solve organizational, community or social problems.
Audience: Graduate

L I S 712 – THE PUBLIC LIBRARY
3 credits.

Library service based on knowledge of structure and government, personnel, resources, legislation, building, management and planning, public relations and marketing.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

L I S 722 – COLLEGE AND UNIVERSITY LIBRARIES
3 credits.

Place of the library and librarian in the instructional program; special units of study devoted to administration of the library, budgets, buildings, departmental libraries and cooperative ventures.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

L I S 732 – STRATEGIC INFORMATION SERVICES
3 credits.

Developing, managing and evaluating information services to corporate, government, research, small business, and community organizations. Overviews of knowledge management, business intelligence, industry analysis, information brokering. Gain skills in information service entrepreneurship and marketing information services. Overview of changes within the profession and networking within the professional community.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022

L I S/HISTORY 734 – INTRODUCTION TO ARCHIVES AND RECORDS MANAGEMENT
3 credits.

An introduction to the archives profession and basic theory and practice of archives and records administration, including the uses of primary sources in research, appraisal, access, and preservation.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

L I S 751 – DATABASE DESIGN FOR INFORMATION PROFESSIONALS
3 credits.

Introduction to contemporary database management systems, the design process employed when implementing databases to solve data and information management problems, developing queries and scripts, and other issues in employing databases to solve organizational information and data challenges.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand conceptual design concepts of contemporary database systems
Audience: Graduate

2. Be able to implement design concepts to create and manage a database given a database system
Audience: Graduate

3. Use notation systems to develop and communicate a database design to others
Audience: Graduate

4. Understand basic principles of scripting languages and their use in making databases web accessible
Audience: Graduate

5. Use SQL or other tools to create and manage a database as well as to manipulate data and produce queries
Audience: Graduate

L I S 755 – ELECTRONIC RESOURCE MANAGEMENT & LICENSING
3 credits.

Management, policy and technology issues associated with licensed digital library resources such as e-journals, e-books, full text and citation databases, digital audio and video collections, and e-references resources. Includes a significant copyright and licensing component.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

L I S 768 – DIGITAL HUMANITIES ANALYTICS
3 credits.

Learn and apply introductory technology-related concepts and skills to plan, implement and assess data-driven projects in the humanities, social sciences and other fields. Topics include identifying relevant existing digitized materials, web scraping, text encoding, topic modeling, mapping, social network analysis and other approaches for collecting, analyzing and visualizing data.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

L I S 772 – LIBRARY SERVICES TO CHILDREN AND YOUNG ADULTS
3 credits.

The theory and structure of public library service to children and young people, its function in the community, and techniques of administration. Seminar and field work.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

L I S/CURRIC/ED PSYCH 803 – COMPUTATIONAL RESEARCH METHODS
3 credits.

Provides a broad overview of ways of formulating and investigating novel questions with tools from educational data mining and learning analytics including social network analysis, natural language processing, Markov modeling, Bayesian inference, and agent-based modeling.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

L I S 818 – ARCHIVES ACCESSIONING AND APPRAISAL
3 credits.

Theories and principles behind archival decisions to acquire records and designate them as worthy of long-term retention in an archive. Emphasis on understanding archival views about society, the role of the archivist, and the attribution of value to archival material.
Requisites: L I S/HISTORY 734 or concurrent enrollment
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

L I S 839 – SPECIAL COLLECTIONS
1-3 credits.

A topical course focusing on a special subject (art, law, music, health sciences) or format (maps, microforms, rare books, iconographic materials). Issues related to collection development, acquisitions, reference, indexing and management.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2018

L I S 855 – TOPICS IN INFORMATION AGENCY MANAGEMENT
1-3 credits.

Critical examination of selected management techniques in the areas of materials control, physical plant operations, personnel programs, budget preparation and statistical reporting. May also focus on a particular type of information agency; e.g., data analysis centers, research libraries, or public libraries.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

L I S 875 – TOPICS IN INFORMATION PROCESSING AND RETRIEVAL
1-3 credits.

Current issues in technologies for information processing and retrieval in libraries and information agencies.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

L I S 910 – SMR-RESEARCH DESIGN & METHODOLOGY FOR LIBRARY & INFORMATION STUDIES
3 credits.

Examines key issues in research design, including how to formulate research questions and shape scholarly research to make valid descriptive and causal inferences. Analysis and evaluation of research designed and conducted with different theoretical frameworks and methodologies; guided proposal preparation.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023

L I S 925 – PROFESSIONAL WRITING AND READING (PWR) SEMINAR
1 credit.

Provides professional development for doctoral-level researchers. Includes presentations by guest speakers and/or faculty members, writing workshops, reflection assignments and student presentations.
Requisites: Declared in Information PhD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 6 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify major outlets and publishing norms for your research area
Audience: Graduate

2. Describe and employ writing and public presentation conventions specific to your research area
Audience: Graduate

3. Employ strategies to help you be productive and grow professionally now and in the future
Audience: Graduate

4. Articulate different career options and pursue those career options in your field of study
Audience: Graduate

5. Describe strategies to engage with materials presented by a range of scholars from different disciplines
Audience: Graduate

L I S 931 – SEMINAR IN INFORMATION POLICY, MANAGEMENT AND INSTITUTIONS
3 credits.

Survey of research and theorizing of: information policy and law, the management of information within and between organizations - including information technology and information labor, and investigation of traditional and new institutions in the information society.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

L I S 940 – SEMINAR IN INFORMATION USE AND USERS IN CONTEXT
3 credits.

Exploration of information needs, information seeking behavior, and information use by people in various roles, situations, and contexts that go beyond libraries. It includes exploring factors that influence a user's information needs and behavior.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

L I S 950 – SEMINAR IN LIS FOUNDATIONS: HISTORIES, PHILOSOPHIES AND DEBATES
3 credits.

An in-depth examination of some aspect(s) of the historical and philosophical foundations of LIS as it has been transformed through time and space, within the broader cultural context.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2021

L I S 975 – SEMINAR IN INFORMATION ORGANIZATION AND ACCESS
3 credits.

Critical examination of technical and non-technical aspects and cognitive/socio-cultural processes and implications of systems and models of information organization, retrieval and transfer. Introduces different research approaches and topic areas, including relevance, search behavior, knowledge representation, and systems design and evaluation.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

L I S 990 – RESEARCH AND THESIS
1-9 credits.

Dissertation credits.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

L I S 999 – INDEPENDENT READING AND RESEARCH
1-4 credits.

Concentrated work on a subject or problem of the student's need or interest; students must submit a written report, paper, or other product covering the work accomplished.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

LIFE SCIENCES COMMUNICATION (LSC)

LSC 100 – SCIENCE AND STORYTELLING
3 credits.

Fundamentals of effective written and spoken communication. Develops skills in gathering and evaluating information, writing research papers and other documents, and preparing and delivering oral presentations.
Requisites: Students required to take the MSN ESLAT cannot enroll until the ESL 118 requirement is satisfied
Course Designation: Gen Ed - Communication Part A
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explore the many ways of knowing, such as the power of storytelling and its impact on science, empathy and communication skills
Audience: Undergraduate

2. Think critically about quality evidence: distinguishing opinions from facts; good arguments from logical fallacies; develop humility in advancing one's point of view in a multicultural society
Audience: Undergraduate

3. Craft college-level essays attending to paragraph and sentence structures, effective transitions
Audience: Undergraduate

4. Give appropriate feedback to classmates for oral presentations and peer review of writing; learning thoughtful feedback and how to appreciate others' points of view as intellectual curiosity grows
Audience: Undergraduate

5. Develop intellectual confidence by recognizing academic best practices ranging from introducing evidence to documenting sources and avoiding plagiarism
Audience: Undergraduate

LSC 155 – FIRST-YEAR SEMINAR IN SCIENCE COMMUNICATION
1 credit.

Introduces students to the field of science communication and the importance of effectively communicating about controversial and complex science and technology topics. Engage with science communication faculty and staff, campus resources, and opportunities to explore academic and career goals. Appropriate for students across a wide variety of disciplines. Examples of topics that may be discussed in the course include climate change, artificial intelligence, gene editing, and public health.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Draw connections between course topics in science communication and the world around you.
Audience: Undergraduate

2. Discuss the importance of diversity and inclusion on our campus and in the field of science communication.
Audience: Undergraduate

3. Describe the importance of strong communication skills in academic and professional careers in science, technology, engineering and math.
Audience: Undergraduate

4. Develop a plan to graduation using knowledge gained about majors of interest, pre-professional and graduate school paths, and your career goals.
Audience: Undergraduate

5. Identify resources at the university that will help you succeed at UW-Madison.
Audience: Undergraduate

LSC 212 – INTRODUCTION TO SCIENTIFIC COMMUNICATION
3 credits.

Writing effective science digests, proposals, newsletters, and trade magazine articles for agriculture, natural resources, health and science-related topics.
Requisites: Satisfied Communications A requirement
Course Designation: Gen Ed - Communication Part B
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the relationship between listening, conversation and writing well
Audience: Undergraduate

2. Contextualize your own views within current conversations surrounding science topics and communicate your ideas to readers
Audience: Undergraduate

3. Evaluate the credibility and usefulness of different science-based information sources
Audience: Undergraduate

4. Deliver constructive feedback on written products to peers and implement peer recommendations within your own work
Audience: Undergraduate

5. Translate scientific arguments for non-scientist audiences
Audience: Undergraduate

6. Describe the common barriers to effective communication
Audience: Undergraduate

LSC 250 – RESEARCH METHODS IN THE COMMUNICATION INDUSTRY
3 credits.

Introduction to research methods in the communication industry. Overview of all stages of the research process and of translating data into reports for strategic communication recommendations for clients, ranging from industry to policymakers.
Requisites: Satisfied Quantitative Reasoning (QR) A requirement
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Select an appropriate research technique
Audience: Undergraduate

2. Develop survey measures based on sound conceptual foundations
Audience: Undergraduate

3. Design and conduct surveys, experiments, and other forms of data collection
Audience: Undergraduate

4. Analyze and interpret both quantitative and qualitative data
Audience: Undergraduate

5. Clearly communicate findings and strategies to relevant audiences
Audience: Undergraduate

LSC 251 – SCIENCE, MEDIA AND SOCIETY
3 credits.

Introduction to communication at the intersection of science, politics and society; overview of the theoretical foundations of science communication and their relevance for societal debates about science and emerging technologies across different parts of the world.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the key elements of (in)effective science communication in popular media across different counties and cultures
Audience: Undergraduate

2. Evaluate how the communication processes work among different stakeholders. Stakeholders include players in the policy arena, scientists, journalists, and lay publics
Audience: Undergraduate

3. Critically assess the cultural, political, and economic impacts on how science and technology are debated across the globe
Audience: Undergraduate

4. Understand origins of cross-country differences in consumer reactions and policy responses to emerging science
Audience: Undergraduate

5. Analyze and compare the ethical, legal, and social implications (ELSI) of science across different countries and cultures
Audience: Undergraduate

6. Critically evaluate country-specific or culture-specific social factors that shape the science-public interface
Audience: Undergraduate

7. Explain the practical implications for different aspects of science and technology, like science journalism, new (information) technology, political aspects of emerging technologies, science literacy, etc.
Audience: Undergraduate

LSC 270 – MARKETING COMMUNICATION FOR THE SCIENCES
3 credits.

Explores marketing, promotion, and strategic communication specific to the consumer marketplace. Analyze communication strategies for science products and industries synthesized from business goals and objectives to specific audiences. Coursework includes a variety of readings from a class textbook as well as peer-reviewed papers published in life science, marketing, communication, and general business journals.
Requisites: Satisfied Communications A requirement
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the unique challenges faced when marketing and communicating life science products, services and initiatives to the general public, business community, and academic peer audiences.
Audience: Undergraduate

2. Identify some of the opportunities and challenges presented when marketing life science to specific American sub-cultures.
Audience: Undergraduate

3. Understand basic communication strategies appropriate to life science firms such as effective press releases and presentations.
Audience: Undergraduate

4. Synthesize data from government sources in combination with proprietary market research to create target audience profiles and life-science marketing strategy for consumer, business and institutional audiences.
Audience: Undergraduate

LSC 289 – HONORS INDEPENDENT STUDY
1-2 credits.

Research work for Honors students under direct guidance of a faculty member in an area encompassing Life Sciences Communication. Students are responsible for arranging the work and credits with the supervising instructor.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Develop critical, analytical, and independent thinking skills
Audience: Undergraduate

2. Apply the scientific method and engage in constructive problem solving ##
Audience: Undergraduate

3. Demonstrate application of research skills and methodologies##
Audience: Undergraduate

4. Effectively communicate findings
Audience: Undergraduate

LSC 299 – INDEPENDENT STUDY
1-3 credits.

Research work for students under direct guidance of a faculty member in an area encompassing Life Sciences Communication. Students are responsible for arranging the work and credits with the supervising instructor.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Develop critical, analytical, and independent thinking skills#
Audience: Undergraduate

2. Apply the scientific method and engage in constructive problem solving ##
Audience: Undergraduate

3. Demonstrate application of research skills and methodologies#
Audience: Undergraduate

4. Effectively communicate findings
Audience: Undergraduate

LSC 314 – INTRODUCTION TO DIGITAL VIDEO PRODUCTION
3 credits.

Principles and techniques of digital documentary and informational video production. Video styles and subject matter treatment analyzed. Information gathering, videography, scripting, producing, and editing techniques.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply concepts and theories to use and present images and information for multiple platforms
Audience: Undergraduate

2. Apply current tools and technologies to develop media for digital video
Audience: Undergraduate

3. Operate video and audio equipment in the studio and field
Audience: Undergraduate

4. Collaborate with team members to reach shared goals
Audience: Undergraduate

LSC 332 – DIGITAL AND PRINT MEDIA DESIGN
3 credits.

Principles and techniques of effective visual communication with industry-standard digital design software for use in digital and print publications.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss the theoretical principles of design
Audience: Undergraduate

2. Present work applying digital and print media design principles to groups of peers and professionals
Audience: Undergraduate

3. Articulate effective and tactful critiques of peer work and examples of design encountered outside of the classroom
Audience: Undergraduate

4. Deploy current industry-standard software tools in digital and print media design
Audience: Undergraduate

5. Explain the ways digital and print design are integrated into professional strategic communications
Audience: Undergraduate

LSC 340 – MISINFORMATION, FAKE NEWS, AND CORRECTING FALSE BELIEFS ABOUT SCIENCE
3 credits.

Explores the spread of misinformation and its effects on scientific topics. Covers why people believe fake news, the role of social media in propagating fake news, and the societal impacts. Practice applying theoretical ideas and making evidence-based recommendations for correcting examples of misinformation in science, media, and industry.
Requisites: Satisfied Communications A requirement or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Define and identify examples of misinformation and disinformation relating to scientific topics.
Audience: Both Grad & Undergrad

2. Explain psychological and contextual factors that lead people to believe false information.
Audience: Both Grad & Undergrad

3. Explain how traditional and online media contribute to the spread of misinformation.
Audience: Both Grad & Undergrad

4. Analyze examples of science misinformation and make arguments about the motivations of the creators/sharers and intended audience.
Audience: Both Grad & Undergrad

5. Build arguments about what effects misinformation is likely to have on science attitudes, trust in science, and democratic society supported by social science research.
Audience: Both Grad & Undergrad

6. Evaluate different strategies for correcting misperceptions and preventing the spread of misinformation.
Audience: Both Grad & Undergrad

7. Analyze and synthesize relevant scholarly literature related to misinformation and misperceptions.
Audience: Graduate

8. Formulate a research proposal articulating an original research project related to the study of scientific misinformation.
Audience: Graduate

LSC 350 – VISUALIZING SCIENCE AND TECHNOLOGY
3 credits.

Introduction to the basic principles in the visual communication of science information. Principles of design, perception, cognition as well as the use of technologies in the representation of science in the mass media will be explored through illustrated lectures and written critique.
Requisites: Satisfied Communications A requirement or graduate/professional standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the fundamental theoretical, practical, and ethical principles of visual communication of science
Audience: Both Grad & Undergrad

2. Critique the design, content, and integrity of science visualizations
Audience: Both Grad & Undergrad

3. Assess the effects of science visualizations on individual attitudes, emotions, and behaviors
Audience: Both Grad & Undergrad

4. Propose effective visual strategies for communicating scientific and sustainability issues
Audience: Both Grad & Undergrad

5. Apply the acquired strategies to designing information visualization
Audience: Both Grad & Undergrad

6. Critically evaluate scientific visualizations through independent research and written analysis
Audience: Graduate

LSC 360 – SCIENCE PODCASTING & RADIO
3 credits.

Radio and podcast writing, editing, information gathering, planning, voicing, and evaluation using digital recording and editing equipment. Write, produce and voice newscasts, advertisements, public service announcements, interviews, and features.
Requisites: Satisfied Communications A requirement
Course Designation: Gen Ed - Communication Part B
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate ideas clearly and persuasively for broadcast, podcast, and social media platforms, refining speaking and writing skills to engage audiences
Audience: Undergraduate

2. Proficiently use digital audio broadcast equipment, operating recording tools, editing software, and other technologies for high-quality audio content creation
Audience: Undergraduate

3. Conceptualize, plan, and produce information-oriented radio programs and podcasts, developing expertise in content curation, scripting, recording, and editing for engaging broadcasts
Audience: Undergraduate

4. Critically evaluate peers' work in information-rich radio programs and podcasts, analyzing content quality, presentation, and effectiveness in conveying information
Audience: Undergraduate

5. Describe radio station functioning, including programming, scheduling, advertising, and management aspects
Audience: Undergraduate

LSC 375 – SPECIAL TOPICS
1-4 credits.

Specialized subject matter of current interest to undergraduate students.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023

LSC 399 – COORDINATIVE INTERNSHIP/COOPERATIVE EDUCATION
1-8 credits.

An internship under guidance of a faculty or instructional academic staff member in LSC and internship site supervisor. Students are responsible for arranging the work and credits with the faculty or instructional academic staff member and the internship site supervisor.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Workplace - Workplace Experience Course
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025
Learning Outcomes: 1. Apply knowledge and skills learned in the classroom to the workplace
Audience: Undergraduate

2. Demonstrate a greater understanding of career options and personal career goals
Audience: Undergraduate

3. Identify areas for future knowledge and skill development#
Audience: Undergraduate

LSC 400 – STUDY ABROAD IN LIFE SCIENCES COMMUNICATION
1-6 credits.

Provides an area equivalency for courses taken on UW-Madison Study Abroad Programs that do not equate to existing UW courses.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Think critically and creatively to integrate ideas for problem solving.
Audience: Undergraduate

2. Connect issues related to science and society from a global perspective.
Audience: Undergraduate

3. Communicate effectively across media and targeted audiences.
Audience: Undergraduate

LSC 430 – COMMUNICATING SCIENCE WITH NARRATIVE
3 credits.

Understand how narrative theory influences audiences in presenting science; analyze the role of metaphor in communicating science; integrate effective writing structures for explaining complex science; learn writing and editing skills for best practices in science communication.
Requisites: LSC 212 or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Explain how narrative theory influences audiences in communicating science
Audience: Undergraduate

2. Analyze the role of narrative and storytelling in scientific understanding
Audience: Undergraduate

3. Integrate effective writing structures for explaining science topics
Audience: Undergraduate

4. Apply best practices for writing and editing in science communication
Audience: Undergraduate

5. Analyze narrative theory in science communication and apply advanced writing techniques to craft effective science narratives
Audience: Graduate

LSC 432 – SOCIAL MEDIA FOR THE SCIENCES
3 credits.

Explore social media communication and tools specific to scientific fields, and learn how to build a social media presence. Examine readings from peer-reviewed papers, marketing, business and communication journals.
Requisites: Satisfied Communications A requirement or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify core messages and determine core audiences for targeted outreach
Audience: Both Grad & Undergrad

2. Build strategies to conduct basic market research
Audience: Both Grad & Undergrad

3. Efficiently communicate with thought leaders and stakeholders
Audience: Both Grad & Undergrad

4. Design a production schedule and inbound marketing plan
Audience: Both Grad & Undergrad

5. Describe the uses and value of the different social media tools
Audience: Both Grad & Undergrad

6. Analyze impacts of social media campaigns
Audience: Both Grad & Undergrad

7. Systematically evaluate digital communication impacts through case studies and data analysis
Audience: Graduate

LSC 435 – BRAND STRATEGY FOR THE SCIENCES
3 credits.

Explores strategic marketing, branding, and communication planning specific to science, technology, and environmental industries. Examines the sociological and psychological processes shaping audiences' perceptions of various brands, and discusses how to apply various strategies and frameworks to reinforce these perceptions and guide marketing and communication efforts. Combines portfolio-building writing as well as in-class presentations and discussion on contemporary marketing, branding issues, including strategic marketing plans.
Requisites: LSC 270, GEN BUS 311, MARKETNG 300, CNSR SCI 477, or graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate an understanding of the psychology and sociology behind successful branding and marketing efforts.
Audience: Both Grad & Undergrad

2. Analyze data and information from appropriate sources to build a foundation for a strategic marketing plan.
Audience: Both Grad & Undergrad

3. Define and recognize audience segments and target appropriate marketing tactics to those segments to achieve marketing goals.
Audience: Both Grad & Undergrad

4. Demonstrate professional skills, including writing and presentation appropriate for the workplace.
Audience: Both Grad & Undergrad

5. Analyze and synthesize relevant scholarly literature related to brand strategy and management.
Audience: Graduate

6. Formulate a research proposal articulating a primary research project in strategic science communication in an industry setting.
Audience: Graduate

LSC 440 – DIGITAL MEDIA AND SCIENCE COMMUNICATION
3 credits.

Explores how to navigate the complex world of digital and networked communication tools with an eye toward a wide variety of careers in communication. Understand and evaluate social implications of digital media, informed by the most recent scholarship and classical theories. Attention is given to implications for public engagement with controversial scientific issues.
Requisites: Satisfied Communications A requirement or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate understanding of the most influential theories and perspectives regarding the social and political implications and effects of digital communication technologies.
Audience: Both Grad & Undergrad

2. Evaluate contemporary claims about the social effects of communication technologies based on the extent to which they are supported by sound social scientific research.
Audience: Both Grad & Undergrad

3. Apply scientific knowledge about the societal implications of digital communication technologies to popular discussions about scientific topics and their social effects.
Audience: Both Grad & Undergrad

4. Demonstrate effective communication skills through the articulation of critical thinking about digital media and political communication through writing and informal oral presentation.
Audience: Both Grad & Undergrad

5. Analyze and synthesize relevant scholarly literature related to digital media and its relation to contemporary science communication surrounding emerging technologies and/or controversial issues involving science.
Audience: Graduate

6. Formulate a research proposal articulating an original empirical research project exploring the role of digital media in contemporary science communication.
Audience: Graduate

LSC 450 – DOCUMENTARY PHOTOGRAPHY FOR THE SCIENCES
3 credits.

Trains students in visual storytelling and how to think photographically for communicating science, health and the environment. Students study the contributions of social documentary photography while assignments create a portfolio of documentary photography, and final team projects create effective still-image video stories that employ intellectual property rights.
Requisites: Satisfied Communications A requirement or graduate/professional standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain and apply photographic thinking
Audience: Both Grad & Undergrad

2. Edit and curate visuals to engage diverse audiences across various media platforms
Audience: Both Grad & Undergrad

3. Create compelling narratives that effectively communicate complex ideas and concepts
Audience: Both Grad & Undergrad

4. Apply the highest ethical standards in visual storytelling, considering cultural differences and societal implications
Audience: Both Grad & Undergrad

5. Craft effective communication media, bridging the gap between science and broader audiences
Audience: Both Grad & Undergrad

6. Produce photo essays within research field of choice
Audience: Graduate

7. Visually represent critical scientific topics through images and accompanying captions
Audience: Graduate

LSC 460 – SOCIAL MEDIA ANALYTICS
3 credits.

Provides an introduction and practical guide to understanding, collecting, and analyzing data from social media to evaluate their impact on consumer choices, human interaction, and public opinion of scientific issues and industries. Prepares students to apply metrics from current social media platforms (e.g. Instagram, Youtube, Twitter, etc.) to develop strategic communication recommendations for clients, ranging from industry to policymakers.
Requisites: Satisfied Quantitative Reasoning A requirement or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe key concepts related to humans/groups/institutions' activities on social media and ethical considerations for social media researchers
Audience: Both Grad & Undergrad

2. Select an appropriate social science qualitative or quantitative research method technique for collecting and analyzing social media data
Audience: Both Grad & Undergrad

3. Analyze and clearly communicate about the relationship between social media content and user click data
Audience: Both Grad & Undergrad

4. Demonstrate basic knowledge of the R data science software
Audience: Both Grad & Undergrad

5. Evaluate social media data's impact on consumer choices, human interaction, and public opinion of scientific issues and industries
Audience: Both Grad & Undergrad

6. Apply metrics from social media platforms to develop strategic communication recommendations for clients, ranging from industry to policymakers
Audience: Both Grad & Undergrad

7. Analyze and synthesize relevant scholarly literature related to social media, internet studies, and computer-mediated communication
Audience: Graduate

8. Formulate a research proposal articulating a primary research project studying consumer choices, human interaction, public opinion, and/or discourse on social media
Audience: Graduate

LSC 477 – NAMA PROJECT: AGRI-MARKETING STRATEGY AND IMPLEMENTATION
2 credits.

A full-scale marketing campaign culminating in a national student competition for National Agricultural Marketing Association during their annual convention held every spring. Development of campaign plan includes brand identity, associated visuals, market research, strategic communication, competitive analysis, presentation skills, and learning how to work as a team toward a common goal.
Requisites: None
Repeatable for Credit: Yes, for 8 number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Identify marketing problems and opportunities#
Audience: Undergraduate

2. Identify critical needs and researching solutions
Audience: Undergraduate

3. Conduct market- and competitive research and analyses#
Audience: Undergraduate

4. Apply analytical tools appropriate for marketing analysis#
Audience: Undergraduate

5. Formulate alternative solutions based on a combination of theory, case study and experience
Audience: Undergraduate

6. Develop the written components of a marketing plan and executive summary and#articulate it accurately per prevailing Associated Press Style

Audience: Undergraduate

7. Orally and visually present a marketing plan
Audience: Undergraduate

LSC 480 – CULTURALLY RESPONSIVE SCIENCE COMMUNICATION
3 credits.

Analyzes inequities in science communication and explores approaches to increase equity and cultural competence in an evolving social landscape. Covers participatory research methods and critiques of approaches that do not center the community as co-creators of science communication designed to serve community priorities. Opportunities to engage with professionals and communities working to achieve culturally responsive science communication in contexts such as health, agriculture, and the environment.
Requisites: Satisfied Communications A requirement or graduate/professional standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify historic societal injustices related to science and science communication
Audience: Both Grad & Undergrad

2. Apply co-creation and participatory approaches to engage diverse communities in science-related topics
Audience: Both Grad & Undergrad

3. Consider civic and social responsibilities to engage diverse groups in science
Audience: Both Grad & Undergrad

4. Evaluate different approaches for communicating science more effectively to underrepresented, marginalized and other communities
Audience: Both Grad & Undergrad

5. Evaluate the cultural responsiveness of science communication and offer recommendations for how to create science communication that is more culturally responsive and culturally sustaining
Audience: Both Grad & Undergrad

6. Work as part of a team to create culturally responsive science communication for real-world project
Audience: Both Grad & Undergrad

7. Create culturally responsive science communication as part of group project
Audience: Both Grad & Undergrad

8. Independently design a graduate-level research prospectus related to examining a culturally responsive science communication context for a marginalized group in the U.S. related to your interests and research program
Audience: Graduate

LSC 515 – SOCIAL MARKETING CAMPAIGNS IN SCIENCE, HEALTH AND THE ENVIRONMENT
3 credits.

Design, production and evaluation of communication programs aimed at informing and educating the public about agricultural, environmental, science, health and human ecology issues.
Requisites: Senior standing, declared in Life Sciences Communication, LSC 250 and 251
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand principles and tactics of social marketing communication
Audience: Undergraduate

2. Plan a social marketing campaign
Audience: Undergraduate

3. Use communication, persuasion, and behavioral principles that inform campaign planning
Audience: Undergraduate

4. Conduct qualitative and quantitative research
Audience: Undergraduate

5. Engage in strategic and creative thinking, writing, and message production
Audience: Undergraduate

6. Collaborate effectively as part of a team
Audience: Undergraduate

LSC 532 – WEB DESIGN FOR THE SCIENCES
3 credits.

Provides an opportunity to design websites that focus on agricultural, life and social sciences. It covers characteristics of web users, science information goals for websites, needs assessment, search strategies, formative evaluations, legal issues.
Requisites: Satisfied Communications A requirement or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the fundamental concepts of how the web works and how humans interact with the web
Audience: Both Grad & Undergrad

2. Analyze website interfaces and content#
Audience: Both Grad & Undergrad

3. Design effective interfaces using usability and information architecture concepts
Audience: Both Grad & Undergrad

4. Explain the differences between select web programming languages
Audience: Both Grad & Undergrad

5. Create basic webpages and websites
Audience: Both Grad & Undergrad

6. Produce a complete website and website promotional strategy.
Audience: Both Grad & Undergrad

7. Analyze and synthesize relevant scholarly literature related to web design
Audience: Graduate

8. Independently research and assess website scholar contributions to the field of web design
Audience: Graduate

LSC 560 – SCIENTIFIC WRITING
3 credits.

Focuses on scientific writing techniques that can be applied to academic papers, scientific journals, grant proposals, and other written and oral professional work in science and technology related fields.
Requisites: LSC 212 or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply the practices and principles that produce both strong scientific arguments and writing that is clear, easy to interpret, and enjoyable to read.
Audience: Both Grad & Undergrad

2. Use the elements of story to engage scientific audiences and to structure both written and oral communications.
Audience: Both Grad & Undergrad

3. Identify the purpose and structure of various genres of scientific writing, such as grant proposals and journal articles, and what readers expect from each.
Audience: Both Grad & Undergrad

4. Describe the common barriers to effective science communication and apply practices for overcoming them.
Audience: Both Grad & Undergrad

5. Critically evaluate their writing and the writing of others, and use best practices for giving constructive, respectful feedback during peer review.
Audience: Both Grad & Undergrad

6. Integrate knowledge of the principles of effective communication with new technical skills to write and speak about aspects of their own research.

Audience: Graduate

LSC 561 – WRITING SCIENCE FOR THE PUBLIC
3 credits.

Focuses on science writing concepts and techniques that can be used to communicate purposefully and effectively with public audiences about science, research, and technology.
Requisites: Junior standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Harness the elements of story to more deeply engage public audiences in science and to organize both written and oral communications.
Audience: Both Grad & Undergrad

2. Apply more concise, clear, and powerful language when writing and speaking about science and research.
Audience: Both Grad & Undergrad

3. Appreciate the need to understand others' perspectives when communicating about science and apply strategies for responding empathetically to audience concerns.
Audience: Both Grad & Undergrad

4. Foster dialogue and community by participating thoughtfully and respectfully in discussions, including peer reviews of each other's work.
Audience: Both Grad & Undergrad

5. Integrate the concepts and skills learned in the course to write a personal essay or opinion piece about a timely and relevant science topic or controversy.
Audience: Both Grad & Undergrad

6. Combine knowledge of the principle of effective science communication with new technical skills to write and speak about aspects of their own research.
Audience: Graduate

LSC 614 – ADVANCED VIDEO PRODUCTION
3 credits.

An advanced digital video production course. Students will receive advanced instruction in producing, videography, scripting, and editing digital video.
Requisites: LSC 314 or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Apply appropriate theories in the use and presentation of images and information
Audience: Both Grad & Undergrad

2. Apply current tools and technologies appropriate for communication professionals, and understand the digital world
Audience: Both Grad & Undergrad

3. Demonstrate professional competency with the operation of video and audio equipment in the studio and field
Audience: Both Grad & Undergrad

4. Demonstrate professional behavior while collaborating with other team members to reach project goals
Audience: Both Grad & Undergrad

5. Select and competently use the most appropriate industry practices for your projects
Audience: Graduate

LSC/COM ARTS/JOURN 617 – HEALTH COMMUNICATION IN THE INFORMATION AGE
3 credits.

Examines the role of communication in health, how the revolution in information technology has affected health communication, and the assumptions about health information and communication that drive current efforts to use technologies.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate their understanding of major theories, approaches, concepts, and current research findings in the area of health communication
Audience: Both Grad & Undergrad

2. Gain a sense of the methodological issues involved in the construction and evaluation of health communication
Audience: Both Grad & Undergrad

3. Demonstrate their understanding of the connections between the environment (e.g., physical, social, media), cognition, and behavior
Audience: Both Grad & Undergrad

4. Communicate effectively through written reports, oral presentations and discussion
Audience: Both Grad & Undergrad

5. Evaluate ideas from different sources critically
Audience: Graduate

6. Derive new testable hypotheses by integrating or contrasting different theories
Audience: Graduate

7. Develop variations on theoretical models or ideas such as contingent conditions or mediating factors
Audience: Graduate

LSC 625 – RISK COMMUNICATION
3 credits.

Examines risk as a central concept in the communication process. Since risk is intrinsically an interdisciplinary concept, the examination will rely on literature from a wide range of disciplines and perspectives, such as communication, psychology, sociology and formal risk analysis. Case studies will be drawn from a wide range of global issues and cultural contexts, including environmental, technological or health risks; food safety risks; international military crisis or threats of terrorism; and natural disasters.
Requisites: Junior standing and (LSC 250 or 251); or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the psychological processes by which risk perceptions are formed across the world and explain these in lay terms to different audiences
Audience: Both Grad & Undergrad

2. Analyze media portrayals of risk and their effect on public perceptions in different cultural settings
Audience: Both Grad & Undergrad

3. Describe the importance of social, political and cultural contexts for risk related issues at the global scale
Audience: Both Grad & Undergrad

4. Critically assess campaigns aiming at persuading individuals to make specific decisions in high-risk situations around the world
Audience: Both Grad & Undergrad

5. Analyze and synthesize relevant scholarly literature related to risk communication
Audience: Graduate

6. Formulate a research proposal articulating a primary research project in riskcommunication
Audience: Graduate

LSC 640 – CASE STUDIES IN THE COMMUNICATION OF SCIENCE AND TECHNOLOGY
3 credits.

Examination of social scientific research addressing characteristics of science, public understanding of science, science news, and relationships between scientists and journalists. Application of this knowledge to several case studies examining the function of communication in specific scientific or technical contexts.
Requisites: Senior standing, declared in Life Sciences Communication, LSC 250 and 251
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Integrate theoretical concepts, data and research, and science communication practice toward solving societal and scientific problems
Audience: Undergraduate

2. Apply knowledge from prior coursework in science communication to a societal or organizational problem
Audience: Undergraduate

LSC 660 – DATA ANALYSIS IN COMMUNICATIONS RESEARCH
3 credits.

How to use chi-square, analysis of variance, simple and multiple correlation and regression analysis, and various nonparametric tests in communication research.
Requisites: LSC 250 and senior standing or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022
Learning Outcomes: 1. Explain the processes of social science research
Audience: Both Grad & Undergrad

2. Connect research theory and logic to methods & analyses
Audience: Both Grad & Undergrad

3. Clean, examine, and analyze experimental, survey, and human language and interaction data using a scientific programming language
Audience: Both Grad & Undergrad

4. Explain social science research methods, research analyses, and results clearly to lay audiences
Audience: Both Grad & Undergrad

5. Create real-world problem sets to apply research methods
Audience: Both Grad & Undergrad

6. Explain how to implement research methods in an integrated development environment such as RStudio
Audience: Both Grad & Undergrad

7. Present social science research analyses and results
Audience: Both Grad & Undergrad

8. Produce manuscripts for publication in academic journals
Audience: Graduate

LSC 681 – SENIOR HONORS THESIS
2-4 credits.

Individual study for majors completing theses for Honors degrees as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Review and analyze scientific literature
Audience: Undergraduate

2. Identify and use appropriate research methodologies to address a research question#
Audience: Undergraduate

3. Begin structuring and writing a thesis based on original research#
Audience: Undergraduate

LSC 682 – SENIOR HONORS THESIS
2-4 credits.

Second semester of individual study for majors completing theses for Honors degrees as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Review and analyze scientific literature##
Audience: Undergraduate

2. Identify and use appropriate research methodologies to address a research question##
Audience: Undergraduate

3. Write a thesis based on original research#
Audience: Undergraduate

LSC 691 – SENIOR THESIS
1-3 credits.

Individual study for undergraduate students completing a thesis in the area of science communication, as arranged with a research faculty member.
Requisites: Consent of instructor
Repeatable for Credit: No
Learning Outcomes: 1. Apply classroom knowledge to develop research proposal
Audience: Undergraduate

2. Assess state of research in a field of study and develop research questions or hypotheses
Audience: Undergraduate

3. Translate research question into research design and instruments
Audience: Undergraduate

LSC 692 – SENIOR THESIS
1-3 credits.

Second semester of individual study for undergraduate students completing a thesis in the area of science communication, as arranged with a research faculty member.
Requisites: Consent of instructor
Repeatable for Credit: No
Learning Outcomes: 1. Analyze data to answer research questions or hypotheses
Audience: Undergraduate

2. Extract broader implications of research findings for field of research or society
Audience: Undergraduate

3. Write senior thesis based on original research project
Audience: Undergraduate

LSC 699 – SPECIAL PROBLEMS
1-4 credits.

Individual advanced work in an area of Life Sciences Communication under the direct guidance of a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022
Learning Outcomes: 1. Develop critical, analytical, and independent thinking skills
Audience: Undergraduate

2. Apply the scientific method and engage in constructive problem solving

Audience: Undergraduate

3. Demonstrate application of research skills and methodologies
Audience: Undergraduate

4. Effectively communicate findings
Audience: Undergraduate

LSC 700 – COLLOQUIUM IN LIFE SCIENCES COMMUNICATION
1 credit.

Gives graduate students exposure to the many faculty across the UW campus who work on communication issues within their own fields. Weekly speakers represent diverse departments and other units; many will focus on science, health technology and related issues.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

LSC 720 – INTRODUCTION TO COMMUNICATION THEORY AND RESEARCH
3 credits.

Introduction of concepts fundamental to conduct of social scientific research, overview of history and structure of field of communication, survey of major theoretical perspectives on mass communication at both micro and macro levels, with treatment of micro-macro and mass-interpersonal integration.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain principles fundamental to the conduct of social science research
Audience: Graduate

2. Describe theoretical perspectives on communication and media effects, including a broad history of milestones and a sampling of current theoretical models
Audience: Graduate

3. Apply concepts learned in the course to critically engage with real-world phenomena
Audience: Graduate

4. Present communication theory research to an academic audience
Audience: Graduate

LSC/JOURN 811 – CONCEPTUALIZATION AND DESIGN OF MASS COMMUNICATION RESEARCH
2-3 credits.

Assists students in turning research questions into substantive research designs with understanding of the concepts involved. For most students, the final product will be a well-developed thesis or dissertation proposal.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024
Learning Outcomes: 1. Explain key principles of social science research, with a focus on how empirical studies relate to, and contribute to social scientific theory creation and development
Audience: Graduate

2. Identify and explain common modes of empirical research in mass communication and science communication scholarship, including their strengths and weaknesses
Audience: Graduate

3. Assess different kinds of social scientific research for strengths/weaknesses related to increasing understanding of mass communication and/or science communication
Audience: Graduate

4. Articulate and/or evaluate research proposals in mass communication and/or science communication
Audience: Graduate

LSC/ENVIR ST/JOURN 823 – SCIENCE AND ENVIRONMENT COMMUNICATION
3 credits.

Tracks the evolution of mass media coverage of science and the environment. Emphasis on how journalists utilize evidence, the influence of scientific and journalistic norms on stories, and the effects of mass media on science and environment messages to the public.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Describe theoretical perspectives relating to science and environmental communication, including a sampling of recent findings and current theoretical model
Audience: Graduate

2. Combine theory and methods to develop and evaluation science and environmental communication efforts
Audience: Graduate

3. Apply research theories and findings to contemporary problems in environmental and science communication
Audience: Graduate

4. Communicate complex environmental and science concepts with scientific and general audiences in oral and written forms
Audience: Graduate

LSC/JOURN 825 – LAW AND ETHICS OF COMMUNICATION AND MEDIA
3 credits.

Explores critical questions of media law and ethics within the United States.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021
Learning Outcomes: 1. Understand the dimensions of legal and ethical philosophies and frameworks as applied to media work.
Audience: Graduate

2. Interpret and critique common elements of media ethics codes and practices.
Audience: Graduate

3. Interpret and critique legal precedents and doctrines
Audience: Graduate

4. Apply philosophy and frameworks to current media concerns and controversies.
Audience: Graduate

5. Rationally defend or critique choices in specific media contexts.
Audience: Graduate

6. Research and write about law and ethics in scholarly or professional publications.
Audience: Graduate

LSC/JOURN 826 – JOURNALISM THEORY
3 credits.

Focus on the content and purposes of journalism, explores cultural values associated with journalism, relationships between journalism and other institutions, and current issues facing journalists at a time when the profession faces many challenges.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

LSC/JOURN 833 – TECHNOLOGY AND SOCIETY
3 credits.

Considers the effects of new communication technologies on everyday life and political mobilization.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

LSC 835 – STRATEGIC SCIENCE COMMUNICATION
3 credits.

Examines science communication through the framework of strategic communication. Examines frameworks and concepts from marketing, branding, advertising, public relations, organizational communication, and related fields to help inform organizational and individual-level science communication and engagement strategies. Explores topics such as messaging tactics, persuasion, audience segmentation and DEI (diversity, equity, and inclusion), and behavior change.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Identify theoretical approaches and methodologies behind strategic communication and how they apply to science communication and engagement.
Audience: Graduate

2. Critically evaluate the effectiveness of strategic science communication efforts in contemporary society, and their impact on diverse audiences.
Audience: Graduate

3. Define and recognize audience segments and how to apply appropriate strategic communication initiatives to achieve audience-specific communication and engagement goals.
Audience: Graduate

4. Formulate a research proposal articulating an original research project in strategic science communication.
Audience: Graduate

LSC 850 – VISUAL SCIENCE COMMUNICATION
3 credits.

Introduces the theoretical, practical, and ethical principles of visual communication, with a focus on how such principles can be applied to communicating scientific phenomena, evidence, and reasoning to both expert and non-expert audiences. Covers the effectiveness of visuals as a tool for science communication, their effects at the individual level as well as the potential long-term impact on society.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Describe the unique benefits of visuals for communicating sciences.
Audience: Graduate

2. Identify the theoretical, practical, and ethical principles of visual communication.
Audience: Graduate

3. Explain how theoretical, practical, and ethical principles can be applied to the visual communication of sciences.
Audience: Graduate

4. Assess the effects of science visualizations on attitudes, emotions, and behaviors with a multidisciplinary reflection on theories and empirical evidence.
Audience: Graduate

5. Develop research proposals and/or original arguments pertaining to the effectiveness of science visualizations.
Audience: Graduate

6. Critique the design, content, and integrity of science visualizations.
Audience: Graduate

7. Incorporate visuals effectively in scholarly writing and public speaking.
Audience: Graduate

LSC 875 – SPECIAL TOPICS
1-4 credits.

Specialized subject matter of current interest to graduate students.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2022

LSC 902 – PUBLIC OPINION OF LIFE SCIENCE ISSUES
3 credits.

Advanced seminar on public opinion surrounding the science issues and science policy. Examines the intersection of public opinion, science, and politics; issues related to public opinion measurement; and the importance of public opinion for different aspects of life science communication.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Explain how all citizens form opinions and how societies reach consensus (or not) about the policy implications of about emerging (scientific) issues
Audience: Graduate

2. Identify key theoretical models of opinion formation and the role that legacy media and online information ecologies play in each model
Audience: Graduate

3. Evaluate how communication and opinion formation processes work among different stakeholders, including players in the policy arena, scientists, journalists, and non-expert publics, with a particular focus on audiences that are not part of the proverbial choir
Audience: Graduate

4. Assess the cultural, political, and economic impacts on (and of) societal debates surrounding science and technology
Audience: Graduate

5. Make informed predictions about how opinion formation and expressions are likely to be reshaped by emerging communication environments
Audience: Graduate

6. Explain the practical implications for communicating science in an increasingly polarized world
Audience: Graduate

LSC 912 – PUBLIC UNDERSTANDING OF POLITICIZED SCIENCE
3 credits.

Focuses on the intersections of science, politics, and communication, and their implications for public opinion and public understanding of science, particularly in the context of controversial science and technology issues. A solid understanding of public opinion and communication dynamics surrounding today's controversial science issues requires deep knowledge of core concepts and theories of political polarization, attitudes, and information processing, especially in the context of contemporary digital media environments. Focus on how these concepts and theories are applied in contemporary research on public opinion about science and science-related issues. Consider how such applications may potentially offer new and unique opportunities for deeper understanding of broader dynamics of contemporary communication.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe key theoretical and conceptual models for understanding and explaining public understanding of science issues that intersect with politics and political communication.
Audience: Graduate

2. Assess how social scientific research addresses the relationship between communication and the public's understanding of controversial science issues.
Audience: Graduate

3. Identify opportunities for original scholarly work related to improving understanding about, or interventions to improve, public understanding of science.
Audience: Graduate

LSC 990 – RESEARCH
1-12 credits.

Independent research in preparation of a graduate thesis under supervision of a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Conduct and report on science communication research under the guidance of a qualified instructor
Audience: Graduate

2. Develop novel research questions and propose methods to answer the questions using tools from science communication
Audience: Graduate

3. Connect their research clearly to other research in their field of study
Audience: Graduate

LSC 999 – INDEPENDENT RESEARCH
1-3 credits.

Independent research.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Conduct and report on science communication research under the guidance of a qualified instructor
Audience: Graduate

2. Develop novel research questions and propose methods to answer the questions using tools from science communication
Audience: Graduate

3. Connect their research clearly to other research in their field of study
Audience: Graduate

LINGUISTICS (LINGUIS)

LINGUIS 101 – HUMAN LANGUAGE
3 credits.

Elementary theory and practical work in phonetics, phonology, morphology, and syntax, with attention to formal grammar.
Requisites: Not open to students with credit for LINGUIS/ANTHRO 301.
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Read and write phonetic transcriptions of speech using the International Phonetic Alphabet.Describe the mechanisms at work during the production of human speech sounds.
Audience: Undergraduate

2. Identify the distinctive features of the sounds of English, and be familiar with the phonetic features of many non-English sounds.
Audience: Undergraduate

3. Analyze and represent the structure of English words and sentences.
Audience: Undergraduate

4. Apply knowledge of phonetics, phonology, morphology, and syntax in analyzing linguistic datasets from a wide variety of unfamiliar languages.
Audience: Undergraduate

LINGUIS/ANTHRO/FOLKLORE/INTL ST 211 – GLOBAL LANGUAGE ISSUES
3 credits.

Focuses on language and its culture, example topics include: extinction and revival, language and nationhood, how widely and deeply languages differ, language and worldview, writing systems and literacy, language discrimination and inequality.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Identify ways that geographic, social, and political events, movements, and trends shape the sociolinguistic context of the world's languages
Audience: Undergraduate

2. Demonstrate an understanding of subfields of global sociolinguistic inquiry, including language contact, variation, change, and death; language revitalization; the intersections of language, race, and ethnicity; the intersections of language and gender, and sexuality
Audience: Undergraduate

3. Critically evaluate specific examples of language use in a variety of linguistic and cultural contexts
Audience: Undergraduate

4. Design and conduct a sociocultural linguistic research project, including: identify a research question; collect appropriate resources and data; conduct data analysis and interpretation; draw conclusions, and summarize results
Audience: Undergraduate

LINGUIS 213 – TOPICS IN SOCIOLINGUISTICS
3 credits.

Introduction to sociolinguistics through study of a particular topic. Focuses on how language is shaped by social factors such as gender, ethnicity, education, social status, and geographic location.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Read and critically evaluate published research in academic journals.
Audience: Undergraduate

2. Summarize key research questions surrounding a specific topic in sociolinguistics.
Audience: Undergraduate

3. Identify, compare, and contrast major theoretical frameworks on a specific topic in sociolinguistics.
Audience: Undergraduate

4. Interpret results of various data collection methods relevant to topics in sociolinguistics (quantitative, qualitative, experimental, etc.).
Audience: Undergraduate

5. Describe and critically evaluate the benefits and drawbacks of different methodological and analytical approaches in sociolinguistics.
Audience: Undergraduate

6. Identify and discuss the relationship between features of human society and some aspect of language.
Audience: Undergraduate

7. Examine and discuss your own beliefs about languages and language users and how these beliefs inform our use of language in interaction.
Audience: Undergraduate

LINGUIS 237 — LANGUAGE IN WISCONSIN
3 credits.

For millennia, the place we now call Wisconsin has been home to countless languages and dialects: Indigenous languages, immigrant/refugee languages and English. How and when did people learn English and when and why did they begin to speak only English? How has English developed in distinctive ways here? Do hands-on, original research to answer these and related questions about English and other languages past and present in Wisconsin. Examine social and historical issues and issues of linguistic structure, drawing on local histories, archival data, Census records and audio recordings, with opportunities to do fieldwork in communities across the state and the region.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Gather and analyze data from various sources (fieldwork, surveys, census records, local histories, archives, recordings)
Audience: Undergraduate

2. Develop hypotheses about language in Wisconsin, e.g. why particular linguistic features have appeared or disappeared, or how people understand language issues including bilingualism
Audience: Undergraduate

3. Apply tools from linguistics, historical linguistics, sociolinguistics and other fields to test hypotheses
Audience: Undergraduate

4. Do original research on a historical or sociolinguistic topic.
Audience: Undergraduate

5. Write up findings in formats appropriate for audiences of linguists and the general public, including substantial revision and rewriting of at least two papers over the course of the semester.
Audience: Undergraduate

LINGUIS 299 — DIRECTED STUDY
1-4 credits.

Directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022

LINGUIS/ANTHRO 301 — INTRODUCTION TO LINGUISTICS: DESCRIPTIVE AND THEORETICAL
3 credits.

Elementary theory and practical work in phonetics, phonology, morphology, and syntax, with attention to formal grammar.
Requisites: Graduate/professional standing. Not open to students with credit for LINGUIS 101.
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Read and write phonetic transcriptions of speech using the International Phonetic Alphabet
Audience: Undergraduate

2. Describe the mechanisms at work during the production of human speech sounds
Audience: Undergraduate

3. List from memory the distinctive features of the sounds of English, and be familiar with the phonetic features of many non-English sounds
Audience: Undergraduate

4. Use appropriate tests to determine the morphological and syntactic structure of English words and sentences.
Audience: Undergraduate

5. Apply knowledge of phonetics, phonology, morphology, and syntax in analyzing linguistic datasets from a wide variety of unfamiliar languages
Audience: Undergraduate

6. Use basic linguistic terms and concepts to read and summarize academic research in linguistics
Audience: Undergraduate

LINGUIS 303 – HISTORICAL LINGUISTICS
3 credits.

Understanding language change; relation of variation and change to formal properties of human language; consideration of linguistic typology, basic concepts and methods of diachronic analysis. Topics include: language classification and reconstruction; language and social identity, geography, and power; language contact; registers; writing systems.
Requisites: (LINGUIS 101 or 301), ENGL 417, ASIAN 631, GERMAN 650, PORTUG/FRENCH/ITALIAN/SPANISH 429, or SCAND ST 415
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify patterns of change in human language
Audience: Both Grad & Undergrad

2. Organize and analyze data on language change
Audience: Both Grad & Undergrad

3. Apply theories of change to analyze data from familiar and unfamiliar languages
Audience: Both Grad & Undergrad

4. Describe patterns of language change, common accounts for those patterns and how they are grounded in understanding language generally
Audience: Both Grad & Undergrad

5. Apply the Comparative Method to evaluate linguistic reconstruction
Audience: Both Grad & Undergrad

6. Understand and critically evaluate research on language change
Audience: Both Grad & Undergrad

7. Critically evaluate theoretical and empirical arguments for competing linguistic analyses of changes
Audience: Graduate

8. Integrate structural and social accounts of language change into a holistic analysis
Audience: Graduate

9. Formulate and develop support for new hypotheses for the analysis of language change
Audience: Graduate

LINGUIS 309 – GRAMMATICAL VARIABILITY OF LANGUAGE
3 credits.

Introduction to theories of variation among world languages, focusing on syntactic phenomena.
Requisites: LINGUIS 101 or 301
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe cross-linguistic differences in syntax and morphosyntax of the world's languages.
Audience: Undergraduate

2. Summarize various theoretical approaches to this variation.
Audience: Undergraduate

3. Discuss and evaluate competing hypotheses about language variation in light of empirical evidence.
Audience: Undergraduate

4. Articulate a coherent linguistic analysis of particular language data on a selected topic.
Audience: Undergraduate

LINGUIS 310 – PHONOLOGY
3 credits.

Analysis and formal statement of phonological systems; problems and methods of phonological theory.
Requisites: LINGUIS 101 or 301
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify basic acoustic features of human language sounds.
Audience: Both Grad & Undergrad

2. Identify basic articulatory descriptions of human language sounds.
Audience: Both Grad & Undergrad

3. Observe and describe the distribution of sounds in human languages.
Audience: Both Grad & Undergrad

4. Describe different levels of representation in the speechchain.
Audience: Both Grad & Undergrad

5. Develop language-specific materials to support acoustic and phonological analysis.
Audience: Graduate

LINGUIS 322 – MORPHOLOGY
3 credits.

Morphological characteristics of the world's languages. Introduction to theoretical approaches to morphology. Interaction between morphology and syntax; morphology and phonology.
Requisites: LINGUIS 101 or 301
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize, identify, and illustrate the major phenomena of linguistic morphology.
Audience: Both Grad & Undergrad

2. Apply analytic techniques to morphological data sets and propose analyses.
Audience: Both Grad & Undergrad

3. Examine and compare different approaches to morphological phenomena and theory.
Audience: Both Grad & Undergrad

4. Interpret and apply advanced knowledge of morphological analysis or technical literature in selected areas of morphological theory.
Audience: Graduate

LINGUIS 330 – SYNTAX
3 credits.

Grammatical theory; types of elements and processes usable in syntactic description of various sorts.
Requisites: LINGUIS 101 or 301
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe and identify certain cross-linguistic universals and points of variation in the syntax of human languages.
Audience: Both Grad & Undergrad

2. Summarize and explain some common theoretical analyses of core syntactic data.
Audience: Both Grad & Undergrad

3. Apply knowledge of syntactic theory and logical reasoning to interpret and discuss the relevance of novel syntactic data to familiar theories.
Audience: Both Grad & Undergrad

4. Formulate a research question in syntax and discover existing research on a selected topic.
Audience: Graduate

5. Summarize and critically evaluate research in syntax.
Audience: Graduate

6. Synthesize and relate information across various sources.
Audience: Graduate

LINGUIS 340 – SEMANTICS
3 credits.

Meaning in natural languages, relationship between syntax and semantics, compositional semantics.
Requisites: LINGUIS 330
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Apply and interpret appropriate linguistic tests to distinguish between different types of linguistic meaning (literal meaning, presupposition, implicature).
Audience: Both Grad & Undergrad

2. Read, write, and translate common formal semantic notation systems, including propositional and predicate logic, set theory notation, direct interpretive rules, and semantic type notation.
Audience: Both Grad & Undergrad

3. Derive the semantic interpretation of a complex sentence from its component parts, using appropriate formal tools and various types of interpretation methods.
Audience: Both Grad & Undergrad

4. Discuss the relevance of key empirical facts about human language for aspects of theoretical semantic models.
Audience: Both Grad & Undergrad

5. Apply semantic terms and concepts to read, summarize, and discuss linguistic research in compositional semantics.
Audience: Graduate

6. Identify and evaluate empirical and theoretical limitations, problems and issues with existing theories of semantics.
Audience: Graduate

LINGUIS 351 – AMERICAN SIGN LANGUAGE 1
4 credits.

An introduction to elementary skills in production and comprehension of American Sign Language (ASL), with a communicative focus. Basics of ASL vocabulary, structure, and grammar, and the North American manual alphabet. Develop basic conversational abilities, culturally appropriate behaviors, and learn about the culture and history of Deaf communities.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize and produce elementary ASL vocabulary items.
Audience: Undergraduate

2. Recognize and produce elementary grammatical structures in ASL, including the use of manual and non-manual parameters.
Audience: Undergraduate

3. Identify grammatical features within short dialogues and narratives in ASL.
Audience: Undergraduate

4. Comprehend short dialogues and narratives in ASL.
Audience: Undergraduate

5. Demonstrate behaviors that facilitate and regulate signed conversation, such as attention-getting techniques and turn-taking signals.
Audience: Undergraduate

6. Demonstrate the ability to create, conduct and terminate a short content-specific conversation in ASL.
Audience: Undergraduate

7. Demonstrate an elementary knowledge of Deaf Culture, including being able to identify markers of Deaf Culture in artifacts and behaviors.
Audience: Undergraduate

8. Demonstrate knowledge of historical topics as they relate to the Deaf community, such as important figures and institutions in Deaf Culture.
Audience: Undergraduate

LINGUIS 352 – AMERICAN SIGN LANGUAGE 2
4 credits.

Develop comprehension and production abilities in American Sign Language (ASL). Recognition and demonstration of more sophisticated grammatical features of ASL, focusing on increasing fluency and accuracy. Develop cultural awareness of the Deaf communities of the world.
Requisites: LINGUIS 351
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Recognize and produce vocabulary items.
Audience: Undergraduate

2. Express daily function dialogues and signed ASL stories utilizing ASL techniques while incorporating vocabulary, grammatical principles, and cultural awareness.
Audience: Undergraduate

3. Recognize and produce basic grammatical structures in ASL, including the use of manual and non-manual parameters.
Audience: Undergraduate

4. Apply critical thinking skills in understanding ASL literature as it relates to Deaf Culture.
Audience: Undergraduate

5. Use behaviors that facilitate and regulate signed conversation, such as attention-getting techniques and turn-taking signals.
Audience: Undergraduate

6. Create, conduct, and terminate a conversation in ASL in a range of common contexts.
Audience: Undergraduate

7. Identify markers of Deaf Culture in artifacts and behaviors.
Audience: Undergraduate

8. Discuss historical topics as they relate to the Deaf community, such as important figures and institutions in Deaf Culture.
Audience: Undergraduate

LINGUIS 353 – AMERICAN SIGN LANGUAGE 3
4 credits.

Intermediate-level communication skills in American Sign Language (ASL). Increase proficiency in production and comprehension of ASL vocabulary, grammar, and classifiers. Develop conversational abilities and continue to learn about the culture and history of Deaf communities.
Requisites: LINGUIS 352
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize and produce vocabulary items in each content unit.
Audience: Undergraduate

2. Comprehend content-specific commands, questions, and statements in ASL.
Audience: Undergraduate

3. Identify grammatical features within short dialogues in ASL.
Audience: Undergraduate

4. Demonstrate comprehension and production of regulating behaviors in ASL (i.e. attention-getting techniques, turn-taking signals, and others).
Audience: Undergraduate

5. Comprehend short narratives and stories in ASL.
Audience: Undergraduate

6. Initiate, conduct, and terminate a short content-specific conversation.
Audience: Undergraduate

7. Analyze and critique competing perspectives of diverse Deaf communities in the United States and Canada, ideas, aesthetic traditions, and cultural practices, and their history.
Audience: Undergraduate

8. Compare, contrast, and interpret differences and commonalities among Deaf and hearing cultures.
Audience: Undergraduate

LINGUIS/AMER IND 371 – SURVEY OF NORTH AMERICAN INDIAN LANGUAGES
3 credits.

Overview of native languages of North America, including topics such as history, distribution, diversity, government policy, language endangerment, elaboration of cultural domains, language and worldview, speech styles, language structure (phonology, morphology, grammatical categories), performance (narrative, song), writing systems.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Identify the scope and breadth of the Native languages of North America.
Audience: Both Grad & Undergrad

2. Apply basic concepts in linguistics to data from different North American languages and families.
Audience: Both Grad & Undergrad

3. Recognize common misconceptions about these languages.
Audience: Both Grad & Undergrad

4. Identify factors in language attrition and endangerment.
Audience: Both Grad & Undergrad

5. Identify and illustrate the significance of language revitalization and reclamation.
Audience: Both Grad & Undergrad

6. Identify the causes of Indigenous language loss in North America, and the methods and goals of Indigenous language revitalization and reclamation programs.
Audience: Graduate

LINGUIS 373 – TOPICS IN LINGUISTICS
3 credits.

Study of a particular topic in linguistics.
Requisites: LINGUIS 101 or 301
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss key concepts, terms, and debates in the study of a particular topic in linguistics.
Audience: Both Grad & Undergrad

2. Compare different approaches to a particular topic in linguistics.
Audience: Both Grad & Undergrad

3. Integrate course material into current research project.
Audience: Graduate

LINGUIS 375 – SIGN LANGUAGE LINGUISTICS
3 credits.

Introduction and overview of the linguistics of sign languages, signing communities, and perceptions of deaf people and sign languages. Topics include: the grammar of sign languages, their use in signing communities, patterns in the transmission and acquisition of sign languages, and the emergence of new sign languages.
Requisites: LINGUIS 101 or ANTHRO/LINGUIS 301
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Recognize false assumptions and claims about sign languages and challenge them
Audience: Both Grad & Undergrad

2. Discuss key concepts, terms, and debates in the study of sign languages and their linguistic structure
Audience: Both Grad & Undergrad

3. Compare different theoretical approaches to sign language linguistics
Audience: Both Grad & Undergrad

4. Discuss the ways that the study of sign languages expands and enhances our understanding of human languages
Audience: Both Grad & Undergrad

5. Demonstrate understanding that deafness and sign languages are valuable parts of cultural and linguistic diversity
Audience: Both Grad & Undergrad

6. Describe ways to increase and advocate for accessibility and inclusivity for minoritized languages and communities
Audience: Both Grad & Undergrad

7. Evaluate and critique different theoretical approaches to sign language linguistics
Audience: Graduate

8. Compare models of sign languages and spoken languages at all levels of linguistic analysis: phonology, morphology, syntax and discourse
Audience: Graduate

LINGUIS 427 – FIELD METHODS II
3 credits.

Collection and analysis of morphological, syntactic, and semantic data from a particular language, using one or more speakers as consultants.
Requisites: LINGUIS 310 and (LINGUIS 322 or 330)
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022
Learning Outcomes: 1. Plan and conduct targeted elicitation with language consultants.
Audience: Both Grad & Undergrad

2. Collect and manage primary data using best practices and software, in accordance with field-wide scientific standards.
Audience: Both Grad & Undergrad

3. Analyze data and present findings in writing and to an audience.
Audience: Both Grad & Undergrad

4. Interpret and apply ethical standards and responsibilities in fieldwork.
Audience: Both Grad & Undergrad

5. Generate research questions, formulate hypotheses, and test them with fieldwork data.
Audience: Graduate

LINGUIS/ANTHRO 430 – LANGUAGE AND CULTURE
3-4 credits.

The relationship of language as a communication system to the culture transmitted by it. Principle problems in the interrelations of language and nonlinguistic human behavior.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022

LINGUIS 481 – JUNIOR HONORS TUTORIAL
1 credit.

Mentored individual research for those pursuing Honors in the Major.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

LINGUIS 482 – JUNIOR HONORS TUTORIAL
1 credit.

Mentored individual research for those pursuing Honors in the Major.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

LINGUIS 510 – PHONOLOGICAL THEORIES
3 credits.

Theories of phonology, and advanced phonological description.
Requisites: LINGUIS 310
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Appraise and assess advanced aspects of phonological theory and their empirical basis.
Audience: Both Grad & Undergrad

2. Find, understand, and summarize relevant research on a topic in phonological theory.
Audience: Both Grad & Undergrad

3. Analyze linguistic data in a coherent manner in the context of a theoretical framework.
Audience: Both Grad & Undergrad

4. Conduct research and present a logical argument.
Audience: Both Grad & Undergrad

5. Identify and explicate theoretically significant new facts about the phonology of a language.
Audience: Graduate

LINGUIS 522 – ADVANCED MORPHOLOGY
3 credits.

Advanced morphological theory.
Requisites: LINGUIS 322
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply advanced knowledge of key concepts and methodologies to morphological datasets and propose analyses.
Audience: Both Grad & Undergrad

2. Evaluate debates in the study of morphology.
Audience: Both Grad & Undergrad

3. Compare and critique different theoretical approaches to morphology, including questioning even the most fundamental concepts.
Audience: Both Grad & Undergrad

4. Analyze and exemplify a wide range of morphological phenomena from a given language or languages from different families.
Audience: Both Grad & Undergrad

5. Identify issues from existing literature and propose solutions.
Audience: Both Grad & Undergrad

6. Articulate problems, potentials, and limits of linguistic theory and methodology.
Audience: Graduate

LINGUIS 530 – SYNTACTIC THEORIES
3 credits.

Theories of syntax, and syntactic description. The relation of syntax to semantics, and other aspects of linguistic theory.
Requisites: LINGUIS 330
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Discuss advanced aspects of syntactic theory and their empirical basis.
Audience: Both Grad & Undergrad

2. Find and summarize relevant research on a topic in syntactic theory.
Audience: Both Grad & Undergrad

3. Analyze linguistic data in a coherent manner in the context of a theoretical framework.
Audience: Both Grad & Undergrad

4. Conduct research related to a topic on syntactic theory and present a clear logical argument for an analysis.
Audience: Both Grad & Undergrad

5. Identify and explicate theoretically significant new facts about the syntax of a language.
Audience: Graduate

LINGUIS 571 – STRUCTURE OF A LANGUAGE
3 credits.

In-depth study of all components of the grammar of a language.
Requisites: LINGUIS 310, 322, and 330
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Define and explain key concepts in the grammar of a particular language.
Audience: Both Grad & Undergrad

2. Identify, analyze, and describe patterns in linguistic data.
Audience: Both Grad & Undergrad

3. Read, summarize, and critically evaluate academic research in linguistics.
Audience: Both Grad & Undergrad

4. Present research on linguistics.
Audience: Both Grad & Undergrad

5. Conceptualize and propose an independent research project.
Audience: Both Grad & Undergrad

6. Identify gaps in the existing academic literature and propose new solutions or arguments based on empirical evidence.
Audience: Graduate

LINGUIS 681 – HONORS SEMINAR-SENIOR THESIS
3 credits.

Mentored individual research and study for students completing a thesis in an Honors program.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025

LINGUIS 682 – HONORS SEMINAR-SENIOR THESIS
3 credits.

Mentored individual research and study for students completing a thesis in an Honors program.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2025

LINGUIS 690 – CAPSTONE IN LINGUISTICS
3 credits.

In-depth exploration of a particular topic in linguistics. Training in data collection methodologies. Experience gathering, organizing, and analyzing linguistic data as part of a supervised research project.
Requisites: LINGUIS 310, 322, and 330
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Organize and analyze linguistic data
Audience: Undergraduate

2. Develop an original research question
Audience: Undergraduate

3. Design and carry out an independent research project
Audience: Undergraduate

4. Write a paper situating the analysis in an understanding of linguistic theory and tradition
Audience: Undergraduate

LINGUIS 699 – INDEPENDENT READING
1-6 credits.

Advanced directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

LINGUIS 800 – RESEARCH METHODS AND MATERIALS
3 credits.

Professionalization activities for linguists, including writing and publishing, submitting abstracts to conferences, and creating CVs.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop a course paper into a preliminary/qualifying paper following norms for academic work in linguistics.
Audience: Graduate

2. Submit work to academic conferences and give successful presentations.
Audience: Graduate

3. Craft a professional curriculum vitae (CV) and website.
Audience: Graduate

4. Navigate the process of publishing academic work.
Audience: Graduate

5. Identify and apply for research funding opportunities.
Audience: Graduate

6. Plan for writing a dissertation in linguistics.
Audience: Graduate

7. Apply for research and/or teaching positions in academia.
Audience: Graduate

LINGUIS 977 – SEMINAR
2-3 credits.

Critical examination of selected issues in linguistics.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss facts and relevant linguistic theories surrounding a particular topic in linguistics.
Audience: Graduate

2. Read, discuss, and critically evaluate linguistic research articles.
Audience: Graduate

3. Synthesize information and make connections with theories and facts learned in prior coursework.
Audience: Graduate

4. Develop an original analysis grounded in theory and supported empirically.
Audience: Graduate

5. Present ideas to an academic audience.
Audience: Graduate

LINGUIS 990 – THESIS
1-12 credits.

Research in connection with the doctoral thesis.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

LINGUIS 999 – INDEPENDENT READING
1-12 credits.

Mentored reading and research for students with dissertator status.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

LITERATURE IN TRANSLATION (LITTRANS)

LITTRANS 103 – TOPICS IN FRENCH LITERATURE AND CULTURE
3-4 credits.

Explores topics in French and Francophone cultures by examining their conceptualizations throughout history as well as their representations in literature and different media such as film and graphic novels. Studies the specificity of French and Francophone cultures and literatures, their contributions to the world's multicultural heritage, and ponder the cultural traditions they claim their own. Possible topics: technology and culture, humanism and anti-humanism, gender relations, race and ethnicity, social justice, institutional forms of power, human emotions, immigration, colonization and its literary heritage, aesthetic ideals, historical memory and its repression, education and acculturation, social rituals, the cultural and political role of language, etc.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Conceptualize a specific topic as a historical concept, a literary topic, and a cultural phenomenon in French and Francophone cultures.
Audience: Undergraduate

2. Understand how artistic imagination and philosophical reasoning creatively intersect.
Audience: Undergraduate

3. Discuss fundamental questions pertaining to cultural phenomena, based on an informed dialogue with thinkers and writers of the past and present.
Audience: Undergraduate

4. Understand cultural differences and apply this knowledge to the French and Francophone cultures.
Audience: Undergraduate

5. Show understanding on how to closely read and critically analyze literary texts, films, and artistic works in relation to a cultural topic.
Audience: Undergraduate

6. Learn how to write interpretative analyses of a foreign culture.
Audience: Undergraduate

7. Identify key thinkers and artists associated with the topic of the course.
Audience: Undergraduate

LITTRANS 200 – FOOD CULTURES IN ITALIAN LITERATURE
3 credits.

Investigate the representation of food in Italian literature from the 19th Century to the present and the connection between food and identity in Italy and Italophone culture. Covers novels, short stories and poems and work on methods of literary analysis by focusing on questions of genre, narrative structure, characters, metaphorical and allegorical interpretation, etc. The theme of food (in relation to hunger, class, gender, identity, diaspora, sustainability, etc.) is central in the literary material included.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Understand Italian literature in historical, social, political, and gender context (1850-present).
Audience: Undergraduate

2. Recognize, define, and critique major literary genres and sub-genres of the novel (such as the historical novel, social novel, crime novel).
Audience: Undergraduate

3. Discuss history and characteristics of food cultures of Italy in relation to issues of identity.
Audience: Undergraduate

4. Compare past history of Italy to contemporary Italian and Italophone cultures.
Audience: Undergraduate

5. Discuss literary texts from a variety of disciplinary approaches.
Audience: Undergraduate

6. Develop analytical skills and critical thinking skills.
Audience: Undergraduate

7. Improve academic writing, literary analysis, library and field research skills.
Audience: Undergraduate

LITTRANS 201 – SURVEY OF 19TH AND 20TH CENTURY RUSSIAN LITERATURE IN TRANSLATION I
3 credits.

Examines the era of 19th-century Russian prose fiction, roughly 1830-1900, from Aleksandr Pushkin to Anton Chekhov.
Requisites: Not open to students with credit for LITTRANS 203
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

LITTRANS 202 – SURVEY OF 19TH AND 20TH CENTURY RUSSIAN LITERATURE IN TRANSLATION II
3 credits.

Examines Russian prose fiction, Anton Chekhov to the end of the 20th century.
Requisites: Not open to students with credit for LITTRANS 204
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

LITTRANS 203 – SURVEY OF 19TH AND 20TH CENTURY RUSSIAN LITERATURE IN TRANSLATION I
4 credits.

Examines the era of 19th-century Russian prose fiction, roughly 1830-1900, from Aleksandr Pushkin to Anton Chekhov. More writing intensive than LITTRANS 201.
Requisites: Not open to students with credit for LITTRANS 201
Course Designation: Gen Ed - Communication Part B
Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

LITTRANS 204 – SURVEY OF 19TH AND 20TH CENTURY RUSSIAN LITERATURE IN TRANSLATION II
4 credits.

Examines Russian prose fiction, Anton Chekhov to the end of the 20th century. More writing intensive than LITTRANS 202.
Requisites: Not open to students with credit for LITTRANS 202
Course Designation: Gen Ed - Communication Part B
Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

LITTRANS/GEN&WS 205 – WOMEN IN RUSSIAN LITERATURE IN TRANSLATION
3-4 credits.

Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

LITTRANS 207 – SLAVIC SCIENCE FICTION THROUGH LITERATURE AND FILM
3 credits.

Explore the rich tradition of Slavic contributions to Science Fiction (SF). Survey early and contemporary works in the Czech, Polish, and Russian contexts, most of which are little known in the US but are nonetheless fundamental to SF as a world genre. Alongside reading these works, discuss and analyze film adaptations that have, in some cases, become more famous than written texts themselves.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

LITTRANS 208 – THE WRITINGS OF VACLAV HAVEL: CRTITIQUE OF MODERN SOCIETY
3 credits.

Survey and critical analysis of the writings of Vaclav Havel from the 1960's through the 1990's: plays, philosophical and dissident essays, selected speeches as president.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

LITTRANS 209 – MASTERPIECES OF FRENCH LITERATURE AND CULTURE
3-4 credits.

A study of representative masterpieces of French and Francophone literature drawn from at least four different centuries. Emphasis on the interpretation of texts, important themes, and the ways literature expresses psychological and sociocultural realities. May cover topics such as: tragedies by Jean Racine, comedies by Moliere, novels by Pierre Choderlos de Laclos, Honore de Balzac, Guy de Maupassant and Maryse Conde, and stories by Gustave Flaubert and Albert Camus.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Become familiar with some of the finest works of literature written in French
Audience: Undergraduate

2. Perfect skills in presenting a literary interpretation in a clear and compelling way.
Audience: Undergraduate

3. Identify recurrent and meaningful themes in readings and learn to recognize and articulate why they are important to an understanding of life in society.
Audience: Undergraduate

4. Explore the various ways literature expresses psychological and sociocultural realities and allows readers to know both themselves and other people with greater depth, understanding, and compassion.
Audience: Undergraduate

LITTRANS/ASIAN 212 – CLASSICAL SOUTH ASIAN LITERATURES
3 credits.

Surveys the classical literatures of South Asia, from ancient origins to adaptations in the modern world. Includes poetry, prose, and drama translated into English from Persian, Prakrit, Sanskrit, Tamil, Telugu, Hindi/Urdu, and other languages. Examines the relationship between literature in theory, in practice, and politics.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Identify major and minor works of classical South Asian literature
Audience: Undergraduate

2. Analyze works of classical South Asian literature in their historical contexts
Audience: Undergraduate

3. Interpret works of classical South Asian literature using classical and contemporary aesthetic theories
Audience: Undergraduate

4. Articulate the significance of classical literatures to contemporary literary cultures
Audience: Undergraduate

5. Conduct and present original writing and research on classical South Asian literature
Audience: Undergraduate

LITTRANS 213 – LOVE AND SEX IN ITALIAN COMEDY
3-4 credits.

Explore Italian comedy and dramatic literature across the centuries through close reading and discussion of selected plays, from its Roman origins to contemporary examples. Read and discuss texts representative of the major comedic modes (e.g. erudite, improvised, etc.), paying close attention to language and structure, genre debates, character typologies, performance history, and the cultural-historical contexts that informed playwrights. Aims are cultivating a deeper understanding of Italian sensibilities and cultural attitudes regarding humor and satire, love and sex, tragedy within comedy, history, gender politics, public/private space, social customs, class, and other issues.
Requisites: None
Course Designation: Gen Ed - Communication Part B
Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2022

LITTRANS/SLAVIC 215 – LOVE AND DEATH: INTRODUCTION TO POLISH LITERATURE & CULTURE
3 credits.

Examines major traditions, narratives, and ideas that have shaped Polish literature and culture from their beginnings to World War II. Gain broad and contextualized knowledge of Polish civilization by closely reading and analyzing literary and cultural texts in their historical context. Course contents are organized into four major paradigms: Christianity, Sarmatism, Romanticism, and Modernity.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. identify and describe the main characteristics of various literary and cultural texts in Polish (and European) culture;
Audience: Undergraduate

2. define major themes, concepts, events, and ideas that shape Poland's literary and cultural history;
Audience: Undergraduate

3. analyze literary texts in their historical context using basic tools of literary analysis (genres, critical concepts, etc.)
Audience: Undergraduate

4. develop, compare, and effectively express ideas about literary texts and their underlying semantic structures;
Audience: Undergraduate

LITTRANS 218 – POLISH LITERATURE IN TRANSLATION: LATE 19TH AND 20TH CENTURIES
3 credits.

A survey of the main currents in Polish literature since 1863.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2019

LITTRANS 220 – CHEKHOV: THE DRAMA OF MODERN LIFE
3 credits.

Russian culture is one where literature has always played a central role in the nation's self-definitions, but Chekhov's enduring popularity around the globe is evidence of his universal appeal and relevance.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Become familiar with the major works of Anton Chekhov, one of the most influential writers in world literature.
Audience: Undergraduate

2. Demonstrate knowledge with the history, culture, and politics of pre-1917 Russia, and show the relevance of Chekhov's works to our time.
Audience: Undergraduate

3. Cultivate various critical approaches to the study of literature and read, analyze, and write about complex literary works.
Audience: Undergraduate

LITTRANS 221 – RUSSIA'S GREATEST ENIGMA: NIKOLAI GOGOL
3 credits.

Despite the comparisons to Poe and Kafka or Gogol's undeniable influence on Dostoevsky and Bulgakov, one thing is certain - his world of laughter and tears is unlike that of any other writer.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Analyze and interpret most of Gogol's masterpieces to gain a better sense of what literature is and why it is important to read literary texts.
Audience: Undergraduate

2. Distinguish features of the major literary movements of the 19th century, Romanticism and Realism, through some of its most fascinating and problematic texts.
Audience: Undergraduate

3. Examine the literariness of literary works and the complex relationships between author, the literary work, and society.
Audience: Undergraduate

4. Develop skills in critical thinking and writing in order to better analyze difficult literary texts.
Audience: Undergraduate

LITTRANS 222 – DOSTOEVSKY IN TRANSLATION
3-4 credits.

Dostoevsky's works are direct encounters with the "accursed questions" of life, love, evil, violence, sex, death and the other usual suspects; main focus will be on the individual reader's close encounter with the aesthetics and ethics of these works.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

LITTRANS/ENGL 223 – VLADIMIR NABOKOV: RUSSIAN AND AMERICAN WRITINGS
3 credits.

The major novels of Vladimir Nabokov studied in the context of Russian and American literatures. Nabokov as a quintessential artist in exile, whose work explores loss of language, country and home.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

LITTRANS 224 – TOLSTOY IN TRANSLATION
3-4 credits.

What were Tolstoy's objections to sexuality and political reform? What is moral and beautiful? How does civilization and education relate to nature? What does death say about life? Discussion of Tolstoy's masterpieces alongside some of his nonfictional manifestoes.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

LITTRANS 226 – INTRODUCTION TO LUSO-AFRO-BRAZILIAN LITERATURE
3 credits.

Introduction to the cultural and literary practices of the Portuguese-speaking world. Readings include novels, short stories, and poetry from Portugal, Brazil, and Lusophone Africa.
Requisites: Satisfied Communications A requirement
Course Designation: Gen Ed - Communication Part B
Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

LITTRANS/CLASSICS/JEWISH/RELIG ST 227 – INTRODUCTION TO BIBLICAL LITERATURE (IN ENGLISH)
4 credits.

Introduction to the text, development, history, and social context of the Hebrew Bible/Old Testament. Covers the Torah (Pentateuch), Neviim (Former and Latter Prophets), and Ketuvim (Writings), and provides a brief introduction to early Jewish literature (Pseudepigrapha/Apocrypha). Discusses various methods of analysis and theories of composition. Addresses major theological claims made of the text by Jewish and Christian communities. Explores contextualized interpretations in the ancient and modern day.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate knowledge of ancient Near Eastern societies and cultures.
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts in translation.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

4. Articulate a self-critical understanding of one's own approach to the biblical text.
Audience: Undergraduate

LITTRANS 229 – REPRESENTATION OF THE JEW IN EASTERN EUROPEAN CULTURES
3 credits.

The image and representation of the "Jew" and Jews in the literatures and cultures of the Slavic countries of Eastern Europe, including Russia, Poland, Serbia, Croatia, and Bosnia. Both pre- and post-Holocaust texts will be read and critically examined.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

LITTRANS 231 – MANGA
3 credits.

Surveys the manga (Japanese comicbook) from precursors in premodern woodblock-printed booklets to contemporary manifestations in subgenres like gekiga, mecha, shonen, and shojo. Draws on critical writings on literature, popular culture, and visual culture.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

LITTRANS 232 – ANIME
3 credits.

Surveys anime (Japanese animation) from 1930s shorts through contemporary feature-length, experimental, and televised serial-form productions. Draws on critical writings on postmodernism, digital cinema, and visual culture.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023

LITTRANS 233 – RUSSIAN LIFE AND CULTURE THROUGH LITERATURE AND ART (TO 1917)
3-4 credits.

Prerevolutionary Russian visual arts, architecture, music and cinema; provides an inside view of life in prerevolutionary Russia with the help of selected readings in Russian literature.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and summarize important features of Russian cultural history from its origins to 1917, with an emphasis on the interaction between culture and the development of Russian politics and society.
Audience: Undergraduate

2. Identify and summarize significant works of Russian "high art" (e.g., painting, literature) as well as mass culture or popular culture (folklore and the culture of the everyday) and to think about the connections between them.
Audience: Undergraduate

3. Demonstrate knowledge about Russian culture in writing and discussion.
Audience: Undergraduate

4. Think critically about the "functions" (artistic, social, and political) of Russian culture through discussions and writing assignments.
Audience: Undergraduate

5. Develop skills in critical reading, logical thinking, and the use of evidence (4 credit)
Audience: Undergraduate

6. Develop skills in the use of style and disciplinary conventions in writing and speaking (4 credit)
Audience: Undergraduate

7. Develop skills in the productive use of core library resources specific to the discipline (4 credit)
Audience: Undergraduate

LITTRANS 234 – SOVIET LIFE AND CULTURE THROUGH LITERATURE AND ART (FROM 1917)
3-4 credits.

Postrevolutionary Russian and Soviet visual arts, architecture, music and cinema; provides an inside view of life under socialism with the help of selected readings in Soviet literature.
Requisites: Sophomore standing
Course Designation: Gen Ed - Communication Part B
Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Identify and summarize important features of Russian cultural history of the Soviet period, with an emphasis on the interaction between politics and culture between 1917 and 1991.
Audience: Undergraduate

2. Identify and summarize significant works of Russian "high art" (e.g., painting, literature, film) as well as mass culture or popular culture (the culture of the everyday) and to think about the connections between them.
Audience: Undergraduate

3. Demonstrate knowledge about Russian Soviet culture in writing and discussion.
Audience: Undergraduate

4. Students will be able to think more critically about the "functions" (artistic, social, and political) of Russian Soviet culture through discussions and writing assignments.
Audience: Undergraduate

5. Develop skills in critical reading, logical thinking, and the use of evidence (4 credit)
Audience: Undergraduate

6. Develop skills in the use of style and disciplinary conventions in writing and speaking (4 credit)
Audience: Undergraduate

7. Develop skills in the productive use of core library resources specific to the discipline (4 credit)
Audience: Undergraduate

LITTRANS 236 – BASCOM COURSE-IN TRANSLATION
3 credits.

Develop skills in critical reading, logical thinking, use of evidence, and use of library resources. Emphasis on writing in the conventions of specific fields.
Requisites: Satisfied Communications A requirement
Course Designation: Gen Ed - Communication Part B
Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023

LITTRANS/SLAVIC 238 – LITERATURE AND REVOLUTION
3 credits.

Take a literary journey from St. Petersburg to Moscow, following the shifting cultural and political currents in Russia from the years preceding the 1917 Revolution to the rise of Stalinism in the 1930s. Topics in translation will include: revolutionary violence and terror, civil war and emigration, Futurism and the birth of Russian avant-garde art, Soviet feminism and the engineering of the "New Man," technological utopias and totalitarian dystopias, literature and early Soviet economic policy.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Conduct close readings of literary texts that take into consideration both form and content.
Audience: Undergraduate

2. Acquire a greater awareness of another culture and become more adept at engaging with perspectives and ways of thinking that are different from the student's own.
Audience: Undergraduate

3. Develop a sensitivity to the way texts and ideas are rooted in their unique historical and political contexts, while having a life span that stretches far beyond them.
Audience: Undergraduate

LITTRANS 241 – LITERATURES AND CULTURES OF EASTERN EUROPE
3 credits.

Introduction to the literature, culture, and art of Eastern Europe.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2019

LITTRANS 245 – TOPICS IN SPANISH AMERICAN LITERATURE IN TRANSLATION
3 credits.

Beginning with the arrival of Spanish colonists in the fifteenth century, Spanish American literature has a rich history of over five centuries, and Spanish American authors were awarded six Nobel prizes between 1945 and 2010. An introduction to key problems, topics, authors, genres, and periods in the history of Spanish American literary practice providing insight into the vast diversity of Spanish American cultures and societies through readings offered in English translation, as well as familiarity with the current critical and theoretical debates on Spanish American literature.
Requisites: Satisfied Communications A requirement
Course Designation: Gen Ed - Communication Part B
Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Improve general skills in written and oral communication, including the abilities to summarize, analyze, interpret and argue with efficiency and clarity.
Audience: Undergraduate

2. Read critically by applying logical analysis and argumentation to the interpretation of literary texts and by marshalling textual evidence in support of their arguments.
Audience: Undergraduate

3. Converse, read and write critically about contemporary Spanish American literary texts using specialized narratological vocabulary and complying with the Modern Language Association's standards for citation and style.
Audience: Undergraduate

4. Identify and assess the cultural, economic and political factors that differentiate Spanish American literary production from that of other regions.
Audience: Undergraduate

5. Recognize, define and critique major genres of contemporary narrative fiction, both international (e.g. autofiction) and locally Spanish American (e.g. the narco-novel).
Audience: Undergraduate

6. Understand and reflect on the advantages and limitations of literary expression in the context of postmodern cultural economies dominated by audiovisual electronic media, and on specific literary responses to the contemporary media ecology.
Audience: Undergraduate

LITTRANS 247 – TOPICS IN SLAVIC LITERATURES IN TRANSLATION
3 credits.

Exploration of periods, genres, individual writers, themes, problems, ect. in Russian and Eastern European literature.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

LITTRANS 248 – NATIONAL IDENTITY IN THE GLOBAL WORLD: THE ITALIAN CASE
3 credits.

What is a national identity in the context of the fluid globalized world in which we live? How are identities affected by big migratory waves within the same country and, more importantly, from one country or continent to another? The Italian case is one of the many in the so-called Western world that can help us to monitor the possible answers to these questions. Through readings and discussions of novels, avant-garde manifestoes, poems, two main tasks will be accomplished. The first task of analyzing literary texts in a variety of genres (epistolary novel, historical novel, avant-garde rhetoric, poetry) to familiarize ourselves with textual analysis and some theoretical tools supporting the interpretative tasks of literary criticism. And the second task of appreciating the rhetorical devices that those texts adopt at different times of Italian modern and contemporary history.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize and identify different literary genres (novel and different subgenres within that genre; poetry and different forms, from closed forms such as a sonnet to free verse; avant-garde manifestoes and their innovative rhetoric).
Audience: Undergraduate

2. Recognize and identify literature of the different periods considered in the course, from Romanticism to modernism, from avant-garde to post-modernism, while reading Italian literature written in a variety of literary genres (especially novels, but also poems and short stories).
Audience: Undergraduate

3. Reflect on major themes and issues related to national identity through literary forms, while focusing on the Italian situation since Risorgimento and until today, with a necessary observation of what historically happens in those two centuries.
Audience: Undergraduate

4. Reflect on the necessary intersections of several disciplines in the humanities such as history, political science, international studies, while the focus remains on the Italian context and the situations in that country are inserted in a larger and global perspective.
Audience: Undergraduate

5. Understand the exchange among several disciplines (arts, history, philosophy, political science) and the relevance they have in their autonomy and in relation to one another in the several historical and literary contexts that Italy lived through in the context of Europe and even in the global context, as we approach World War II and our contemporary times.
Audience: Undergraduate

LITTRANS 249 – LITERATURE IN TRANSLATION: NINETEENTH-CENTURY FRENCH MASTERPIECES
3 credits.

Read a series of extraordinary narrative texts from nineteenth-and early twentieth-century France.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2021

LITTRANS 252 – SPANISH LITERARY MASTERPIECES IN TRANSLATION
3 credits.

Major works of Spanish Peninsular literature in prose, drama and poetry.
Requisites: Satisfied Communications A requirement
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2021

LITTRANS/MEDIEVAL/RELIG ST 253 – OF DEMONS AND ANGELS. DANTE'S DIVINE COMEDY
3 credits.

Have you ever wondered about human nature? What is our place in this world? Through readings, videos, and original images, explore and discuss Dante's answers from one of the greatest world literary classics, his Divine Comedy. From Hell, through Purgatory to Paradise, we will travel together with Dante in a universal tale of the journey of the human soul. Along the way, learn about Dante, his life and his works, development of literary history, historical and socio-political context of medieval Europe, the Mediterranean and the Middle East. Make connections that cross today's geographic and cultural lines in an exploration of literary topics, the history of ideas, and shared history, pondering universal concepts and patterns in the development of civilization that can still be observed today.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Learn about Dante Alighieri, his life, and works
Audience: Undergraduate

2. Understand medieval civilization and its human culture(s)
Audience: Undergraduate

3. Describe literary, historical, cultural concepts and phenomena
Audience: Undergraduate

4. Analyze from multiple perspectives a text, a situation, a context
Audience: Undergraduate

5. Synthesize information acquired from primary and secondary sources
Audience: Undergraduate

6. Learn the dangers of anachronism
Audience: Undergraduate

LITTRANS 254 – IN TRANSLATION: LIT OF MODERN ITALY-EXISTENTIALISM, FASCISM, RESISTANCE
3 credits.

Covers Italian history and culture from the Unification (1860) to the 21st century.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

LITTRANS/MEDIEVAL 255 – BLACK DEATH AND MEDIEVAL LIFE THROUGH BOCCACCIO'S DECAMERON
3 credits.

Have you ever wondered what it was like to live during the Black Death? Were our medieval and early-modern ancestors different from us, or are we challenged with similar problems? What can we learn from their lives? And, if we could, what could we teach each other? Discuss these topics while reading one of the world's greatest literary classics, Giovanni Boccaccio's Decameron, a text that will make us both laugh and cry. Through reading the Decameron, investigate medicine, art, culture, music, politics, religion, interpersonal and transcultural relations, warfare, fashion, gender and gender roles, as well as everyday life in the Middle Ages and early modernity. Also examines medieval written documents, twentieth-century feminist responses to the Decameron and filmic renditions of it, medieval frescoes, historical descriptions of the plague, and modern descriptions of, and reactions to, the COVID-19 pandemic.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Learn about Giovanni Boccaccio and his Decameron, medieval civilization and its human culture(s)
Audience: Undergraduate

2. Acquire intercultural knowledge and competence and apply them to past and current issues
Audience: Undergraduate

3. Analyze a text, a situation, a context
Audience: Undergraduate

4. Synthesize information acquired from primary and secondary sources
Audience: Undergraduate

5. Learn the dangers of anachronism
Audience: Undergraduate

6. Engage in problem solving
Audience: Undergraduate

7. Develop critical and creative thinking skills
Audience: Undergraduate

8. Engage in effective teamwork
Audience: Undergraduate

9. Design and construct new content based on skills acquired throughout the semester
Audience: Undergraduate

LITTRANS/SLAVIC 259 – ADVENTURE IN LITERATURE AND FILM
3 credits.

How do we define adventure? Who gets to experience it and on what terms? What role has it played in ancient and modern cultures? What do its ever-changing definitions, heroes, and genres tell us about our evolving values? Address these and similar questions on our intellectual journey through some of the most iconic adventures in Western cultural tradition, from Homer's The Odyssey to Spielberg's Raiders of the Lost Ark, and beyond.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. identify the conventions of adventure narratives across different periods, traditions, and genres
Audience: Undergraduate

2. apply basic methods of literary, cinematic, and cultural analysis to close readings of cultural texts, be they epics, romances, novels, or films
Audience: Undergraduate

3. develop, compare, and effectively express ideas about cultural texts and their underlying semantic structures
Audience: Undergraduate

4. discuss how adventure tropes evolve to reflect and often mediate social and cultural changes
Audience: Undergraduate

5. explain the function of adventure as a social construct, both historically and in the context of today’s globalized world.
Audience: Undergraduate

LITTRANS 260 – ITALY AND THE INVENTION OF AMERICA: FROM COLUMBUS TO WORLD WAR II
3 credits.

Focuses on the central role played by Italy in the European vision of America between Columbus's voyages and the Second World War.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

LITTRANS 261 – SURVEY OF CHINESE LITERATURE IN TRANSLATION
3 credits.

A critical survey of premodern Chinese literature spanning from the earliest times to the 18th century. Covers representative works of prose, fiction, drama and poetry.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

LITTRANS 263 – SURVEY OF JAPANESE LITERATURE IN TRANSLATION
3 credits.

A historical introduction to the important literary works of Japan. Focus on literary tradition before the restoration of 1868.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2021

LITTRANS 264 – SURVEY OF JAPANESE LITERATURE IN TRANSLATION
3 credits.

Survey of Japanese Literature from 1868 to present, including novels and short stories by significant authors.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2022

LITTRANS/SLAVIC 266 – ELEMENTARY SPECIAL TOPICS IN RUSSIAN LITERATURE & CULTURE
1-3 credits.

Exploration of various topics - periods, genres, individual writers, themes, problems, etc. in Russian and Eastern European literature.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Gain basic knowledge of Russia's history, literature, performance arts, and films.
Audience: Undergraduate

2. Develop an ability to interpret politics through a cultural lens
Audience: Undergraduate

3. Improve academic writing skills beyond the elementary level
Audience: Undergraduate

4. Place works of literature in their social, historical, and political context
Audience: Undergraduate

5. Analyze literary texts in their historical and cultural context
Audience: Undergraduate

6. Integrate information from primary and secondary sources
Audience: Undergraduate

LITTRANS/GERMAN/JEWISH 269 – YIDDISH LITERATURE AND CULTURE IN EUROPE
3 credits.

Exploration of European Yiddish fiction, poetry, folklore, and cinema, with a focus on works of the 19th and 20th centuries.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

LITTRANS/GEN&WS 270 – GERMAN WOMEN WRITERS IN TRANSLATION
3 credits.

Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

LITTRANS 271 – IN TRANSLATION:MASTERPIECES OF SCANDINAVIAN LITERATURE, MIDDLE AGES-1900
3-4 credits.

An introduction to Scandinavian literary and intellectual history, placed in a European context, from Old Norse sagas to end of 19th century.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2019

LITTRANS 274 – IN TRANSLATION: MASTERPIECES OF SCANDINAVIAN LITERATURE-THE 20TH CENTURY
3-4 credits.

An introduction to Scandinavian literary and intellectual history, placed in a European context, from 1900 to present day.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

LITTRANS 275 – IN TRANSLATION: THE TALES OF HANS CHRISTIAN ANDERSEN
3-4 credits.

The works of Hans Christian Andersen, with an emphasis on his best-known fairytales, but also texts from some of the other genres he mastered, focusing on the biographical traits of his stories and his mastery of the genre and complex narrative method.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

LITTRANS/GERMAN 276 – SPECIAL TOPICS IN GERMAN AND WORLD LITERATURE/S
3 credits.

Exploration of diverse world literary traditions with an emphasis on German and German speaking cultures.
Requisites: Satisfied Communications A requirement
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Engage with world literature as a lens for the human experience
Audience: Undergraduate

2. Read and discuss literature of German speaking countries and the world in translation
Audience: Undergraduate

3. Recognize and explain general themes common to different cultures
Audience: Undergraduate

4. Write about the topics and texts covered in the course
Audience: Undergraduate

LITTRANS 277 – TOPICS IN TWENTIETH-CENTURY GERMAN LITERATURE (IN TRANSLATION)
3 credits.

Discussion of major twentieth-century literary texts from Germany, Switzerland, and Austria by such authors as Franz Kafka, Bertolt Brecht, Anna Seghers, Friedrich Durrenmatt, Gunter Grass, Christa Wolf. Possible areas of emphasis: identity formation; technology and culture; literary representations of fascism.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2019

LITTRANS/GERMAN/JEWISH 279 – YIDDISH LITERATURE AND CULTURE IN AMERICA
3 credits.

Exploration of American Yiddish poetry, fiction, theater, and cinema created by European Jews in the United States.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Prepare students for life and careers in an increasingly multicultural and multilingual US environment
Audience: Undergraduate

2. Develop critical thinking skills through sustained discussion with one's peers and foster a constructive climate in which to engage with questions concerning cultural, racial, religious, and linguistic difference
Audience: Undergraduate

3. Acquire a critical vocabulary to speak about historical and present-day issues concerning migration, ethnic identity, and religious difference
Audience: Undergraduate

4. Engage in reflective writing practices, respond critically to feedback, and assess one's own communicative strengths
Audience: Undergraduate

5. Identify the major themes of American Yiddish literature and culture from the early-twentieth century until today. These themes include: the politics of language use; the negotiation of a minoritized status; regional vs. national American Jewish identity; inter-generational conflict; Jews and the question of race
Audience: Undergraduate

LITTRANS/GERMAN 280 – FROM GRIMM TO GRYFFINDOR: GERMAN FAIRYTALES (RE)IMAGINED
3 credits.

From Rumpelstiltskin to Rapunzel, the rich fairy-tale tradition of the German-speaking world is filled with familiar themes and subversive morals. With an eye to depictions of gender, gender roles, sexuality, and race, we critically engage with these tales and contextualize them within the social and political landscapes that shaped them.
Requisites: Satisfied Communications A requirement
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Critically engage with German fairytales from different time periods and contextualize them within the social and political landscapes that shaped them
Audience: Undergraduate

2. Explore fairytales through a variety of analytical lenses, including feminist and queer theories, ecocriticism, and psychoanalytic perspectives

Audience: Undergraduate

3. Recognize and analyze the fairytale's transcultural influences in literature, art, music, poetry, and pop culture
Audience: Undergraduate

LITTRANS 302 – WHAT IS LIFE? BIOLOGICAL LIFE IN LITERATURE AND CULTURE
3-4 credits.

Explores representations of biological life in literature, scientific discourse, film, and art. The symbolic representations (metaphors and similes used by scientists, fictions narrated by writers, and pictorial forms imagined by artists) allow students to analyze diverse conceptualizations of biological life: life as mechanism, rhythmic movement, balance of energy, inherent force, resistance to death, death's complementary cycle. The exploration of biological life's attributes, such as plasticity, limitedness, and self-consciousness, fosters interdisciplinary thinking bridging the humanities and life sciences. The symbolic representations of life are studied through different genres of texts and different media, and at different moments of cultural history. The texts and media will be from around the world (with a particular emphasis on French, francophone and Italian sources), but studied in English translation.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Identify problems that transcend disciplinary divides and learn how to think across disciplines of learning, namely life sciences, humanities and literature.
Audience: Undergraduate

2. Identify key thinkers and artists associated with the course topic.
Audience: Undergraduate

3. Recall facts and concepts pertaining to the cultural representations of biological.
Audience: Undergraduate

4. Compare literary and artistic representations with scientific illustrations of concepts pertaining to biological life.
Audience: Undergraduate

5. Interpret literary texts, films and artistic works in relation to the problem of organic life, through close reading and conceptual analysis.
Audience: Undergraduate

6. Develop argumentation skills by discussing fundamental questions pertaining to organic life, based on an informed dialogue with thinkers and writers of the past and present.
Audience: Undergraduate

7. Distinguish cultural premises of scientific problems through the critique of their literary, artistic and rhetorical formulations.
Audience: Undergraduate

8. Demonstrate knowledge of fundamental conceptions of biological life in Western cultural tradition by writing a research paper (for Comm-B students: two research papers and three response papers).
Audience: Undergraduate

9. Comm-B students: Create oral presentations and a creative project synthesizing knowledge about the course topic.
Audience: Undergraduate

LITTRANS 303 – TOPICS IN FRENCH LITERATURE AND CULTURE
3-4 credits.

Explores topics in French and Francophone cultures by examining their conceptualizations throughout history as well as their representations in literature and different media such as film and graphic novels. Understand the specificity of French and Francophone cultures and literatures, their contributions to the world's multicultural heritage, and ponder the cultural traditions they claim their own. Possible topics: gender relations, race and ethnicity, social justice, institutional forms of power, human emotions, immigration, colonization and its literary heritage, aesthetic ideals, everyday forms of human interaction, historical memory and its repression, education and acculturation, social rituals, the cultural and political role of language, etc.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Conceptualize historical, literary, and cultural aspects of a specific topic in French and Francophone cultures.
Audience: Undergraduate

2. Understand how artistic imagination and philosophical reasoning creatively intersect.
Audience: Undergraduate

3. Know how to discuss fundamental questions pertaining to cultural phenomena, based on an informed dialogue with thinkers and writers of the past and present.
Audience: Undergraduate

4. Understand cultural differences and apply this knowledge to the French and Francophone cultures.
Audience: Undergraduate

5. Know how to close read and critically analyze literary texts, films, and artistic works in relation to a cultural topic.
Audience: Undergraduate

6. Know how to write interpretative analyses of a foreign culture.
Audience: Undergraduate

7. Identify key thinkers and artists associated with the topic of the course.
Audience: Undergraduate

LITTRANS/JEWISH 318 – MODERN JEWISH LITERATURE
3-4 credits.

Pre-modern Jewish society's breakdown, immigration, the challenges of integration and exclusion, and the establishment of new communities will serve as a backdrop for the analysis and comparison of Jewish literary texts written in Hebrew, Yiddish, German, Russian, and English.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

LITTRANS/SCAND ST 320 – THE NORDIC CHILD
3 credits.

Astrid Lindgren's Pippi Longstocking is an icon of childhood in the Nordic countries and beyond. Pippi has come to symbolize the Nordic "autonomous" child par excellence. Takes up a diverse selection of books and films that represent both the common ideas of the Nordic Child, as well as various elaborations of and exceptions to the idealized norm. Examines a number of the prevalent forms and themes in Nordic children's culture, such as nature, play, school, sexuality, death, loss, and storytelling.
Requisites: Satisfied Communications A requirement or graduate/ professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate an informed understanding of diverse Nordic childhoods and how these are represented in a variety of texts.
Audience: Both Grad & Undergrad

2. Build and show skills of creative and critical thinking, historical thinking, and literary and media analysis through class discussion, short writing assignments, and formal papers.
Audience: Both Grad & Undergrad

3. Develop and demonstrate skills of literary analysis by interpreting texts in multiple genres--including novels, tales, and short stories--in class discussion and especially in writing.
Audience: Both Grad & Undergrad

4. Demonstrate and apply knowledge of current scholarship in the fields of children's literature, childhood studies, and Nordic literary studies in class discussion and formal papers.
Audience: Graduate

LITTRANS/ILS/SCAND ST 321 – HUMANS AND OTHER ANIMALS IN NORDIC LITERATURE AND FILM
3 credits.

Engage with major questions in the field of animal studies while studying a variety of Nordic texts that center the animal, including novels, tales, and feature and documentary films. Through fiction, film, and theory, tackle questions such as: What distinguishes humans from animals? Can humans speak for animals, and should they try? And, what can Nordic literature and film teach us about humans and other animals in the Anthropocene?
Requisites: Satisfied Communications A requirement or graduate/ professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Identify and critically engage with major questions in the field of animal studies in a Nordic context in class discussion, in writing assignments, and on exams.
Audience: Both Grad & Undergrad

2. Interpret film and literature in their cultural and historical contexts in class discussion, in writing assignments, and on exams.
Audience: Both Grad & Undergrad

3. Analyze literature and film in multiple genres--including novels, tales, and feature and documentary films--in formal papers.
Audience: Both Grad & Undergrad

4. Synthesize, interpret, and respond to current scholarship in the fields of Nordic literary studies, film studies, and animal studies in formal papers.
Audience: Graduate

LITTRANS 324 – TOPICS IN SCANDINAVIAN LITERATURE
3-4 credits.

An examination of selected topics in Scandinavian literature.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

LITTRANS 326 – TOPICS IN DUTCH LITERATURE IN TRANSLATION
3 credits.

Study of an author or theme in modern Dutch/Flemish literature, presented by the current Dutch/Flemish writer in residence.
Requisites: Satisfied Communications A requirement
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

LITTRANS/FOLKLORE 327 – VAMPIRES
3 credits.

Explores the development of the vampire legend in folklore, rumor, literature, cinema, television, and popular culture and in relation to topics such as colonization, race, gender, sexuality, and class.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Describe the evolving characteristics of vampire traditions from early nineteenth-century European folklore through European and American literature, film, and other media.
Audience: Undergraduate

2. Describe the interplay between folklore and authored cultural works over time, with examples drawn from the circulation of vampire concepts between informal and authored products.
Audience: Undergraduate

3. Interpret representations of the vampire in relation to historical and cultural situations, with particular reference to colonization, race, gender, sexuality, and class.
Audience: Undergraduate

LITTRANS/JEWISH/RELIG ST 328 – CLASSICAL RABBINIC LITERATURE IN TRANSLATION
3-4 credits.

Introduction to the literature of the Classical Rabbinic or Talmudic period of Judaism (2nd to 7th centuries CE). Historical and intellectual background; the interrelation of liturgy, legal and non-legal literature.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2019

LITTRANS/CLASSICS/HEBR-BIB/JEWISH/RELIG ST 332 – PROPHETS OF THE BIBLE
4 credits.

An introduction to the thought, literature, and history of the prophets of ancient Israel (in English).
Requisites: RELIG ST/CLASSICS/JEWISH/LITTRANS 227 or Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2019
Learning Outcomes: 1. Demonstrate knowledge of ancient Near Eastern societies and cultures.
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts in translation.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

4. Compare ancient Near Eastern prophetic voices to modern prophetic voices.
Audience: Undergraduate

LITTRANS 334 – IN TRANSLATION: THE ART OF ISAK DINESEN/ KAREN BLIXEN
3-4 credits.

Blixen's tales and biographical fiction.
Requisites: Junior standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023

LITTRANS/THEATRE 335 – IN TRANSLATION: THE DRAMA OF HENRIK IBSEN
3-4 credits.

Often considered "the father of modern drama," the Norwegian playwright Henrik Ibsen (1828-1906) is a major figure of world literature whose dramatic works remain fascinating and globally influential, both as texts and through performance and adaptation. Read and discuss Ibsen in English translation, with a focus on Ibsen's historical contexts, dramatic techniques, social and political thought, and the reception and adaptation of his work in modern culture.
Requisites: Junior standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2022

LITTRANS 337 – IN TRANSLATION: 19TH CENTURY SCANDINAVIAN FICTION
3-4 credits.

Begins with Romanticism and looks at Norwegian folktales and Hans Christian Andersen's world-famous stories, moving to the Modern Breakthrough, perhaps the most important period in Scandinavian literary history.
Requisites: Junior standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

LITTRANS/FOLKLORE/MEDIEVAL/SCAND ST 345 – THE NORDIC STORYTELLER
3 credits.

Exploring the oral nature and performance traditions of folklore, ethnography, tales and ballads, literature and culture from Nordic areas and Scandinavia.
Requisites: Satisfied Communications A requirement
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize, describe and analyze cultural phenomena, specifically Nordic Narrative, and put it into context.
Audience: Undergraduate

2. Demonstrate an understanding of the major theories, approaches, concepts and current research findings concerning Nordic Narrative and folklore studies.
Audience: Undergraduate

3. Synthesize the written and material information and use insight and creativity to demonstrate an understanding of the knowledge base from the field.
Audience: Undergraduate

4. Communicate effectively through written essays, oral presentations and discussion.
Audience: Undergraduate

5. Retrieve, analyze, and interpret the professional and lay literature providing information to both professionals and public.
Audience: Undergraduate

6. Work in multi-disciplinary teams to analyze the cultural material from various disciplinary points of view.
Audience: Undergraduate

LITTRANS/FOLKLORE 347 – IN TRANSLATION: KALEVALA AND FINNISH FOLK-LORE
3-4 credits.

A look at the Kalevala, the Finnish creation myth and national epic of Finland, and how it affected Finnish national identity and the eventual Finnish independence from Russia.
Requisites: Junior standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2022

LITTRANS 350 – SCANDINAVIAN DECADENCE IN ITS EUROPEAN CONTEXT
3-4 credits.

Examines the European context of literary decadence (Baudelaire, Huysmans, Wilde) and how it inspired some of Scandinavia's most important writers (Strindberg, Hamsun, Jacobsen).
Requisites: Junior standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

LITTRANS/SLAVIC 357 – INTERMEDIATE SPECIAL TOPICS IN SLAVIC LANGUAGES AND LITERATURES
3 credits.

Special topics in Slavic and Central and Eastern European Languages and Literatures.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024
Learning Outcomes: 1. Define, explain, and contextualize literary periods, genres, individual writers, themes, and problems in Polish, Central European, Slavic, and East-Central European literatures and cultures
Audience: Undergraduate

2. Apply learned knowledge to contemporary issues in cultures and societies of East-Central Europe in their literary and cultural contexts
Audience: Undergraduate

3. Communicate effectively through written reports and essays, oral presentations, classroom discussions, and other
Audience: Undergraduate

4. Demonstrate understanding of the methods, theories, and sources used by scholars of literature and culture
Audience: Undergraduate

5. Develop and learn to utilize techniques, skills, and concepts of literary and cultural criticism in a variety of contexts
Audience: Undergraduate

LITTRANS 360 – FRENCH AND ITALIAN RENAISSANCE LITERATURE ONLINE
3-4 credits.

A virtual journey through Renaissance Italian and French cities; study main literary texts and cultural documents associated with the city or region.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2020

LITTRANS/SLAVIC 361 – LIVING AT THE END OF TIMES: CONTEMPORARY POLISH LITERATURE AND CULTURE
3 credits.

The collapse of communism and the posthumous triumph of the Solidarity movement started a new era in Polish culture. However, living in "posthistory" comes with its own set of problems. Examine contemporary Polish literature, film, and other cultural forms as they struggle with the country's turbulent past while trying to forge new collective identities for the future. How does culture mediate our relationship with the past? How does it help us understand the present and prepare for the future?
Requisites: SLAVIC/LITTRANS 215 or SLAVIC 111
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. identify and define major themes, concepts, events, and ideas that shape Poland’s cultural history since 1989
Audience: Undergraduate

2. develop, compare, and effectively express ideas about various cultural texts and their underlying semantic structures
Audience: Undergraduate

3. demonstrate an understanding of contemporary cultural, social, and political issues that shape collective identities in Poland and, more broadly, East-Central Europe
Audience: Undergraduate

4. apply the concepts learned in classroom to select contemporary debates in Polish culture and society
Audience: Undergraduate

LITTRANS/ILS/ITALIAN/POLI SCI 365 – MACHIAVELLI AND HIS WORLD
3 credits.

Introduces students to the major works of Machiavelli through the close reading of his writings in cultural and historical contexts. Discussion and targeted writing assignments will aim at cultivating in students 1) a broad understanding of Machiavelli's principal intellectual attitudes, 2) a deeper understanding of his literary sensibility, and 3) the ability to articulate controversies and complexities surrounding his thought.
Requisites: Satisfied Communications A requirement
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop a broad understanding of Machiavelli's principal intellectual attitudes.
Audience: Undergraduate

2. Cultivate a deep understanding of Machiavelli's literary sensibility.
Audience: Undergraduate

3. Articulate controversies and complexities surrounding Machiavelli's political thought.
Audience: Undergraduate

LITTRANS/SLAVIC 366 – INTERMEDIATE SPECIAL TOPICS IN RUSSIAN LITERATURE & CULTURE
3 credits.

Exploration of various topics - periods, genres, individual writers, themes, problems, etc. in Russian and Eastern European literature at the intermediate level.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Gain a greater awareness of another culture and become more adept at engaging with perspectives and ways of thinking that are different from your own.
Audience: Undergraduate

2. Develop a sensitivity to the way texts and ideas are rooted in their unique historical and political contexts, while having a life span that stretches far beyond them.
Audience: Undergraduate

3. Be able to conduct a close reading of a literary text that takes into consideration both its form and content.
Audience: Undergraduate

LITTRANS 373 – TOPICS IN JAPANESE LITERATURE
3 credits.

Focuses on a specific theme in Japanese literary history for in-depth study, such as Contemporary Japanese Novels or Japanese Women Writers.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023

LITTRANS 410 – IN TRANSLATION: SPECIAL TOPICS IN ITALIAN LITERATURE
3 credits.

Treatment of a specific perific period, genre, theme or movement in Italian literature.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

LITTRANS/THEATRE 423 – IN TRANSLATION: SLAVIC DRAMA IN CONTEXT
3 credits.

Slavic playwrights and the European tradition of theatre and drama.
Requisites: Junior standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2020

LITTRANS/SCAND ST 428 – MEMORY AND LITERATURE FROM PROUST TO KNAUSGARD
3 credits.

Investigates the relations between theories of memory, both individual and collective, and modern literary representations of remembering. Survey seminal conceptions of memory in the interdisciplinary field of memory studies, investigating topics such as nostalgia, trauma, personal and cultural identity, war and Holocaust, sites of memory, and autobiographical narrative. Through the avenues opened up by these theoretical frameworks, consider the narrative forms as well as the ethical and political dimensions of remembering in major novels by Marcel Proust, W. G. Sebald, and Karl Ove Knausgard.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2019

LITTRANS/SCAND ST 435 – THE SAGAS OF ICELANDERS IN ENGLISH TRANSLATION
3 credits.

The prose narratives of medieval Iceland. Gain an understanding of saga literature as a genre and of the cultural history of Iceland in the Viking Era and the Middle Ages, based on the interplay between pagan codes of honor and Christian ethics. In addition, gain an understanding of the methodological problems involved in studying sagas as historical documents.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Demonstrate understanding of approaches, concepts, and current and classical findings in the area of concentration.
Audience: Undergraduate

2. Appropriately apply major theories in terms of analyzing Old Norse-Icelandic texts.
Audience: Undergraduate

3. Analyze Old Norse-Icelandic texts, especially with a view to historical knowledge and jurisprudence.
Audience: Undergraduate

LITTRANS/GEN&WS/SCAND ST 438 – SEXUAL POLITICS IN SCANDINAVIA
3 credits.

Read and discuss works by Scandinavian writers of the nineteenth and twentieth century reflecting sexual politics and the roles of women in literature. Course taught in English.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and understand the categories depicting sexual politics and the position of women in Scandinavia as portrayed through various works of literature
Audience: Undergraduate

2. Analyze and discuss the important features characterizing sexual politics and the position of women in Scandinavia as portrayed through various works of literature
Audience: Undergraduate

3. Compose and produce writing that applies the concepts introduced to describe, analyze, and differentiate sexual politics and the position of women as portrayed through various works of literature about Scandinavian women.
Audience: Undergraduate

LITTRANS 454 – HISTORY OF SERBIAN AND CROATIAN LITERATURE
3 credits.

Major literary movements of Serbian and Croatian literature from the medieval period until the formation of the Yugoslav state in 1919.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2018

LITTRANS/SLAVIC 467 – ADVANCED SPECIAL TOPICS IN SLAVIC LANGUAGES AND LITERATURES
3 credits.

Special topics in Slavic and Central and Eastern European Languages and Literatures.
Requisites: Junior standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024
Learning Outcomes: 1. list, define, and discuss the main figures, theories, and concepts related to the course's advanced topic
Audience: Undergraduate

2. apply methods of literary, cinematic, and cultural analysis in interpreting a wide range of cultural texts
Audience: Undergraduate

3. develop, compare, and effectively express ideas about cultural texts and their underlying semantic structures, informed by contextual knowledge and literary critical techniques
Audience: Undergraduate

4. hone critical and analytical skills through a close reading of fictional, philosophical, political, and theological texts in connection to social, political, and ethical issues
Audience: Undergraduate

LITTRANS 471 – POLISH LITERATURE (IN TRANSLATION), MIDDLE AGES TO 1863
3 credits.

Intensive study of major writers such as Kochanowski, Krasicki, and Mickiewicz.
Requisites: Junior standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021

LITTRANS 473 – POLISH LITERATURE (IN TRANSLATION) SINCE 1863
3 credits.

A comprehensive survey of Polish literature and its historical background from 1863 to the present.
Requisites: Junior standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2019

MANAGEMENT AND HUMAN RESOURCES (M H R)

M H R 300 – MANAGING ORGANIZATIONS
3 credits.

The management of people and organizations: diversity, attitude and job satisfaction, emotions, personality and value, individual and group decision making, motivation, teams, leadership, influence, strategy, organizational structure and culture, and change management.
Requisites: Open to undergraduates or declared in undergraduate Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Summarize how employee behavior affects organizational performance.
Audience: Undergraduate

2. Explain strategies that improve individual, group, and team performance.
Audience: Undergraduate

3. Develop leadership and management potential through feedback, self-reflection, and implementable action plans to achieve personal and career goals.
Audience: Undergraduate

4. Explain how organizational inputs and processes relate to critical outcomes such as productivity and survival.
Audience: Undergraduate

5. Recommend organizational behavior-related solutions to address problems faced by organizations.
Audience: Undergraduate

M H R 305 – HUMAN RESOURCE MANAGEMENT
3 credits.

Policies and practices; principles and techniques applicable to problems such as employee staffing, training, labor relations, wages, communications, etc.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain strategy-driven human resource management, including how activities must be aligned with processes, structure, culture, and each other.
Audience: Undergraduate

2. Measure and diagnose human resource-related conditions based on assessment of vertical and horizontal alignment and performance-relevant metrics.
Audience: Undergraduate

3. Develop and evaluate human resource policies and actions designed to effectively address common human resource challenges.
Audience: Undergraduate

4. Recognize rights of both employers and employees, ethically and according to major employment laws.
Audience: Undergraduate

M H R 310 – CHALLENGES & SOLUTIONS IN BUSINESS SUSTAINABILITY
3 credits.

Provides central knowledge and skills to tackle challenges at the intersection of business and sustainability. Analysis of the causes of sustainability challenges as relating to business and study of frameworks and measurement systems for incorporating sustainability into corporate decision-making and business analysis.
Requisites: Junior standing or declared in undergraduate Business Exchange program. Not open to graduate/professional students
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the social, economic, and environmental dimensions of the sustainability challenges of business activity and identify potential trade-offs and interrelationships among these dimensions at a level appropriate to the course.
Audience: Undergraduate

2. Analyze the causes of and solutions for the sustainability challenges resulting from business activity.
Audience: Undergraduate

3. Apply sustainability principles and/or frameworks to addressing the challenge of incorporating sustainability into corporate decision-making.
Audience: Undergraduate

M H R 320 – NEW VENTURES IN BUSINESS, THE ARTS AND SOCIAL ENTREPRENEURSHIP
3 credits.

Develop capabilities to conceive of new ventures that create value and critically analyze the role of entrepreneurship in society. Activities include: Imagine/design new ventures, identify markets and funding sources, develop founding teams, do scholarly research on impact of entrepreneurship.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Explain the entrepreneurial mindset and methods used in starting new ventures and what differs for social purpose ventures
Audience: Undergraduate

2. Generate new venture concepts using idea generation techniques and articulate their value proposition
Audience: Undergraduate

3. Evaluate opportunities using rigorous feasibility and experimentation processes
Audience: Undergraduate

4. Develop, define, and clearly communicate a business concept
Audience: Undergraduate

5. Apply introductory concepts in accounting, finance, marketing, intellectual property strategy and entity selection
Audience: Undergraduate

M H R 321 – SOCIAL ENTREPRENEURSHIP
1 credit.

Learn how to create a socially-engaged businesses and how to use entrepreneurial approaches to non-profit ventures. Activities include developing mission statements, assessing social impact, seeking funding from varied sources. Guest lecturers, cases, role playing. Grounded in management theory.
Requisites: None
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Define social entrepreneurship
Audience: Undergraduate

2. Articulate elements of effective mission statements
Audience: Undergraduate

3. Explain the social, economic, and/or environmental dimensions of the sustainability challenge(s) of businesses and nonprofit organizations
Audience: Undergraduate

4. Apply sustainability principles and/or frameworks to addressing the challenge of assessing social impact
Audience: Undergraduate

5. Identify basic forms of financing available to social-purpose organizations
Audience: Undergraduate

M H R 322 – INTRODUCTION TO ENTREPRENEURSHIP
3 credits.

Gain and apply knowledge about foundations of entrepreneurship, and key topics such as founding teams, customer/market discovery, starting and growing a business.
Requisites: Not open to graduate/professional students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply basic market discovery techniques.
Audience: Undergraduate

2. Define the basic steps taken to start a new venture.
Audience: Undergraduate

3. Identify career paths in entrepreneurship.
Audience: Undergraduate

4. Exercise appropriate leadership, value diverse perspectives, and work collaboratively to accomplish organizational objectives in an entrepreneurial context.
Audience: Undergraduate

M H R 365 – CONTEMPORARY TOPICS
1-3 credits.

Exploration of subject areas possibly to be introduced into the business curriculum.
Requisites: Sophomore standing. Not open to graduate/professional students
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

M H R 399 – READING AND RESEARCH-MANAGEMENT
1-6 credits.

Individual work suited to the needs of undergraduate students may be arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

M H R 401 – LEADING TEAMS
3 credits.

Examines components that comprise teams, highlights key factors that influence team effectiveness, develops skills in diagnosing opportunities and threats that face teams, and enhances teamwork expertise.
Requisites: Not open to graduate/professional students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the challenges and opportunities of working in teams as well as developing and leading them.
Audience: Undergraduate

2. Identify common pitfalls in team dynamics and decision-making, and how to avoid them.
Audience: Undergraduate

3. Describe different types of conflicts that teams experience and how to resolve them.
Audience: Undergraduate

4. Practice different techniques to promote team communication, cohesion, and creativity.
Audience: Undergraduate

5. Reflect on how personality and emotional intelligence influences interactions with others.
Audience: Undergraduate

M H R/INTL BUS 403 – GLOBAL ISSUES IN MANAGEMENT
3 credits.

Focuses on the strategic management required in global business. Topics include environmental analysis, global strategy, and subsidiary control. The aim of the course is to develop special skills that are required to manage international firms.
Requisites: Sophomore standing. Not open to graduate/professional students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze the key drivers of globalization and their impact on organizational strategy, structure, and culture in global settings.
Audience: Undergraduate

2. Evaluate the role of cultural differences in facilitating or hindering organizational success and recommend strategies for effective leadership across cultures.
Audience: Undergraduate

3. Apply global human resource and corporate social responsibility practices to improve organizational productivity and sustainability in a global economy.
Audience: Undergraduate

4. Assess country, competitor, market, and consumer data to develop and refine management and marketing plans that allows a company to gain a sizeable market share and achieve strong financial performance for its operations in another country.
Audience: Undergraduate

M H R 412 – MANAGEMENT CONSULTING
3 credits.

Offers an understanding of fundamental principles, methods, and tools used in management consulting and develop skills to diagnose the functioning of an organization, problem solving, and to design and implement interventions to enhance individual, group, and organizational effectiveness.
Requisites: Sophomore standing. Not open to graduate/professional students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate fundamental principles, methods and tools used in management consulting.
Audience: Undergraduate

2. Apply management consulting tools and methods to diagnose the functioning of an organization and develop recommendations for solving problems.
Audience: Undergraduate

3. Design and implement interventions to enhance individual, group, and organizational effectiveness.
Audience: Undergraduate

4. Compose, communicate and deliver recommendations based of investigation and analysis.
Audience: Undergraduate

M H R 415 – STRATEGIC MANAGEMENT OF INNOVATION AND CORPORATE ENTREPRENEURSHIP
3 credits.

Covers innovation and entrepreneurship in an existing corporate environment. Adopt the perspective of decision-makers who must evaluate the potential of new technologies, decide on their adoption, and establish their implementation in the current firm's activities and products. Discuss how established firms can build an internal environment such that all employees adopt entrepreneurial behaviors and generate their own technological or business model innovations.
Requisites: M H R 322, 423, or 434
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze the unique characteristics of technology markets and industries. This includes a focus on platforms, technology standards, and ecosystems.
Audience: Undergraduate

2. Evaluate whether a technological solution is a business opportunity within an established organization.
Audience: Undergraduate

3. Identify the process of commercializing technology in existing organizations and the appropriate mode of commercialization (i.e., license, internal commercialization, sale, or startup).
Audience: Undergraduate

4. Offer recommendations regarding the work environment and practices that support entrepreneurial initiatives within an established organization.
Audience: Undergraduate

M H R 420 – LEADING CHANGE IN ORGANIZATIONS
3 credits.

To be effective, leaders must be able to adapt their organization and the people within it to address the challenges they face. Those who are able to adapt quickly can create a competitive advantage. Explore how leaders can enact, foster, and implement change in organizations and individuals. Topics will include managing organizational transformations, responding to crises, and performance improvement.
Requisites: Not open to graduate/professional students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize the nature of complex organizations, the dynamic environments in which they exist, and key issues involved in the successful management of evolving organizations.
Audience: Undergraduate

2. Become effective leaders of the change management process from initiation to execution.
Audience: Undergraduate

3. Facilitate inclusive change in organizations and organizations characterized bydiverse views and populations.
Audience: Undergraduate

4. Develop the capability to effectively respond to organizational crises considering the short- and long-term needs of all stakeholders.
Audience: Undergraduate

5. Identify and facilitate opportunities for performance improvement in individuals and teams.
Audience: Undergraduate

M H R 422 – ADVANCED ENTREPRENEURSHIP
3 credits.

Focuses on the process of starting and growing a new venture. Develop and utilize a set of qualitative and quantitative skills that can be applied in this context. Topics include how to assess and quantify growth potential of an entrepreneurial opportunity, how investors value startups, and how startups are effectively managed. Acquire a set of cross-functional concepts in finance, law, marketing, and strategy.
Requisites: M H R 322 and (ACCT I S 100 or GEN BUS 310) or declared in the Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Evaluate whether an idea is an entrepreneurial opportunity using both quantitative and qualitative tools.
Audience: Undergraduate

2. Explain the process of building and growing a startup and the challenges associated with each phase of that process for both high-growth and traditional startups.
Audience: Undergraduate

3. Apply select quantitative and qualitative skills and resources required for successfully managing and growing a startup.
Audience: Undergraduate

4. Explain how to start and finance a new business venture.
Audience: Undergraduate

5. Create and present a report analyzing commercial potential of an entrepreneurial opportunity including evaluating potential for sustained growth.
Audience: Undergraduate

M H R 423 – STRATEGIC MANAGEMENT
3 credits.

Synthesis of material from accounting, economics, finance, operations management, human resources, law, marketing, and technology to consider problems in corporate and business-level strategy; top management problems; discussion of actual business cases.
Requisites: Sophomore standing. Not open to graduate/professional students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Conduct an external analysis of the firm, focusing on the industry, competitors, and the general environment.
Audience: Undergraduate

2. Analyze alternative strategic positions within an industry, differentiating between cost and differentiation strategies, and their implications for competitive advantage.
Audience: Undergraduate

3. Assess firm diversification and internationalization, considering mergers, acquisitions, and alliances as potential means.
Audience: Undergraduate

4. Develop and communicate strategic analyses and recommendations both individually and as part of a team.
Audience: Undergraduate

M H R 427 – ENTREPRENEURIAL GROWTH STRATEGIES
3 credits.

General management course that analyzes and integrates growth patterns and business disciplines in context of nascent and high growth firms.
Requisites: Sophomore standing, M H R 422, and ACCT I S 211; or declared in undergraduate Business Exchange program. Not open to graduate/professional students
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Identify specific challenges, such as scaling, resource management, and market competition, affecting high-growth ventures.
Audience: Undergraduate

2. Analyze the implications of industry trends, competitive positioning, financial sustainability, and operational capacity on growth strategies.
Audience: Undergraduate

3. Explain how search funds identify, evaluate, and acquire existing small to medium-sized businesses.
Audience: Undergraduate

M H R 434 – VENTURE CREATION
3 credits.

Intended for students who seek to transform their own ideas into new ventures. Students will learn the process of evaluating, formalizing, and communicating a new venture idea. Student originated product/service/venture concept required for course.
Requisites: Sophomore standing. Not open to graduate/professional students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify market opportunities for new venture concepts.
Audience: Undergraduate

2. Explain the process involved in forming a company.
Audience: Undergraduate

3. Develop and validate aspects of a business model for a proposed product or service.
Audience: Undergraduate

4. Develop knowledge and skills to create materials required to finance a new venture.
Audience: Undergraduate

M H R 438 – WISCONSIN APPLIED VENTURES IN ENTREPRENEURSHIP (WAVE)
3 credits.

Develop, refine, and present business models following the Lean Start-Up approach for customer/market discovery. Presentations are made to the WAVE Board for feedback and investment potential.
Requisites: M H R 322, 415, 422, 434 or 441
Repeatable for Credit: No
Learning Outcomes: 1. Apply market discovery techniques to identify and assess customer needs, preferences, and potential product-market fit.

Audience: Undergraduate

2. Design and conduct entrepreneurial experiments to validate key assumptions and test early-stage business models.
Audience: Undergraduate

3. Evaluate and refine venture concepts by providing and incorporating constructive feedback from peers, instructors, and industry experts.
Audience: Undergraduate

M H R 441 – TECHNOLOGY ENTREPRENEURSHIP
3 credits.

Designed for undergraduate students interested in learning about the fundamental issues related to starting and managing technology-based new ventures. Encourages students to consider how technology-based solutions can solve economic and socially oriented problems.
Requisites: Sophomore standing. Not open to graduate/professional students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe entrepreneurship and the nature of opportunities including the aspects of technology entrepreneurship that are distinct from other types of entrepreneurship.
Audience: Undergraduate

2. Identify the appropriate legal form and potential intellectual property protections for a technology venture.
Audience: Undergraduate

3. Design, evaluate, and select appropriate business models and business strategies for technology ventures.
Audience: Undergraduate

4. Describe and plan appropriate product development and sales and marketing activities for a technology venture.
Audience: Undergraduate

5. Explain basic concepts associated with financial reports in the context of technology venturing.
Audience: Undergraduate

6. Identify, evaluate, and propose specific financing options for technology ventures.
Audience: Undergraduate

M H R/A A E 540 – INTELLECTUAL PROPERTY RIGHTS, INNOVATION AND TECHNOLOGY
3 credits.

Uses economic concepts to illustrate the nature of technological innovation, competition, and economic growth. Topics: economics of the intellectual property protection (IPP); market structure and innovation; interaction between public and private sectors; IPP and anticompetitive policies; globalization.
Requisites: Graduate/professional standing and (ECON 301 or 311)
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Describe major issues in economics of intellectual property protection (IPP), technology and innovation.
Audience: Both Grad & Undergrad

2. Employ basic economic analysis of IPP, technology and innovation related policy issues.
Audience: Both Grad & Undergrad

3. Articulate and critique theories and firms' commercial strategies related to IPP, technology and innovation.
Audience: Graduate

4. Communicate clearly economic and policy issues related to IPP, technology and innovation.
Audience: Both Grad & Undergrad

M H R 604 – LEADERSHIP THEORY AND PRACTICE
2-3 credits.

Presents leadership theories grounded in research in Industrial and Organizational Psychology and Organizational Behavior and the implications of those theories for practice in organizations.
Requisites: Not open to students with credit for M H R 704.
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Articulate the differences between effective management and leadership principles.
Audience: Undergraduate

2. Identify leadership research that supports or rebuts leadership myths and popular half-truths.
Audience: Undergraduate

3. Explain foundational theories and approaches to leadership using research and professional literature.
Audience: Undergraduate

4. Explain the implications of leadership theories for leadership practice in organizations.
Audience: Undergraduate

5. Reconcile the results of leadership psychometric self-assessments with leadership theories and personal experiences with effective leadership.
Audience: Undergraduate

6. Apply leadership theories to guide leadership practice in order to enhance real-world effectiveness in organizations.
Audience: Undergraduate

M H R 610 – COMPENSATION: THEORY AND ADMINISTRATION
3 credits.

Determinants of wage levels, wage structures and individual wages; analysis of the impact of wages on individual attitudes and decisions to participate and perform in organizations.
Requisites: Sophomore standing and (M H R 305 or 705), or declared in the Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate the principles of effective compensation systems and their role in supporting organizational strategy, internal alignment, external competitiveness, pay for performance, and cost control.
Audience: Both Grad & Undergrad

2. Explain the impact of global, legal, organized labor, and regulatory contexts on an organization’s compensation practices.
Audience: Both Grad & Undergrad

3. Apply course concepts to support careers in compensation strategy, managing people, and recognizing how one's own pay and career progression is determined.
Audience: Both Grad & Undergrad

4. Analyze compensation strategies to identify problems and develop solutions that support an organization’s strategy.
Audience: Graduate

M H R 611 – STRATEGIC TALENT MANAGEMENT
2-3 credits.

Explores the strategies and range of processes, methods, and resources that organizations use in talent (human capital) management initiatives to support achievement of business strategy and short and long-term objectives. The focus is on understanding the fundamentals of effective talent management including talent attraction, talent acquisition, talent (career) development, motivation and engagement, and talent retention.
Requisites: M H R 300, 305, graduate/professional standing, or declared in the Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop a talent attraction and acquisition strategy, using data-based decisions, that aligns with business strategy
Audience: Undergraduate

2. Recommend methods to develop the skills and abilities of talent
Audience: Undergraduate

3. Propose strategies that motivate talent in a manner that supports achievement business objectives
Audience: Undergraduate

4. Design a talent retention strategy that aligns with and reinforces business strategy
Audience: Undergraduate

M H R 612 – LABOR-MANAGEMENT RELATIONS
3 credits.

Labor-management relations at the firm level including its evolution, characteristics and contemporary issues. Emphasis on analysis of the labor-management relationship through reference to theory and research on collective action, bargaining behavior and conflict resolution.
Requisites: Sophomore standing and (M H R 305 or 705), or declared in the Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze the role of the state in regulating labor relations, including conflict resolution and the enforcement of individual and collective workplace rights.
Audience: Both Grad & Undergrad

2. Evaluate the process of union organization and collective bargaining, identifying key strategies and challenges faced by both workers and management.
Audience: Both Grad & Undergrad

3. Develop a thorough understanding of contract administration, including grievance handling, arbitration, and contract interpretation in labor disputes.
Audience: Both Grad & Undergrad

4. Assess current and emerging challenges in labor-management relations and propose strategies for human resource professionals to respond.
Audience: Graduate

M H R 614 – PEOPLE ANALYTICS
2-3 credits.

Technological advances have led many organizations to adopt a more "data-driven" approach to managing their employees. It is therefore critical for managers to understand how to integrate data analytics into their organization's human resource management or risk being at a competitive disadvantage. Build hands-on skills to analyze data in ways that facilitate the development and evaluation of human capital policies, practices, programs, and strategies. Learn to take advantage of data and analytics in decision-making processes. Emphasis on experiential learning using data from various organizational contexts.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Design an analytic plan that can inform managers' decision-making processes
Audience: Both Grad & Undergrad

2. Apply statistical tools to answer applied questions of interest
Audience: Both Grad & Undergrad

3. Use results of statistical analyses to inform HR practices, policies, and strategies
Audience: Both Grad & Undergrad

4. Communicate analytic plans and findings to non-expert audiences
Audience: Both Grad & Undergrad

5. Apply advanced statistical tools to answer applied questions of interest
Audience: Graduate

6. Communicate analytic plans and findings to statistically advanced audiences
Audience: Graduate

M H R 617 – DIVERSITY IN ORGANIZATIONS
2-3 credits.

Provides a thorough understanding of the advantages and challenges presented by workplace diversity, suggesting techniques to manage effectively and maximize the benefits of diversity. Includes a comprehensive survey of demographic groups and an analysis of their history to foster a thorough understanding of the dimensions of diversity. Discussions will include effectively managing diversity on the basis of race, sex, LGBTQIA, religion, age, ability, national origin, and intersectionality in organizations and about issues various groups face, including discrimination. Provides practical insight into subconscious/implicit bias, team diversity, and diversity management in the United States and abroad. Goal is to learn to work with diverse groups to create a productive organization in which everyone feels included.
Requisites: Junior standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Define key terminology associated with diversity in organizations
Audience: Both Grad & Undergrad

2. Explain the major theories used in diversity research to understand diversity in organizations
Audience: Both Grad & Undergrad

3. Apply these theories to replicate diversity successes, diagnose diversity challenges, and make informed decisions to manage diversity well
Audience: Both Grad & Undergrad

4. Connect historical context to current impact for various demographics
Audience: Both Grad & Undergrad

5. Reflect upon the topics discussed in the class and determine applications for future work settings
Audience: Graduate

M H R 628 – NEGOTIATIONS
2-3 credits.

Theory and practice of negotiations.
Requisites: Sophomore standing or declared in the Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the game theory approach to the negotiator's dilemma, and thus the issues of distributive and integrative bargaining (i.e., to compete or cooperate; to claim value or create value).
Audience: Both Grad & Undergrad

2. Recognize the contingent nature of appropriate tactics for negotiation preparation, opening, concession-making, and closing.
Audience: Both Grad & Undergrad

3. Explain the foundational impacts of bargaining style, goals, relationships, standards, interests, leverage, ethical concerns, cultural differences, and departures from economic interests.
Audience: Both Grad & Undergrad

4. Understand how some issues can be exploited to create value, enabling win-win outcomes.
Audience: Both Grad & Undergrad

5. Apply appropriate tactics in cooperative and competitive negotiations, both alone and as part of a negotiating team.
Audience: Both Grad & Undergrad

6. Analyze the negotiations process and settlements in order to identify strengths, weaknesses, and opportunities for improvement.
Audience: Both Grad & Undergrad

7. Evaluate recent negotiations research in relation to course principles.
Audience: Graduate

M H R/INTEGART 632 – INTRODUCTION TO ARTS ENTREPRENEURSHIP
3 credits.

An overview and foundation in preparation for developing, launching, or advancing innovative projects in arts, culture, design, and humanities. Learn the unique contexts and challenges of creative careers. Develop creative project goals while gaining an understanding of the nature and structure of arts entrepreneurship in a variety of sectors - for-profit, nonprofit, government, and hybrid.
Requisites: Sophomore standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize and equitable entrepreneurship opportunities in arts and cultural expression through projects, partnerships, initiatives, and organizations.
Audience: Both Grad & Undergrad

2. Assess challenges and opportunities in the arts and cultural sector and develop them into project business plans.
Audience: Both Grad & Undergrad

3. Analyze case studies that lead to the discovery, acquisition, and alignment of key resources necessary for a concept's success (time, money, space, equipment, talent.)
Audience: Graduate

4. Communicate and present a clear and compelling project plan which includes narrative, budget, marketing plan, fund development plan, and the accompanying strategies in written and spoken form.
Audience: Both Grad & Undergrad

5. Evaluate a project's outcomes in ways that consider equity, inclusivity, and diversity as a measure of current and future success.
Audience: Both Grad & Undergrad

6. Illustrate acquired skills and learning by creating a web-based professional portfolio with work samples.
Audience: Both Grad & Undergrad

M H R/INTEGART 636 – ENTREPRENEURSHIP IN ARTS & CULTURAL ORGANIZATIONS
3 credits.

Become familiar with basic entrepreneurship principles and value proposition design techniques in social entrepreneurship settings with attention to the perspective of arts and cultural organizations. Content includes business model development, customer-driven innovation, lean startup practices, organizational capacity for entrepreneurial action, team performance, the structure of alliances and partnerships and funding mechanisms in the sector.
Requisites: Junior standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and describe the key elements of a value proposition canvas
Audience: Both Grad & Undergrad

2. Articulate the role of mission statements in social-purpose organizations, implications of entity choices, and sources of funding for nonprofit and related organizations in the arts and cultural space
Audience: Both Grad & Undergrad

3. Identify and analyze business models used in the creative economy across nonprofit and social-purpose organizations
Audience: Both Grad & Undergrad

4. Define the design thinking problem-solving approach and outline key elements of the process
Audience: Both Grad & Undergrad

5. Apply appropriate research methods (ethnographic versus market research) and invoke related tools (literature reviews, observational note-taking, etc.) to help test hypothesis in the development of new products/services for arts and cultural organizations
Audience: Both Grad & Undergrad

6. Analyze arguments about the role of entrepreneurial action and funding for arts and cultural organizations in the context of other disciplinary approaches in the visual and performing arts, design, and related fields
Audience: Graduate

7. Design a value proposition canvas for an entrepreneurial cultural/creative organization in the Madison community that will inform product/service development for a distinct customer segment.
Audience: Both Grad & Undergrad

8. Rapidly test emergent ideas in the field with (potential) customers using a design thinking approach that includes creation of "prototypes" (storyboards, role play, 3D printed objects, etc.) and interpretation of results
Audience: Both Grad & Undergrad

9. Make connections between the world of ideas and concepts with day-to-day issues and concerns in cultural/creative organizations. Where possible, encourage/highlight/expose new connection points (e.g., "I never thought of it that way...")
Audience: Both Grad & Undergrad

10. Develop teamwork, written and oral communication skills
Audience: Both Grad & Undergrad

M H R 640 – CREATIVE DESTRUCTION LAB I
1 credit.

Introduces key topics and concepts associated with technology entrepreneurship, venture formation, and project-based organizational consulting. Allows for practice of key analytical approaches to understanding technology venturing processes. Application required.
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Assess entrepreneurial challenges and startup viability in a disciplined andobjective manner.
Audience: Undergraduate

2. Recognize opportunity spaces in knowledge-intensive industries and assess whether a specific technological innovation may generate new value for stakeholders.
Audience: Undergraduate

3. Utilize a set of tools and frameworks to evaluate tech startup capabilities, processes, and opportunities.
Audience: Undergraduate

M H R 641 – CREATIVE DESTRUCTION LAB II
2 credits.

Action learning through engaging with a real-world technology venture in the context of a knowledge-intensive industry. In teams, negotiate a project to support venture development, plan and implement the project, and present the results to the venture and the instructor. Provides direct insight into technology venture processes, observation of pitching and mentoring activities, and the real-world challenges associated with early stage venturing.
Requisites: M H R 640
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Effectively collaborate with peers on a long-term project with multiple milestones and outputs.
Audience: Undergraduate

2. Summarize desk and action research to address timely, important, and relevant challenges identified by the venture.
Audience: Undergraduate

3. Reflect on one's contributions to a self-managed consultation project to support the development of a real-world technology venture.
Audience: Undergraduate

M H R 700 – LEADING PEOPLE AND ORGANIZATIONS
1-3 credits.

Management of people and organizations, exploring concepts that will be valuable as a current employee or a future employee, manager, or leader. Concepts will be discussed at the individual, group or team, and the organizational level. Key organizational behavior topics include: diversity, attitude and job satisfaction, emotions, personality and value, individual and group decision making, motivation, teams, leadership, influence, strategy, organizational structure and culture, and change management.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Summarize how employee behavior affects organizational performance.
Audience: Graduate

2. Explain strategies that improve individual, group, and team performance.
Audience: Graduate

3. Develop leadership and management potential through feedback, self-reflection, and implementable action plans to achieve personal and career goals.
Audience: Graduate

4. Explain how organizational level inputs and processes relate to critical outcomes such as productivity and survival.
Audience: Graduate

5. Recommend organizational behavior-related solutions to address current problems faced by organizations.
Audience: Graduate

M H R 704 – MANAGING BEHAVIOR IN ORGANIZATIONS
2-3 credits.

Examines the effective management of behavior in organizations. Focuses on the application of theories of leadership and work motivation. Includes critical conceptual and analytical assessment of these theories. Emphasizes the management of work performance, managerial skill building, and enabling followers.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program. Not open to students with credit for M H R 604.
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Apply the scientific method as an epistemological guide to first understand, then be able to predict, and consequently lead organizational behavior.
Audience: Graduate

2. Evaluate research behind some of the foundational theories of motivation and leadership: operant conditioning, goal-setting, social cognitive, contingency model of leadership effectiveness, and transactional vs. transformational leadership paradigm.
Audience: Graduate

3. Practice differentiating research-derived, cumulatively-built evidence from leadership myths, popular half-truths, idiosyncratic anecdotes, and complete nonsense.
Audience: Graduate

4. Articulate deductive and inductive reasoning, understanding of chance and associated errors of inference, and characterizing of applied recommendations through the lens of their inferential probabilities, or the lack of thereof.
Audience: Graduate

M H R 705 – HUMAN RESOURCE MANAGEMENT
3 credits.

Two broad substantive areas are covered. (1) Evidence (theoretical and empirical) reviewed on the determinants of employee job attitudes and behavior. For example, the impact of compensation on employee satisfaction and performance. (2) Functional activities of personnel management and their impact on employee behavior evaluated. Sample topics: Selection, development, evaluation and compensation. Knowledge of Statistics strongly encouraged such as STAT 301.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Evaluate the expected effectiveness – based on theory, empirical research, and experience – of alternative human resources strategies to align with and achieve organizational goals.
Audience: Graduate

2. Formulate and execute human resources strategies to achieve organizational goals, considering internal (people-related resources and capabilities) and external influences/constraints (product/labor markets, legal framework, ethics, and labor unions).
Audience: Graduate

3. Utilize data analytics to inform/improve decision-making, diagnose human resources/organizational challenges, and evaluate the effectiveness of human resources strategies in achieving human resources/organizational goals.
Audience: Graduate

M H R 706 – LEADING AND WORKING IN TEAMS
1 credit.

Examines team dynamics, highlights key factors that influence team effectiveness, develops skills in diagnosing opportunities and threats that face teams, and enhances teamwork expertise. The content is applicable to projects across specializations. For instance, teamwork skills are essential to project teams developing new products/services, working on business strategy, implementing process improvements, designing new financial investment instruments, and developing real estate. In any of these projects, employees would work as a team to accomplish their goals. The team's success or failure will depend, to a large extent, on how the team members work together.
Requisites: Declared in a Master of Business Administration degree program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze team dynamics to identify barriers and facilitators of effective team functioning and performance.
Audience: Graduate

2. Explain the effectiveness of various leadership strategies and styles in shaping team outcomes.
Audience: Graduate

3. Apply creativity and communication techniques to enhance team collaboration and problem-solving in real-world scenarios.
Audience: Graduate

M H R 710 – CHALLENGES & SOLUTIONS IN BUSINESS SUSTAINABILITY
2-3 credits.

Provides central knowledge and skills to tackle challenges at the intersection of business and sustainability. Analysis of the causes of sustainability challenges as relating to business and study of frameworks and measurement systems for incorporating sustainability into corporate decision-making and business analysis.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Explain the social, economic, and environmental dimensions of the sustainability challenges of business activity and identify potential trade-offs and interrelationships among these dimensions at a level appropriate to the course.
Audience: Graduate

2. Analyze the causes of and solutions for the sustainability challenges resulting from business activity.
Audience: Graduate

3. Apply sustainability principles and/or frameworks to addressing the challenge of incorporating sustainability into corporate decision-making.
Audience: Graduate

4. Use knowledge and skills in business sustainability for developing professional values and pathways.
Audience: Graduate

M H R 715 – STRATEGIC MANAGEMENT OF INNOVATION
2-3 credits.

Helps student gain tools, concepts and information about how to generate value from Innovation and technology in existing organizations.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Evaluate whether a technological solution is a business opportunity.
Audience: Graduate

2. Explain the process of commercializing technology and the challenges associated with each phase of that process.
Audience: Graduate

3. Articulate the skills and resources required for successfully managing technologies and innovative processes.
Audience: Graduate

4. Produce an analysis of the commercial potential of a technological solution.
Audience: Graduate

M H R 716 – ACCELERATING INNOVATION
2-3 credits.

How startups and business accelerators create and diffuse innovation. Topics covered include the basic economics of startups and business accelerators, the development of acceleration platforms, the accelerator model of innovation sourcing and selection, and fostering mindsets of innovation.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate the startup model and business accelerator model of innovation that is driving the entrepreneurial economy.
Audience: Graduate

2. Explain how external innovation is financed.
Audience: Graduate

3. Utilize analytic skills and effective communication to present an investment decision and logic to decision-makers.
Audience: Graduate

M H R 720 – LEADING CHANGE IN ORGANIZATIONS
2-3 credits.

To be effective, leaders must be able to adapt their organization and the people within it to address the challenges they face. Explore how leaders can enact, foster, and implement change in organizations and individuals. Topics will include managing organizational transformations, responding to crises, and performance improvement.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize the nature of complex organizations, the dynamic environments in which they exist, and key issues involved in the successful management of evolving organizations.
Audience: Graduate

2. Demonstrate effective leadership of the change management process from initiation to execution.
Audience: Graduate

3. Develop the capability to effectively respond to organizational crises considering the short- and long-term needs of all stakeholders.
Audience: Graduate

4. Identify opportunities for performance improvement in individuals and teams.
Audience: Graduate

M H R 722 – ENTREPRENEURIAL MANAGEMENT
2-3 credits.

Describes activities and skills necessary to start and manage an enterprise. Includes decisions about domain, purchase versus start-up, preferred market, financing, legal form, staffing, organization structure, location, and legal requirements. Describes the entrepreneurial role in business initiation.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain what it takes to be a successful entrepreneur.
Audience: Graduate

2. Understand how to manage an entrepreneurial firm.
Audience: Graduate

3. Recognize and evaluate entrepreneurial opportunities.
Audience: Graduate

4. Demonstrate effective oral and written communication skills associated with entrepreneurial management.
Audience: Graduate

5. Explain the importance of entrepreneurial organizations in society.
Audience: Graduate

6. Demonstrate positive and productive interactions with professionals and fellow students across the entrepreneurial spectrum.
Audience: Graduate

M H R 723 – BUSINESS STRATEGY
2-3 credits.

Integrative approach to strategic management, including strategy formulation/implementation at business unit, corporate levels. Cases, discussion, lecture, simulation are used to communicate concepts. Emphasizes development of unique tools for analysis of companies and industries, application of knowledge to business problems.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Perform an external analysis of the firm's environment (industry, competitors, and the broader environment), and an internal analysis of the firm's resources (capabilities, tangible and intangible assets, etc.).
Audience: Graduate

2. Perform an analysis of alternative strategic positions within an industry, distinguishing between cost and differentiation strategies, with implications for building competitive advantage.
Audience: Graduate

3. Analyze a firm's resources (capabilities, tangible and intangible assets etc.) as a basis of assessing the merits of firm growth into new industries and geographies.
Audience: Graduate

4. Assess and respond to different types of change in the industry environment (technological change, industry evolution, competitive threats, disruption) that may alter industry structure and the firm's competitive advantage.
Audience: Graduate

5. Analyze the benefits and challenges of alternative modes of achieving growth including: de novo growth, mergers, acquisitions, and alliances.
Audience: Graduate

M H R 724 – GROWTH STRATEGIES: MULTI BUSINESS AND GLOBAL ARENAS
2-3 credits.

Examines growth strategies that extend the firm's scope into new businesses and geographies. Most firms operate in multiple products, markets, and geographic arenas. Explore complementarities (and costs) of operating in a portfolio of strategic arenas defined by products, customers, and global markets. This includes the analysis of strategic choices to vertically integrate (e.g., internal suppliers) as well as maintaining external alliance partners.
Requisites: (M H R 723 or concurrent enrollment) or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Analyze a firm's resources (capabilities, tangible, and intangible assets, etc.) as a basis to assess the merits of firm growth into new industries and geographies.
Audience: Graduate

2. Evaluate the costs and potential gains (synergies) associated with operating in multiple product or geographic markets.
Audience: Graduate

3. Balance the tradeoffs associated with different market entry strategies such as de-novo growth, strategic alliances, and mergers and acquisitions.
Audience: Graduate

4. Assess a firm's need to vertically integrate business units.
Audience: Graduate

M H R 728 – BARGAINING, NEGOTIATING AND DISPUTE SETTLEMENT FOR MANAGERS
3 credits.

Designed to improve student knowledge of the bargaining process and their negotiating skills. Students will learn about different bargaining theories and have the opportunity to apply these theories in exercises and role-playing cases.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze negotiation frameworks and bargaining contexts.
Audience: Graduate

2. Demonstrate context-appropriate negotiation tactics used in preparation, opening, offering of concessions, and closing.
Audience: Graduate

3. Utilize quantitative analysis to assess potential negotiation outcomes.
Audience: Graduate

4. Reflect on ethical, relational, competitive, and cooperative dimensions in negotiation.
Audience: Graduate

M H R/I SY E 729 – BEHAVIORAL ANALYSIS OF MANAGEMENT DECISION MAKING
3 credits.

Examination of behavioral science literature dealing with the processes by which individuals, small groups and organizations make decisions. Understanding decision-making behavior in order to improve managerial performance; modeling decision-making processes for systems design and theory building purposes. Knowledge of statistics strongly encouraged such as STAT 301.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022
Learning Outcomes: 1. Evaluate behavioral science literature on individual, group, and organizational decision-making
Audience: Graduate

2. Apply decision-making models to improve managerial performance, system design, and theory development
Audience: Graduate

3. Identify key challenges in behavioral decision-making and their implications for leadership and policy
Audience: Graduate

M H R 734 – VENTURE CREATION
2-3 credits.

Transform ideas into new ventures. Learn the process of evaluating, formalizing, and communicating a new venture idea. Develop an original product/service/venture concept.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and prioritize market opportunities for new venture concepts based on scalability and feasibility.
Audience: Graduate

2. Evaluate founder roles, responsibilities, agreements, and potential outcomes.
Audience: Graduate

3. Develop and validate a business model that aligns a venture's value proposition, resources, and financial goals.
Audience: Graduate

4. Design a comprehensive plan for a new venture, addressing key legal and operational considerations.
Audience: Graduate

5. Develop a credible investment-ready business plan.
Audience: Graduate

M H R 738 – WISCONSIN APPLIED VENTURES IN ENTREPRENEURSHIP (WAVE)
3 credits.

Develop, refine, and present business models following the Lean Start-Up approach for customer/market discovery. Presentations are made to the WAVE Board for feedback and investment potential.
Requisites: M H R 715, 722, 734, or 741
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply market discovery techniques to identify and assess customer needs, preferences, and potential product-market fit.
Audience: Graduate

2. Design and conduct entrepreneurial experiments to validate key assumptions and test early-stage business models.
Audience: Graduate

3. Evaluate and refine venture concepts by providing and incorporating constructive feedback from peers, instructors, and industry experts.
Audience: Graduate

4. Communicate venture ideas and findings clearly and persuasively through written and oral presentations tailored to potential investors and stakeholders.
Audience: Graduate

M H R 739 – WISCONSIN ENTERPRISE DEVELOPMENT FELLOWSHIP SEMINAR
1 credit.

An applied early stage startup practicum and professional socialization seminar in Entrepreneurship and Enterprise Development for students admitted into the Wisconsin Fellowship in Enterprise Development Program. Meets weekly on the topic of entrepreneurship and enterprise development. Learn to apply business and entrepreneurship frameworks and skills in a class project focused on early-stage ideas. Requires admission to the Wisconsin Enterprise Development Fellowship program
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Practice applying business frameworks/skills to early stage ideas
Audience: Graduate

2. Demonstrate ability to provide and accept constructive business feedback on ideas
Audience: Graduate

3. Improve ability to communicate your business idea via a short pitch
Audience: Graduate

M H R 741 – TECHNOLOGY ENTREPRENEURSHIP
3 credits.

Designed for graduate students interested in learning about the fundamental issues related to starting and managing technology-based new ventures. Encourages students to consider how technology-based solutions can solve economic and socially oriented problems.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe entrepreneurship and the nature of opportunities, including the aspects of technology entrepreneurship that are distinct from other types of entrepreneurship.
Audience: Graduate

2. Identify the appropriate legal form and potential intellectual property protections for a technology venture.
Audience: Graduate

3. Evaluate and select appropriate business models and business strategies for technology ventures.
Audience: Graduate

4. Create and plan appropriate product development, sales, and marketing activities for a technology venture.
Audience: Graduate

5. Interpret financial reports in the context of technology venturing in order to evaluate and propose specific financing options.
Audience: Graduate

M H R 744 – NONPROFIT GOVERNANCE & BOARD MEMBERSHIP
2 credits.

Learn about nonprofit board structure and governance, develop a commitment to community and civic engagement, and network with representatives from nonprofit organizations.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate different organizational structures and board governance models in the nonprofit and not-for-profit sectors.
Audience: Graduate

2. Demonstrate and articulate the responsibilities of a nonprofit governance board including the duties of the board chair and board members.
Audience: Graduate

3. Recognize the processes and protocols used by nonprofit and advisory boards to shepherd key issues through decision-making and into action by the organization.
Audience: Graduate

4. Demonstrate connections between the world of ideas and concepts with day-to-day issues and concerns in cultural and creative organizations.
Audience: Graduate

M H R 747 – IMPACT CONSULTING FOR ARTS-BASED ORGANIZATIONS AND COMMUNITIES
2 credits.

With the Wisconsin Idea as our guidepost, emphasis placed on learning and practicing the conceptual frameworks and skills related to creating lasting and sustainable impact in Wisconsin communities. Through classroom discussions, guest speakers, site visits, and field-consulting project(s), acquire and practice skills needed in designing, facilitating and developing key relationships and strategies that promote community vibrancy, revitalization, and create (or keep) the essence of what makes our Wisconsin towns and organizations special. Examples of the types of projects that will be conducted include the development of cultural plans, strategic/comprehensive community planning, program evaluations, change management, bench-marking, data collection and analysis, hosting public convenings (focus groups, town halls and forums), and business modeling.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply knowledge of management consulting practices.
Audience: Graduate

2. Demonstrate use of consulting practices in active learning with community clients through interviews, focus group/survey design and delivery for discovery, data acquisition, analysis and reporting, which lead to strategic planning and change management.
Audience: Graduate

3. Practice in a variety of processes and interventions inherent in the management consulting field, specifically those techniques used in service to create equity, building diverse stakeholder groups, and being inclusive of all members of a community.
Audience: Graduate

4. Recognize individual strengths, non-strengths, likes, dislikes, personality and goals with consulting opportunities, demands and behaviors so as to help enhance their placement and career opportunities in the future.
Audience: Graduate

M H R 750 – PROFESSIONAL DEVELOPMENT FOR ARTS LEADERSHIP
1 credit.

Experience networking, engagement, and access to research and industry leaders. Practice active reflection through application of course concepts in non-classroom settings. Includes professional development through career services support and mock interview panels.
Requisites: Declared in Business: Arts and Creative Enterprise Leadership MA
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 2 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate connections between the world of ideas and concepts with day-to-day issues and concerns in cultural and creative organizations.
Audience: Graduate

2. Demonstrate integrative learning through the application of knowledge, skills, and responsibilities to complex issues facing the sector.
Audience: Graduate

3. Build cross-sector professional networks through conversations with professionals within and across arts/ creative enterprises and/or relevant communities.
Audience: Graduate

M H R 765 – CONTEMPORARY TOPICS
1-4 credits.

Exploration of advanced subject areas possibly to be introduced into the business curriculum.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

M H R 773 – SEMINAR-ARTS ADMINISTRATION
3 credits.

Examination and applied analysis of selected topics in administration of both visual and performing arts organizations; marketing and audience development, contracts and legal problems, fund development, program planning and evaluation, facilities management, business and government relations.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze business models, mission statements, and strategic frameworks used in arts and cultural organizations.
Audience: Graduate

2. Develop leadership and management skills through applied learning projects.
Audience: Graduate

3. Evaluate marketing and communications strategies using professional tools or audit techniques.
Audience: Graduate

4. Synthesize theories and best practices in arts management through writing, presentation, performance, or discussion.
Audience: Graduate

M H R 774 – SEMINAR-ARTS ADMINISTRATION
3 credits.

Continuation of M H R 773.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Assess financial management strategies and program evaluation methods relevant to arts and cultural organizations.
Audience: Graduate

2. Develop data-informed solutions to complex fundraising and management challenges.
Audience: Graduate

3. Create compelling grant proposals or development audits aligned with organizational goals and donor expectations.
Audience: Graduate

4. Connect with arts industry professionals to enhance career readiness and expand professional networks.
Audience: Graduate

5. Synthesize theories and best practices in arts management through writing, presentation, performance, or discussion.
Audience: Graduate

M H R 775 – APPLIED LEARNING IN HUMAN RESOURCE MANAGEMENT
1 credit.

Explore emerging and current human resources topics through applied learning experiences such as personal assessments, case studies, industry meetings, and exercises or workshops. Interact with leading human resources and business professionals to gain exposure to various leadership and communication styles. Focus on enhancing leadership and communication effectiveness.
Requisites: M H R 705 or concurrent enrollment
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 4 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Examine industry standard human resource technical competencies (reflecting what knowledge HR professionals apply on the job) and behavioral competencies (reflecting how knowledge is applied).
Audience: Graduate

2. Articulate current career aspirations
Audience: Graduate

3. Prepare a strategic human resources-related business recommendation to address a current opportunity or challenge
Audience: Graduate

4. Create a comprehensive dynamic (evergreen) networking plan
Audience: Graduate

M H R 776 – STRATEGIC HUMAN RESOURCE MANAGEMENT CAPSTONE
2 credits.

Conduct research, apply strategic human resources knowledge, and complete a capstone project for a local client organization, addressing a human resources business challenge or need.
Requisites: M H R 705 and GEN BUS 725
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze a specific real-world human resources-related organizational challenge or need
Audience: Graduate

2. Demonstrate the value and the impact of a specific human resources-related initiative utilizing appropriate business metrics
Audience: Graduate

3. Create an action plan with necessary associated deliverables that meets the client challenge or need in a manner that aligns with the client's business strategy
Audience: Graduate

4. Demonstrate effective, ethical team and client communication and relationship-building
Audience: Graduate

M H R/E P D/GEN BUS 783 – LEADING TEAMS
1 credit.

Students will gain the knowledge and skills to continuously enhance their own team performance and productivity as well as the teams they are involved with. They will also be in a much better position to lead teams effectively.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Describe team dynamics, roles, and expectations that influence a STEM team's performance
Audience: Graduate

2. Identify and effectively deploy specific team member strengths relevant for technical projects
Audience: Graduate

3. Plan, lead, and facilitate productive team meetings
Audience: Graduate

4. Identify and manage team conflict more effectively and constructively
Audience: Graduate

5. Assess and improve their current STEM team leadership methods and practices
Audience: Graduate

M H R/E P D/GEN BUS 785 – EFFECTIVE NEGOTIATION STRATEGIES
1 credit.

Improves students' negotiating skills, doing so by providing a theoretical underpinning that will help them to understand the sources of effective and ineffective approaches to negotiations.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Describe game theory and distinguish between distributive and integrative bargaining, recognizing appropriate tactics
Audience: Graduate

2. Identify bargaining styles, set goals, improve relationships, and leverage interests effectively
Audience: Graduate

3. Analyze ethical issues in negotiations and create mutual gain through value creation
Audience: Graduate

4. Demonstrate thorough preparation for negotiations, use individual and team techniques, and evaluate post-negotiation strengths and areas for improvement
Audience: Graduate

M H R 799 – READING AND RESEARCH-MANAGEMENT
1-6 credits.

Individual work suited to the needs of graduate students.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

M H R 871 – SEMINAR-PERSONNEL MANAGEMENT
3 credits.

Study and evaluation of merging issues in the field of personnel management. Extensive reading of appropriate literature together with analysis, reports and discussions.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Articulate the concepts, theory, and research in human resources/human capital.
Audience: Graduate

2. Summarize, integrate, and evaluate research in human resources/human capital.
Audience: Graduate

3. Develop new ideas and/or approaches that advance this research literature and that might serve as starting points for publishable research papers.
Audience: Graduate

4. Evaluate, frame, develop, and conduct research and communicate findings.
Audience: Graduate

M H R 872 – SEMINAR IN ORGANIZATIONAL BEHAVIOR AND DESIGN
3 credits.

Analysis and discussion of selected topics in organizational behavior and design.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024
Learning Outcomes: 1. Recognize core areas of organizational behavior and become familiar with the literature in these fields.
Audience: Graduate

2. Describe central concepts and debates in the field of organizational behavior.
Audience: Graduate

3. Identify and describe where and how to potentially make contributions to research in organizational behavior.
Audience: Graduate

M H R 973 – DOCTORAL RESEARCH SEMINAR IN BUSINESS STRATEGY
3 credits.

This doctoral level strategy research seminar invites students to explore drivers of performance heterogeneity among firms. Why do some firms out-perform others? The topic is integrative in that the answer draws on theory and empirical evidence from economics, sociology, and psychology, as well as management and organizational theory that is more interdisciplinary in nature. In studying this topic, we also focus on the research process: what is the anatomy of a scholarly contribution in strategy and how does one conduct strategy research?
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explore foundational concepts and theories in strategic management to build a strong knowledge of seminal research.
Audience: Graduate

2. Develop expertise in emerging phenomena and streams in strategic management research to link and extend seminal theories to contemporary phenomena.
Audience: Graduate

3. Evaluate and creatively integrate research in strategic management to identify connections between ideas, gaps, and future directions for scholarship.
Audience: Graduate

4. Formulate new research questions, conceptual frameworks, or empirical designs that might serve as starting points for publishable research papers.
Audience: Graduate

5. Utilize various methodological approaches in strategic management research to enable the comprehension, design, and execution of reliable and robust empirical studies.
Audience: Graduate

M H R 975 – DOCTORAL RESEARCH SEMINAR IN MANAGEMENT
3 credits.

Seminar for Ph.D. candidates majoring in management and at or near the doctoral thesis stage. Focus: Assisting the student in working through the conceptualization and design of a thesis topic.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Design and evaluate empirical research in management, applying principles of research design, measurement, and statistical analysis.
Audience: Graduate

2. Assess causal inference in management research, identifying potential threats such as endogeneity, measurement error, and bias.
Audience: Graduate

3. Apply quantitative research methods, including experimental, quasi-experimental, and observational approaches, to investigate management-related phenomena.
Audience: Graduate

4. Interpret and communicate empirical findings effectively, demonstrating an understanding of methodological trade-offs and implications for theory and practice.
Audience: Graduate

M H R 976 – DOCTORAL RESEARCH SEMINAR IN MANAGEMENT
2 credits.

Continuation of M H R 975.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023
Learning Outcomes: 1. Create and evaluate advances in scholarly theories of management processes and outcomes.
Audience: Graduate

2. Develop high-impact testable causal hypotheses and select appropriate evidence for their specific claims in the deductive research tradition, with awareness of inductive and abductive research strategies.
Audience: Graduate

3. Formulate, write, and distinguish compelling theory motivations/contributions for research studies to be published in top-level refereed journals.
Audience: Graduate

4. Assemble a broad research agenda into which a focal study fits and evaluate gaps that it would help to fill.
Audience: Graduate

M H R 977 – EMERGING ENTREPRENEURSHIP THEORY AND RESEARCH
3 credits.

This PhD seminar explores contemporary entrepreneurship theory and research topics; providing students an opportunity to probe and develop scholarly theories of entrepreneurial behavior and outcomes. The course will incorporate presentations by the instructor, students and invited speakers.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze emerging topics and debates in entrepreneurship research, identifying key theoretical and empirical advancements.
Audience: Graduate

2. Evaluate diverse research methodologies used in entrepreneurship studies, assessing their strengths and limitations.
Audience: Graduate

3. Develop novel research questions and theoretical contributions that address gaps in the field.
Audience: Graduate

4. Communicate research insights effectively through written critiques, presentations, and scholarly discourse.
Audience: Graduate

M H R 990 – MANAGEMENT INDEPENDENT RESEARCH PHD THESIS
1-12 credits.

Individual work to complete dissertation requirement of Ph.D. program.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

M H R 999 – READING AND RESEARCH-MANAGEMENT AND HUMAN RESOURCES PHD
1-6 credits.

Individual work suited to the needs of Ph.D. students may be arranged both during regular sessions and during the intersession periods.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MARKETING (MARKETNG)

MARKETNG 300 – MARKETING MANAGEMENT
3 credits.

Planning and controlling the elements of the marketing program; marketing organization, product and service, packaging, pricing, promotion and physical distribution.
Requisites: (ECON 101, 111, A A E 101, or 215 prior to Fall 2024) or declared in the Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply marketing principles to develop a SWOT analysis, segment markets to identify a target, and position a product.
Audience: Undergraduate

2. Apply knowledge of marketing terms and functional areas of marketing to critically reflect upon the current issues/challenges facing the field.
Audience: Undergraduate

3. Demonstrate the market planning process.
Audience: Undergraduate

4. Evaluate a marketing situation and define measurable marketing objectives.
Audience: Undergraduate

5. Integrate and apply the marketing levers of product, price, promotion, and place to profitably address marketing objectives.
Audience: Undergraduate

MARKETNG 305 – CONSUMER BEHAVIOR
3 credits.

Consumer behavior is a broad field that studies how individuals, families and groups acquire, consume, and dispose of goods, services, ideas and experiences. Provides an integrated view of consumer behavior that draws on psychological, economic, anthropological and sociological perspectives to enhance understanding of consumer acquisition processes.
Requisites: MARKETNG 300 or declared in the Business Exchange program. Not open to students with credit for CNSR SCI 657.
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Examine consumers as active agents, participating in diverse environments (e.g. cultural, sub-cultural, physical, social, etc.) that shape consumer behavior in the marketplace
Audience: Undergraduate

2. Integrate their own consumption approaches/experiences to reflect on how these environments shape their behavior.
Audience: Undergraduate

3. Consider theoretical frameworks that highlight the socio-cultural and historical influences upon consumer choices, preferences, and marketplace behaviors and contrast how these explanations differ from other approaches
Audience: Undergraduate

4. Develop frameworks as a way to think about and analyze consumer behavior/ marketing strategy relationships.
Audience: Undergraduate

5. Evaluate appropriate research tools for analyzing consumer experiences

Audience: Undergraduate

MARKETNG 310 – MARKETING RESEARCH
3 credits.

Systematic and objective search for and analysis of information relevant to the identification and solution of problems in marketing.
Requisites: MARKETNG 300 and (GEN BUS 206 or 306), or declared in the Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe different stages of the marketing research process, including research terminology and methodology
Audience: Undergraduate

2. Articulate the managerial importance of marketing research
Audience: Undergraduate

3. Design marketing research studies for problems of interest
Audience: Undergraduate

4. Develop analytical skills and apply suitable methods for effective marketing research
Audience: Undergraduate

5. Apply insights from marketing research to make effective business recommendations
Audience: Undergraduate

MARKETNG 335 – BRAND MANAGEMENT & STRATEGY
3 credits.

Learn about brands, how they work, and apply that knowledge to managerial situations. Covers brand history, societies, and cultures; critical mental processes; marketing imperatives; and the economies that underlie them.
Requisites: MARKETNG 300 or declared in the Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the concept of branding and why strong branding can help a brand create shareholder value.
Audience: Undergraduate

2. Cultivate a set of practical skills including how to develop a brand position, manage a brand experience, and manage relevancy over time.
Audience: Undergraduate

3. Recognize the top branding strategies that the current strongest brands employ and how to implement them.
Audience: Undergraduate

4. Work with a brand to create a compelling marketing campaign that resonates with the brand and its shareholders.
Audience: Undergraduate

MARKETNG 340 – TECHNOLOGY PRODUCT MARKETING
3 credits.

Introduction to marketing strategy for technology companies and products. Learn how traditional marketing tools can be adopted to help technology products succeed, and what new frameworks beyond the traditional 5C's and 4P's are needed for the marketing of technology products. Topics covered include technology development and adoption, managing disruptive technologies, economics of IT products, AI, and platform strategy.
Requisites: MARKETNG 300 or declared in the Business Exchange program
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify key challenges in the process of new technology development and adoption.
Audience: Undergraduate

2. Explain the concept of disruptive technologies and their managerial implications.
Audience: Undergraduate

3. Perform economic analysis to design smart marketing strategies for IT products.
Audience: Undergraduate

4. Recognize and apply the concept of multisided platforms and the drivers of successful platform companies.
Audience: Undergraduate

MARKETNG 349 – GLOBAL IMMERSION EXPERIENCE IN MARKETING
1-3 credits.

Participation in a global immersion experience (short term study abroad) in Marketing. Enrollment in a UW-Madison resident study abroad program.
Requisites: None
Repeatable for Credit: Yes, for 8 number of completions
Learning Outcomes: 1. Demonstrate personal and leadership qualities that help achieve success in global enterprise.
Audience: Undergraduate

MARKETNG 350 – GLOBAL IMMERSION IN MARKETING
2 credits.

In preparation for a global immersion experience in marketing, explore topics such as social innovation, globalization, cultural studies, religion, history, and technology in relation to the travel destination. Delve into personal and leadership qualities that facilitate a successful experience in a global setting. Travel requirements, such as a valid passport, may apply to the immersion experience component.
Requisites: Consent of instructor
Repeatable for Credit: Yes, for 8 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Examine local and regional cultures and societies, including using socio-economic frameworks.
Audience: Undergraduate

2. Understand how globalization is shaping the local economy, and how the local economy in turn impacts globalization.
Audience: Undergraduate

3. Transfer international business theory to professional practice.
Audience: Undergraduate

4. Demonstrate personal and leadership qualities that help achieve success in global enterprise.
Audience: Undergraduate

MARKETNG 355 – MARKETING IN A DIGITAL AGE
3 credits.

A foundational understanding of digital marketing channels and how successful marketing campaigns use the numerous online and mobile platforms. Fundamentals of digital marketing including internet marketing strategies, user-generated content, search engine optimization, website design and management, inbound marketing, email marketing, social media campaigns, mobile apps, content strategy and paid search advertising.
Requisites: MARKETNG 300 or declared in the Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop a digital marketing strategy.
Audience: Undergraduate

2. Select appropriate digital marketing tools to achieve marketing and sales goals.
Audience: Undergraduate

3. Describe the strategy behind and tactical implementation of the following: website design and management, social media, search engine optimization, paid search advertising, E-commerce, email marketing, mobile apps.
Audience: Undergraduate

MARKETNG 365 – CONTEMPORARY TOPICS
1-3 credits.

A course for the exploration of subject areas possibly to be introduced into the business curriculum.
Requisites: (MARKETNG 300 and sophomore standing) or declared in the Business Exchange program
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

MARKETNG 375 – SOCIAL MEDIA MARKETING
3 credits.

Social Media (Facebook, Twitter, Instagram etc.) has changed the way brands communicate with their consumers and vice versa. In this digital age, marketers and entrepreneurs can create competitive advantage for their brand by mastering the science and art of social media strategy. The goal is to understand how brands can leverage social for competitive advantage, consumer listening and innovation. Provides a strong theoretical foundation coupled with practical experience of developing and managing social media strategies for brands.
Requisites: MARKETNG 300 or declared in undergraduate Business Exchange program
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Measure and explain social media metrics and social network basics.
Audience: Undergraduate

2. Perform social media brand health audits.
Audience: Undergraduate

3. Identify brand personality, goals, and target audience from social media listening.
Audience: Undergraduate

4. Generate insights from user generated content to understand customers and improve firm decision making.
Audience: Undergraduate

5. Create, manage, and monitor social media campaigns and integrate social with the overall IMC strategy of the brand.
Audience: Undergraduate

MARKETNG 399 – READING AND RESEARCH-MARKETING
1-6 credits.

Individual work suited to the needs of undergraduate students may be arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

MARKETNG 410 – SPORTS MARKETING
3 credits.

An overview of trends in sports marketing, the issues facing sport organizations, and the use of marketing techniques to solve problems. Includes a focus on the challenges faced by organizations that use sports properties to enhance their marketing efforts. Learn how to attract the customer in a competitive, fragmented and global market, and how sports marketers develop and apply strategies to meet their objectives.
Requisites: (MARKETNG 300 or JOURN 150) or declared in the Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the role of marketing in sports business entities and the use of sports in traditional marketing
Audience: Undergraduate

2. Articulate an understanding of sport as industry and the fan as consumer
Audience: Undergraduate

3. Apply strategic sports marketing decisions appropriate to various industries
Audience: Undergraduate

4. Demonstrate an understanding of the unique aspects of sports marketing
Audience: Undergraduate

5. Demonstrate an understanding of the interrelationship of integrated marketing communications and sport
Audience: Undergraduate

MARKETNG 415 – SOCIAL CREATIVE MARKETING
3 credits.

Covers multiple approaches to marketing communications. Identifies unique opportunities for creatively solving problems. Develops skills to approach marketing solutions from creative ethical perspectives. Builds and refines marketing skills required to identify, articulate, and resolve marketing and policy problems. Leverages marketing communications to improve society and well-being.
Requisites: MARKETNG 300 or declared in undergraduate Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize and capitalize upon unique opportunities within the marketing discipline through application of critical and creative thinking
Audience: Undergraduate

2. Develop and evaluate provocative marketing questions and present plausible and ethical solutions using marketing principles.
Audience: Undergraduate

3. Demonstrate effective and persuasive oral and written communication skills in the presentation and evaluation of marketing communications and ideas.
Audience: Undergraduate

4. Recognize how to address ambiguity and uncertainty using broad contextual and creative thinking.
Audience: Undergraduate

MARKETNG/INTL BUS 420 – GLOBAL MARKETING STRATEGY
3 credits.

Structure of foreign trading; commercial facilities available to exporters and importers; application of economic analysis in marketing decisions; contemporary trends in international economy affecting foreign trade policies and practices.
Requisites: (MARKETNG 300 and sophomore standing) or declared in the Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize and analyze the impact of government intervention on trade and investment at national and transnational levels.
Audience: Undergraduate

2. Explain the role of the US in the global economy considering changes in demographics, technology, government intervention, trade, and resource scarcity.
Audience: Undergraduate

3. Identify challenges faced by global marketers due to differences in legal systems, laws, jurisdiction, and enforcement of property rights, including ethical considerations.
Audience: Undergraduate

4. Conduct cultural research to prepare for negotiations with potential suppliers, distributors, and consumers.
Audience: Undergraduate

5. Develop proposals that adapt a firm's international business strategy based on evaluations of how risk, culture, and macro- and national-level economic factors influence foreign national and sub-national environment.

Audience: Undergraduate

MARKETNG/OTM 421 – FUNDAMENTALS OF SUPPLY CHAIN MANAGEMENT
3 credits.

Supply chain management (SCM) is a dynamic, cross-functional discipline that encompasses the areas of strategy, product development/innovation, marketing, finance, sourcing, production, logistics, and technology in both product and service industries. The supply chain is responsible for the sustainable and efficient movement of products, services, funds, and data along the value chain. Companies must effectively coordinate these functions not only within the firm, but with business partners and customers around the world. SCM is a critical, strategic component of any business or organization, from high-tech to healthcare, and it is a fundamental knowledge base for any student of business.
Requisites: Sophomore standing and (MARKETNG 300 or OTM 300) or declared in undergraduate Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the business purpose and primary functions of supply chain management and their cross-functional linkages/interdependencies across an organization
Audience: Undergraduate

2. Apply supply chain management in strategic and tactical frameworks to optimize financial, operational, and customer objectives
Audience: Undergraduate

3. Analyze the influence of supply chain management on business performance and its role in delivering competitive advantage to an organization
Audience: Undergraduate

4. Identify and apply the economic, political, and business issues that impact how companies develop and execute supply chain strategy including globalization, sustainability, risk management, and ethics/society

Audience: Undergraduate

MARKETNG/OTM 422 – LOGISTICS MANAGEMENT
3 credits.

Provides a management perspective on the fundamental activities, concepts, and current practices in logistics. Transportation management, order fulfillment, warehousing, global logistics, key performance indicators, outsourcing, and introduction to radio frequency identification and barcoding. Use of case studies and industry speakers.
Requisites: MARKETNG 300, OTM 300, and sophomore standing, or declared in undergraduate Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate understanding of fundamental logistics principles and fluency in the language of logistics.
Audience: Undergraduate

2. Articulate key activities performed by the logistics function including distribution, transportation, global logistics and inventory control.
Audience: Undergraduate

3. Demonstrate understanding of order fulfillment processes and best practices utilized in supply chain operations.
Audience: Undergraduate

4. Analyze and utilize supply chain data to make business decisions and expand applied data analysis skills.
Audience: Undergraduate

MARKETNG/OTM 423 – PROCUREMENT AND SUPPLY MANAGEMENT
3 credits.

Procurement and supply management is the business function concerned with an organization's acquisition of required materials, services, and equipment. Explores the key aspects of modern supply management including the purchasing process, cost management, negotiation, sourcing strategies, supplier management, category management, acquisition methods for materials and services, and outsourcing.
Requisites: Sophomore standing and (MARKETNG 300 or OTM 300) or declared in undergraduate Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the importance of supply management, its functions and impact within firms, and the managerial strategies and operational tactics required of entry-level professionals in supply change management.
Audience: Undergraduate

2. Analyze a scenario to determine the appropriate sourcing strategy, [and] propose the most effective supplier management processes.
Audience: Undergraduate

3. Apply, at a foundational level, the necessary legal and ethical considerations to the examination and implementation of supply management.
Audience: Undergraduate

4. Apply a proper process in evaluating a decision to outsource and utilize a rigorous approach to the development of service contracts.
Audience: Undergraduate

5. Assess which of the generic purchasing and P2P process steps add value, explain the basis for that assessment, and suggest possible improvement methods.
Audience: Undergraduate

6. Demonstrate how to operationalize cost management and use it to make decisions.
Audience: Undergraduate

7. Prepare a risk assessment utilizing the knowledge and tools acquired in class.
Audience: Undergraduate

MARKETNG 424 – SALES STRATEGY AND MANAGEMENT
3 credits.

Emphasis on business and organizational selling and covers professional selling techniques, business development and relationship building, integrating sales and marketing, utilizing sales technology and analytics, as well as building and managing an effective sales force.
Requisites: (MARKETNG 300 and sophomore standing) or declared in the Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop the skills required to be an effective salesperson
Audience: Undergraduate

2. Articulate and apply the steps involved in the sales process
Audience: Undergraduate

3. Integrate knowledge of marketing, technology, and analytics to facilitate sales
Audience: Undergraduate

4. Recognize and apply principles of effective sales force management
Audience: Undergraduate

MARKETNG 425 – ROUTE TO MARKET STRATEGIES
3 credits.

Explores the critical role of 'Place' within the marketing mix, focusing on how to effectively design, implement, and manage the marketing channels that make products and services available at the right place, time, and value proposition. Covers identifying customer needs, aligning them with the strengths of various market intermediaries, addressing conflicts associated with direct-to-consumer strategies, and understanding incentivization, power dynamics, and control. Delves into managing relationships, the role of brands, and the transition to an omnichannel environment.
Requisites: MARKETNG 300 or declared in undergraduate Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate how and why marketing channels are a key source of value creation and innovation for a firm and its customers.
Audience: Undergraduate

2. Identify and demonstrate the use of fundamental channel frameworks and structures for designing and evaluating various routes to market.
Audience: Undergraduate

3. Identify and analyze sources of channel power and strategies for effective channel governance.
Audience: Undergraduate

4. Analyze and assess the various aspects of a route-to-market including customer segmentation; allocation of channel functions and responsibilities; management of relationships and incentives.
Audience: Undergraduate

MARKETNG 426 – STRATEGIC RETAILING
3 credits.

Provides an overview of the different types of retailers and the channels they use, the retailing environment, the functions retailers perform, the decision-making processes of consumers with respect to retailers and their offerings, and various issues in retailing strategy, merchandise management and store management.
Requisites: Sophomore standing or declared in the Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Explain the different classifications of retailers (e.g., food, general merchandise, service, ownership), characteristics and trends for each of the retailer classifications, and the key functions retailers perform
Audience: Undergraduate

2. Examine the different channels (i.e., store and non-store) that retailers leverage to sell and deliver merchandise and services to customers and will analyze the characteristics, benefits, and challenges for each of these channels.
Audience: Undergraduate

3. Explain how consumer decision-making and environmental trends impact retailers
Audience: Undergraduate

4. Explain how successful retailers utilize various strategies to secure competitive advantages (e.g., growth opportunities, financial management, location selection, human resource management, information systems and supply chain).
Audience: Undergraduate

5. Examine data to better understand how retailers assess their financial performance and determine appropriate inventory levels.
Audience: Undergraduate

MARKETNG/OTM 427 – INFORMATION TECHNOLOGY IN SUPPLY CHAINS
3 credits.

Explores the concepts and practices of using information technology to effectively manage and operate supply chains of businesses and other organizations. Topics include supply chain processes, enterprise resource planning (ERP) system implementation, and supply chain simulations using SAP software.
Requisites: MARKETNG 300, OTM 300, and sophomore standing, or declared in undergraduate Business Exchange program
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe key business processes related to supply chain management
Audience: Undergraduate

2. Effectively utilize an ERP system to execute key business processes related to supply chain management and have an intermediate level of ability to navigate within an ERP system
Audience: Undergraduate

3. Identify and analyze appropriate data and information from an ERP system as a means to making measurable improvements in the performance of a business
Audience: Undergraduate

4. Understand and recognize principles and best practices of implementing enterprise systems and have the ability to articulate common implementation mistakes
Audience: Undergraduate

MARKETNG/OTM 428 – SUPPLY CHAIN CAPITAL MANAGEMENT
3 credits.

Introduce the set of activities and solutions available to finance an organization's supply chain infrastructure. Define and study the related influencers. Investigate risks and mitigation techniques relative to associated metrics and strategies. Analyze multiple cases in group study work. Identify and recommend improvement opportunities.
Requisites: Junior standing and (MARKETNG 300 or OTM 300), or declared in the Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze multiple aspects of a supply chain network and provide recommendations on how to improve operations and efficiency of a business.
Audience: Undergraduate

2. Recognize and compose appropriate business contract language.
Audience: Undergraduate

3. Recognize and interpret financial statements to understand the current financial state of the organization; identify improvement opportunities and develop solutions to improve the entity's performance.
Audience: Undergraduate

4. Construct specific actions to take to improve working capital efficiency and release.
Audience: Undergraduate

5. Articulate the impact of geopolitical and international issues on supply chains.
Audience: Undergraduate

MARKETNG/OTM 429 – GLOBAL EXPERIENCE: SUPPLY CHAIN MANAGEMENT
1-2 credits.

Companies and organizations operate globally - sourcing, producing, and distributing to/from markets around the world. For business leaders in this environment, political, economic, historical, and cultural frameworks are critical to understand and navigate. Learn and explore these themes via classroom and applied experiences in global supply chain management.
Requisites: Consent of instructor
Repeatable for Credit: Yes, for 2 number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Apply supply chain management theory and practice in a global and industry-specific context
Audience: Undergraduate

2. Analyze how cultural, political, economic, and historical factors impact global business generally and industry-specific
Audience: Undergraduate

3. Develop cultural awareness and appreciation through interactions with students, faculty, and business professionals in the host country
Audience: Undergraduate

MARKETNG 430 – STRATEGIC PRICING
3 credits.

Pricing is one of the most important but least understood of marketing decisions. This course aims to equip you with key concepts and techniques for evaluating and formulating pricing strategies. We will use a combination of analytical and experiential learning methods to accomplish this objective.
Requisites: (MARKETNG 300 and sophomore standing) or declared in the Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025

MARKETNG 437 – NEW PRODUCT INNOVATION
3 credits.

Explore strategies and processes by which organizations effectively discover, develop, and launch impactful new products. Includes design thinking methods and the stage-gate approach to generate and evaluate new product ideas.
Requisites: MARKETNG 300 or declared in the Business Exchange program
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize key barriers and drivers of successful new product launches
Audience: Undergraduate

2. Develop a deeper consumer empathy that leads to new product ideas
Audience: Undergraduate

3. Explain a stage-gate and other processes companies use for new product development
Audience: Undergraduate

4. Create new product ideas
Audience: Undergraduate

5. Explain different market research methods used in new product development
Audience: Undergraduate

MARKETNG 442 – CURRENT TOPICS IN MARKETING ANALYTICS & INSIGHTS
1 credit.

Exposure to emerging and current topics in the marketing insights and analytics industry through applied learning experiences including case studies, industry meetings, exercises, and/or workshops.
Requisites: MARKETNG 300 or declared in the Business Exchange program
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explore how organizations utilize marketing analytics and insights through interactions with industry professionals.
Audience: Undergraduate

2. Articulate insights from interactions with industry professionals.
Audience: Undergraduate

3. Recognize how to advance career success in organizations.
Audience: Undergraduate

4. Explain the role of the marketing researcher.
Audience: Undergraduate

MARKETNG 445 – DIGITAL MARKETING ANALYTICS
3 credits.

Introduces business analytic techniques applied in the context of digital marketing. Includes approaches to design, run, evaluate, and improve online marketing tactics in order to meet specific business objectives such as customer acquisition. Covers digital analytics methods and execution of marketing tactics with data-driven techniques. Emphasizes the implementation of analytic skills on practical problems.
Requisites: Sophomore standing, MARKETNG 300 and (GEN BUS 303 or 306), or declared in the Business Exchange program
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop an understanding of digital marketing tools and their applications including but not limited to targeted advertising, social media marketing, and search engine advertising
Audience: Undergraduate

2. Identify and apply analytical methods of evaluation including data visualization, experimental design, regression analysis, and machine learning methods
Audience: Undergraduate

3. Gather and analyze data for a product category/brand from a variety of digital sources to evaluate the effectiveness of digital marketing approaches
Audience: Undergraduate

MARKETNG 450 – MARKETING ANALYTICS
3 credits.

Impact of analytics on successful marketing decisions. Topics include marketing metrics, digital analytics, marketing response models, segmentation, product design, experimentation and big data. It is designed for students with some background in quantitative methods and an exposure to basic marketing research concepts. A combination of lectures, cases and hands-on model building focused on marketing analytics.
Requisites: Sophomore standing, MARKETNG 300, and 310. Not open to graduate students
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize that the effective use of data is a critical success factor for any business.
Audience: Undergraduate

2. Apply online and offline behavior-based metrics to make effective marketing decisions.
Audience: Undergraduate

3. Apply marketing mix models, multivariate statistics, experimental analyses and machine learning tools to a variety of marketing problems.
Audience: Undergraduate

4. Acquire a portfolio of quantitative methods commonly used in business practice.
Audience: Undergraduate

5. Explain the impact of marketing analytics in areas such as market research, product management and consulting.
Audience: Undergraduate

MARKETNG 460 – MARKETING STRATEGY
3 credits.

Capstone marketing decision-making course emphasizing analysis of the external environment. The coordination of tactical and strategic marketing plans with the goals and objectives of the firm.
Requisites: Senior standing, MARKETNG 300, 305, and 310, or declared in the Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025

MARKETNG/JOURN 605 – DIGITAL BRAND BUILDING
3 credits.

Provides an overview of the rapidly changing digital landscape and its role and importance in the marketing mix. Explores the digital revolution and its impact on building brands in today's digital first environment. Examines themes of the revolution and their effects on how organizations market their brands and, more broadly, on culture.
Requisites: MARKETNG 300, JOURN 201, or declared in the Business Exchange program
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain how the digital marketing landscape has evolved over time, including specific disruptions and revolutions that have made the greatest impact.
Audience: Undergraduate

2. Articulate how brand marketers adapted their strategies to compete in a changing digital ecosystem.
Audience: Undergraduate

3. Develop critical thinking and communication skills that will require analysis and synthesis of class lessons and topics.
Audience: Undergraduate

MARKETNG 700 – MARKETING MANAGEMENT
2-3 credits.

Provides a framework for evaluating marketing problems and developing a marketing strategy. Customer, competitor, and collaborator factors are emphasized as foundations for marketing decision-making. Examines the key aspects of product, pricing, distribution, and promotion strategy.
Requisites: Declared in a Master of Business Administration degree program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify frameworks for making marketing decisions, including decisions regarding a) new products and services, b) pricing, c) distribution channels, and d) marketing communications.
Audience: Graduate

2. Recognize that an analysis of customers and competitors is a prerequisite for marketing decision-making
Audience: Graduate

3. Apply the frameworks to make decisions in the context of company case studies.
Audience: Graduate

MARKETNG 705 – CONSUMER BEHAVIOR
2-3 credits.

Consumer behavior is a broad field that studies how individuals, families and groups acquire, consume, and dispose of goods, services, ideas and experiences. Provides an integrated view of consumer behavior that draws on psychological, economic, anthropological and sociological perspectives to enhance understanding of consumer experiences.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop frameworks as a way to think about and analyze consumer behavior/ marketing strategy relationships.
Audience: Graduate

2. Examine consumers as active agents, participating in diverse environments (e.g. cultural, subcultural, physical, social, etc.) that shape consumer behavior in the marketplace.
Audience: Graduate

3. Integrate own consumption approaches/experiences to reflect on how these environments shape behavior.
Audience: Graduate

4. Apply use of appropriate research tools for analyzing consumer experiences and make strategic recommendations based on data.
Audience: Graduate

5. Evaluate theoretical frameworks that highlight the socio-cultural and historical influences upon consumer choices, preferences, and marketplace behaviors and contrast how these explanations differ from other approaches.
Audience: Graduate

MARKETNG 710 – MARKETING RESEARCH
2-3 credits.

An overview of the marketing research process from a methodological perspective. Topics: Research design, data collection procedures, sampling and data analysis.
Requisites: Graduate/professional standing and (MARKETNG 300, 700 or GEN BUS 311), or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe different stages of the marketing research process, including research terminology and methodology
Audience: Graduate

2. Articulate the managerial importance of marketing research
Audience: Graduate

3. Design marketing research studies for problems of interest
Audience: Graduate

4. Develop analytical skills and apply suitable methods for effective marketing research
Audience: Graduate

5. Apply insights from marketing research to make effective business recommendations
Audience: Graduate

MARKETNG 715 – SOCIAL CREATIVE MARKETING
2-3 credits.

Covers multiple approaches to marketing communications. Identifies unique opportunities for creatively solving problems. Develops skills to approach marketing solutions from creative ethical perspectives. Builds and refines marketing skills required to identify, articulate, and resolve marketing and policy problems. Leverages marketing communications to improve society and well-being.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize and capitalize upon unique opportunities within the marketing discipline through application of critical and creative thinking.
Audience: Graduate

2. Evaluate contemporary marketing problems and issues using prior learning and course-related concepts.
Audience: Graduate

3. Develop and evaluate provocative marketing questions and present plausible and ethical solutions using marketing principles.
Audience: Graduate

4. Demonstrate effective and persuasive oral and written communication skills in the presentation and evaluation of marketing communications and ideas.
Audience: Graduate

5. Recognize how to address ambiguity and uncertainty using broad contextual and creative thinking.
Audience: Graduate

MARKETNG/OTM 722 – LOGISTICS MANAGEMENT
2-3 credits.

A foundation in transportation, order fulfillment, warehousing, materials planning including MRP, demand planning, import/export fundamentals, ERP systems, supply chain metrics, and leading supply chain technologies such as RFID.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate an understanding of fundamental logistics principles and fluency in the language of logistics.
Audience: Graduate

2. Recognize the key activities performed by the logistics function including distribution, transportation, global logistics, and inventory control.
Audience: Graduate

3. Demonstrate an introductory level of understanding of information technology used in logistics operations.
Audience: Graduate

4. Analyze and use supply chain data to make business decisions in order to expand their applied data analysis skills.
Audience: Graduate

MARKETNG/OTM 724 – STRATEGIC GLOBAL SOURCING
2-3 credits.

Supply management (procurement) is widely recognized as one of the most critical elements in global supply chain management. The function plays a major role in maximizing the value and the integration of supply chain operations. Explores the key aspects of modern supply management including functional responsibilities and exemplary practices for major industry sectors.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify the functions, strategies, tactics, and analytical tools utilized in the sourcing function.
Audience: Graduate

2. Analyze scenarios to determine appropriate sourcing strategies and the most effective supplier management processes.
Audience: Graduate

3. Explain and apply components of sourcing strategy including supplier collaboration, risk assessment, ethics, make or buy considerations, and cost-plus modeling.
Audience: Graduate

4. Evaluate outsourcing decisions and utilize a rigorous approach to the development of service contracts.
Audience: Graduate

5. Demonstrate how to operationalize cost management for sourcing decisions.
Audience: Graduate

MARKETNG 725 – ROUTE TO MARKET STRATEGIES
2-3 credits.

Explores the critical role of 'Place' within the marketing mix, focusing on how to effectively design, implement, and manage the marketing channels that make products and services available at the right place, time, and value proposition. Covers identifying customer needs, aligning them with the strengths of various market intermediaries, addressing conflicts associated with direct-to-consumer strategies, and understanding incentivization, power dynamics, and control. Delves into managing relationships, the role of brands, and the transition to an omnichannel environment.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate how and why marketing channels are a key source of value creation and innovation for a firm and its customers.
Audience: Graduate

2. Identify and demonstrate the use of fundamental channel frameworks and structures for designing and evaluating various routes to market.
Audience: Graduate

3. Identify and analyze sources of channel power and strategies for effective channel governance.
Audience: Graduate

4. Analyze and assess the various aspects of a route-to-market including customer segmentation; allocation of channel functions and responsibilities; management of relationships and incentives.
Audience: Graduate

5. Using case analysis methodology, develop a toolkit to solve complex unstructured, and often intractable problems that are commonly faced by managers.
Audience: Graduate

MARKETNG/OTM 726 – SUPPLY CHAIN STRATEGY
3 credits.

Focuses on strategic issues and current theory and practice in supply chain management. Effective design and management of supply chain resources is a key source of competitive advantage for organizations. Supply chain management is a cross-functional discipline that concentrates on the management of goods, services, and information among all links in the value chain.
Requisites: (MARKETNG 300 and OTM 300) or (MARKETNG 700 and OTM 700) and graduate/professional standing, or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Summarize the current theory and practice of supply chain management (SCM)
Audience: Graduate

2. Describe the emergence of SCM as a management function and academic discipline in a global economy
Audience: Graduate

3. Recognize the role of supply chain management in emerging business models
Audience: Graduate

4. Identify supply chain networks and the drivers of supply chain design
Audience: Graduate

5. Describe the impact of product design and innovation on supply chain design and costs
Audience: Graduate

6. Apply the importance of internal coordination and external collaboration to firm performance
Audience: Graduate

7. Demonstrate understanding of the critical and integrative role of supply chain management in business and society
Audience: Graduate

MARKETNG/OTM 727 – INFORMATION TECHNOLOGY IN SUPPLY CHAINS
3 credits.

Explores the concepts and practices of using information technology to effectively manage and operate supply chains of businesses and other organizations. Topics include supply chain processes, enterprise resource planning (ERP) system implementation, and supply chain simulations using SAP software.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe key business processes related to supply chain management.
Audience: Graduate

2. Effectively utilize an ERP system to execute key business processes related to supply chain management and have an intermediate level of ability to navigate within an ERP system
Audience: Graduate

3. Identify and analyze appropriate data and information from an ERP system as a means to making measurable improvements in the performance of a business
Audience: Graduate

4. Understand and recognize principles and best practices of implementing enterprise systems and have the ability to articulate common implementation mistakes
Audience: Graduate

MARKETNG/OTM 728 – SUPPLY CHAIN CAPITAL MANAGEMENT
2-3 credits.

Supply chain capital management refers to the set of activities and solutions available to finance an organization's supply chain infrastructure. As supply chains become more extended and complicated a need has developed to both manage and fund the supply network. Define and study the various influencers on the supply chain capital structure. Investigate risks, mitigation techniques, metrics and themes relating to the topic.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze multiple aspects of a supply chain network and provide recommendations on how to improve operations and efficiency of a business.
Audience: Graduate

2. Recognize and compose appropriate business contract language.
Audience: Graduate

3. Recognize and interpret financial statements to understand the current financial state of the organization; identify improvement opportunities and develop solutions to improve the entity's performance.
Audience: Graduate

4. Construct specific actions to take to improve working capital efficiency and release.
Audience: Graduate

5. Articulate the impact of geopolitical and international issues on supply chains.
Audience: Graduate

MARKETNG 730 – STRATEGIC PRICING
2-3 credits.

Pricing is one of the most important but least understood of marketing decisions. Focus on key concepts and techniques for evaluating and formulating pricing strategies through analytical and experiential learning methods.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate the strengths and weaknesses of common pricing strategies including cost-plus, value based, bundle and dynamic pricing
Audience: Graduate

2. Perform qualitative and quantitative pricing modeling based on market variables
Audience: Graduate

3. Demonstrate concept knowledge by successfully participating in a pricing simulation
Audience: Graduate

4. Apply various tools to increase the perceived value of an offering in an attempt to drive further pricing power
Audience: Graduate

5. Explain how various people and organizations have handled the challenges of overseeing strategic pricing responsibilities in an organization and be able to articulate your own process for doing so
Audience: Graduate

MARKETNG 735 – BRAND STRATEGY
2-3 credits.

Provides a comprehensive and up-to-date treatment of the subjects of brand, brand equity, and strategic brand management. Examines the concepts and techniques to improve the long-term performance of brand strategies.
Requisites: Graduate/professional standing and (MARKETNG 300, 700 or GEN BUS 311), or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Differentiate what constitutes a strong brand from a weak brand
Audience: Graduate

2. Apply key frameworks to the development of an organization's brand
Audience: Graduate

3. Recognize different approaches to bringing a brand to life
Audience: Graduate

4. Identify different types of brand architectures
Audience: Graduate

5. Create a brand strategy
Audience: Graduate

MARKETNG 737 – NEW PRODUCT INNOVATION
2-3 credits.

Explores strategies and processes by which organizations effectively discover, develop, and launch impactful new products. Includes design thinking methods and the stage-gate approach to generate and evaluate new product ideas.
Requisites: Graduate/professional standing and (MARKETNG 300, 700 or GEN BUS 311), or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Utilize design thinking skills and qualitative research techniques to identify unmet or unarticulated needs in the marketplace
Audience: Graduate

2. Generate a number of new business and product ideas designed to meet those needs and to evaluate those ideas to determine which ones deserve future investments
Audience: Graduate

3. Estimate the potential market size for a new product using multiple methods
Audience: Graduate

4. Make decisions and recommendations regarding target market and launch strategies for new products based on a solid understanding of innovation adoption / diffusion of innovations
Audience: Graduate

MARKETNG 740 – TECHNOLOGY PRODUCT MARKETING
2-3 credits.

Introduction to marketing strategy for technology companies and products. Learn how traditional marketing tools can be adopted to help technology products succeed, and what new frameworks beyond the traditional 5C's and 4P's are needed for the marketing of technology products. Topics covered include technology development and adoption, managing disruptive technologies, economics of IT products, AI, and platform strategy.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify key challenges in the process of new technology development and adoption.
Audience: Graduate

2. Explain the concept of disruptive technologies and their managerial implications.
Audience: Graduate

3. Perform economic analysis to design smart marketing strategies for IT products.
Audience: Graduate

4. Recognize and apply the concept of multisided platforms and the drivers of successful platform companies.
Audience: Graduate

5. Evaluate the latest technological advancements and novel business prospects.
Audience: Graduate

MARKETNG 745 – DIGITAL MARKETING ANALYTICS
2-3 credits.

Introduces business analytic techniques applied in the context of digital marketing. Includes approaches to design, run, evaluate, and improve online marketing tactics in order to meet specific business objectives such as customer acquisition. Covers digital analytics methods and execution of marketing tactics with data-driven techniques. Emphasizes the implementation of analytic skills on practical problems.
Requisites: Graduate/professional standing and (MARKETNG 300, 700 or GEN BUS 311), or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop an understanding of digital marketing tools and their applications including but not limited to targeted advertising, social media marketing, and search engine advertising
Audience: Graduate

2. Identify and apply analytical methods of evaluation including data visualization, experimental design, regression analysis, and machine learning methods
Audience: Graduate

3. Gather and analyze data for a product category/brand from a variety of digital sources to evaluate the effectiveness of digital marketing approaches
Audience: Graduate

MARKETNG 750 – BRAND ASSET MANAGEMENT
2-3 credits.

Learn how brands add value for consumers and customers and how an understanding of this process can be used to create and leverage intangible brand assets for the organizations that own and control brands.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the strategic issues in branding, the impact of marketing decisions on brand equity, and the building and managing of brands and brand portfolios.
Audience: Graduate

2. Integrate and apply the tools, concepts, and theories of marketing to solve complex business problems and make sound business decisions.
Audience: Graduate

3. Make marketing decisions consistent with creating and sustaining brand equity.
Audience: Graduate

4. Develop effective self-assessment, communication, and collaboration skills through the execution of brand strategy decisions.
Audience: Graduate

MARKETNG 755 – MARKETING IN A DIGITAL AGE
2-3 credits.

A foundational understanding of digital marketing channels and how successful marketing campaigns use the numerous online and mobile platforms. Fundamentals of digital marketing including internet marketing strategies, user-generated content, search engine optimization, website design and management, inbound marketing, email marketing, social media campaigns, mobile apps, content strategy and paid search advertising.
Requisites: Graduate/professional standing and (MARKETNG 300, 700 or GEN BUS 311), or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop an Internet marketing strategy
Audience: Graduate

2. Select appropriate Internet marketing tools to achieve marketing and sales goals
Audience: Graduate

3. Explain the strategy behind and tactical implementation of the following: website design and management, social media, search engine optimization, paid search advertising, E-commerce, email marketing, mobile apps
Audience: Graduate

MARKETNG 760 – GROWTH MARKETING STRATEGIES
2-3 credits.

Development and effective implementation of planned growth marketing strategies is a pre-requisite to enhancing business performance but is difficult to do. Explore the following topics utilizing an evidence-based approach: growth marketing strategy frameworks; resources and capability for marketing strategy formulation and execution; market orientation, customer orientation, and competitor orientation; key strategy decision points (market selection, value proposition, timing); common implementation problems; organizing for execution; and metrics and performance assessment.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate understanding of the major strategic and managerial issues in formulating a growth marketing strategy.
Audience: Graduate

2. Design and effectively lead a growth marketing strategy development process.
Audience: Graduate

3. Utilize tools, concepts, and theories necessary to make and execute effective growth marketing strategy decisions.
Audience: Graduate

4. Recognize the complexities and underlying causes of common strategy implementation problems.
Audience: Graduate

MARKETNG 765 – CONTEMPORARY TOPICS
1-4 credits.

Exploration of advanced subject areas possibly to be introduced into the business curriculum.
Requisites: Graduate standing and (MARKETNG 300 or 700)
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MARKETNG 770 – MARKETING CONSULTING PRACTICUM
2-4 credits.

Apply and synthesize acquired knowledge through an applied consulting project. Provides the opportunity to explore/apply concepts like identifying and understanding the business challenge; applying marketing research and analytics methods to discover consumer insight to help answer the business challenge; developing recommendations based on the discovered findings; and communicating findings and recommendation(s).
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 2 number of completions
Last Taught: Spring 2022
Learning Outcomes: 1. Learn and apply management consulting practices through conducting a marketing consulting project on a current business problem
Audience: Graduate

2. Articulate a business problem and translate into a marketing question(s).
Audience: Graduate

3. Evaluate a business problem by selecting and conducting an appropriate marketing research or analytical technique to address the problem.
Audience: Graduate

4. Clearly articulate a business recommendation based on the discovered finding(s).
Audience: Graduate

5. Learn and apply project management skills.
Audience: Graduate

6. Demonstrate professional written and verbal communication skills.
Audience: Graduate

7. Articulate personal insights about their preparation for graduation and post-MBA career.
Audience: Graduate

MARKETNG 775 – SOCIAL MEDIA MARKETING
2-3 credits.

Social Media (Facebook, Twitter, Instagram etc.) has changed the way brands communicate with their consumers and vice versa. In this digital age, marketers and entrepreneurs can create competitive advantage for their brand by mastering the science and art of social media strategy. The goal is to understand how brands can leverage social for competitive advantage, consumer listening and innovation. Provides a strong theoretical foundation coupled with practical experience of developing and managing social media strategies for brands.
Requisites: Graduate/professional standing and (MARKETNG 300, 700 or GEN BUS 311), or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Measure and explain social media metrics and social network basics.
Audience: Graduate

2. Perform social media brand health audits.
Audience: Graduate

3. Identify brand personality, goals, and target audience from social media listening.
Audience: Graduate

4. Generate Insights from user generated content to understand customers and improve firm decision making.
Audience: Graduate

5. Create, manage, and monitor social media campaigns and integrate social with the overall IMC strategy of the brand.
Audience: Graduate

6. Discern how primary research findings from current literature can be applied to a real world business situation.
Audience: Graduate

MARKETNG 779 – BAYESIAN MACHINE LEARNING FOR MARKETING
2-3 credits.

Learn to resolve common marketing tasks such as consumer choice prediction, market analysis, and product development by using Bayesian statistical learning methods. A broad range of methods are covered, from standard approaches such as hierarchical modeling to more advanced techniques, including Bayesian Optimization and Bayesian Deep Learning.
Requisites: Graduate/professional standing and (GEN BUS 656, ECON 704, 709, STAT 609, or STAT/MATH 709) or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Design and utilize complex models to solve business problems.
Audience: Graduate

2. Explain how Bayesian models can be used to model uncertainty in business settings.
Audience: Graduate

3. Interpret results and effectively communicate findings in relevant business applications.
Audience: Graduate

MARKETNG/E P D/GEN BUS 782 – MARKETING FOR NON-MARKETING PROFESSIONALS
1 credit.

An overview of marketing's role within an organization, the key elements of a marketing plan, and how the plan is implemented. Students will learn about buyer demographic, psychographic and purchasing decision behavior. A thorough understanding of the customer enables students to develop a coordinated marketing mix (product, price promotion and place) that will satisfy the customer better than the competition and at the required margin. Students will leave the course understanding the degree to which all company functions must be coordinated and focused on the customer. This course will not apply toward fulfilling the MBA degree requirements.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Explain how the marketing function impacts an organization’s business operations
Audience: Graduate

2. Identify and use marketing terminology and concept
Audience: Graduate

3. Use both demographic and psychographic information to segment markets and select a target market
Audience: Graduate

4. Research and create a basic marketing plan that aligns customer expectations with organizational marketing activities and the organization's resources
Audience: Graduate

5. Coordinate consistency between product, price, promotion, and place (distribution)
Audience: Graduate

6. Relate and utilize the product life cycle concept to product and service offerings
Audience: Graduate

MARKETNG 799 – READING AND RESEARCH-MARKETING
1-6 credits.

Individual work suited to the needs of graduate students may be arranged both during regular sessions and the intersession periods.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023

MARKETNG 805 – QUALITATIVELY-BASED MARKETING INSIGHTS
2-3 credits.

Understanding and application of in-depth qualitative market research methods, with an emphasis on the interpretation of qualitative data. Provides hands-on experience with different methodological techniques and immersion in a cultural perspective for systematically analyzing data from a marketing perspective.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand and use core methodological principles for designing a research project that highlights important relationships between the meanings that consumers attribute to brands and consumption practices and their socio-cultural positions.
Audience: Graduate

2. Translate a cultural analysis of a consumer group into viable strategic actions.
Audience: Graduate

3. Evaluate the key assumptions that are implicit to various methodological techniques used to generate qualitative data.
Audience: Graduate

4. Assess the strengths, weaknesses, and respective degrees of "fit" of these methodological techniques for specific research problems and questions.
Audience: Graduate

5. Critically evaluate the findings and strategic interpretations or results that derive from meaning-based marketing research.
Audience: Graduate

6. Apply culturally-oriented theories and concepts that are useful in deriving breakthrough marketing insights from qualitative data.
Audience: Graduate

MARKETNG 815 – MARKETING ANALYTICS
2-3 credits.

Study of the impact of analytics on successful marketing decisions. A spectrum of topics include Marketing Metrics, Digital Analytics, Marketing Response Models, Segmentation, Product Design, Experimentation and Big Data. Applicable to careers in marketing analytics, product management and consulting.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply online, and offline behavior-based metrics to make effective marketing decisions
Audience: Graduate

2. Apply marketing mix models, multivariate statistics, experimental analyses and machine learning tools to a variety of marketing problems
Audience: Graduate

3. Acquire a portfolio of quantitative methods commonly used in business practice
Audience: Graduate

4. Explain the impact of marketing analytics in areas such as market research, product management and consulting
Audience: Graduate

5. Utilize data in compiling brand recommendations.
Audience: Graduate

MARKETNG 840 – CURRENT TOPICS IN MARKETING
1 credit.

Expose to emerging and current topics in the industry of marketing through applied learning experiences - case studies, industry meetings, and exercises or workshops.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 3 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Reflect on their interactions with and learnings from industry professionals
Audience: Graduate

2. Clearly articulate a business recommendation based on in-class activities and analysis
Audience: Graduate

3. Demonstrate professional written and verbal communication skills
Audience: Graduate

4. Articulate their current career aspirations
Audience: Graduate

MARKETNG 842 – CURRENT TOPICS IN MARKETING ANALYTICS & INSIGHTS
1 credit.

Exposure to emerging and current topics in the marketing insights and analytics industry through applied learning experiences including case studies, industry meetings, exercises, and/or workshops.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explore how organizations utilize marketing analytics and insights through interactions with industry professionals.
Audience: Graduate

2. Articulate insights from interactions with industry professionals.
Audience: Graduate

3. Recognize how to advance career success in organizations.
Audience: Graduate

4. Explain the role of the marketing researcher.
Audience: Graduate

5. Articulate a business problem and translate it into a set of marketing research questions and adopt suitable qualitative and quantitative methodologies for the studies they design.
Audience: Graduate

MARKETNG 971 – SEMINAR-MARKETING PHD, CONTEMPORARY TOPICS IN MARKETING
1-3 credits.

Analysis and discussion of contemporary issues in marketing.
Requisites: Declared in Business PHD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate current and emerging research questions and topics in Marketing
Audience: Graduate

2. Demonstrate the ability to analyze, critique and creatively think about social sciences research.
Audience: Graduate

3. Demonstrate the ability to formulate novel research questions and ideas.
Audience: Graduate

4. Articulate and present ideas in written and oral format for research studies in the marketing discipline.
Audience: Graduate

5. Demonstrate the principles of research ethics.
Audience: Graduate

MARKETNG 972 – SEMINAR-MARKETING PHD, RESEARCH METHODS IN MARKETING
1-3 credits.

Specialized subject matter of current interest to doctoral students.
Requisites: Declared in Business PHD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Articulate current and emerging research questions and topics in Marketing.
Audience: Graduate

2. Demonstrate the ability to analyze, critique and creatively think about social sciences research.
Audience: Graduate

3. Demonstrate the ability to formulate novel research questions and ideas.
Audience: Graduate

4. Articulate and present ideas in written and oral format for research studies in the marketing discipline
Audience: Graduate

5. Demonstrate the principles of research ethics
Audience: Graduate

MARKETNG 990 – MARKETING INDEPENDENT RESEARCH PHD THESIS
1-12 credits.

Individual work to complete dissertation requirement of Ph.D. program.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MARKETNG 999 – READING AND RESEARCH-MARKETING PHD
1-6 credits.

Individual work suited to the needs of Ph.D. students may be arranged both during regular sessions and during the intersession periods.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

MATERIALS SCIENCE AND ENGINEERING (M S & E)

M S & E 1 – COOPERATIVE EDUCATION PROGRAM
1 credit.

Work experience which combines classroom theory with practical knowledge of operations to provide students with a background upon which to base a professional career.
Requisites: Sophomore standing
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025
Learning Outcomes: 1. Identify and respond appropriately to real-life engineering ethics cases relevant to co-op work
Audience: Undergraduate

2. Synthesize and apply appropriate technical education to real world technical work
Audience: Undergraduate

3. Communicate effectively in writing and speaking with a range of audiences in the workplace, including those without disciplinary expertise
Audience: Undergraduate

4. Develop professional and transferable habits like time management skills, collaborative problem-solving skills, and research skills for learning new information
Audience: Undergraduate

M S & E 151 – MATERIALS OF THE MODERN WORLD
3 credits.

The properties and structure of everyday materials. A non-mathematical exploration of the relation between structure and resulting properties of metals, plastics, ceramics, glasses, and composite materials. Case studies of important materials in the modern and historical context.
Requisites: None
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Classify types of modern materials and their properties
Audience: Undergraduate

2. Describe the relationship between materials properties and atomic to microscopic scales
Audience: Undergraduate

3. Explore case studies of modern and historic applications
Audience: Undergraduate

4. Explain the role of materials in current and future applications
Audience: Undergraduate

M S & E 260 – MATERIALS EXPERIENCE
2 credits.

Provides overview of the field of Materials Science and Engineering, with significant design and hands-on components. Highlights different types of materials, with a focus on describing the extensive impact that Materials Science and Engineering has had on society. Small teams provide hands-on experience in materials design, synthesis, and processing and the fabrication of materials with desired properties and function.
Requisites: (MATH 113, 114, or 171) and (CHEM 103, 109, or 115 or concurrent enrollment)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Acquire introductory competency in materials science and engineering principles.
Audience: Undergraduate

2. Describe the broad impact of materials science and engineering on society.
Audience: Undergraduate

3. Learn the basics of materials design, synthesis, processing, properties, and function in a hand-on laboratory setting.
Audience: Undergraduate

4. Develop communication skills including laboratory notebook organization, oral presentation, and technical reporting.
Audience: Undergraduate

5. Obtain professional skills pertaining to team-based problem solving, project management, multicriteria optimization, and engineering ethics.
Audience: Undergraduate

M S & E 299 – INDEPENDENT STUDY
1-3 credits.

Independent study under faculty supervision.
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Fall 2025

M S & E 330 – THERMODYNAMICS OF MATERIALS
4 credits.

Introduction to thermodynamics of materials, equilibrium constants, solutions, heterogeneous equilibria and electrochemistry.
Requisites: MATH 222 and (CHEM 104, 109, or 115), or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply the basic principles of the thermodynamics to important processes in materials such as diffusion, phase transformations, and chemical reactions
Audience: Undergraduate

2. Predict the stable chemical and physical state of materials under different thermal, mechanical, and chemical conditions
Audience: Undergraduate

3. Evaluate the mutual conversion between the chemical energy of a material and other forms of energy such as thermal, mechanical, electrical
Audience: Undergraduate

4. Communicate the solutions to technical problems through written assignments and group activities
Audience: Undergraduate

5. Connect materials thermodynamics to societal problems in energy and human health
Audience: Undergraduate

M S & E 331 – TRANSPORT PHENOMENA IN MATERIALS
3 credits.

Basic principles of fluid flow, heat transfer and diffusion are introduced. Examples relevant to design and processing of materials including metals, semiconductors, glasses, polymers, and ceramics are given.
Requisites: M S & E 330 and (MATH 319, 320, 376, or concurrent enrollment), or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply mathematics, chemistry, physics, and materials science and engineering principles to quantitatively describe fluid flow, heat transport, mass transport, and their interplay during materials processing and production
Audience: Undergraduate

2. Identify materials transport related problems and formulate plans to solve such problems pertaining to the synthesis, fabrication, and purification of materials
Audience: Undergraduate

3. Analyze transport phenomena and processes using both analytical and computational (finite element) methods
Audience: Undergraduate

4. Develop the mathematical and scientific principles to be able to design materials and the processes needed to produce them to meet desired needs within realistic constraints
Audience: Undergraduate

5. Broadly apply transport principles to understand the impact of materials science and engineering production in a global, economic, environmental, and societal context
Audience: Undergraduate

M S & E 332 – MACROPROCESSING OF MATERIALS
3 credits.

Topics include: ironmaking and steelmaking; production of Cu, Zn, Al and Mg by electrolysis; solidification processing of alloys by ingot casting, continuous casting and directional solidification; growth of bulk single crystals of semiconductors and ceramics from melts.
Requisites: M S & E 350, 351, or CBE 440, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe how macroscopic-scale materials are produced from ores, including ironmaking, steelmaking, electrolysis of aluminum, and electrolysis of magnesium
Audience: Undergraduate

2. Describe how macroscopic-scale materials are manufactured, including casting and welding of metals; molding of plastics; preparation of composites; growth of bulk single crystals of semiconductors and oxides; preparation of materials very complicated in shape (additive manufacturing)
Audience: Undergraduate

3. Design the processes for the production of macroscopic-scale materials
Audience: Undergraduate

4. Recognize the impact of the production of macroscopic-scale materials on the environment
Audience: Undergraduate

M S & E 333 – MICROPROCESSING OF MATERIALS
3 credits.

Integration of materials science theory and materials engineering practice as applied to the processing of materials at the microscopic level.
Requisites: M S & E 350, 351, or CBE 440, or member of Engineering Guest Students
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Explain basic semiconductor physics, and apply these same physics to approximate device carrier densities, mobility, switching behavior, and other electronically related quantities
Audience: Undergraduate

2. Design process flows based on the physical processes required for desired outcomes in target semiconductor device structures
Audience: Undergraduate

3. Describe how lithography processes are executed and be able to weigh the benefits of each lithography technique against each other
Audience: Undergraduate

4. Analyze device characteristics and connect this analysis with designed process flows
Audience: Undergraduate

M S & E 350 – INTRODUCTION TO MATERIALS SCIENCE
3 credits.

The basic structures and resulting properties of solid materials, including phase equilibria, meta-stability, mechanical properties, failure, corrosion, and materials selection.
Requisites: CHEM 103, 109, 115, graduate/professional standing, or member of Engineering Guest Students. Not open to students with credit in M S & E 351.
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe some of the ways a range of materials, including ceramics, metals, and polymers, have economic, societal, and political ramifications, both on the present and in history
Audience: Undergraduate

2. Explain how the structure inside a material can be manipulated across a wide range of length scales (0.1nm – 1mm) to control its properties
Audience: Undergraduate

3. Analyze the interrelationships among structure, processing, properties, and performance in material
Audience: Undergraduate

4. Justify the use of a material based on the material properties, the engineering constraints of project, functionality, and human and environmental interaction
Audience: Undergraduate

5. Demonstrate a quantitative understanding of material properties and structure
Audience: Undergraduate

6. Interpret commonplace representations of data and concepts in materials (e.g. Arrhenius relationship, TTT diagram, Larson-Miller Plot, Ashby Map)
Audience: Undergraduate

7. Communicate with peers to analyze problems in materials selection and design and develop skills for working in collaborative environments
Audience: Undergraduate

M S & E 351 – MATERIALS SCIENCE-STRUCTURE AND PROPERTY RELATIONS IN SOLIDS
3 credits.

Introduction to: atomic, electronic, and defect structures in materials; diffusional, mechanical and electrical properties of materials; and the role of structure and defects in diffusional, mechanical, and electrical properties.
Requisites: MATH 222 and (CHEM 103, 109, or 115), or member of Engineering Guest Students. Students with credit for M S & E 350 may not enroll in M S & E 351.
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe atomic-scale structure of crystalline materials and their defects using standard materials science and engineering methods
Audience: Undergraduate

2. List major mechanical and electrical properties of materials and the stimuli and responses they connect
Audience: Undergraduate

3. Describe relationships among elements of materials structure and materials properties at an introductory level and use them to predict materials behavior at an introductory level
Audience: Undergraduate

4. Exhibit skills required for successful completion of the MS&E undergraduate curriculum
Audience: Undergraduate

M S & E 352 – MATERIALS SCIENCE-TRANSFORMATION OF SOLIDS
3 credits.

The basic factors that determine phase equilibria, structural and transformation characteristics of solids. Principles governing the thermodynamics and kinetics of phase transformations and microstructure evolution. Nucleation and growth processes in precipitation, recrystallization, solidification, oxidation, martensitic, ordering and spinodal reactions. Transformation behavior in polymers, biomaterials and nanomaterials.
Requisites: M S & E 350, 351, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify the basic factors that determine phase equilibria, structural and transformation characteristics of solids
Audience: Undergraduate

2. Apply principles of thermodynamics and kinetics to phase transformations and microstructure evolution
Audience: Undergraduate

3. Express nucleation and growth processes in precipitation, recrystallization, solidification, oxidation, martensitic, ordering and spinodal reactions
Audience: Undergraduate

4. Extend to transformation behavior in polymers, biomaterials and nanomaterials
Audience: Undergraduate

M S & E 360 – STRUCTURES & PHASES LAB
2 credits.

Laboratory instruction in sample preparation for and applications of quantitative microscopy, x-ray diffraction, and properties measurement in the context of structure-property relationships in materials.
Requisites: M S & E 350 or (M S & E 351 or concurrent enrollment) and declared in Materials Science and Engineering BS or Applied Mathematics, Engineering and Physics BS
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Characterize the structure and properties of materials using imaging and diffraction methods
Audience: Undergraduate

2. Perform experiments to explore the connections among composition, structure, and properties
Audience: Undergraduate

3. Perform data analysis including linear curve fitting and uncertainty analysis
Audience: Undergraduate

4. Produce professional reports including bibliography
Audience: Undergraduate

M S & E 361 – KINETICS & THERMODYNAMICS LAB
2 credits.

Experimental principles of materials science. Thermal, kinetic, structural, and materials synthesis experiments and associated concepts, data analysis, and presentation.
Requisites: Declared in Materials Science and Engineering BS or Applied Mathematics, Physics and Engineering BS and (M S & E 351 and 360)
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Perform experiments measuring structure, properties, kinetics, and thermodynamics
Audience: Undergraduate

2. Explore correlations among structure, processing/synthesis, and properties, and relate these to the underlying thermodynamics and the kinetic processes upon which processing/synthesis relies
Audience: Undergraduate

3. Build upon experimental methods to design new experiments
Audience: Undergraduate

4. Perform data analysis to include, for instance, non-linear curve-fitting, error propagation, assessment of systematic error, and computer simulation of experimental data
Audience: Undergraduate

5. Function effectively in groups to carry out joint projects
Audience: Undergraduate

6. Produce professional reports including discussion of experimental hypotheses, presentation of data, and conclusion
Audience: Undergraduate

M S & E 362 – SYNTHESIS & CHARACTERIZATION LAB
3 credits.

Experiments in the mechanical and electronic properties of matter in bulk and thin films; computer instrument control; and data analysis.
Requisites: M S & E 361
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Perform experiments exploring interrelationships across the full materials tetrahedron: synthesis, structure, properties, and performance
Audience: Undergraduate

2. Employ computers to control experiments and take measurements
Audience: Undergraduate

3. Work effectively in collaborative and inclusive teams to design and carry out experiments that seek optimization of materials performance for engineering applications
Audience: Undergraduate

4. Communicate effectively with a range of audiences using oral presentation, interdepartmental technical memos, and scientific posters
Audience: Undergraduate

M S & E 363 – BASIC MATERIALS CHARACTERIZATION TECHNIQUES
2 credits.

The purpose of this course is to familiarize students with a variety of modern characterization techniques. Three general subject areas are covered: Physical Properties: Thermogravic analysis (TGA); differential scanning calorimetry (DSC); dynamic mechanical analysis (DMA); gel permeation chromatography (GPC). Spectroscopy, optical and x-ray: Ultraviolet/visible (VIS), molecular-infrared/Raman, Rheology; x-ray crystal and powder diffraction. Microscopy: scanning electron microscopy (SEM); SEM and energy dispersive analysis (EDS).
Requisites: Declared in Materials Science and Engineering BS or Applied Mathematics, Physics and Engineering BS and (M S & E 351 and 360)
Repeatable for Credit: No

M S & E 401 – SPECIAL TOPICS IN MATERIALS SCIENCE AND ENGINEERING
1-3 credits.

Special topics of interest to students in materials science and engineering.
Requisites: M S & E 350, 351, or graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and describe key theories, concepts, and methods in Materials Science and Engineering
Audience: Undergraduate

2. Apply key theories, concepts, and methods in Materials Science and Engineering, using appropriate tools, processes, and/or software
Audience: Undergraduate

3. Apply, analyze, or evaluate advanced theories, concepts, or methods in Materials Science and Engineering
Audience: Undergraduate

M S & E/CHEM 421 – POLYMERIC MATERIALS
3 credits.

Polymer chemistry and physics terminologies, structure-property relationship, polymer characterization, polymer synthesis, material requirements for optoelectronics including conjugated polymers, thin film transistors, light emitting diodes, non-linear optical materials, holographic data storage and liquid crystal polymers.
Requisites: CHEM 341, 343, or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Classify, identify, and write the structure of different types of common polymers
Audience: Undergraduate

2. Characterize the molecular weights of polymers, their microstructure, and morphology
Audience: Undergraduate

3. Describe the common methods for the synthesis of polymers
Audience: Undergraduate

4. Demonstrate quantitative understanding of the kinetics of polymerization
Audience: Undergraduate

5. Characterize the principle thermal transitions that occur in polymers
Audience: Undergraduate

6. Analyze the interrelationships among structure, properties, processing and applications of polymers
Audience: Undergraduate

M S & E/N E 423 – NUCLEAR ENGINEERING MATERIALS
3 credits.

Fundamentals of fuel and cladding behavior in terms of thermal properties, chemical behavior and radiation damage.
Requisites: M S & E 350 or 351, graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply material science and engineering principles to analyze mass transport, heat transport, corrosion, and mechanical behavior in nuclear fuels and materials
Audience: Undergraduate

2. Assess irradiation induced microstructural change and mechanical property degradation in nuclear materials
Audience: Undergraduate

3. Apply material science and engineering principles to identify material challenges in current and advanced nuclear reactors
Audience: Undergraduate

4. Identify mechanisms and mitigation strategies for critical materials issues in current and advanced nuclear reactors
Audience: Undergraduate

M S & E/N E 433 – PRINCIPLES OF CORROSION
3 credits.

Thermodynamics and kinetics of metallic corrosion. The common forms of corrosion and corrosion susceptibility tests. Electrochemical measurement of corrosion rates. Corrosion prevention, economic considerations. High temperature oxidation and sulphidation. Corrosion case histories.
Requisites: M S & E 330, or graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025

M S & E 434 – INTRODUCTION TO THIN-FILM DEPOSITION PROCESSES
3 credits.

Introduction to major thin-film deposition techniques and properties of thin films. Evaporation, plasma assisted processes with emphasis on sputter deposition, chemical vapor deposition ion beams. Film properties and characterization methods, applications.
Requisites: (M S & E 330 and 351), graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Spring 2025

M S & E 441 – DEFORMATION OF SOLIDS
3 credits.

Elastic and plastic deformation of real solids. Dislocation theory with applications to metals and alloys. Fracture, fatigue, brittle failure and methods for measuring the mechanical properties of materials.
Requisites: M S & E 352 or graduate/professional standing
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply elementary mechanics and tensor analysis (including Mohr's Circle) to solve problems involving force, displacement, stress, strain, and Hooke's law
Audience: Undergraduate

2. Apply theories of plasticity and viscoelasticity to solve engineering problems in uniform stress/strain
Audience: Undergraduate

3. Predict the mechanical response of a material (including deformation, failure, and microscopic mechanisms) under an arbitrary state of uniform stress or in the presence of stress concentrations and cracks, and across a wide range of temperatures and time-scale
Audience: Undergraduate

4. Choose materials and microstructures to optimize performance for engineering applications
Audience: Undergraduate

M S & E 448 – CRYSTALLOGRAPHY AND X-RAY DIFFRACTION
3 credits.

Crystal symmetry, projection methods, X-ray studies of structural problems in the solid state.
Requisites: M S & E 350 or 351, graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025

M S & E 451 – INTRODUCTION TO CERAMIC MATERIALS
3 credits.

Primary objectives are to: 1) analyze how atoms and ions combine to form 3D crystals and glasses; 2) examine phase equilibria to understand the driving forces for the formation of particular ceramic phases; 3) introduce and discuss the nature of defects in ceramics; 4) discuss the migration of matter and of charge in ceramics; and 5) discuss properties and processing technologies of ceramics.
Requisites: M S & E 352 and (M S & E 330 or concurrent enrollment), or graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe how atoms and ions combine to form 3D crystals and glasses
Audience: Undergraduate

2. Relate phase equilibria to the driving forces for the formation of particular ceramic phases
Audience: Undergraduate

3. Recognize properties of ceramics and identify processing technologies of ceramics
Audience: Undergraduate

4. Analyze the nature of defects in ceramics and the migration of matter and charge in ceramics
Audience: Undergraduate

M S & E 456 – ELECTRONIC, OPTICAL, AND MAGNETIC PROPERTIES OF MATERIALS
3 credits.

Quantitative description of electronic, optical, and magnetic structure-property relationships of materials. Strategies for the development of new materials and introduction to applications of these materials.
Requisites: (M S & E 350 or 351) and (PHYSICS 202, 208, 248, or E C E/PHYSICS 235), graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Predict the electronic, optical, and magnetic properties of a material based on knowledge of the type (chemistry) and arrangement (micro- and macrostructure) of its constituent atoms
Audience: Undergraduate

2. Design materials and device properties by engineering the type and arrangement of atoms
Audience: Undergraduate

3. Analyze experimental transport, optical, and magnetic properties measurements and connect the outcomes of these measurements to electronic band structure
Audience: Undergraduate

M S & E 460 – INTRODUCTION TO COMPUTATIONAL MATERIALS SCIENCE AND ENGINEERING
3 credits.

An introduction to the theoretical and computational tools for computational materials, with hands on homework and laboratories. Topics may include atomistic simulation (e.g., molecular dynamics), mesoscale simulation (e.g,. Phase field method), macroscale simulation (e.g., finite element method), thermodynamic and kinetic modeling (CALPHAD method), informatics (e.g., machine learning), and special topics (e.g., solar cell design, electronic device simulation, etc.)
Requisites: None
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recall and utilize basic principles of how computers can aid in materials science and engineering.
Audience: Undergraduate

2. Assess and utilize literature and software tools related to computational materials science and engineering.
Audience: Undergraduate

3. Communicate effectively about technical work in oral and written presentation.
Audience: Undergraduate

M S & E 461 – ADVANCED METAL CASTING
3 credits.

Metallurgical and engineering principles applied in the foundry and related industries, primarily for those interested in foundry engineering.
Requisites: M S & E 350 or 352, graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2023

M S & E/M E 462 – WELDING METALLURGY
3 credits.

Metallurgical principles applied to welding; mechanisms of strengthening, phase equilibria, and microstructure of the weld zone. Modern processes including laser and electron beam welding.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Identify the specific types of fusion and solid-state processes for welding specific metals/alloys of specific geometries and joints
Audience: Undergraduate

2. Relate principles of heat transfer, fluid flow, mass transfer, chemical reactions, and phase transformations during welding to the development of microstructure, properties, and defects of welds
Audience: Undergraduate

3. Identify the causes and remedies of various defects in welds, such as gas porosity, loss of strength, loss of toughness, cracking, and corrosion
Audience: Undergraduate

4. Identify processes for welding dissimilar materials, such as aluminum alloys to steels, aluminum alloys to copper
Audience: Undergraduate

M S & E 463 – MATERIALS FOR ELEVATED TEMPERATURE SERVICE
3 credits.

The design, properties, processing and selection of high temperature materials for structural applications. The fundamentals of diffusion, phase transformations, dislocation motion and oxidation governing the high temperature mechanical properties and structural performance of metallic and ceramic materials.
Requisites: M S & E 352, graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025

M S & E 465 – FUNDAMENTALS OF HEAT TREATMENT
3 credits.

Principles of phase transformations, heat transfer and mechanical properties as applied to heat treatment practice. The design, modeling and analysis of heat treatment processes.
Requisites: M S & E 352, graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Spring 2025

M S & E 470 – CAPSTONE PROJECT I
1 credit.

Capstone experiences in materials design, selection, and application. Emphasis on creativity and application of fundamental principles of public identification, experimental design, data acquisition and analysis, and presentation of results.
Requisites: Declared in Materials Science and Engineering BS, M S & E 352, and 362 (or concurrent enrollment in M S & E 362)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Transition from materials science and engineering theory and concepts to real-world applications
Audience: Undergraduate

2. Conduct literature research including industry engineering standards, tools and techniques on a capstone project topic
Audience: Undergraduate

3. Develop a project's statement of work with a timeline of milestones, tasks, dates, and assignments
Audience: Undergraduate

4. Work effectively with a client (project sponsor) in a team environment, while practicing critical thinking, written and oral communication skills, problem solving and design
Audience: Undergraduate

M S & E 471 – CAPSTONE PROJECT II
3 credits.

Capstone experiences in materials design, selection and application for MSE students. Emphasis on creativity and application of fundamental principles in problem identification, experimental design, data acquisition and analysis, and presentation of results.
Requisites: M S & E 470
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Conduct design of experiments (materials selection or failure modes effects analysis), critically analyze and solve a client sponsored capstone project
Audience: Undergraduate

2. Execute a project's statement of work with a timeline of milestones, tasks, dates, and assignments
Audience: Undergraduate

3. Apply industry engineering standards, tools and techniques while conducting design of experiments and research in a capstone project
Audience: Undergraduate

4. Work effectively with a client (project sponsor) in a team environment, while practicing critical thinking, written and oral communication skills, problem solving and design
Audience: Undergraduate

5. Demonstrate skill at project management including navigating the relationships among scheduling, planning, and prioritization of milestones and tasks
Audience: Undergraduate

6. Practice hands-on knowledge in areas that range from experimental design and project management to interpretation and presentation of results
Audience: Undergraduate

7. Apply modern laboratory techniques, skills, and engineering tools appropriate to materials science research and current engineering practices
Audience: Undergraduate

M S & E/CIV ENGR/G L E/GEOSCI 474 – ROCK MECHANICS
3 credits.

Classification of rock masses, stress and strain in rock, linear and non-linear behavior of rock, failure mechanisms, state of stress in rock masses, lab testing, geological and engineering applications.
Requisites: E M A 201, PHYSICS 201, 207, or 247, or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Measure basic index properties for rock mass classification
Audience: Both Grad & Undergrad

2. Describe stress and strain in continuums
Audience: Both Grad & Undergrad

3. Describe the factors which control the mechanical behavior of rocks
Audience: Both Grad & Undergrad

4. Apply basic concepts of rock mechanics and rock physics to analyze basic geomechanical engineering problems
Audience: Both Grad & Undergrad

5. Prepare rock samples for mechanical testing, conduct experiment, and analyze experimental data to obtain rock strength properties
Audience: Both Grad & Undergrad

6. Describe analytically time-dependent rock behaviors
Audience: Graduate

M S & E 521 – ADVANCED POLYMERIC MATERIALS
3 credits.

This course is directed at graduate and advanced undergraduates with focused interest in polymeric materials. Basic principles of compatibility between macromolecules and small molecules, physical chemistry of blends and concepts in phase separation, and selected topics on materials design using self-assembly concepts.
Requisites: CHEM/M S & E 421, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Analyze and contrast self-assembly across length-scales in natural and synthetic polymers
Audience: Both Grad & Undergrad

2. Relate self-assembled structure and function with the chemistry of the components
Audience: Both Grad & Undergrad

3. Apply the fundamentals of polymer science and concepts of self-assembly, in conjunction with current literature to design functional materials
Audience: Both Grad & Undergrad

4. Analyze problems in materials selection and design
Audience: Both Grad & Undergrad

5. Communicate design concepts to your peers
Audience: Both Grad & Undergrad

6. Demonstrate awareness of the latest advances using the scientific literature, lectures, and independent reading in the field
Audience: Graduate

M S & E 530 – THERMODYNAMICS OF SOLIDS
3 credits.

Thermodynamics of condensed matters as applied to materials science and engineering.
Requisites: M S & E 330, or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe relationships between heat, work, and entropy and its implications for heat engines
Audience: Both Grad & Undergrad

2. Describe the connection between microscopic states and thermodynamic variables and how to calculate the latter from the former using partition functions
Audience: Both Grad & Undergrad

3. Describe how mixing alters the free energy of the unmixed components in terms of ideal and non-ideal contributions
Audience: Both Grad & Undergrad

4. Describe the role of thermodynamic potentials and their implications for materials properties
Audience: Both Grad & Undergrad

5. Describe how Gibbs energy, chemical potential, and activity are related and their role in chemical equilibrium
Audience: Both Grad & Undergrad

6. Read and interpret different types of phase diagrams
Audience: Both Grad & Undergrad

7. Analyze a scientific or engineering problem to obtain selected insights enabled by thermodynamic analysis and communicate them at a basic level
Audience: Undergraduate

8. Analyze a scientific or engineering problem to obtain the major insights enabled by thermodynamic analysis and communicate them at a semi-professional level
Audience: Graduate

M S & E/E M A 541 – HETEROGENEOUS AND MULTIPHASE MATERIALS
3 credits.

Principles of the mechanics of solid multiphase systems. Role of heterogeneity and anisotropy in determining physical properties including elastic, dielectric and piezoelectric properties. Applications in lightweight structures, ultrastrong materials, materials for protection of the body, and materials for the replacement of human tissues. Materials with fibrous, lamellar, particular, and cellular structures. Heterogeneous materials of biological origin. Biomimetic and bio-inspired materials.
Requisites: E M A 303, M E 306, or M S & E 441, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022

M S & E 550 – MATERIALS FUNDAMENTALS
3 credits.

Accelerated introduction to foundational materials concepts and the materials paradigm approach to problem solving and research. Atomic scale structure of materials; defects in crystalline materials; alloy phase diagrams, solid-state diffusion, phase transformations, microstructure development, micro/nano/atomic-scale structure-property relationships.
Requisites: Graduate/professional standing. Not open to students with credit in M S & E 350, 351, or 352.
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Prepare to succeed in graduate level courses offered by the Materials Science and Engineering department
Audience: Graduate

2. Analyze scholarly publications in their field of research at the level expected of an entry-level researcher
Audience: Graduate

3. Analyze technical challenges in terms of structure-properties-processing-performance relationships
Audience: Graduate

M S & E 551 – STRUCTURE OF MATERIALS
3 credits.

Atomic, nanoscale and microscale structure of materials. Course is designed for first year graduate students with interests in materials research.
Requisites: M S & E 451, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the atomic-scale structure of materials using multiple methods including one or more not typically required for B.S. degree in materials science and engineering
Audience: Both Grad & Undergrad

2. Articulate the role of crystal symmetry in expression and anisotropy of properties at a level not typically required for a B.S. degree in materials science and engineering
Audience: Both Grad & Undergrad

3. Describe the characteristics of crystal defects at a more advanced level than typically required for a B.S. degree in materials science and engineering
Audience: Both Grad & Undergrad

4. Complete the structures section of the qualifying exam successfully if enrolled in the Ph.D. program
Audience: Graduate

M S & E 553 – NANOMATERIALS & NANOTECHNOLOGY
3 credits.

The principal objectives of the course are to: i) introduce advanced processing methods for synthesizing nanomaterials, ranging from single nanoparticles to three-dimensional nanostructures, ii) discuss important thermodynamic and kinetic theories related to such processing, iii) describe methods for characterizing the structure and properties of nanomaterials, iv) discuss current and emerging applications for nanomaterials, and v) illustrate the interdisciplinary nature of nanotechnology and address critical challenges.
Requisites: M S & E 350, 351, or CBE 440, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Comprehend the scope and advances of nanomaterials and nanotechnology
Audience: Both Grad & Undergrad

2. Explain the fundamental physical and chemical knowledges involved in nanoscience
Audience: Both Grad & Undergrad

3. Relate the physical and chemical property of nanomaterials with their performance in different applications
Audience: Both Grad & Undergrad

4. Analyze the synthesis and fabrication of nanomaterials and their devices
Audience: Both Grad & Undergrad

5. Propose research projects that involve the use of nanomaterials/ nanotechnology for certain applications
Audience: Graduate

6. Evaluate a research proposal from fundamental nanomaterials point of view
Audience: Undergraduate

M S & E 561 – MACHINE LEARNING IN MATERIALS
3 credits.

Introduction to applications of data science in materials science and engineering, including understanding the creation and use of modern data resources, data-centric approaches to materials, and the integration of machine learning across the materials landscape.
Requisites: Satisfied Quantitative Reasoning (QR) B requirement, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall and utilize basic principles and methods of how informatics (data science and machine learning) can be used in materials science and engineering
Audience: Both Grad & Undergrad

2. Apply software tools related to materials informatics
Audience: Both Grad & Undergrad

3. Communicate effectively about technical work in oral and written presentation
Audience: Both Grad & Undergrad

4. Develop machine learning workflows for informatics applications in materials science and engineering
Audience: Graduate

M S & E 570 – PROPERTIES OF SOLID SURFACES
3 credits.

Introduction to structure and electronic properties; surface energy; thermodynamics of surfaces; diffusion. Surface barriers, work function, vibrational and electronic states. Chemical interactions: chemisorption, oxidation, corrosion, absorption kinetics, catalysis. Experimental methods and applications in metals, semiconductors.
Requisites: PHYSICS 205, 241, 244, or (M S & E 351 and 333) or PHYSICS/E C E 235, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain how and why the surface and electronic properties of solid surfaces and interfaces differ from the bulk
Audience: Both Grad & Undergrad

2. Design and interpret experiments to measure surface properties
Audience: Both Grad & Undergrad

3. Evaluate the efficiency of various experimental techniques in measuring surface composition, surface structure, and electronic properties
Audience: Both Grad & Undergrad

4. Implement surface/interface phenomena in the design of devices
Audience: Graduate

M S & E 648 – ADVANCED X-RAY SCATTERING METHODS IN MATERIALS SCIENCE AND ENGINEERING
3 credits.

Advanced concepts and methods for the use of x-ray scattering, diffraction, and spectroscopy in materials science and engineering. Underpinning fundamental mathematical and scattering concepts, including kinematic and dynamical diffraction, diffuse scattering, and optical coherence in x-ray scattering. Practical aspects of experiments at synchrotron light sources and free electron lasers. Applications, including structure of metals and ceramics, polymeric materials, thin films and nanostructures, and magnetic materials.
Requisites: M S & E 448, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Demonstrate knowledge and understanding of the principles of x-ray scattering, spectroscopy, and diffraction
Audience: Both Grad & Undergrad

2. Apply quantitative x-ray analysis methods to characterization of important materials systems
Audience: Both Grad & Undergrad

3. Communicate the solutions to technical and scientific problems
Audience: Both Grad & Undergrad

4. Connect x-ray scattering to societal problems in energy and human health
Audience: Both Grad & Undergrad

5. Articulate the role of advanced x-ray characterization methods in materials research
Audience: Undergraduate

6. Apply x-ray scattering methods to specific problems in their own graduate-level scientific research
Audience: Graduate

M S & E 660 – MESOSCALE MODELING OF MATERIALS
3 credits.

Classical theories, analytical and numerical modeling of various kinetic processes in materials. Including but not limited to transport, grain growth, phase separation, solidification, precipitation, chemical reactions, and multiphysics problems involving electrical, optical, mechanical, and magnetic properties of materials.
Requisites: (MATH 319, 320, or 376) and (M S & E 350, 351, or CBE 440), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply the theory of irreversible dynamics to analyze many important kinetic processes of materials such as transport, phase transitions, and chemical reactions
Audience: Both Grad & Undergrad

2. Computationally model exemplary mesoscale problems in materials research
Audience: Both Grad & Undergrad

3. Analyze results from a computational model and extract useful understanding from it
Audience: Both Grad & Undergrad

4. Solve several representative types of partial differential equations using both analytical methods and numerical algorithms
Audience: Both Grad & Undergrad

5. Apply these analytical methods and numerical algorithms to students' own research
Audience: Graduate

M S & E 699 – INDEPENDENT STUDY
1-4 credits.

Courses in Metallurgical Engineering.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

M S & E 702 – GRADUATE COOPERATIVE EDUCATION PROGRAM
1-2 credits.

Work experience that combines classroom theory with practical knowledge of operations to provide students with a background on which to develop and enhance a professional career. The work experience is tailored for MS students from within the U.S. as well as eligible international students.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and respond appropriately to real-life engineering ethics cases relevant to co-op work
Audience: Graduate

2. Synthesize and apply appropriate technical education to real world technical work
Audience: Graduate

3. Communicate effectively in writing and speaking with a range of audiences in the workplace, including those without disciplinary expertise
Audience: Graduate

4. Develop professional and transferable habits like time management skills, collaborative problem-solving skills, and research skills for learning new information
Audience: Graduate

M S & E 748 – STRUCTURAL ANALYSIS OF MATERIALS
3 credits.

Introduction to transmission electron microscopy of materials, including imaging, diffraction, and microanalysis. Knowledge of diffraction [such as M S & E 448] strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use ray optics and Fourier optics to explain the operating modes and major subsystems of a transmission electron microscope (TEM)
Audience: Graduate

2. Apply electron diffraction theory and electron scattering theory to predict or simulate the results of the interaction of a high energy electron beam with a material, depending on the material's crystal structure, microstructure, composition, and bonding
Audience: Graduate

3. Predict the outcome of TEM experiments including imaging, diffraction, and spectroscopy, given appropriate data about the material's composition, crystal structure, microstructure, and interatomic bonding and information about the TEM experimental conditions
Audience: Graduate

4. Analyze experimental TEM data, including images, diffraction patterns, and spectra, to determine the material's crystal structure, microstructure, composition, or bonding, and the TEM experimental conditions, as appropriate
Audience: Graduate

5. Identify common artifacts in TEM data including images, diffraction patterns, and spectra and explain their origins
Audience: Graduate

6. Design a TEM experimental plan to address a research problem in structure of materials
Audience: Graduate

M S & E 750 – IMPERFECTIONS AND MECHANICAL PROPERTIES
3 credits.

Mathematical theory of dislocations and other crystal imperfections; mechanical properties of crystals in relation to imperfections. Knowledge of crystal structure and dislocations [such as M S & E 551] required.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Apply mechanics and tensor analysis to solve problems in non-uniform strain related to stress-defect and defect-defect interactions
Audience: Graduate

2. Apply theories of plasticity and viscoelasticity to solve 3 dimensional problems in stress and strain
Audience: Graduate

3. Construct models of the strength of materials based on underlying microscopic mechanisms
Audience: Graduate

4. Construct maps of mechanical response (deformation, failure, and microscopic mechanisms) under arbitrary state of stress and in the presence of stress concentrations, cracks, and across a wide range of temperatures, time-scale, and length-scale
Audience: Graduate

M S & E 752 – ADVANCED MATERIALS SCIENCE: PHASE TRANSFORMATIONS
3 credits.

Phase transformations, nucleation theory and the role of structural imperfections, alloy phase equilibria, interface reactions and growth kinetics, continuous transformations. Knowledge of diffusion and reactions [such as M S & E 352] required.
Requisites: (M S & E 530 or concurrent enrollment) and graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

M S & E 756 – STRUCTURE AND PROPERTIES OF ADVANCED ELECTRONIC MATERIALS
3 credits.

Prepares graduate students for research in electronic materials and related areas by examining (1) how does the physical structure of a material affect its electronic structure and properties: and (2) state-of-the-art advance electronic materials. Topics include: molecular and organic semiconductors; carbon nanomaterials (nanotubes, nanoribbons and graphene); advances in conventional bulk zinc-blende and wurtzite semiconductors; polycrystalline, amorphous, and disordered materials; state-of-the-art high- low-k dielectrics; and up-and-coming and next-generation materials. Knowledge of solid state physics [such as PHYSICS 551 or M S & E 456] required.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Examine the physical and electronic structure relationships of advanced electronic materials
Audience: Graduate

2. Analytically deduce how the physical structure and composition of a material affect its electronic structure and properties employing concepts pertaining to quantum mechanics, bonding, crystal structure, spin, symmetry, and dimensionality
Audience: Graduate

3. Utilize concepts and tools including: experimental measurements, scientific literature, and models/calculations of energy and band structure, dielectric spectra, and transport phenomena
Audience: Graduate

4. Analyze conventional bulk zinc-blende and wurtzite semiconductors; oxides; Heuslers; carbon and 2D nanomaterials; polycrystalline and disordered materials; organic semiconducting molecules and crystals; and up-and-coming and next-generation electronic materials
Audience: Graduate

5. Connect fundamental principles to motivations from device applications (field effect transistors; light emitting devices; and photovoltaics)
Audience: Graduate

M S & E 758 – TRANSMISSION ELECTRON MICROSCOPY LABORATORY
1 credit.

An introduction to the practice of transmission electron microscopy (TEM) and TEM sample preparation through hands-on laboratory training.
Requisites: M S & E 748 or concurrent enrollment
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Operate a transmission electron microscope safely for the operator and the instrument
Audience: Graduate

2. Obtain publication quality experimental TEM imaging and diffraction data
Audience: Graduate

3. Obtain publication quality experimental TEM data in one or more additional modalities related to the student's research interests
Audience: Graduate

M S & E 760 – MOLECULAR MODELING OF MATERIALS
3 credits.

Hands-on experience in modern tools of atomic and molecular modeling, including density functional theory, interatomic potentials, and molecular dynamics. Select additional/advanced techniques like high-throughput calculations, (Kinetic) Monte Carlo, accelerated molecular dynamics, and machine learning.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Choose and use the appropriate molecular simulations to obtain properties of materials
Audience: Graduate

2. Apply ab initio methods to model materials properties
Audience: Graduate

3. Apply molecular dynamics methods to model materials properties
Audience: Graduate

4. Use results of molecular simulations in scientific literature to obtain properties of materials
Audience: Graduate

5. Use molecular simulations to analyze scientific or engineering problems to obtain selected insights and communicate them at a semi-professional level
Audience: Graduate

M S & E 790 – MASTER'S RESEARCH OR THESIS
1-9 credits.

Under faculty supervision.
Requisites: Declared in Materials Science and Engineering M.S., Ph.D., or doctoral minor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate an ability to formulate and analyze advanced materials science and engineering problems
Audience: Graduate

2. Communicate research results in writing and seminars
Audience: Graduate

3. Work independently and collaboratively, as appropriate, on solutions for materials science and engineering problems
Audience: Graduate

4. Prepare for academic requirements such as the masters thesis document, masters thesis defense, or graduate preliminary exam
Audience: Graduate

M S & E 803 – SPECIAL TOPICS IN MATERIALS SCIENCE
1-3 credits.

Topics vary.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and describe key theories, concepts, and methods in materials science and engineering
Audience: Graduate

2. Apply key theories, concepts, and methods in materials science and engineering, using appropriate tools, equipment, processes, and/or software
Audience: Graduate

3. Apply, analyze, or evaluate advanced theories, concepts, or methods in materials science and engineering
Audience: Graduate

4. Communicate results in writing, in live presentations, written assignments, or recorded presentations
Audience: Graduate

M S & E 890 – PRE-DISSERTATOR'S RESEARCH
1-9 credits.

Under faculty supervision.
Requisites: Declared in Materials Science and Engineering Ph.D. or doctoral minor.
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate an ability to formulate and analyze advanced materials science and engineering problems
Audience: Graduate

2. Communicate research results in writing and seminars
Audience: Graduate

3. Work independently and collaboratively, as appropriate, on solutions for materials science and engineering problems
Audience: Graduate

4. Prepare for academic requirements such as the graduate preliminary exam
Audience: Graduate

M S & E 900 – MATERIALS RESEARCH SEMINAR
1 credit.

Introduces graduate students to the breadth, wealth and practices of materials research at the University of Wisconsin and in the professional materials research community.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate awareness of current advances in materials science and engineering research gained from the material science and engineering seminar series
Audience: Graduate

2. Demonstrate awareness of professional responsibilities in maintaining and equitable and inclusive work environment
Audience: Graduate

3. Develop and apply professional skills in technical presentation and writing
Audience: Graduate

4. Demonstrate awareness of professional responsibilities with respect to ethics, intellectual property, and/or appropriate documentation of research
Audience: Graduate

M S & E 990 — RESEARCH AND THESIS
1-9 credits.

Under faculty supervision.
Requisites: Declared in Materials Science and Engineering Ph.D. or doctoral minor.
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate an ability to formulate and analyze advanced materials science and engineering problems
Audience: Graduate

2. Communicate research results in writing and seminars
Audience: Graduate

3. Work independently and collaboratively, as appropriate, on solutions for materials science and engineering problems
Audience: Graduate

4. Prepare for academic requirements such as the PhD thesis defense and PhD thesis
Audience: Graduate

M S & E 999 — INDEPENDENT WORK
1-3 credits.

Independent study under faculty supervision.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2000
Learning Outcomes: 1. Conduct and report on independent materials science and engineering research
Audience: Graduate

2. Independently develop materials science and engineering research directions
Audience: Graduate

3. Appropriately utilize research materials including the scientific and technical literature
Audience: Graduate

4. Connect their research clearly to other research in their field of study
Audience: Graduate

MATHEMATICS (MATH)

MATH 96 — PREPARATORY ALGEBRA
3 credits.

Covers the necessary mathematical tools needed to succeed in our algebra course and provides fundamental mathematical skills. Topics include real numbers, linear equations and inequalities, integral and fractional exponents, polynomials and their arithmetic, polynomial equations and equations with fractional exponents, the quadratic formula and completing the square, systems of two linear equations, graphing, and problem solving using algebra and graphs. All students must pass an assessment on basic mathematical skills to complete the course. The course does not count for degree credit.
Requisites: Placement into MATH 96
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Perform arithmetic operations, such as addition, multiplication, exponentiation, and their inverses using various sets of numbers (including integers, fractions, decimals, and radicals).
Audience: Undergraduate

2. Algebraically manipulate polynomial, rational, and radical expressions.
Audience: Undergraduate

3. Solve various types of one-variable equations and inequalities.
Audience: Undergraduate

4. Identify functions and determine their domain, range, and other properties.
Audience: Undergraduate

5. Recognize the coordinate plane and relate two-variable equations to their graphs.
Audience: Undergraduate

6. Solve linear systems of two-variable equations.
Audience: Undergraduate

7. Evaluate real-world problems by applying linear and other equations.
Audience: Undergraduate

8. Support solutions by using algebraic concepts in justifications.
Audience: Undergraduate

MATH 112 – COLLEGE ALGEBRA
3 credits.

Properties of elementary functions, such as polynomial, absolute value, radical, rational, exponential, and logarithmic functions. Topics include equations, inequalities, functions, and their graphs. Formulating, analyzing, solving, and interpreting mathematical and real-world problems. Provides the algebra skills required for calculus.
Requisites: MATH 96 or placement into MATH 112. MATH 118 does not fulfill the requisite
Course Designation: Gen Ed - Quantitative Reasoning Part A
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Solve equations and inequalities using algebraic techniques.
Audience: Undergraduate

2. Interpret the properties of functions, including their domains and ranges.
Audience: Undergraduate

3. Graph, transform, combine, compose, and solve for the inverse of functions.
Audience: Undergraduate

4. Interpret and graph polynomial, rational, exponential, logarithmic functions, and their combinations.
Audience: Undergraduate

5. Solve linear and nonlinear systems of equations.
Audience: Undergraduate

6. Model and analyze real-world problems using functions and their properties.
Audience: Undergraduate

7. Support solutions by applying mathematical concepts and reason to justifications.
Audience: Undergraduate

MATH 113 – TRIGONOMETRY
3 credits.

Covers the graphs, properties and geometric significance of trigonometric functions of a real variable. Other topics include trigonometric equations and identities, application, trigonometric form of complex numbers, DeMoivre's theorem, and polar and parametric equations. The course also has a significant number of applications, especially related to other disciplines.
Requisites: MATH 112 or placement into MATH 113
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define the sine, cosine, and tangent functions with respect to the unit circle and other geometric objects.
Audience: Undergraduate

2. Identify the properties of trigonometric functions, including their domains and ranges.
Audience: Undergraduate

3. Graph trigonometric functions using the concepts of amplitude, period, and phase shift.
Audience: Undergraduate

4. Interpret and graph inverse trigonometric functions using restricted domains.
Audience: Undergraduate

5. Solve equations using factoring, trigonometric identities, and other algebraic techniques.
Audience: Undergraduate

6. Model and analyze real-world problems using trigonometric functions and their properties.
Audience: Undergraduate

7. Support solutions and arguments by applying mathematical concepts and reason to justifications.
Audience: Undergraduate

MATH 114 – PRECALCULUS
5 credits.

Properties of elementary functions, such as polynomial, absolute value, radical, rational, exponential, logarithmic, and trigonometric functions. Topics include equations, inequalities, functions, and their graphs. Other topics include trigonometric equations and identities and the geometric significance of trigonometry. Formulating, analyzing, solving, and interpreting mathematical and real-world problems. Provide the algebra and trigonometry skills required for calculus.
Requisites: MATH 96 or placement into MATH 114. MATH 118 does not fulfill the requisite
Course Designation: Gen Ed - Quantitative Reasoning Part A
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Solve equations and inequalities using algebraic and trigonometric techniques.
Audience: Undergraduate

2. Interpret the properties of functions, including their domains and ranges.
Audience: Undergraduate

3. Graph, transform, combine, compose, and solve for the inverse of functions.
Audience: Undergraduate

4. Interpret and graph polynomial, rational, exponential, and trigonometric functions.
Audience: Undergraduate

5. Define the sine, cosine, and tangent functions with respect to the unit circle and other geometric objects.
Audience: Undergraduate

6. Interpret and graph radical, logarithmic, and inverse trigonometric functions using restricted domains.
Audience: Undergraduate

7. Model and analyze real-world problems using functions and their properties.
Audience: Undergraduate

8. Support solutions and arguments by applying mathematical concepts and reason to justifications.
Audience: Undergraduate

MATH 118 – SUMMER COLLEGIATE EXPERIENCE MATHEMATICS COURSE
2 credits.

A preparation and introductory math course for students enrolled in the Summer Collegiate Experience program. Includes material from precalculus and calculus and related topics depending on students' results on the math placement exam.
Requisites: Enrolled in the Summer Collegiate experience program
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025

MATH 141 – QUANTITATIVE REASONING AND PROBLEM SOLVING
3 credits.

Develops a habit of mind, competency, and comfort in working with numerical data. Learn to reason and solve quantitative problems from a wide array of authentic contexts and everyday life situations, develop the ability to reason mathematically, and make and evaluate logical arguments supported by quantitative evidence. This course is for students who need to satisfy part A of the Quantitative Reasoning requirement and prepare for QR-B courses, but do not want to continue in the calculus sequence.
Requisites: MATH 96 or placement into MATH 141. MATH 118 does not fulfill the requisite
Course Designation: Gen Ed - Quantitative Reasoning Part A
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify appropriate models to fit scenarios described with numerical data and/or verbal descriptions (e.g. related to basic financial, probabilistic, and statistical models).
Audience: Undergraduate

2. Make predictions and draw conclusions in real world contexts using a model, and recognize the limitations of mathematical models in those contexts.
Audience: Undergraduate

3. Understand and be able to create and evaluate arguments supported by quantitative evidence and clearly communicate those arguments using words, tables, graphs, mathematical equations, etc., as appropriate in various contexts (e.g. with problems related to financial planning, basic probability).
Audience: Undergraduate

4. Construct and interpret graphical displays of data and understand how they can be used and misused.
Audience: Undergraduate

MATH 171 – CALCULUS WITH ALGEBRA AND TRIGONOMETRY I
5 credits.

Topics in algebra, trigonometry and precalculus are integrated with elementary differential calculus. Part of a 2-semester sequence with MATH 217; these two courses together are equivalent to MATH 114 and 221.
Requisites: MATH 96 or placement into MATH 171. MATH 118 does not fulfill the requisite
Course Designation: Gen Ed - Quantitative Reasoning Part A
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Recall the algebraic and geometric properties of polynomial and power functions, use such functions to model practical situations, and use such properties to resolve practical problems.
Audience: Undergraduate

2. Recall formal and informal definitions and theory related to limits and use such statements to perform relevant computations, analyze the behavior of functions, and resolve practical problems (e.g., determine if a function is continuous, find horizontal asymptotes, determine long term behavior of a model, etc.).
Audience: Undergraduate

3. Recall formal and informal definitions and theory related to differential calculus and use such statements to perform relevant computations, analyze the behavior of functions, and resolve practical problems (e.g., determine where a function is increasing or decreasing, compute a linear approximation, predict future behavior, etc.).
Audience: Undergraduate

4. Recall formal and informal definitions and theory related to integrability and use such statements to perform relevant computations, analyze the behavior of functions, and resolve practical problems (e.g., compute antiderivatives, determine areas and volumes, compute average value, etc.).
Audience: Undergraduate

5. Convey informal mathematical arguments and formal computations using appropriate mathematical terminology, notation, and grammar.
Audience: Undergraduate

MATH 198 – DIRECTED STUDY
1-3 credits.

Directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2012

MATH 207 – TOPICS IN MATHEMATICS STUDY ABROAD
1-5 credits.

Credit is awarded to students who have completed an appropriate math course abroad at the intermediate level having no direct equivalence within the math department offerings. The study abroad course must be pre-approved by the math department.
Requisites: None
Course Designation: Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

MATH 211 – SURVEY OF CALCULUS 1
4 credits.

Essential concepts of differential and integral calculus; exponential and logarithmic functions; functions of several variables. Primarily for students in prebusiness and some social sciences. Students preparing for advanced study in mathematics, physics, engineering and other sciences (including most biological sciences) should take MATH 221.
Requisites: MATH 112, 114, 171, or placement into MATH 211 or 221
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply differential calculus to analyze rates of change, and in particular to model physical and economic phenomena (e.g., derivatives of exponential and logarithmic functions, modeling with linear differential equations, first and second derivative tests for extrema, applied optimization, etc.).
Audience: Undergraduate

2. Analyze the behavior of functions of one variable, including their asymptotic behavior, local behavior and existence of extrema (e.g., limits, continuity, tangent lines, finding extrema, etc.).
Audience: Undergraduate

3. Apply integral calculus to analyze the cumulative effects of continuous processes (e.g., difference between indefinite and definite integral, integration by parts, the Fundamental Theorem of Calculus, etc.).
Audience: Undergraduate

4. Analyze functions of two variables (e.g., partial derivatives, tangent lines to curves, maximization and minimization in two variables, etc.).
Audience: Undergraduate

5. Successfully perform computations related to limits, differentiation, and integration.
Audience: Undergraduate

6. Articulate mathematical knowledge and understanding of differential and integral calculus in a written context.
Audience: Undergraduate

MATH 213 – SURVEY OF CALCULUS 2
3 credits.

First order differential equations, introduction to multivariable calculus and constrained optimization, infinite sequences and series, methods of approximation, and a brief introduction to probability. Models and applications from business and the social sciences.
Requisites: MATH 211, 217, or 221
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall the algebraic and geometric properties of polynomial and power functions and use these properties to resolve practical problems.
Audience: Undergraduate

2. Use definitions, properties, and theory related to the concept of the derivative to perform standard computations and analyze functions (e.g., use Lagrange multipliers to optimize multivariate functions, etc.).
Audience: Undergraduate

3. Use definitions, properties and theory related to limits, sequences, and series to determine convergence, divergence, and limit values as possible (e.g., geometric sums, use limit values as approximations to long term behavior, etc.).
Audience: Undergraduate

4. Use definitions, properties, and theory related to integrals to perform standard computations and analyze functions (e.g., numerical integration, multiple integrals, etc.).
Audience: Undergraduate

5. Use definitions, properties, and theory related to differential equations to produce families of solutions and resolve initial value problems (e.g., first-order linear and separable ordinary differential equations, etc.).
Audience: Undergraduate

6. Use functions to model practical behavior, analyze those functions using calculus concepts, and interpret that analysis in a practical context (e.g., identify concavity and use it to make investment decisions, model an annuity through a geometric series and determine its total present value, determine total change from a marginal rate, etc.).
Audience: Undergraduate

7. Produce informal arguments and formal computations in English using proper mathematical terminology, notation, and logic.
Audience: Undergraduate

MATH 217 – CALCULUS WITH ALGEBRA AND TRIGONOMETRY II
5 credits.

Continuation of MATH 171. Topics in algebra, trigonometry and precalculus are integrated with elementary differential calculus. Completion of MATH 217 implies completion of MATH 221 and 114.
Requisites: MATH 171
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recall the algebraic and geometric properties of exponential and trigonometric functions, their inverses, and their algebraic combinations and compositions, and use these properties to resolve practical problems.
Audience: Undergraduate

2. Recall formal and informal definitions and theory related to limits (e.g., limit properties, continuity, the intermediate value theorem, etc.) and use such statements to perform relevant computations, analyze the behavior of functions, and resolve practical problems (e.g., determine if a function is continuous, find horizontal asymptotes, determine long term behavior of a model, etc.).
Audience: Undergraduate

3. Recall formal and informal definitions and theory related to the derivative (e.g., definition, chain rule, interpretation as rate of change, critical point theory, l'Hopital's rule, etc.) and use such statements to perform relevant computations, analyze the behavior of functions, and resolve practical problems (e.g., determine where a function is increasing, compute a linear approximation, etc.).
Audience: Undergraduate

4. Recall formal and informal definitions and theory related to integrability (e.g., definition as the limit of a Riemann sum, the fundamental theorem of calculus, definite integral as total change, etc.) and use such statements to perform relevant computations, analyze the behavior of functions, and resolve practical problems (e.g., compute antiderivatives, determine areas/volumes, etc.).
Audience: Undergraduate

5. Offer informal mathematical arguments and formal computations in English using appropriate mathematical terminology, notation, and grammar.
Audience: Undergraduate

MATH 221 – CALCULUS AND ANALYTIC GEOMETRY 1
5 credits.

Introduction to differential and integral calculus and plane analytic geometry; applications; transcendental functions.
Requisites: MATH 114 or (MATH 112 and 113) or placement into MATH 221. MATH 211 or MATH 213 does not fulfill the requisite.
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply differential calculus to analyze rates of change, and in particular to model real world phenomena (e.g., derivatives of exponential, logarithmic and trigonometric functions, first and second derivative tests for extrema, applied optimization, etc.).
Audience: Undergraduate

2. Analyze the behavior of functions of one variable, including their asymptotic behavior, local behavior and existence of extrema (e.g., limits, continuity, tangent lines, finding extrema, etc.).
Audience: Undergraduate

3. Apply integral calculus to model the cumulative effects of continuous processes (e.g., difference between indefinite and definite integral, the Fundamental Theorem of Calculus, computing areas, volumes, and surface areas, etc.).
Audience: Undergraduate

4. Successfully perform computations related to limits, differentiation, and integration.
Audience: Undergraduate

MATH 222 – CALCULUS AND ANALYTIC GEOMETRY 2
4 credits.

Techniques of integration, improper integrals, first order ordinary differential equations, sequences and series, Taylor series, vector geometry in two and three dimensions.
Requisites: MATH 217 or 221. MATH 211 or 213 does not fulfill the requisite.
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply a variety of integration techniques to compute proper and improper integrals (e.g., integration by parts, substitution including trigonometric substitution, partial fractions, etc.).
Audience: Undergraduate

2. Find and analyze the solutions to first order differential equations and initial value problems (e.g., separable equations, equilibrium solutions, linear equations and integrating factors, etc.).
Audience: Undergraduate

3. Recall the main definitions and results related to limits, continuity, sequences, and series (e.g., convergence, divergence, convergence of geometric sequences, convergence of geometric series, different tests for convergence and divergence, the Integral test, etc.).
Audience: Undergraduate

4. Derive and manipulate asymptotic expansions of functions, and use these expansions to understand the properties of the functions they approximate (e.g., Taylor series, etc.).
Audience: Undergraduate

5. Describe objects in three dimensional space and how they interact with each other (the coordinate system, vector addition and scalar multiplication, the dot product and cross product, etc.).
Audience: Undergraduate

6. Describe physical and biological phenomena using mathematical models (e.g. linear growth models, logistic growth models, pressure and force, moments and center of mass, etc.).
Audience: Undergraduate

7. Offer informal mathematical arguments and formal computations in English using appropriate mathematical terminology, notation, and grammar.
Audience: Undergraduate

MATH 228 – WES CALCULUS SUPPLEMENT
1 credit.

Topics in differential, integral and multi-variable calculus and analytic geometry.
Requisites: Concurrent enrollment in MATH 221, 222, or 234
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Practice problem-solving and critical thinking skills in group settings
Audience: Undergraduate

2. Demonstrate academic skills that increase engagement and belonging in mathematics
Audience: Undergraduate

3. Apply calculus to solve real-world problems
Audience: Undergraduate

4. Connect with the math learning support community via participation in various tutoring and small group study opportunities across campus
Audience: Undergraduate

MATH 234 – CALCULUS--FUNCTIONS OF SEVERAL VARIABLES
4 credits.

Introduction to calculus of functions of several variables; calculus on parameterized curves, derivatives of functions of several variables, multiple integrals, vector calculus.
Requisites: MATH 222
Course Designation: Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze the behavior of functions of several variables, including their asymptotic behavior, local behavior, and existence of extrema with the tools of calculus (e.g., limits and continuity of multidimensional functions, derivatives and integrals of vector valued functions, arc length and curvature, partial derivatives, tangent planes, etc.).
Audience: Undergraduate

2. Describe and analyze motion in space with the tools of calculus (velocity vector and acceleration, directional derivatives and the gradient vector, etc.).
Audience: Undergraduate

3. Represent and compute areas and volumes by means of multiple integrals (e.g., integration over rectangles and more general spaces, average values, integration with polar, cylindrical, and spherical coordinates, general changes of variables, etc.).
Audience: Undergraduate

4. Derive relations between different physical phenomena and their integral representations (e.g., using Green's theorem, the Divergence theorem, and Stokes' theorem).
Audience: Undergraduate

5. Describe physical, biological, and/or economic phenomena using mathematical models (e.g., topographical maps and level curves, Lagrange multipliers, etc.).
Audience: Undergraduate

6. Offer informal mathematical arguments and formal computations in English using appropriate mathematical terminology, notation, and grammar.
Audience: Undergraduate

MATH/COMP SCI 240 – INTRODUCTION TO DISCRETE MATHEMATICS
3 credits.

Basic concepts of logic, sets, partial order and other relations, and functions. Basic concepts of mathematics (definitions, proofs, sets, functions, and relations) with a focus on discrete structures: integers, bits, strings, trees, and graphs. Propositional logic, Boolean algebra, and predicate logic. Mathematical induction and recursion. Invariants and algorithmic correctness. Recurrences and asymptotic growth analysis. Fundamentals of counting.
Requisites: MATH 217 or 221
Course Designation: Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate proficiency with basic skills for constructing and evaluating mathematically rigorous arguments and proofs.
Audience: Undergraduate

2. Construct proofs by induction to prove properties in a variety of domains (mathematical formulas, recursively-defined structures, loop invariants, program correctness).
Audience: Undergraduate

3. Demonstrate a familiarity with and an ability to reason about discrete structures/data types (integers, strings, bit strings, sets, relations, functions, graphs, trees).
Audience: Undergraduate

4. Employ basic program analysis techniques to evaluate behavior of functions and simple algorithms such as assessing correctness and termination of simple algorithms, constructing recurrences, solving simple recurrences, and applying asymptotic analysis.
Audience: Undergraduate

5. Apply basic combinatoric techniques to counting problems.
Audience: Undergraduate

6. Demonstrate the connections between a description of a simple language and a finite state machine or regular expression. Given a finite state machine or regular expression, determine the language it defines and/or whether a given string is recognized by it. Given a simple language, construct a finite state machine or regular expression that recognizes it.
Audience: Undergraduate

MATH 298 – DIRECTED STUDY IN MATHEMATICS
1-3 credits.

Directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023

MATH/STAT 309 – INTRODUCTION TO PROBABILITY AND MATHEMATICAL STATISTICS I
3 credits.

Probability and combinatorial methods, discrete and continuous, univariate and multivariate distributions, expected values, moments, normal distribution and derived distributions, estimation.
Requisites: MATH 234, 376, or concurrent enrollment. Not open to students with credit for STAT/MATH 431 or STAT 311
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall the definitions of fundamental objects and concepts underlying probability theory (e.g. sample spaces and events, the axioms of probability, the notions of conditional probability and independence, random variables and their probability distributions, mathematical expectation, and the joint distribution of one or more random variables) and demonstrate understanding of their properties
Audience: Undergraduate

2. Perform important operations in probability (e.g. calculate the probabilities of events, derive the probability distributions of random variables, compute moments and the expectation of functions of random variables, calculate covariances and correlations, and obtain conditional distributions and conditional expectations) and interpret the results
Audience: Undergraduate

3. Explain the meaning of key results in probability theory that are especially important in mathematical statistics (e.g. Bayes' Theorem, probabilistic tail inequalities such as Markov's and Chebyshev's inequalities, the Law of Large Numbers, and the Central Limit Theorem)
Audience: Undergraduate

4. Identify, utilize, and understand the key properties of, probability distributions that are especially important in statistics, including discrete families of distributions (e.g. the binomial, Poisson, geometric, and negative binomial distributions) and continuous families of distributions (e.g. the uniform, exponential, gamma, and normal distributions)
Audience: Undergraduate

MATH/STAT 310 – INTRODUCTION TO PROBABILITY AND MATHEMATICAL STATISTICS II
3 credits.

Mathematical statistical inference aims at providing an understanding of likelihood's central role to statistical inference, using the language of mathematical statistics to analyze statistical procedures, and using the computer as a tool for understanding statistics. Specific topics include: samples and populations, estimation, hypothesis testing, and theoretical properties of statistical inference.
Requisites: (STAT/MATH 309, STAT 311, STAT/MATH 431, or MATH 531) and (STAT 240, STAT 301, STAT 302, STAT 324, STAT 371, or ECON 310), or graduate/professional standing
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Construct point estimators including maximum likelihood estimators, understand the theoretical properties of point estimation methods, and evaluate their performance
Audience: Undergraduate

2. Construct hypothesis tests including likelihood ratio tests, interpret their results, evaluate their performance, and understand the theoretical properties of hypothesis testing methods
Audience: Undergraduate

3. Construct interval estimators to quantify uncertainty, understand the theoretical properties of interval estimation methods, and interpret their results
Audience: Undergraduate

4. Mathematically derive key quantities required for statistical inference methods and be familiar with simulation-based techniques for obtaining those quantities
Audience: Undergraduate

5. Describe the Bayesian approach to inference and contrast it with the frequentist approach
Audience: Undergraduate

6. Identify and describe the assumptions underlying methods of statistical inference and explain their importance
Audience: Undergraduate

MATH 319 – TECHNIQUES IN ORDINARY DIFFERENTIAL EQUATIONS
3 credits.

Review of linear differential equations; series solution of linear differential equations; boundary value problems; Laplace transforms; possibly numerical methods and two dimensional autonomous systems.
Requisites: MATH 222 or graduate/professional standing
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall and state the formal definitions, properties, and theorems associated to ordinary differential equations (e.g. systems of linear ODEs, homogeneous/inhomogeneous ODEs, series solutions, Laplace transform, equilibria, etc.).
Audience: Undergraduate

2. Verify if a mathematical object has a given property used in ODEs (e.g. that a problem is well-posed, that a given function is a solution, etc.).
Audience: Undergraduate

3. Apply algorithms to describe the solutions to various types of ODEs (e.g. separable equations, linear systems, boundary value problems, etc.).
Audience: Undergraduate

4. Check the premises of theorems used in elementary ODEs in order to apply their conclusions (e.g., that a given equation satisfies conditions which guarantee the existence of a solution).
Audience: Undergraduate

5. Apply the presented techniques for solving ODEs to solve problems from physics (e.g. spring problems, pendulum problems, etc.).
Audience: Undergraduate

6. Express informal mathematical arguments in English using appropriate mathematical terminology and notation.
Audience: Undergraduate

MATH 320 – LINEAR ALGEBRA AND DIFFERENTIAL EQUATIONS
3 credits.

An introduction to linear algebra and differential equations with emphasis on the relationship between the theory of linear algebra and analytical and numerical techniques for solving differential equations. Linear algebra topics include linear systems, matrices and their algebra, vector spaces and linear transformations, eigenvalues and eigenvectors. Topics from differential equations include first order ODE, homogeneous and nonhomogeneous linear systems, and numerical methods.
Requisites: MATH 222 or graduate/professional standing
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall and state the formal definitions, properties, and theorems associated to elementary linear algebra and ordinary differential equations (e.g. existence and uniqueness theorems for first-order ODEs, eigenvalues and eigenvectors, etc.).
Audience: Undergraduate

2. Verify if a mathematical object has a given property used in elementary linear algebra and differential equations (e.g., that a matrix is invertible, that a set is a vector subspace, that a vector is an eigenvector, etc.).
Audience: Undergraduate

3. Check the premises of theorems used in elementary linear algebra in order to apply their conclusions (e.g., that a given matrix has zero determinant and therefore cannot be inverted).
Audience: Undergraduate

4. Resolve algebraic statements related to elementary linear algebra through appropriate computations and compute solutions to elementary systems of ordinary differential equations.
Audience: Undergraduate

5. Express informal mathematical arguments in English using appropriate mathematical terminology and notation.
Audience: Undergraduate

MATH 321 – APPLIED MATHEMATICAL ANALYSIS 1: VECTOR AND COMPLEX CALCULUS
3 credits.

Vector analysis: algebra and geometry of vectors, index notation, 3D rotations, Euler angles; vector differential and integral calculus, theorems of Green, Gauss, and Stokes; grad, div, curl, and Laplacian in cylindrical and spherical coordinates; Complex analysis: analytic functions, Cauchy-Riemann equations, conformal mapping, complex integrals, residue theorem.
Requisites: (MATH 234 and 320), (MATH 234, 319, and 340), (MATH 319 and 341), MATH 376, or graduate/professional standing
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Accelerated Honors (!)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall and state the formal definitions, properties, and theorems associated to elementary vector calculus including complex calculus.
Audience: Undergraduate

2. Verify if a mathematical object has a given property used in complex and vector calculus (e.g., that a matrix is invertible, that a set of vectors is linearly independent, that a vector field is conservative, etc.)
Audience: Undergraduate

3. Check the premises of theorems used in complex and vector calculus in order to apply their conclusions (e.g., that a vector field is conservative and so one can apply the fundamental theorem of path integrals).
Audience: Undergraduate

4. Resolve algebraic statements and perform standard computations related to vector and complex calculus (e.g., compute residues, perform basis changes, use multivariate substitution in integrals, compute surface areas, etc.).
Audience: Undergraduate

5. Express informal mathematical arguments in English using appropriate mathematical terminology and notation.
Audience: Undergraduate

MATH 322 – APPLIED MATHEMATICAL ANALYSIS 2: PARTIAL DIFFERENTIAL EQUATIONS
3 credits.

Sturm-Liouville theory; Fourier series, including mean convergence; initial and boundary value problems for linear second order partial differential equations, including separation of variables and eigenfunction expansions; fundamental solutions and Green's functions in multiple dimensions.
Requisites: MATH 321, 376, or graduate/professional standing
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recall and state the formal definitions, properties, techniques, and theorems associated to elementary partial differential equations (e.g., boundary value problem, linearity, eigenfunction, Fourier series, finite difference methods, etc.).
Audience: Undergraduate

2. Verify if a mathematical object has a given property used in elementary partial differential equations (e.g., homogeneous vs. nonhomogeneous PDEs, symmetry, etc.)
Audience: Undergraduate

3. Check the premises of theorems used in complex and vector calculus in order to apply their conclusions (e.g., that a finite series solution minimizes error, etc.).
Audience: Undergraduate

4. Resolve algebraic statements and perform standard computations related to elementary partial differential equations (e.g., derive series solutions to a given PDE, apply the finite element method to approximate a PDE solution, etc.).
Audience: Undergraduate

5. Express informal mathematical arguments in English using appropriate mathematical terminology and notation.
Audience: Undergraduate

MATH 331 – INTRODUCTORY PROBABILITY
3 credits.

Topics covered include axioms of probability, random variables, the most important discrete and continuous probability distributions, expectation and variance, conditional probability and conditional expectations, Markov's and Chebyshev's inequalities, laws of large numbers, and the central limit theorem. Includes a brief introduction to techniques of multivariate integration.
Requisites: MATH 213 or 222
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall and state the formal definitions of the mathematical objects and their properties used in basic probability theory (e.g., probability spaces, random variables and their probability distributions, named distributions, conditional probability, independence, etc.).
Audience: Undergraduate

2. Use such definitions to argue that a mathematical object does or does not have the condition of being a particular type or having a particular property (e.g., whether certain events or random variables are independent or not, whether a random variable has one of the named distributions, etc.).
Audience: Undergraduate

3. Recall and state the standard theorems of probability theory. (e.g., Bayes' theorem, the law of large numbers, the central limit theorem, Markov's inequality etc.), and apply these theorems to solve problems in probability theory.
Audience: Undergraduate

4. Use multiple approaches to compute and estimate probabilities and expectations.
Audience: Undergraduate

5. Model simple real-life situations using techniques in probability theory and calculate probabilities and expectations associated with those models.

Audience: Undergraduate

6. Express informal mathematical arguments in English using appropriate mathematical terminology and notation
Audience: Undergraduate

MATH 340 – ELEMENTARY MATRIX AND LINEAR ALGEBRA
3 credits.

An introduction to linear algebra. Topics include matrix algebra, linear systems of equations, vector spaces, sub-spaces, linear dependence, span, basis, rank of matrices, determinants, linear transformations, coordinate representations, kernel, range, eigenvalues and eigenvectors, diagonalization, inner products and orthogonal vectors, symmetric matrices. Covers linear algebra topics in greater depth and detail than MATH 320. Formal techniques in mathematical argument [MATH 341] not covered.
Requisites: MATH 222
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall and state the formal definitions, properties, and theorems associated to elementary linear algebra (e.g., matrix, eigenvector, rank, linear independence, vector space, etc.).
Audience: Undergraduate

2. Verify if a mathematical object has a given property used in elementary linear algebra (e.g., that a matrix is invertible, that a set is a vector subspace, that a vector is an eigenvector, etc.).
Audience: Undergraduate

3. Check the premises of theorems used in elementary linear algebra in order to apply their conclusions (e.g., that a given matrix has zero determinant and therefore cannot be inverted).
Audience: Undergraduate

4. Resolve algebraic statements related to elementary linear algebra through appropriate computations.
Audience: Undergraduate

5. Express informal mathematical arguments in English using appropriate mathematical terminology and notation.
Audience: Undergraduate

MATH 341 – LINEAR ALGEBRA
3 credits.

The theory of linear algebra with an introduction to proofs and proof writing. Topics include vector spaces, linear dependence, span, basis, linear transformations, kernel, image, inner products and inner product spaces, geometry, eigenvalues, eigenvectors, standard matrix factorizations. Other content includes basic set theory, logical operations, quantifiers, direct and indirect arguments, and induction. Differential equations [MATH 320] not covered.
Requisites: MATH 234
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Accelerated Honors (!)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall and state the formal definitions of mathematical objects and their properties used in elementary linear algebra (e.g., dimension of a vector space, linear dependence of a set of vectors, etc.).
Audience: Undergraduate

2. Use the standard methods and tools of mathematical argument in the context of linear algebra (e.g., direct and indirect methods, the construction of examples and counterexamples, induction arguments, 1st order logic, set theory, quantifiers, etc.).
Audience: Undergraduate

3. Verify if a mathematical construct does or does not have the condition of having a particular property (e.g., that a matrix is invertible, that a set is a vector subspace, that a vector is an eigenvector, etc.).
Audience: Undergraduate

4. Recall and state standard theorems used in elementary linear algebra (e.g., symmetric matrices are diagonalizable, linear operators with non-trivial kernel are not invertible, etc.).
Audience: Undergraduate

5. Verify the premises of standard theorems in elementary linear algebra in order to apply their conclusions in the context of longer arguments (e.g., that a given matrix has zero determinant and therefore has nullity larger than one, etc.).
Audience: Undergraduate

6. Prove or disprove statements related to the definitions, properties, and theorems of elementary linear algebra using the techniques of mathematical argument.
Audience: Undergraduate

7. Perform standard computations in the context of linear algebra (e.g., finding the rank of a matrix, computing the determinant of a square matrix, etc.).
Audience: Undergraduate

8. Convey formal mathematical arguments in English using appropriate mathematical terminology and notation.
Audience: Undergraduate

MATH 345 – LINEAR ALGEBRA AND OPTIMIZATION
4 credits.

Introduction to linear algebra, differential calculus in several variables, and basic optimization theory with applications to data science and related topics. Vectors, analytic geometry, matrices, linear functions, linear independence, orthogonality, inverses, partial derivatives and gradients, Taylor approximation, gradient descent, Lagrange multipliers, clustering, regression, classification. Implementation in Python.
Requisites: MATH 222 and (COMP SCI 200, 220, 300, 310, 320, or placement in COMP SCI 300). Not open to students with credit for MATH 320, 340, 341, or 375.
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recall and state the formal definitions, properties, and theorems associated to elementary linear algebra (e.g., matrix, eigenvector, rank, linear independence, vector space, etc.).
Audience: Undergraduate

2. Verify if a mathematical object has a given property used in elementary linear algebra (e.g., that a matrix is invertible, that a set is a vector subspace, that a vector is an eigenvector, etc.).
Audience: Undergraduate

3. Check the premises of theorems used in elementary linear algebra in order to apply their conclusions (e.g., that a given matrix has zero determinant and therefore cannot be inverted).
Audience: Undergraduate

4. Resolve algebraic statements related to elementary linear algebra through appropriate computations, including using classical algorithms to solve data science problems using linear algebra and their implementation in Python.
Audience: Undergraduate

5. Analyze the behavior of functions of several variables, including their asymptotic behavior, local behavior, and existence of extrema with the tools of calculus (e.g., limits and continuity of multidimensional functions, derivatives and integrals of vector valued functions, arc length and curvature, partial derivatives, tangent planes, etc.).
Audience: Undergraduate

6. Express informal mathematical arguments in English using appropriate mathematical terminology and notation.
Audience: Undergraduate

MATH 375 – TOPICS IN MULTI-VARIABLE CALCULUS AND LINEAR ALGEBRA
5 credits.

Vector spaces and linear transformations, differential calculus of scalar and vector fields, determinants, eigenvalues and eigenvectors, multiple integrals, line integrals, and surface integrals. Freshmen students are invited to enroll by the Department of Mathematics.
Requisites: Consent of Instructor
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the formal definitions of mathematical objects and their properties used in linear algebra and differential multivariable calculus (e.g., vector spaces, linear transformations, derivatives of multivariate functions, etc.).
Audience: Undergraduate

2. Use the standard methods and tools of mathematical argument in the context of linear algebra and multivariate differential calculus (e.g., direct and indirect methods, the construction of examples and counterexamples, induction arguments, 1st order logic, set theory, quantifiers, etc.).
Audience: Undergraduate

3. Verify if a mathematical construct does or does not have the condition of having a particular property (e.g., that a matrix is invertible, that a set is a vector subspace, that a vector valued function is differentiable, etc.).
Audience: Undergraduate

4. Identify standard theorems in linear algebra and differential multivariate calculus and recall arguments for these theorems and the underlying logic of their proofs (e.g., symmetric matrices are diagonalizable, chain rule for multivariate functions, etc.).
Audience: Undergraduate

5. Prove or disprove statements related to the definitions, properties, and theorems of linear algebra and differential multivariate calculus using the techniques of mathematical argument.
Audience: Undergraduate

6. Perform standard computations in the context of linear algebra and differential multivariate calculus.
Audience: Undergraduate

7. Write mathematical proofs and concepts in logical, reasonable, and concise ways.
Audience: Undergraduate

MATH 376 – TOPICS IN MULTI-VARIABLE CALCULUS AND DIFFERENTIAL EQUATIONS
5 credits.

Topics in multi-variable calculus and introduction to differential equations.
Requisites: MATH 375
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify the formal definitions of mathematical objects and their properties used in integral multivariable calculus and elementary ordinary differential equations (e.g., multivariate integrals, line and surface integrals, systems of linear ODEs, etc.).
Audience: Undergraduate

2. Understand and use the standard methods and tools of mathematical argument in the context of integral multivariable calculus and elementary ordinary differential equations (e.g direct and indirect methods, the construction of examples and counterexamples, induction arguments, first-order logic, set theory, and quantifiers).
Audience: Undergraduate

3. Distinguish if a mathematical construct does or does not have the condition of having a particular property formally (e.g., that a vector field is conservative, that a given function is a solution, etc.).
Audience: Undergraduate

4. Identify standard theorems in integral multivariable calculus and elementary ordinary differential equations (e.g., Green's theorem, the Divergence theorem, Stokes' theorem, existence and uniqueness theorem for ODEs, etc.) and recall arguments for these theorems and the underlying logic of their proofs.
Audience: Undergraduate

5. Prove or disprove statements related to the definitions, properties, and theorems of integral multivariable calculus and elementary ordinary differential equations using the techniques of mathematical argument.
Audience: Undergraduate

6. Perform standard computations in the context of integral multivariable calculus and elementary ordinary differential equations (e.g. evaluate surface and line integrals, solve simple ordinary differential equations, etc.).
Audience: Undergraduate

7. Write mathematical proofs and concepts in logical, reasonable, and concise ways.
Audience: Undergraduate

MATH 390 – UNDERGRADUATE RESEARCH WITH MADISON EXPERIMENTAL MATHEMATICS LAB
3 credits.

An introduction to mathematical research. Instruction in ancillary skills such as literature review, mathematical software use, technical writing and communication, etc. Requires acceptance to the Madison Experimental Mathematics undergraduate research lab.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. work with a team to investigate open problems in mathematics.
Audience: Undergraduate

2. employ methods of mathematical research (e.g., numerical software, literature review, problem design, etc.)
Audience: Undergraduate

3. communicate mathematics in formal written and oral forms (e.g, journal article, poster presentation, seminar talk, etc.)
Audience: Undergraduate

MATH 407 – TOPICS IN MATHEMATICS STUDY ABROAD
1-5 credits.

Credit is awarded to students who have completed an appropriate math course abroad at the advanced level having no direct equivalence within the math department offerings. The study abroad course must be pre-approved by the math department.
Requisites: None
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

MATH 415 – APPLIED DYNAMICAL SYSTEMS, CHAOS AND MODELING
3 credits.

An introduction to nonlinear dynamical systems including stability, bifurcations and chaos. The course will give underlying mathematical ideas, but emphasize applications from many scientific fields.
Requisites: MATH 376, (MATH 234 and 319), (MATH 234 and 320), (MATH 234 and 340), (MATH 234 and 341) or (MATH 234 and 375) or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) program
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall and state the formal definitions, properties, and theorems associated to linear and nonlinear dynamical systems (e.g., periodicity, critical points, chaotic behavior, contraction mapping principle, etc.).
Audience: Undergraduate

2. Verify if a mathematical object has a given property used in elementary linear and nonlinear dynamical systems (e.g., if a set is stable, etc.).
Audience: Undergraduate

3. Identify the type of bifurcation undergone by a dynamical system under a change of parameter values (e.g., saddle-node, pitchfork, and transcritical bifurcations, normal forms, etc.).
Audience: Undergraduate

4. Check the premises of theorems used in elementary linear and nonlinear dynamical systems in order to apply their conclusions (e.g., that a function satisfies a particular inequality and hence must have a fixed point, etc.).
Audience: Undergraduate

5. Resolve algebraic statements and perform standard computations and constructions related to elementary linear and nonlinear dynamical systems (e.g., computing eigenvectors, identifying invariant sets, draw a phase plane portrait, etc.).
Audience: Undergraduate

6. Design a mathematical model that embodies specific features of a physical or biological system (e.g., finite carrying capacity, predation).
Audience: Undergraduate

7. Express informal mathematical arguments in English using appropriate mathematical terminology and notation.
Audience: Undergraduate

MATH 421 – THE THEORY OF SINGLE VARIABLE CALCULUS
3 credits.

Covers material in first and second semester calculus but it is intended to teach math majors to write and understand proofs in mathematics in general and in calculus in particular.
Requisites: MATH 234 or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand and use the standard methods and tools of mathematical argument (e.g direct and indirect methods, the construction of examples and counterexamples, induction arguments, first-order logic, set theory, and quantifiers).
Audience: Undergraduate

2. Recall and state the formal definitions of mathematical objects (e.g. sets, functions, and graphs) and their properties used in calculus.
Audience: Undergraduate

3. Distinguish if a mathematical construct does or does not have the condition of having a particular property formally (e.g. limits, continuity, differentiability, and integrability).
Audience: Undergraduate

4. Recall and state standard calculus theorems (e.g. Intermediate Value Theorem, Mean Value Theorems, and Fundamental Theorem of Calculus), and recall arguments for these theorems and the underlying logic of their proofs.
Audience: Undergraduate

5. Prove or disprove statements related to the definitions, properties, and theorems of calculus using the techniques of mathematical argument.
Audience: Undergraduate

6. Write mathematical proofs and concepts in logical, reasonable, and concise ways.
Audience: Undergraduate

MATH/COMP SCI/I SY E 425 – INTRODUCTION TO COMBINATORIAL OPTIMIZATION
3 credits.

Focuses on optimization problems over discrete structures, such as shortest paths, spanning trees, flows, matchings, and the traveling salesman problem. We will investigate structural properties of these problems, and we will study both exact methods for their solution, and approximation algorithms.
Requisites: (MATH 320, 340, 341, or 375) or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and use the structural properties of combinatorial optimization problems
Audience: Undergraduate

2. Apply algorithms for the solution -exact or approximate- of a combinatorial optimization problem
Audience: Undergraduate

3. Explain why the algorithms studied are correct and understand their running time
Audience: Undergraduate

MATH/STAT 431 – INTRODUCTION TO THE THEORY OF PROBABILITY
3 credits.

Topics covered include axioms of probability, random variables, the most important discrete and continuous probability distributions, expectation and variance, moment generating functions, conditional probability and conditional expectations, multivariate distributions, Markov's and Chebyshev's inequalities, laws of large numbers, and the central limit theorem.
Requisites: MATH 234 or 376 or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall and state the formal definitions of the mathematical objects and their properties used in probability theory (e.g., probability spaces, random variables and random vectors and their probability distributions, named distributions, conditional probability, independence, linearity of expectation, etc.).
Audience: Undergraduate

2. Use such definitions to argue that a mathematical object does or does not have the condition of being a particular type or having a particular property (e.g., whether certain events or random variables are independent or not, whether a random variable has one of the named distributions, whether or not a sequence of random variables is exchangeable, etc.).
Audience: Undergraduate

3. Recall and state the standard theorems of probability theory. (e.g., Bayes' theorem, the law of large numbers, the central limit theorem, etc.), and apply these theorems to solve problems in probability theory.
Audience: Undergraduate

4. Use multiple approaches to compute and estimate probabilities and expectations (e.g., using the indicator method, using conditioning, estimating probabilities using normal or Poisson approximation etc.).
Audience: Undergraduate

5. Construct mathematical arguments related to the above definitions, properties, and theorems, including the construction of examples and counterexamples.
Audience: Undergraduate

6. Convey his or her arguments in oral and written forms using English and appropriate mathematical terminology and notation (and grammar).
Audience: Undergraduate

7. Model simple real-life situations using techniques in probability theory and calculate probabilities and expectations associated with those models.

Audience: Undergraduate

MATH/COMP SCI/E C E 435 – INTRODUCTION TO CRYPTOGRAPHY
3 credits.

Cryptography is the art and science of transmitting digital information in a secure manner. Provides an introduction to its technical aspects.
Requisites: (MATH 320, 340, 341, or 375) or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe and distinguish between perfect secrecy and computational security.
Audience: Undergraduate

2. State game#based security definitions—IND#CPA, IND#CCA, MAC unforgeability, and signature unforgeability—in both symmetric# and public#key contexts.
Audience: Undergraduate

3. Explain core primitives: pseudorandom functions, block ciphers, and collision#resistant hash functions.
Audience: Undergraduate

4. Contrast foundational hardness assumptions: one#way functions, PRFs, Diffie–Hellman, discrete logarithm, and integer factoring.
Audience: Undergraduate

5. Construct symmetric and public#key encryption and authentication schemes using these primitives, and prove their security.
Audience: Undergraduate

6. Evaluate the security and deployment trade#offs of protocols such as authenticated encryption, key exchange, and digital signatures.
Audience: Undergraduate

MATH 443 – APPLIED LINEAR ALGEBRA
3 credits.

Review of matrix algebra. Simultaneous linear equations, linear dependence and rank, vector space, eigenvalues and eigenvectors, diagonalization, quadratic forms, inner product spaces, norms, canonical forms. Discussion of numerical aspects and applications in the sciences.
Requisites: (MATH 320, 340, 341, or 375) or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recall and state the formal definitions of the mathematical objects and their properties used in applied linear algebra (e.g., system of equations, matrices, linear transformations, inner product spaces, quadratic forms, etc.).
Audience: Undergraduate

2. Use such definitions to argue that a mathematical object does or does not have the condition of being a particular type or having a particular property (e.g., system of equations has a solution, matrix has an LU factorization, linear transformation is invertible, etc.).
Audience: Undergraduate

3. Recall and state the standard theorems of applied linear algebra. (e.g., Rank-Nullity theorem, Spectral theorem of normal operators, theorems leading to SVD and PCA methods, etc.). Moreover, apply these theorems to solve problems in applied linear algebra.
Audience: Undergraduate

4. Construct mathematical arguments related to the above definitions, properties, and theorems, including the construction of examples and counterexamples. Moreover, the student will learn classical algorithms to solve scientific problems using linear algebra (e.g., Page rank, Recommendation systems, SVD and matrix completion, Least square and Gram Schmidt process, etc.).
Audience: Undergraduate

5. Convey his or her arguments in oral and written forms using English and appropriate mathematical terminology and notation, and justify the applicability of classical linear algebra based algorithms in science.
Audience: Undergraduate

MATH 444 – GRAPHS AND NETWORKS IN DATA SCIENCE
3 credits.

Mathematical foundations of networks with an emphasis on their applications in modern data science, using tools from algorithmic graph theory and linear algebra. Topics include: basics of graph theory, network statistics, graph traversal algorithms and implementation, matrix methods, community detection, PageRank, simulation of random graph models.
Requisites: (MATH 320, 340, 341, or 375) and (COMP SCI 200, 220, 300, 310, 320, or placement in COMP SCI 300), graduate/professional standing, or declared in Mathematics VISP (undergraduate or graduate)
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. State formal definitions in graph theory and networks.
Audience: Both Grad & Undergrad

2. Describe essential network search algorithms (e.g., shortest path and minimum spanning tree) and prove their correctness and computational complexity
Audience: Both Grad & Undergrad

3. Understand how community detection algorithms using spectral analysis works; implement and/or use community detection algorithms and apply them to real-world networks using Python
Audience: Both Grad & Undergrad

4. Simulate various random graph models (Erdos-Renyi, Watts-Strogats, Stochastic Block Model, Configuration model, Preferential Attachement).
Audience: Both Grad & Undergrad

5. Use a programming language to load network data and apply deterministic and randomized algorithms for network data analysis; fit various random graph models to the given real-world network and infer its statistical properties.
Audience: Both Grad & Undergrad

6. Identify applications of course content in areas of modern research.
Audience: Graduate

MATH 461 – COLLEGE GEOMETRY I
3 credits.

An introduction to Euclidean or non-Euclidean geometry.
Requisites: MATH 234 or (MATH 222 and COMP SCI/MATH 240) or MATH 375 or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recall and state the formal definitions of mathematical objects and their properties used in axiomatic and coordinate geometry with a special emphasis on triangles and circles (e.g., pedal triangles, Simson line, perpendicular bisector, etc.).
Audience: Undergraduate

2. Use the above definitions to argue if a mathematical construct does or does not have the condition of having a particular property (e.g., that two triangles are congruent, three points are collinear, etc.).
Audience: Undergraduate

3. Recall and state standard theorems used in axiomatic geometry including their proofs (e.g., opposite angles are congruent, Ceva's Theorem, nine-point circle theorem, etc.).
Audience: Undergraduate

4. Verify the premises of standard theorems in in order to apply their conclusions in the context of longer arguments (e.g., arguing congruence by verifying angle sums, etc.).
Audience: Undergraduate

5. Prove or disprove statements related to the definitions, properties, and theorems of axiomatic geometry using the techniques of mathematical argument. In particular, the student will employ construction and computational techniques as necessary.
Audience: Undergraduate

6. Convey formal mathematical arguments in written and/or verbal English using appropriate mathematical terminology and notation.
Audience: Undergraduate

MATH 467 – INTRODUCTION TO NUMBER THEORY
3 credits.

An introduction to proof writing techniques through a study of classical topics in elementary number theory. Topics include the divisibility, basic properties of primes, congruences, Fermat's theorem.
Requisites: MATH 234, 375, (MATH 222 and COMP SCI/MATH 240), (MATH 222 and 320), or (MATH 222 and 340)
Course Designation: Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand and use the standard methods and tools of mathematical argument (e.g. direct and indirect methods, the construction of examples and counterexamples, induction arguments).
Audience: Undergraduate

2. State and describe the formal definitions of the mathematical objects and their properties used in elementary number theory (e.g., divisibility, prime numbers, congruences, etc.).
Audience: Undergraduate

3. State and apply the main theorems in elementary number theory (e.g. theorems related to modular arithmetic, divisibility, prime numbers, Fermat's Little Theorem).
Audience: Undergraduate

4. Prove or disprove statements and evaluate the validity of arguments related to the definitions, properties, and theorems elementary number theory.
Audience: Undergraduate

MATH/CURRIC 471 – MATHEMATICS FOR SECONDARY SCHOOL TEACHERS
3 credits.

Capstone for future middle and high school teachers, drawing connections between higher mathematics and school mathematics.
Requisites: (MATH 341, 375, or 421) and (MATH 461 or concurrent enrollment)
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Examine the conceptual difficulties, fundamental ideas, and techniques of secondary school mathematics.
Audience: Undergraduate

2. Describe connections between advanced mathematics and the content typically found in middle and high school mathematics curriculum.
Audience: Undergraduate

3. Recall and state alternate definitions, extensions, and constructions of content typically found in middle and high school mathematics curriculum.
Audience: Undergraduate

4. Demonstrate symbolic and computational proficiency.
Audience: Undergraduate

5. Justify mathematical reasoning as a means to deepen understanding.
Audience: Undergraduate

6. Analyze multiple solution strategies from a mathematical perspective (e.g. understanding different approaches to solving a problem, assessing whether a strategy generalizes, making connections between strategies, examining student strategies when appropriate etc.).
Audience: Undergraduate

7. Explain mathematics to others and assess the mathematical understanding of others.
Audience: Undergraduate

MATH/HIST SCI 473 – HISTORY OF MATHEMATICS
3 credits.

An historical survey of the main lines of mathematical development.
Requisites: Consent of instructor
Course Designation: Breadth - Either Humanities or Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall and state the formal definitions of the mathematical objects and their properties used in various mathematical topics throughout history (e.g., content from number theory, analysis, algebra, etc.).
Audience: Undergraduate

2. Use such definitions to argue that a mathematical object does or does not have the condition of being a particular type or having a particular property in the context of these topics.
Audience: Undergraduate

3. Recall and state the standard theorems from these topics, and recall the arguments for these theorems and the underlying logic of their proofs.

Audience: Undergraduate

4. Prove or disprove statements related to the above definitions, properties, and theorems using techniques of mathematical argument (direct methods, indirect methods, constructing examples and counterexamples, induction, etc.).
Audience: Undergraduate

5. Convey arguments in oral and written forms using English and appropriate mathematical terminology, notation, and grammar.
Audience: Undergraduate

6. Explain mathematical ideas and describe their historical contexts.
Audience: Undergraduate

MATH/COMP SCI/STAT 475 – INTRODUCTION TO COMBINATORICS
3 credits.

Problems of enumeration, distribution, and arrangement. Inclusion-exclusion principle. Generating functions and linear recurrence relations. Combinatorial identities. Graph coloring problems. Finite designs. Systems of distinct representatives and matching problems in graphs. Potential applications in the social, biological, and physical sciences. Puzzles. Problem solving.
Requisites: (MATH 320, 340, 341, or 375) or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand basic counting strategies, such as staged thought-experiments, inclusion/exclusion, generating functions, and recurrence relations, and apply these strategies to solve a wide variety of counting problems.
Audience: Undergraduate

2. Recall basic objects that are used in combinatorics, such as permutations and combinations of sets and multisets, binomial and multinomial coefficients, the Catalan numbers, the Stirling numbers, and the partition numbers.
Audience: Undergraduate

3. Analyze a given combinatorial problem using the standard theorems of combinatorics, such as the pigeonhole principle, the Newton binomial theorem, the multinomial theorem, the Ramsey theorem, the Dilworth theorem, the Burnside theorem, and the Polya counting theorem.
Audience: Undergraduate

4. Construct mathematical arguments related to combinatorial problems using the above definitions, properties, theorems, and counting strategies; including the construction of examples and counterexamples.
Audience: Undergraduate

5. Convey his or her arguments in oral and written form in English, using appropriate mathematical terminology, notation, and grammar.
Audience: Undergraduate

MATH 490 – UNDERGRADUATE SEMINAR
1-3 credits.

Intermediate or upper level topics course in mathematics. Topics vary.
Requisites: Consent of instructor
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023

MATH 491 – TOPICS IN UNDERGRADUATE MATHEMATICS
3-4 credits.

Intermediate or upper level topics course in mathematics. Topics vary.
Requisites: None
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024
Learning Outcomes: 1. Recall and state the formal definitions of the mathematical objects and their properties used in an area of mathematics.
Audience: Undergraduate

2. Use such definitions to argue that a mathematical object does or does not have the condition of being a particular type or having a particular property.
Audience: Undergraduate

3. Recall and state the standard theorems of an area of mathematics.
Audience: Undergraduate

4. Check the premises of theorems used in an area of mathematics in order to apply their conclusions.
Audience: Undergraduate

5. Resolve statements related to an area of mathematics through appropriate computations.
Audience: Undergraduate

6. Convey arguments using English and appropriate mathematical terminology, notation and grammar.
Audience: Undergraduate

MATH/COMP SCI 513 – NUMERICAL LINEAR ALGEBRA
3 credits.

Direct and iterative solution of linear and nonlinear systems and of eigenproblems. LU and symmetric LU factorization. Complexity, stability, and conditioning. Nonlinear systems. Iterative methods for linear systems. QR-factorization and least squares. Eigenproblems: local and global methods.
Requisites: (MATH 340, 341, or 375) and (COMP SCI 200, 300, 301, 302, 310, or placement into COMP SCI 300) or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) program
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

MATH/COMP SCI 514 – NUMERICAL ANALYSIS
3 credits.

Polynomial forms, divided differences. Polynomial interpolation. Polynomial approximation: uniform approximation and Chebyshev polynomials, least-squares approximation and orthogonal polynomials. Numerical differentiation and integration. Splines, B-splines and spline approximation. Numerical methods for solving initial and boundary value problems for ordinary differential equations.
Requisites: (MATH 320, 340, 341, or 375), (MATH 322, 376, 421, or 521), and (COMP SCI 200, 220, 300, 310, or 301 prior to Spring 2020, or placement into COMP SCI 300); grad/professional standing; member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall and state the formal definitions of the mathematical objects and their properties used in numerical analysis (e.g., Lagrange polynomials, Gibbs phenomenon, Runge phenomenon, orthogonal polynomials, recurrence relation, Gaussian quadrature points, splines, etc.).
Audience: Both Grad & Undergrad

2. Use different techniques of numerical analysis in their appropriate settings (e.g., polynomial interpolation, least square approximation, discrete Fourier transform, the Golub-Welsch algorithm, fast Fourier transform, trapezoidal rule and Simpson's rule, numerical differentiation, forward and backward Euler's method, etc.).
Audience: Both Grad & Undergrad

3. State the main theoretical results related to the error analysis for different methods (e.g., least square error, numerical integration using a Riemann sum, the trapezoidal rule, Simpson's rule and Gaussian quadratures, (semi-)discrete Fourier transform, forward and backward Euler, etc.), and recall the arguments for these theorems and the underlying logic of their proofs.
Audience: Both Grad & Undergrad

4. Convey arguments in oral and written forms using English and appropriate mathematical terminology, notation and grammar.
Audience: Both Grad & Undergrad

5. Identify applications of course content in current areas of research.
Audience: Graduate

MATH 519 – ORDINARY DIFFERENTIAL EQUATIONS
3 credits.

Provides a rigorous introduction to ordinary differential equations and dynamical systems. Intended for math majors and advanced (or graduate) students in other disciplines.
Requisites: (MATH 320, 340, 341, or 375) and (MATH 322, 376, 421, or 521) or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recall and state the formal definitions of the mathematical objects and their properties used in ordinary differential equations (e.g., systems of differential equations, dependence on initial conditions, exponentials of matrices, Lyapunov functions, etc.).
Audience: Both Grad & Undergrad

2. Use such definitions to argue that a mathematical object does or does not have the condition of being a particular type or having a particular property (e.g., that a function is a solution to an ode, local and global stability of an equilibrium, that an initial value problem has a unique solution, etc.).
Audience: Both Grad & Undergrad

3. Recall and state the standard theorems of ordinary differential equations (e.g., the existence and uniqueness theorem, Hartman-Grobman theorem). Moreover, recall the arguments for these theorems and the underlying logic of their proofs.
Audience: Both Grad & Undergrad

4. Use such theorems in the context of longer arguments by examining their premises (e.g., differentiable dependence upon initial conditions, checking stability via Lyapunov functions, etc.).
Audience: Both Grad & Undergrad

5. Prove or disprove statements related to the above definitions, properties, and theorems using techniques of mathematical argument (direct methods, indirect methods, constructing examples and counterexamples, etc.).
Audience: Both Grad & Undergrad

6. Convey arguments in oral and written forms using English and appropriate mathematical terminology, notation and grammar.
Audience: Both Grad & Undergrad

7. Identify applications of course content in current areas of research.
Audience: Graduate

MATH 521 – ANALYSIS I
3 credits.

The real numbers, elements of set theory, metric spaces and basic topology, sequences and series, limits, continuity, differentiation, integration, sequences and series of functions, uniform convergence.
Requisites: (MATH 234 and 467), (MATH 322, 341, 376, or 421), graduate/professional standing, or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall and state the formal definitions of the mathematical objects and their properties used in classical real analysis (e.g., the of a set, continuity of a function, limit of a sequence, etc.).
Audience: Both Grad & Undergrad

2. Use the above definitions to prove if a mathematical construct does or does not have the condition of being a particular mathematical object or having a particular property (e.g., that a given function is continuous, that a given set is compact, that a series converges absolutely, etc.).
Audience: Both Grad & Undergrad

3. Recall and state the standard theorems of classical real analysis. (e.g., the Bolzano- Weierstrass theorem, monotone bounded sequences converge, the fundamental theorem of calculus, etc.). Moreover, the student will be able to recall the arguments for these theorems and the underlying logic of their proofs.
Audience: Both Grad & Undergrad

4. Use the above theorems in the context of longer arguments by examining their premises (e.g., proving that a function has a maximum by verifying that it is continuous on a compact set).
Audience: Both Grad & Undergrad

5. Prove or disprove statements related to the above definitions, properties, and theorems using techniques of mathematical argument (direct methods, indirect methods, constructing examples and counterexamples, induction, etc.).
Audience: Both Grad & Undergrad

6. Convey arguments in oral and written forms using English and appropriate mathematical terminology, notation and grammar.
Audience: Both Grad & Undergrad

7. Identify applications of course content in areas of modern research.
Audience: Graduate

MATH 522 — ANALYSIS II
3 credits.

Special functions, power series, Fourier series, approximation, contraction principle, characterizations of compactness in metric spaces, applications to differential equations. Differential calculus in normed spaces, including implicit and inverse function theorems. Course is essential for graduate work in mathematics.
Requisites: MATH 521 and (MATH 320, 340, 341, or 375) or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall and state the formal definitions of the mathematical objects and their properties used in advanced real analysis (e.g., uniform and pointwise convergences, Fourier series, compactness, metric spaces, etc.).
Audience: Both Grad & Undergrad

2. Use the above definitions to prove if a mathematical construct does or does not have the condition of being a particular mathematical object or having a particular property (e.g. that a sequence of functions converges uniformly or not, whether a set in a metric space is compact or not, etc.).
Audience: Both Grad & Undergrad

3. Recall and state the standard theorems of advanced real analysis. (e.g., Arzela-Ascoli theorem, Stone-Weierstrass theorem, the Contraction Principle etc.), and recall the arguments for these theorems and the underlying logic of their proofs.
Audience: Both Grad & Undergrad

4. Use the above theorems in the context of longer arguments by examining their premises (e.g., using the Arzela-Ascoli theorem to check if a set of continuous functions is relatively compact or not).
Audience: Both Grad & Undergrad

5. Prove or disprove statements related to the above definitions, properties, and theorems using techniques of mathematical argument (direct methods, indirect methods, constructing examples and counterexamples, etc.).
Audience: Both Grad & Undergrad

6. Convey arguments in oral and written forms using English and appropriate mathematical terminology, notation and grammar.
Audience: Both Grad & Undergrad

7. Identify applications of course content in current areas of research.
Audience: Both Grad & Undergrad

MATH/COMP SCI/I SY E/STAT 525 — LINEAR OPTIMIZATION
3 credits.

Introduces optimization problems whose constraints are expressed by linear inequalities. Develops geometric and algebraic insights into the structure of the problem, with an emphasis on formal proofs. Presents the theory behind the simplex method, the main algorithm used to solve linear optimization problems. Explores duality theory and theorems of the alternatives.
Requisites: MATH 320, 340, 341, 375, or 443 or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use linear programming to formulate real world decision problems.
Audience: Both Grad & Undergrad

2. Apply algorithms to solve linear programming problems and demonstrate their correctness.
Audience: Both Grad & Undergrad

3. Combine different proving techniques explored in class in an original way to show new results.
Audience: Graduate

MATH 531 – PROBABILITY THEORY
3 credits.

A rigorous introduction to probability theory at an advanced undergraduate level. Only a minimal amount of measure theory is used, in particular, the theory of Lebesgue integrals is not needed. It is aimed at math majors and Master's degree students, or students in other fields who will need probability in their future careers. Gives an introduction to the basics (Kolmogorov axioms, conditional probability and independence, random variables, expectation) and discusses some classical results with proofs (DeMoivre-Laplace limit theorems, the study of simple random walk on the one dimensional lattice, applications of generating functions).
Requisites: MATH 376, 421, or 521 or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. State, explain, and apply the axioms, principal results, definitions, and theorems of undergraduate probability theory. This includes concepts such as probability spaces, random variables and random vectors and their probability distributions, conditional probability, independence, law of large numbers, and the central limit theorem.
Audience: Undergraduate

2. Calculate probabilities and expectations in simple model problems.
Audience: Undergraduate

3. Use probability theory to model simplified real-world situations with random outcomes. In particular, students can identify and apply the most common probability distributions, including the Bernoulli, binomial, geometric, Poisson, uniform, normal, and exponential distributions.
Audience: Undergraduate

4. Analyze long-term behavior in simple model problems using the law of large numbers, the central limit theorem, and the Borel-Cantelli lemma.
Audience: Undergraduate

5. Construct proofs of simple theorems in probability theory.
Audience: Undergraduate

MATH 535 – MATHEMATICAL METHODS IN DATA SCIENCE
3 credits.

A rigorous introduction to mathematical concepts important for modern data science. Topics include: matrix factorizations, optimization theory and algorithms, probabilistic models, finite Markov chains. Mathematical techniques are motivated by and illustrated on a range of applied problems from machine learning and statistics.
Requisites: (MATH 320, 340, 341, 375 or M E/COMP SCI/E C E 532) and (STAT/MATH 309, 431, MATH 531, STAT 311 or E C E 331) and (MATH 322, 341, 375, 421, 467, or COMP SCI 577), graduate/professional standing, or member of Pre-Masters Mathematics (Visiting Intl) Prgrm
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. State and calculate eigenvalue, singular value and QR decompositions and apply them to data science techniques such as spectral clustering, principal components analysis and least-squares problems.
Audience: Both Grad & Undergrad

2. State and derive properties of multivariate normal distributions and apply them to data science problems based on Gaussian models such as mixtures of Gaussians and Gaussian graphical models.
Audience: Both Grad & Undergrad

3. Formulate certain machine learning and statistics problems as optimization problems, solve these problems using simple optimization algorithms such as first-order methods and state results about the convergence of these algorithms.
Audience: Both Grad & Undergrad

4. State and derive basic properties of finite Markov chain models and apply them to data science techniques such as Markov chain Monte Carlo.
Audience: Both Grad & Undergrad

5. Construct proofs of simple theorems in matrix factorizations, Gaussian modeling, optimization theory, and finite Markov chains.
Audience: Both Grad & Undergrad

6. Implement data science methods based on matrix factorizations, Gaussian modeling, optimization theory, and finite Markov chains in a programming language such as Python.
Audience: Both Grad & Undergrad

7. Identify and use course content in the context of current/modern research in mathematics and data science.
Audience: Graduate

MATH 540 – LINEAR ALGEBRA II
3 credits.

Review of linear transformations, duality. Diagonalization of linear transformations.The Cayley Hamilton Theorem. Minimal polynomials. The Jordan canonical form. Exponential function. Inner product spaces, orthonormal bases and Gram-Schmidt orthogonalization. Operators on inner product spaces. Self-adjoint, unitary and positive operators. Spectral theorem. singular value decomposition. Bilinear and quadratic forms. Norms, bounded linear operators, matrix norms. Basic multilinear algebra. This is a second course in linear algebra.
Requisites: (MATH 234 or 375), (MATH 320, 340, 341, or 375), and (MATH 341, 375, 421, 467, or 521), or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall and state the formal definitions of the mathematical objects and their properties used in advanced linear algebra (e.g., diagonalizable matrices, minimal polynomials, inner product spaces, and their operators, canonical forms, etc.).
Audience: Both Grad & Undergrad

2. Use such definitions to argue that a mathematical object does or does not have the condition of being a particular type or having a particular property (e.g., whether a matrix is diagonalizable, whether a space is an inner product space, etc.).
Audience: Both Grad & Undergrad

3. Recall and state the standard theorems of advanced linear algebra (e.g., the spectral theorem, Sylvester's theorem, the Gram-Schmidt algorithm, etc.), and recall the arguments for these theorems and the underlying logic of their proofs.
Audience: Both Grad & Undergrad

4. Use such theorems in the context of longer arguments by examining their premises (e.g,. establishing results on canonical forms, applying algorithms to diagonalize matrices, find canonical forms, etc.).
Audience: Both Grad & Undergrad

5. Prove or disprove statements related to the above definitions, properties, and theorems using techniques of mathematical argument (direct methods, indirect methods, constructing examples and counterexamples, induction, etc.).
Audience: Both Grad & Undergrad

6. Convey arguments using English and appropriate mathematical terminology, notation and grammar.
Audience: Both Grad & Undergrad

7. Identify applications of course content in areas of modern research (Graduate only).
Audience: Graduate

MATH 541 – MODERN ALGEBRA
3 credits.

Groups, normal subgroups, Cayley's theorem, rings, ideals, homomorphisms, polynomial rings, abstract vector spaces.
Requisites: (MATH 234 or 375), (MATH 320, 340, 341, or 375), and (MATH 341, 375, 421, 467, or 521), or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall and state the formal definitions of the mathematical objects and their properties used in modern abstract algebra (e.g., groups and their actions, rings, fields, homomorphisms, standard examples of these, etc.).
Audience: Both Grad & Undergrad

2. Use such definitions to argue that a mathematical object does or does not have the condition of being a particular type or having a particular property (e.g., whether a group is abelian, whether a homomorphism is an isomorphism, etc.).
Audience: Both Grad & Undergrad

3. Recall and state the standard theorems of abstract algebra. (e.g., the isomorphism theorems, the Sylow theorems, Lagrange's theorem, etc.), and recall the arguments for these theorems and the underlying logic of their proofs.
Audience: Both Grad & Undergrad

4. Use such theorems in the context of longer arguments by examining their premises (e.g., to classify groups of a given order, prove that alternating groups are simple, etc.).
Audience: Both Grad & Undergrad

5. Prove or disprove statements related to the above definitions, properties, and theorems using techniques of mathematical argument (direct methods, indirect methods, constructing examples and counterexamples, induction, etc.).
Audience: Both Grad & Undergrad

6. Convey arguments using English and appropriate mathematical terminology, notation and grammar.
Audience: Both Grad & Undergrad

7. Identify applications of course content in areas of modern research.
Audience: Graduate

MATH 542 – MODERN ALGEBRA
3 credits.

Field extensions, roots of polynomials, splitting fields, simple extensions, linear transformations, matrices, characteristic roots, canonical forms, determinants.
Requisites: MATH 541 or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall and state the formal definitions of the mathematical objects and their properties used in advanced abstract algebra (e.g., rings, modules, fields, Galois groups, etc.).
Audience: Both Grad & Undergrad

2. Use such definitions to argue that a mathematical object does or does not have the condition of being a particular type or having a particular property (e.g. whether a field extension is normal, whether a ring is a principal ideal domain, classifying abelian groups, etc.).
Audience: Both Grad & Undergrad

3. Recall and state the standard theorems of advanced abstract algebra (e.g. the fundamental theorem of Galois theory, the classification of modules over principal ideal domains, results on canonical forms of matrices, etc.) and recall the arguments for these theorems and the underlying logic of their proofs.
Audience: Both Grad & Undergrad

4. Use such theorems in the context of longer arguments by examining their premises (e.g., determining if a polynomial is solvable over a given field, finding the normal and Jordan canonical forms of linear transformations and applying these to problems in various fields like differential equations, etc.).
Audience: Both Grad & Undergrad

5. Prove or disprove statements related to the above definitions, properties, and theorems using techniques of mathematical argument (direct methods, indirect methods, constructing examples and counterexamples, induction, etc.).
Audience: Both Grad & Undergrad

6. Convey arguments using English and appropriate mathematical terminology, notation and grammar.
Audience: Both Grad & Undergrad

7. Identify applications of course content in current areas of research.
Audience: Graduate

MATH 551 – ELEMENTARY TOPOLOGY
3 credits.

Topological spaces, connectedness, compactness, separation axioms, metric spaces.
Requisites: (MATH 234 or 375), (MATH 320, 340, 341, or 375), and (MATH 341, 375, 421, 467, or 521), or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall and state the formal definitions of the mathematical objects and their properties used in elementary point set topology (e.g., abstract topological spaces, metric spaces, Hausdorff spaces, compact spaces, etc.).
Audience: Both Grad & Undergrad

2. Use such definitions to argue that a mathematical object does or does not have the condition of being a particular type or having a particular property (e.g., connected, compact Hausdorff).
Audience: Both Grad & Undergrad

3. Recall and state the standard theorems of point set topology (e.g., Extension theorems, Tychnoff Theorem, etc.) and recall the arguments for these theorems and the underlying logic of their proofs.
Audience: Both Grad & Undergrad

4. Use such theorems in the context of longer arguments by examining their premises (e.g., proving a map is a homeomorphism).
Audience: Both Grad & Undergrad

5. Prove or disprove statements related to the above definitions, properties, and theorems using techniques of mathematical argument (direct methods, indirect methods, constructing examples and counterexamples, induction, etc.).
Audience: Both Grad & Undergrad

6. Convey arguments using English and appropriate mathematical terminology, notation and grammar.
Audience: Both Grad & Undergrad

7. Identify applications of course content in areas of modern research.
Audience: Graduate

MATH 552 – ELEMENTARY GEOMETRIC AND ALGEBRAIC TOPOLOGY
3 credits.

Introduction to algebraic topology. Emphasis on geometric aspects, including two-dimensional manifolds, the fundamental group, covering spaces, basic simplicial homology theory, the Euler-Poincare formula, and homotopy classes of mappings.
Requisites: (MATH 551 and 541) or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recall and state the formal definitions of the mathematical objects and their properties used in algebraic topology (e.g., covering spaces, universal covering spaces, fundamental group, CW-complexes, closed oriented surfaces, homology, euler characteristic, etc.).
Audience: Both Grad & Undergrad

2. Use such definitions to argue that a mathematical object does or does not have the condition of being a particular type or having a particular property (e.g., a set is simply connected, two sets are homotopic, etc.).
Audience: Both Grad & Undergrad

3. Recall and state the standard theorems of algebraic topology (e.g., the classification of closed oriented surfaces, etc.), and recall the arguments for these theorems and the underlying logic of their proofs.
Audience: Both Grad & Undergrad

4. Use such theorems in the context of longer arguments by examining their premises.
Audience: Both Grad & Undergrad

5. Prove or disprove statements related to the above definitions, properties, and theorems using techniques of mathematical argument (direct methods, indirect methods, constructing examples and counterexamples etc.).
Audience: Both Grad & Undergrad

6. Convey arguments using English and appropriate mathematical terminology, notation and grammar.
Audience: Both Grad & Undergrad

7. Identify applications of course content in current areas of research.
Audience: Graduate

MATH 561 – DIFFERENTIAL GEOMETRY
3 credits.

Theory of curves and surfaces by differential methods.
Requisites: (MATH 320, 340, 341, or 375) and (MATH 322, 376, 421, or 521) or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recall and state the formal definitions of the mathematical objects and their properties used in differential geometry in n-dimensional real space (e.g., vector spaces and inner product spaces, manifolds, Riemannian metric on a manifold, arc length, curvature, torsion, geodesic curves, etc.).
Audience: Both Grad & Undergrad

2. Recall and state the standard theorems of differential geometry (e.g., Frenet-Serret equations, Hopf winding number theorem, four vertex theorem for convex curves, etc.), and recall the arguments for these theorems and the underlying logic of their proofs.
Audience: Both Grad & Undergrad

3. Compute various quantities related to curves and surfaces in the n-dimensional real space using the definitions and theorems (e.g., the fundamental forms, arc length, curvature, total derivative, etc.).
Audience: Both Grad & Undergrad

4. Use the covered theorems in the context of longer arguments by examining their premises (e.g., arguing paths are geodesics, applying the inverse function theorem to show a level set is a manifold, etc.).
Audience: Both Grad & Undergrad

5. Prove or disprove statements related to the above definitions, properties, and theorems using techniques of mathematical argument (direct methods, indirect methods, constructing examples and counterexamples, induction, etc.).
Audience: Both Grad & Undergrad

6. Convey arguments using English and appropriate mathematical terminology, notation and grammar.
Audience: Both Grad & Undergrad

7. Identify applications of course content in current areas of research.
Audience: Graduate

MATH 567 – MODERN NUMBER THEORY
3 credits.

A course in number theory covering fundamentals and modern applications in topics of recent interest: Modular arithmetic, quadratic reciprocity, arithmetic functions, zeta function, Diophantine equations, transcendental numbers, Roth's theorem, continued fractions, and the circle method. Optional material from probability including random matrix theory.
Requisites: MATH 541 or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Honors - Honors Optional (%)
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recall and state the formal definitions of the mathematical objects and their properties used in the field of Number Theory (e.g., congruence, quadratic residue, arithmetic function, elliptic curves, etc.).
Audience: Both Grad & Undergrad

2. Use such definitions to argue that a mathematical object does or does not have the condition of being a particular type or having a particular property (e.g., a number is transcendental, a continued fraction is positive, etc.).
Audience: Both Grad & Undergrad

3. Recall and state the standard theorems of number theory. (e.g., quadratic reciprocity, Roth's theorem, etc.). Moreover, the student will be able to recall the arguments for these theorems and the underlying logic of their proofs.
Audience: Both Grad & Undergrad

4. Use such theorems in the context of longer arguments by examining their premises (e.g., Applying the euclidean algorithm to show that rational numbers have a finite continued fraction expansion , etc.)
Audience: Both Grad & Undergrad

5. Prove or disprove statements related to the above definitions, properties, and theorems using techniques of mathematical argument (direct methods, indirect methods, constructing examples and counterexamples, induction, etc.).
Audience: Both Grad & Undergrad

6. Convey arguments using English with appropriate mathematical terminology and notation.
Audience: Both Grad & Undergrad

7. Identify applications of course content in areas of modern research.
Audience: Graduate

MATH 570 – FUNDAMENTALS OF SET THEORY
3 credits.

Introduces the basic concepts of Set Theory including: Set-theoretical paradoxes and means of avoiding them, sets, relations, functions, orders and well-orders, proof by transfinite induction and definitions by transfinite recursion, cardinal and ordinal numbers and their arithmetic, construction of the real numbers, the axiom of choice and its consequences.
Requisites: (MATH 234 and 467) or (MATH 341, 375, 421 or 521) or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall and state the formal definitions of the mathematical objects and their properties used in set theory (e.g., sets, power sets, cardinality, ordinals, Zermelo-Fraenkel Axiom System etc.).
Audience: Both Grad & Undergrad

2. Use such definitions to argue that sets do or do not have the condition of a particular property (e.g., that a set is countable, enumerable, well ordered, etc.).
Audience: Both Grad & Undergrad

3. Describe the role of the axiom system of Zermelo-Fraenkel set theory.
Audience: Both Grad & Undergrad

4. Recall and state the standard theorems of set theory (e.g., the Axiom of Choice, Zorn's Lemma, the Well-ordering Theorem, construction of the real numbers from the natural numbers, etc.) and recall the arguments for these theorems and the underlying logic of their proofs.
Audience: Both Grad & Undergrad

5. Prove or disprove statements related to the above definitions, properties, and theorems using techniques of mathematical argument (direct methods, indirect methods, constructing examples and counterexamples, induction, etc.).
Audience: Both Grad & Undergrad

6. Convey arguments using English and appropriate mathematical terminology, notation and grammar.
Audience: Both Grad & Undergrad

7. Identify applications of course content in areas of modern research.
Audience: Graduate

MATH/PHILOS 571 – MATHEMATICAL LOGIC
3 credits.

Basics of logic and mathematical proofs; propositional logic; first order logic; undecidability.
Requisites: (MATH 234 or 375), (MATH 320, 340, 341, or 375), and (MATH 341, 375, 421, 467, or 521), or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Recall and state the formal definitions of the first-order logic and their properties used in formal logic (e.g., truth assignments, syntax, semantics, theories, models, etc.).
Audience: Both Grad & Undergrad

2. Use such definitions to argue certain objects do or do not have the condition or property (e.g., decidability, compactness, undecidability, etc.).

Audience: Both Grad & Undergrad

3. Recall and state the standard theorems of logic. (e.g., Soundness and Completeness Theorems, the Compactness Theorem, Godel's Incompleteness Theorem, etc.) and recall the arguments for these theorems and the underlying logic of their proofs.
Audience: Both Grad & Undergrad

4. Use concepts from logic in the context of larger arguments (e.g., nonstandard models of arithmetic, etc.).
Audience: Both Grad & Undergrad

5. Prove or disprove statements related to the above definitions, properties, and theorems using techniques of mathematical argument (direct methods, indirect methods, constructing examples and counterexamples, induction, etc.).
Audience: Both Grad & Undergrad

6. Convey arguments using English and appropriate mathematical terminology, notation and grammar.
Audience: Both Grad & Undergrad

7. Identify applications of course content in areas of modern research .
Audience: Graduate

MATH 607 – TOPICS IN MATHEMATICS STUDY ABROAD
1-5 credits.

Credit is awarded to students who have completed an appropriate math course abroad at the advanced level having no direct equivalence within the math department offerings. The study abroad course must be pre-approved by the math department.
Requisites: None
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

MATH/B M I/BIOCHEM/BMOLCHEM 609 – MATHEMATICAL METHODS FOR SYSTEMS BIOLOGY
3 credits.

Provides a rigorous foundation for mathematical modeling of biological systems. Mathematical techniques include dynamical systems and differential equations. Applications to biological pathways, including understanding of bistability within chemical reaction systems, are emphasized.
Requisites: MATH 415 and (MATH 320, 340, 341, or 375) or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall and state the formal definitions of the mathematical objects and their properties in systems biology (e.g., reaction networks, reaction rate equations, mass-action kinetics models, detailed balanced and complex balanced systems, Lyapunov functions, etc.).
Audience: Both Grad & Undergrad

2. Use such definitions to argue that a mathematical object does or does not have the condition of being a particular type or having a particular property (e.g., reversible, weakly reversible, mass-action, detailed balanced, complex balanced, globally stable, oscillatory, persistent, permanent, etc.).
Audience: Both Grad & Undergrad

3. Recall and state the standard theorems of the field (e.g., the Horn-Jackson theorem, the deficiency zero theorem, theorems on characterization of mass-action systems, theorems on persistence and permanence, theorems on dynamical equivalence, etc.) and recall the arguments for these theorems and the underlying logic of their proofs.
Audience: Both Grad & Undergrad

4. Construct mathematical arguments related to the above definitions, properties, and theorems, including the construction of examples and counterexamples.
Audience: Both Grad & Undergrad

5. Convey arguments using English and appropriate mathematical terminology, notation and grammar.
Audience: Both Grad & Undergrad

6. Model real biological systems by means of systems of differential equations, and be able to use software (such as Matlab) for visualization of their dynamics. Example models could include: (i) Enzymes, substrates and saturating kinetics, (ii) Glycolytic oscillations, (iii) Cell cycle control, budding yeast cell cycle models, (iv) Activator-inhibitor and positive feedback systems.
Audience: Both Grad & Undergrad

7. Identify applications of course content in current areas of research.
Audience: Graduate

MATH 616 – DATA-DRIVEN DYNAMICAL SYSTEMS, STOCHASTIC MODELING AND PREDICTION
3 credits.

An introduction to data-driven dynamical systems, including mathematical theory, methodology, numerical algorithms, applications and the use of a programming language to solve related coding problems. Topics include stochastic toolkits for dynamical systems and data science, linear Gaussian processes, nonlinear stochastic systems, elementary stochastic differential equations, data assimilation, parameter estimation, forecasting and prediction.
Requisites: (MATH 320, 340, 341 or 375) and (STAT/MATH 309, 431, STAT 311 or MATH 531) and (MATH 322, 341, 375, 421, or 467), graduate/professional standing, or declared in Mathematics VISP
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Conduct numerical simulations of stochastic dynamical systems and implement data assimilation methods.
Audience: Both Grad & Undergrad

2. Analyze data from a stochastic dynamical system and characterize the system's properties in terms of its statistics, such as mean, variance, and autocorrelation function.
Audience: Both Grad & Undergrad

3. Calculate analytical formulas for the solutions of discrete-time stochastic processes and stochastic differential equations.
Audience: Both Grad & Undergrad

4. Recall and state the basic properties of Brownian motion and the Wiener process.
Audience: Both Grad & Undergrad

5. Illustrate the basic properties of Brownian motion and the Wiener process using numerical simulations.
Audience: Both Grad & Undergrad

6. Estimate the parameters of a dynamical system using simulated data.
Audience: Both Grad & Undergrad

7. Predict the future evolution of a dynamical system using analytical formulas and numerical simulations.
Audience: Both Grad & Undergrad

8. Assess the accuracy of a prediction in terms of different definitions of error and uncertainty.
Audience: Both Grad & Undergrad

9. Identify applications of course content in areas of modern research.
Audience: Graduate

MATH 619 – ANALYSIS OF PARTIAL DIFFERENTIAL EQUATIONS
3 credits.

A rigorous introduction to the theoretical underpinnings of the basic methods and techniques in the modern theory of PDEs. It is aimed at math majors, but will also be useful to some students in the sciences, engineering and economics who feel the need for a deeper understanding of the theory of PDEs. The emphasis is on the exposure to a number of different methods of solution of PDEs and their connection to physical phenomena modeled by the equations. The goals include both learning to solve some basic types of PDEs as well as to understand the motivation behind and inner workings of the techniques involved.
Requisites: (MATH 322, 421, or 521) and (MATH 319, 320, 376, 415, or 519) or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

MATH 621 – INTRODUCTION TO MANIFOLDS
3 credits.

Integration in Euclidean spaces, change of variables, multilinear algebra, vector fields and differential forms, manifolds and tangent spaces, integration on manifolds, Stokes theorem. Classical vector analysis. Cauchy integral theorem.
Requisites: MATH 522, (MATH 521 and 561), graduate/professional standing, or declared in Mathematics VISP
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Use the techniques of multilinear algebra and apply them to differential forms in Euclidean space and on abstract differentiable manifolds. This includes being able to compute with the exterior derivative.
Audience: Both Grad & Undergrad

2. Identify and/or construct differentiable manifolds. This includes being able to identify spaces as differentiable manifolds and to endow abstract topological spaces with differentiable manifold structures.
Audience: Both Grad & Undergrad

3. Extend calculus concepts from Euclidean space in order to apply them to abstract differentiable manifolds. This includes being able to identify and work with differentiable maps between differentiable manifolds in computations and proofs
Audience: Both Grad & Undergrad

4. Use the essential definitions and theorems from calculus on manifolds in the context of computations and proofs. This includes taking Lie derivatives of vector fields on differentiable manifolds, computing integrals of curves, integrating differential forms, and Stokes' theorem.
Audience: Both Grad & Undergrad

5. Identify applications of course content in current areas of research.
Audience: Graduate

MATH 623 – COMPLEX ANALYSIS
3 credits.

Elementary functions of a complex variable; conformal mapping; complex integrals; the calculus of residues.
Requisites: MATH 321 or 521 or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall and state the formal definitions of the mathematical objects and their properties used in complex analysis (e.g., principle branches, conjugates, holomorphic and analytic functions, etc.).
Audience: Both Grad & Undergrad

2. Use such definitions to argue that a mathematical object does or does not have the condition of being a particular type or having a particular property (e.g., that a function is complex differentiable, that an infinite product converges, classification of singularities, etc.).
Audience: Both Grad & Undergrad

3. Recall and state the standard theorems of complex analysis (e.g., Cauchy's Integral formula, the maximum modulus principle, the Riemann mapping Theorem), and recall the arguments for these theorems and the underlying logic of their proofs.
Audience: Both Grad & Undergrad

4. Use such theorems in the context of longer arguments by examining their premises (e.g., computation of real integrals using path integration techniques, computation of residues of meromorphic functions, that a given function has an analytic continuation, etc.).
Audience: Both Grad & Undergrad

5. Prove or disprove statements related to the above definitions, properties, and theorems using techniques of mathematical argument (direct methods, indirect methods, constructing examples and counterexamples, induction, etc.).
Audience: Both Grad & Undergrad

6. Convey arguments in oral and written forms using English and appropriate mathematical terminology, notation and grammar.
Audience: Both Grad & Undergrad

7. Identify applications of course content in current areas of research.
Audience: Graduate

MATH 627 – INTRODUCTION TO FOURIER ANALYSIS
3 credits.

Fourier series and integrals, and their applications.
Requisites: MATH 521 or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Recall and state the formal definitions of the mathematical objects and their properties relevant to the analysis of Fourier series, the Fourier transform, and their applications in mathematics (e.g., convergence, divergence, convolution, Lipschitz property, Schwartz space, etc.).
Audience: Both Grad & Undergrad

2. Use the above definitions to prove if a mathematical construct does or does not have the condition of being a particular mathematical object or having a particular property used in Fourier analysis (e.g., that a sequence is equidistributed, that a set of functions is uniformly bounded, etc.).
Audience: Both Grad & Undergrad

3. Recall and state the standard theorems and results of elementary Fourier analysis (e.g., the Fourier series of an integrable function converges to that function on its domain, etc.), and recall the arguments for these results and the underlying logic of their proofs.
Audience: Both Grad & Undergrad

4. Use the above theorems in the context of longer arguments by examining their premises (e.g., verifying integrability of a function in order to conclude that its Fourier series converges, etc.).
Audience: Both Grad & Undergrad

5. Prove or disprove statements related to the above definitions, properties, and theorems using techniques of mathematical argument (direct methods, indirect methods, constructing examples and counterexamples, induction, etc.).
Audience: Both Grad & Undergrad

6. Convey arguments in oral and written forms using English and appropriate mathematical terminology, notation and grammar.
Audience: Both Grad & Undergrad

7. Identify applications of course content in current areas of research.
Audience: Graduate

MATH 629 – INTRODUCTION TO MEASURE AND INTEGRATION
3 credits.

Lebesgue integral and measure, abstract measure and integration, differentiation, spaces of integrable functions.
Requisites: MATH 522 or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recall and state the formal definitions of the mathematical objects and their properties used in measure theory (e.g., measures and measurability, Lebesgue integral, absolute continuity, product measures, Lp spaces, etc.).
Audience: Both Grad & Undergrad

2. Use such definitions to argue that a mathematical object does or does not have the condition of being a particular type or having a particular property (e.g., that a measure is absolutely continuous with respect to another one, that a sequence of functions converge almost everywhere or in measure, etc.).
Audience: Both Grad & Undergrad

3. Recall and state the standard theorems of measure theory (e.g., Fatou's Lemma, Egoroff's theorem, Hahn decomposition theorem, monotone convergence theorem, dominated convergence theorem, Holder's inequality, etc.), and recall the arguments for these theorems and the underlying logic of their proofs.
Audience: Both Grad & Undergrad

4. Prove or disprove statements related to the above definitions, properties, and theorems using techniques of mathematical argument (direct methods, indirect methods, constructing examples and counterexamples, etc.).
Audience: Both Grad & Undergrad

5. Convey arguments in oral and written forms using English and appropriate mathematical terminology, notation and grammar.
Audience: Both Grad & Undergrad

6. Identify applications of course content in current areas of research.
Audience: Graduate

MATH/I SY E/OTM/STAT 632 – INTRODUCTION TO STOCHASTIC PROCESSES
3 credits.

Topics include discrete-time Markov chains, Poisson point processes, continuous-time Markov chains, and renewal processes. Applications to queueing, branching, and other models in science, engineering and business.
Requisites: (STAT/MATH 431, 309, STAT 311 or MATH 531) and (MATH 320, 340, 341, 375, 421 or 531) or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall and state the formal definitions of the mathematical objects and their properties for stochastic processes (e.g., discrete space Markov chains, Poisson processes, renewal processes, branching processes, etc.).
Audience: Both Grad & Undergrad

2. Use such definitions to argue that a mathematical object does or does not have the condition of being a particular type or having a particular property (e.g., irreducibility, aperiodicity, recurrence, transience, the Markov property, etc.).
Audience: Both Grad & Undergrad

3. Recall and state the standard theorems of stochastic processes. (e.g., laws of large numbers for Markov chains, existence of limiting/stationary distributions, law of large numbers for renewal processes, etc.) and recall the arguments for these theorems and the underlying logic of their proofs.

Audience: Both Grad & Undergrad

4. Construct mathematical arguments related to the above definitions, properties, and theorems, including the construction of examples and counterexamples.
Audience: Both Grad & Undergrad

5. Convey arguments in oral and written forms using English and appropriate mathematical terminology, notation and grammar.
Audience: Both Grad & Undergrad

6. Model simple real life situations by means of discrete-space stochastic processes and calculate probabilities associated with those processes.
Audience: Both Grad & Undergrad

7. Identify applications of course content in current areas of research.
Audience: Graduate

MATH 635 – AN INTRODUCTION TO BROWNIAN MOTION AND STOCHASTIC CALCULUS
3 credits.

Presents an introduction to Brownian motion and its application to stochastic calculus. Sample path properties of Brownian motion, Ito stochastic integrals, Ito's formula, stochastic differential equations and properties of their solutions, and various applications will be included.
Requisites: (MATH 521 and STAT/I SY E/MATH/OTM 632) or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Recall and state the formal definitions of the mathematical objects and their properties used in stochastic calculus (e.g., martingale, stopping time, filtration, Brownian motion, stochastic integral etc.).
Audience: Both Grad & Undergrad

2. Use such definitions to argue that a mathematical object does or does not have the condition of being a particular type or having a particular property (e.g., checking if a discrete or continuous time process is a martingale, using characteristic functions to characterize a distribution, identifying different methods of convergence, etc.).
Audience: Both Grad & Undergrad

3. Recall and state the standard theorems of stochastic calculus. (e.g., martingale convergence, optional stopping theorem, existence results related to the Ito integral, Ito's formula, etc.), and recall the arguments for these theorems and the underlying logic of their proofs.
Audience: Both Grad & Undergrad

4. Solve simple stochastic differential equations.
Audience: Both Grad & Undergrad

5. Convey arguments in oral and written forms using English and appropriate mathematical terminology, notation and grammar.
Audience: Both Grad & Undergrad

6. Model simple financial situations by means of stochastic processes and calculate probabilities associated with those processes (e.g., the Black-Scholes formula).
Audience: Both Grad & Undergrad

7. Identify applications of course content in current areas of research.
Audience: Graduate

MATH 681 – SENIOR HONORS THESIS
3 credits.

Individual study for honors math majors writing a thesis in mathematics.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025

MATH 682 – SENIOR HONORS THESIS
3 credits.

Individual study for honors math majors writing a thesis in mathematics.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025

MATH 691 – UNDERGRADUATE THESIS
2-4 credits.

Individual study for students writing a thesis in mathematics.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

MATH 692 – UNDERGRADUATE THESIS
2-4 credits.

Individual study for students writing a thesis in mathematics.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2018

MATH 698 — DIRECTED STUDY
1-3 credits.

Directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Recall and state the formal definitions of the mathematical objects and their properties used in an area of mathematics.

Audience: Both Grad & Undergrad

2. Use such definitions to argue that a mathematical object does or does not have the condition of being a particular type or having a particular property.
Audience: Both Grad & Undergrad

3. Recall and state the standard theorems of an area of mathematics and recall the arguments for these theorems and the underlying logic of their proofs.
Audience: Both Grad & Undergrad

4. Use such theorems in the context of longer arguments by examining their premises.
Audience: Both Grad & Undergrad

5. Prove or disprove statements related to the above definitions, properties, and theorems using techniques of mathematical argument (direct methods, indirect methods, constructing examples and counterexamples, induction, etc.).
Audience: Both Grad & Undergrad

6. Convey arguments using English and appropriate mathematical terminology, notation and grammar.
Audience: Both Grad & Undergrad

7. Identify applications of course content in areas of modern research.
Audience: Graduate

MATH 699 — DIRECTED STUDY
1-6 credits.

Directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MATH 703 — METHODS OF APPLIED MATHEMATICS 1
3 credits.

Study of the linear algebraic structure underlying discrete equilibrium problems. Boundary value problems for continous equilibria: Sturm-Liouville equations, Laplace's equation, Poisson's equation, and the equations for Stokes flow. Contour integration and conformal mapping. Applications of dynamics leading to initial value problems for ODEs and PDEs. Green's functions for ODEs and introduction to asymptotic methods for ODEs, e.g. WKB analysis. Separation of variables and eigenfunction expansions for linear PDEs. Examples from physics and engineering throughout. Knowledge of undergraduate linear algebra, analysis and complex analysis is strongly recommended.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

MATH 704 — METHODS OF APPLIED MATHEMATICS-2
3 credits.

Derivation, nature and solution of canonical partial differential equations of applied mathematics. Conservation laws, advection, diffusion. First order PDEs, characteristics, shocks. Traffic flow, eikonal and Hamilton-Jacobi equations. Higher order PDEs: classification, Fourier analysis, well-posedness. Series solutions and integral transforms. Green's functions and distributions. Similarity solutions. Asymptotics of Fourier integrals. Laplace's method, stationary phase. Ship waves. Perturbation methods. Knowledge of undergraduate linear algebra, analysis and complex analysis is strongly recommended.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

MATH 705 — MATHEMATICAL FLUID DYNAMICS
3 credits.

Advanced introduction to fluid dynamics. Basic concepts; elementary viscous flow; Navier-Stokes equations. Elementary airfoil theory; boundary layers. Vortex motion. Waves. Very viscous flow. Compressible flows. Instabilities, bifurcations, turbulence. Requires working knowledge of multivariate calculus, differential equations and mechanics.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

MATH/STAT 709 – MATHEMATICAL STATISTICS I
4 credits.

An introduction to measure theoretic probability, random variables, and high-dimensional statistics; conditional expectation, sufficiency, and unbiased estimation; methods of large sample theory including laws of large numbers and central limit theorems.
Requisites: Declared in Statistics MS, Statistics PhD, Biomedical Data Science PhD, Biomedical Data Science MS, or Statistics Doctoral Minor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define statistical estimation problems using rigorous mathematicallanguages
Audience: Graduate

2. Derive basic statistical properties of an estimator such as bias andvariance
Audience: Graduate

3. Analyze and compare different statistical estimators, and articulatethe strengths and weaknesses of each method
Audience: Graduate

4. Apply theoretical tools such as concentration inequalities to newstatistical problems in the form of mathematical proofs
Audience: Graduate

5. Articulate the distinctions between classical large-sample statisticaltheory and high-dimensional statistical theory, and critique recentstatistical research
Audience: Graduate

MATH/STAT 710 – MATHEMATICAL STATISTICS II
4 credits.

Estimation theory, efficiency, Neyman-Pearson theory of hypothesis testing, confidence regions, decision theory, likelihood ratio theory, current research topics in mathematical statistics.
Requisites: STAT/MATH 709
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Define and distinguish different notions of optimality in point estimation, hypothesis testing, and confidence sets.
Audience: Graduate

2. Apply standard techniques to derive optimal estimators, hypothesis tests, and confidence sets.
Audience: Graduate

3. Study statistical inference procedures for parametric and non-parametric models.
Audience: Graduate

4. Investigate asymptotic analysis of point estimators, hypothesis tests, and confidence sets.
Audience: Graduate

5. Understand and critique current research in mathematical statistics.
Audience: Graduate

MATH/COMP SCI 714 – METHODS OF COMPUTATIONAL MATHEMATICS I
3 credits.

Development of finite difference methods for hyperbolic, parabolic and elliptic partial differential equations. Analysis of accuracy and stability of difference schemes. Direct and iterative methods for solving linear systems. Introduction to finite volume methods. Applications from science and engineering. Students are strongly encouraged to have programming skills (e.g. COMP SCI 200) and some undergraduate numerical analysis (e.g. MATH/COMP SCI 514 or COMP SCI 412), analysis and differential equations (e.g. MATH 322 and MATH 521) and linear algebra (e.g. MATH 341).
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

MATH/COMP SCI 715 – METHODS OF COMPUTATIONAL MATHEMATICS II
3 credits.

Introduction to spectral methods (Fourier, Chebyshev, Fast Fourier Transform), finite element methods (Galerkin methods, energy estimates and error analysis), and mesh-free methods (Monte-Carlo, smoothed-particle hydrodynamics) for solving partial differential equations. Applications from science and engineering. Applications from science and engineering. Students are strongly encouraged to have programming skills (e.g. COMP SCI 200), undergraduate numerical analysis (e.g. MATH/COMP SCI 514 or COMP SCI 412), analysis (MATH 322 and 521) and linear algebra (e.g. MATH 341 or equiv.)
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

MATH 716 – ORDINARY DIFFERENTIAL EQUATIONS
3 credits.

Existence, uniqueness, and continuous dependence theorems, linear systems, stability, singular points, and boundary value problems. Qualitative behavior of nonlinear equations, stability, Lyapunov functions, invariant manifolds, bifurcation theory, periodic orbits, and connecting orbits.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

MATH 717 – STOCHASTIC COMPUTATIONAL METHODS
3 credits.

Introduction to computational methods that use stochastic algorithms and/or methods that are applied to random or stochastic mathematical problems. The main emphasis will be placed on learning practical tools, while some aspects of theoretical foundations will also be covered (e.g., basic error analysis for numerical solution of stochastic differential equations (SDEs), and basic convergence of Monte Carlo methods). Topics include Monte Carlo methods, Bayesian inference and Bayesian sampling, simulation of Markov chains, numerical analysis for SDEs, data assimilation / state estimation, stochastic optimization methods and random sketching. Applications to science, engineering, finance, data science, and other practical problems also included.
Requisites: Graduate/professional standing or declared in Mathematics Visiting International Student Program (graduate or dissertator)
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Implement a range of Monte Carlo solvers.
Audience: Graduate

2. Write clear and well-reasoned mathematical arguments that explain the convergence of Monte Carlo methods.
Audience: Graduate

3. Implement stochastic optimization methods, and understand the basic proofs for convergence.
Audience: Graduate

4. Explain and implement a range of data assimilation methods.
Audience: Graduate

5. Apply the Monte Carlo solvers, stochastic optimization solvers and data assimilation solvers to practical problems.
Audience: Graduate

6. Conduct error analysis for computational stochastic differential equations.
Audience: Graduate

MATH 718 – RANDOMIZED LINEAR ALGEBRA AND APPLICATIONS
3 credits.

Random solvers have been playing increasingly crucial roles in the modern computational tasks. The recent breakthroughs in applied and computational linear algebra that incorporate techniques of randomization have proven to be of great importance in modern applied math, computational sciences and data science, such as inverse problems, machine learning and scientific computing. The guiding principle is that one may greatly reduce computational and storage expenses at the cost of a small probability of failure. Systematic study of these modern methods of randomized linear algebra solvers will be provided, presenting mathematical backgrounds, algorithms, and concrete applications. Core theoretical topics include randomized Kaczmarz and its generalization to stochastic gradient descent, randomized singular value decomposition, random sketching, matrix completion, and compressive sensing, and corresponding applications.
Requisites: Graduate/professional standing or declared in Mathematics VISP (graduate or dissertator)
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Implement, in a computer language, the principal linear algebra solvers, namely, matrix completion, randomized SVD, matrix sketching, and the Kaczmarz algorithm.
Audience: Graduate

2. Identify the conditions, assumptions, and effectiveness of the principal linear algebra solvers.
Audience: Graduate

3. Reproduce the proof strategies for effectiveness of these algorithms and summarize the main parts of these proofs.
Audience: Graduate

4. Apply random linear algebra solvers to problems from image reconstruction, inverse problems and topic modeling.
Audience: Graduate

5. Model problems from the physical or social sciences in matrix form and identify regimes to apply linear algebra solvers.
Audience: Graduate

MATH 719 – PARTIAL DIFFERENTIAL EQUATIONS
3 credits.

Classical theory of partial differential equations, together with an introduction to the modern theory based on functional analysis. Familiarity with basic measure theory (e.g. MATH 629 or 721) or concurrent registration in MATH 721 is strongly recommended.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall and state the basic theorems regarding solutions to the transport, Laplace, heat, and wave equations.
Audience: Graduate

2. Use the above theorems to analyze solutions to first and second order linear partial differential equations of the above types, with novel initial data or boundary values.
Audience: Graduate

3. Apply basic tools for studying first order nonlinear partial differential equations to analyze conservation laws and equations of Hamilton-Jacobi type.
Audience: Graduate

4. Recall and state the definitions and basic theorems of Sobolev spaces.
Audience: Graduate

5. Analyze novel second order elliptic equations by establishing existence, regularity, and maximum principles of solutions, given initial or boundary data with various properties.
Audience: Graduate

MATH 720 – PARTIAL DIFFERENTIAL EQUATIONS
3 credits.

Linear elliptic, parabolic and hyperbolic equations, continuing with calculus of variations and then nonlinear initial value problems.
Requisites: Graduate/professional standing or declared in Mathematics VISP (graduate or dissertator)
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze notions of weak solutions to linear and nonlinear initial value problems defined by partial differential equations of first-order, elliptic, parabolic, and hyperbolic types.
Audience: Graduate

2. Analyze proof methods to establish uniqueness and existence of weak solutions to partial differential equations.
Audience: Graduate

3. Investigate regularity of weak solutions via various different viewpoints.
Audience: Graduate

4. Illustrate the general theory by applying it to concrete examples.
Audience: Graduate

5. Investigate parameter dependence of weak solutions to both linear and nonlinear PDE
Audience: Graduate

MATH 721 – A FIRST COURSE IN REAL ANALYSIS
3 credits.

Real analysis concentrating on measures, integration, and differentiation and including an introduction to Hilbert spaces. Knowledge of undergraduate analysis (e.g. the sequence MATH 521 and 522) is strongly recommended.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

MATH 722 – COMPLEX ANALYSIS
3 credits.

The basic theory of functions of one complex variable including Cauchy formula, singularities and residues, meromorphic functions, conformal mappings, harmonic functions, approximation and the nonhomogeneous d-bar equation. Requires knowledge of undergraduate analysis (e.g. the sequence MATH 521 and 522).
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

MATH 725 – A SECOND COURSE IN REAL ANALYSIS
3 credits.

Continuation of MATH 721. An introduction to further topics in real analysis: Banach spaces, Fourier transforms, elements of distribution theory, and applications.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

MATH/COMP SCI/I SY E/STAT 726 – NONLINEAR OPTIMIZATION I
3 credits.

Theory and algorithms for nonlinear optimization, focusing on unconstrained optimization. Line-search and trust-region methods; quasi-Newton methods; conjugate-gradient and limited-memory methods for large-scale problems; derivative-free optimization; algorithms for least-squares problems and nonlinear equations; gradient projection algorithms for bound-constrained problems; and simple penalty methods for nonlinearly constrained optimization. Students are strongly encouraged to have knowledge of linear algebra and familiarity with basic mathematical analysis.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

MATH/COMP SCI/I SY E 728 – INTEGER OPTIMIZATION
3 credits.

Introduces optimization problems over integers, and surveys the theory behind the algorithms used in state-of-the-art methods for solving such problems. Special attention is given to the polyhedral formulations of these problems, and to their algebraic and geometric properties. Applicability of Integer Optimization is highlighted with applications in combinatorial optimization. Key topics include: formulations, relaxations, polyhedral theory, cutting planes, decomposition, enumeration. Students are strongly encouraged to have knowledge of Linear Programming (e.g., MATH/COMP SCI/I SY E/STAT 525), including algorithms, duality and polyhedral theory.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe and explain the basics of polyhedral theory, which consists in the study of systems of linear inequalities both from an algebraic and a geometric point of view
Audience: Graduate

2. Define perfect formulations and identify what properties are desirable in an integer programming formulation of a problem
Audience: Graduate

3. Explain how valid inequalities can be used as cutting planes to strengthen integer programming formulations
Audience: Graduate

MATH/COMP SCI/I SY E 730 – NONLINEAR OPTIMIZATION II
3 credits.

Theory and algorithms for nonlinearly constrained optimization. Relevant geometric concepts, including tangent and normal cones, theorems of the alternative, and separation results. Constraint qualifications. Geometric and algebraic expression of first-order optimality conditions. Second-order optimality conditions. Duality. Nonlinear programming algorithms: merit functions and filters; interior-point, augmented Lagrangian, and sequential quadratic programming algorithms.
Requisites: STAT/COMP SCI/I SY E/MATH 726
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022

MATH/STAT 733 – THEORY OF PROBABILITY I
3 credits.

An introduction to measure theoretic probability and stochastic processes.Topics include foundations, independence, zero-one laws, laws of large numbers, convergence in distribution, characteristic functions, central limit theorems, random walks, conditional expectations. Familiarity with basic measure theory (e.g. MATH 629 or 721) or concurrent registration in MATH 721 is strongly recommended.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MATH/STAT 734 – THEORY OF PROBABILITY II
3 credits.

Possible topics include martingales, weak convergence of measures, introduction to Brownian motion.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

MATH 735 – STOCHASTIC ANALYSIS
3 credits.

Foundations of continuous time stochastic processes, semimartingales and the semimartingale integral, Ito's formula, stochastic differential equations, stochastic equations for Markov processes, application in finance, filtering, and control. The course relies on measure theoretic probability theory that can be reviewed at the beginning of the semester.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

MATH 740 – ENUMERATIVE COMBINATORICS/SYMMETRIC FUNCTIONS
3 credits.

Inclusion-exclusion principle, permutation statistics, sieve methods, unimodal sequences, posets, lattice theory, Mobius functions, generating functions, bases and transition matrices for symmetric functions, Young tableaux, plane partitions, polytopes, poset homology, Stanley-Reisner rings.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2020

MATH 741 – ABSTRACT ALGEBRA
3 credits.

Usually a study of finite groups and noncommutative rings. Group theoretic topics may include: permutation groups, Lagrange's theorem, Cauchy's theorem and the Sylow theorems, solvable and nilpotent groups. Ring theoretic topics may include: Artinian rings and modules, the Wedderburn theorems, the Hopkins-Levitzki theorem, the Jacobson radical and density theorem. The basic prerequisite for all advanced graduate courses in algebra. Familiarity with topics in undergraduate algebra (e.g. MATH 541 and 542) is strongly recommended.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

MATH 742 – ABSTRACT ALGEBRA
3 credits.

Continuation of MATH 741. Usually the study of commutative rings and fields. Ring theoretic topics may include: modules over PIDs, Noetherian rings and the Hilbert basis theorem, the Lasker-Noether theorem, the Krull intersection theorem, integrality and the Hilbert Nullstellensatz. Field theoretic topics may include: algebraic extensions, Galois theory, solvability of polynomials and classical constructability problems.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

MATH 746 – TOPICS IN RING THEORY
3 credits.

Will alternate between commutative and noncommutative ring theory. Commutative topics include localization; local rings; dimension theory; Cohen-Macaulay rings. Noncommutative topics include projective modules; injective modules; flat modules; homological and global dimension; Wedderburn and Goldie rings. Basic graduate algebra courses (e.g. MATH 741 and 742) are strongly recommended.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

MATH 747 – LIE ALGEBRAS
3 credits.

Lie algebras and matrix groups. Topics: tangent spaces; exponentials; Baker-Campbell-Hausdorff formula; (nilpotent, solvable, semisimple) Lie algebras; Engel's and Lie's theorems; Levi decomposition; Killing form; sl(2)-representations; root systems; Dynkin diagrams; Weyl groups; Cartan and Borel subalgebras; Serre's theorem. Basic graduate algebra courses (e.g. MATH 541 and 542 or MATH 741 and 742) are strongly recommended.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

MATH 748 – ALGEBRAIC NUMBER THEORY
3 credits.

A rigorous introduction to the arithmetic of number fields; algebraic integers, geometry of numbers, Dirichlet's Unit Theorem, ideal class groups, first case of Fermat's Last Theorem; prime decompositions, Galois automorphisms. Basic graduate algebra courses (e.g. MATH 741 and 742) are strongly recommended.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

MATH 749 – ANALYTIC NUMBER THEORY
3 credits.

An introduction to the Riemann zeta function and Dirichlet L-functions, and their application to topics such as the distribution of prime numbers and the arithmetic of quadratic fields. Familiarity with elementary number theory [such as MATH 567] and complex analysis [such as MATH 623] is strongly recommended.
Requisites: Graduate/professional standing or declared in Mathematics VISP (graduate or dissertator)
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Examine a range of mathematical proofs and identify underlyingprinciples and techniques.
Audience: Graduate

2. Write clear and well-reasoned mathematical arguments.
Audience: Graduate

3. Explain the methods used to establish the analytic continuation andfunctional equation of the Riemann zeta function and Dirichlet L-functions.
Audience: Graduate

4. Apply tools from complex analysis to analyze the distribution ofzeros of L-functions.
Audience: Graduate

5. Apply the above results on the zeros of L-functions to analyze thedistribution of prime numbers.
Audience: Graduate

MATH 750 – HOMOLOGICAL ALGEBRA
3 credits.

Topics include: complexes, cohomology, double complexes, spectral sequences; abelian categories, derived categories, derived functors; Tor and Ext, Koszul complexes; group cohomology; sheaf cohomology, hypercohomology. Basic graduate algebra courses (e.g. MATH 741 and 742) are strongly recommended
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

MATH 751 – INTRODUCTORY TOPOLOGY I
3 credits.

An introduction to algebraic and differential topology. Elements of homotopy theory, fundamental group, covering spaces. Differentiable manifolds, tangent vectors, regular values, transversality, examples of compact Lie groups. Homological algebra, chain complexes, cell complexes, singular and cellular homology, calculations for surfaces, spheres, projective spaces, etc. Familiarity with undergraduate algebra and topology MATH 541 or 551) is strongly recommended.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

MATH 752 – INTRODUCTORY TOPOLOGY II
3 credits.

Continuation of MATH 751. Cohomology, Universal Coefficient Theorem, Kunneth Formula, cup and cap products, applications to manifolds, orientability, Poincare Duality. Differential forms, integration and Stokes Theorem, De Rham Theorem. Calculations, further duality theorems, Euler class, Lefschetz Fixed-Point Theorem.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

MATH 753 – ALGEBRAIC TOPOLOGY I
3 credits.

Higher homotopy groups, elements of obstruction theory, fibrations, bundle theory, classifying spaces, applications to smooth mainfolds, differential forms, vector bundles, characteristic classes, cobordism, applications and calculations. Basic graduate topology courses (e.g. MATH 751 and 752) are strongly recommended.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

MATH 758 – INTRODUCTION TO ERGODIC THEORY AND DYNAMICS
3 credits.

An introduction to ergodic theory and dynamics covering fundamental theorems of ergodic theory, classical examples of one and two dimensional dynamics as well as applications to study of group actions.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze a range of mathematical proofs in discrete and continuous dynamical systems and recognize the underlying principles and techniques.
Audience: Graduate

2. Write clear and well-reasoned mathematical arguments to describe the long time behavior of measure preserving transformations.
Audience: Graduate

3. State the Birkhoff, von Neumann, and maximal ergodic theorems and reproduce their proofs.
Audience: Graduate

4. Apply fundamental ergodic theorems from classical dynamics to low-dimensional examples such as the circle rotation, interval exchange transformations, and geodesic and horocycle flows on two dimensional manifolds.
Audience: Graduate

5. Apply results in ergodic theory and dynamics to solve novel problems in geometric group theory and geometric topology.
Audience: Graduate

MATH 761 – DIFFERENTIABLE MANIFOLDS
3 credits.

Differentiable manifolds, vector bundles, implicit function theorem, submersions and immersions, vector fields and flows, foliations and Frobenius theorem, differential forms and exterior calculus, integration and Stokes' theorem, De Rham theory, Riemannian metrics. Familiarity with basic undergraduate analysis courses MATH 521 and 522 or MATH 621) is strongly recommended.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

MATH 763 – INTRODUCTION TO ALGEBRAIC GEOMETRY
3 credits.

Algebraic preliminaries, including local rings; valuation theory, and power series rings; geometry of algebraic varieties with emphasis on curves and surfaces.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

MATH 764 – INTRODUCTION TO ALGEBRAIC GEOMETRY
3 credits.

Continuation of MATH 763.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023

MATH 765 – DIFFERENTIAL GEOMETRY
3 credits.

Covers the metric properties of Riemannian manifolds. The following topics will be covered: Vector bundles and connections, Riemannian metrics, submanifolds and second fundamental form, first variation of arc length, geodesics, Hopf-Rinow theorem, second variation of arc length, Jacobi fields and index lemmas, Bonnet-Meyer theorem, Rauch comparison theorem, spaces of constant curvature, Hodge-de Rham theory. Familiarity with the topics in a differential manifolds course (e.g. MATH 761) is strongly recommended.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

MATH 770 – FOUNDATIONS OF MATHEMATICS
3 credits.

First-order logic syntax and semantics, Completeness and Compactness Theorems, Lowenheim-Skolem Theorem, computable and computably enumerable sets, Incompleteness Theorem, axioms of Zermelo-Fraenkel set theory with choice, ordinal and cardinal arithmetic.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

MATH 771 – SET THEORY
3 credits.

Martin's Axiom, Suslin and Aronszajn trees, diamond principle, absoluteness and reflection, constructible universe, and one-step forcing constructions. Familiarity with the topics in a basic Foundations course such as MATH 770 is strongly recommended.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

MATH 773 – COMPUTABILITY THEORY
3 credits.

Turing degree and jump, strong reducibilities, arithmetic hierarchy, index sets, simple and (hyper)hypersimple sets, easy forcing arguments in computability theory, finite and infinite injury, Friedberg-Muchnik and Sacks Splitting Theorem, Sacks Jump and Sacks Density Theorems, computable ordinals. Familiarity with the topics in a basic Foundations course such as MATH 770 is strongly recommended.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

MATH 776 – MODEL THEORY
3 credits.

Review of compactness and some consequences. Quantifier elimination with examples. The omitting types theorem. Categoricity. Baldwin-Lachlan theory. Strongly minimal and o-minimal theories. Saturated models. Morley's theorem. Familiarity with the topics in a basic Foundations course such as MATH 770 is strongly recommended.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022

MATH 790 – MASTERS THESIS
1-3 credits.

Work on a Master's thesis under the supervision of a faculty member.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 2 number of completions
Last Taught: Fall 2025

MATH 801 – TOPICS IN APPLIED MATHEMATICS
3 credits.

Selected topics in applied mathematics, applied analysis or numerical analysis and scientific computing.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

MATH/STAT 803 – EXPERIMENTAL DESIGN I
3 credits.

Summary of matrix algebra required, theory of estimable functions, incomplete blocks, balanced incomplete block designs, partially balanced incomplete block designs.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

MATH 807 – DYNAMICAL SYSTEMS
3 credits.

Treats the qualitative behavior of continuous and discrete dynamical systems, including Hamiltonian systems of differential equations. Typical topics include periodic and almost periodic solutions, the fixed point theorem of Poincare and Birkhoff, invariant curves and KAM theory, celestial mechanics, and chaotic behavior.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023

MATH 821 – ADVANCED TOPICS IN REAL ANALYSIS
3 credits.

Topics in partial differential equations and real analysis.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MATH 823 – ADVANCED TOPICS IN COMPLEX ANALYSIS
3 credits.

Several complex variables. Basic several complex variables or more special topics.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MATH 825 – SELECTED TOPICS IN FUNCTIONAL ANALYSIS
3 credits.

Topics will vary and may include spectral theory, nonlinear functional analysis or abstract harmonic analysis.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MATH 826 – ADVANCED TOPICS IN FUNCTIONAL ANALYSIS AND DIFFERENTIAL EQUATIONS
3 credits.

Topics in functional analysis and differential equations.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

MATH 827 – FOURIER ANALYSIS
3 credits.

Introduction to Fourier analysis in Euclidean spaces and related topics that may include singular and oscillatory integrals and trigonometric series.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

MATH 828 – ADVANCED TOPICS IN HARMONIC ANALYSIS
3 credits.

Continuation of MATH 827. Advanced topics in harmonic analysis.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

MATH/STAT 833 – TOPICS IN THE THEORY OF PROBABILITY
3 credits.

Advanced topics in probability and stochastic processes.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

MATH/E C E 842 – TOPICS IN APPLIED ALGEBRA
3 credits.

Applied topics with emhasis on algebraic constructions and structures. Examples include: algebraic coding theory; codes (algebraic-geometric, convolutional, low-density-parity-check, space-time); curve and lattice based cryptography; watermarking; computer vision (face recognition, multiview geometry).
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

MATH 843 – REPRESENTATION THEORY
3 credits.

Introduction to the representation theory of Lie groups and their combinatorics. Universal enveloping algebras, highest weight modules, induction, restriction, weights, characters, multiplicity formulas, tensor products, Shapovalov forms, filtrations, Kazhdan-Zetlin patterns, Littelmann paths.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

MATH 844 – ARITHMETIC GEOMETRY
3 credits.

An introduction to arithmetic geometry with emphasis on arithmetic of elliptic curves.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022

MATH 845 – CLASS FIELD THEORY
3 credits.

Introduction to local and global class field theory. Theory of local fields; local and global class field theory; complex multiplication, adeles, ideles, idele class characters, Tchebotarev's Density Theorem, CM elliptic curves, construction of class fields of imaginary quadratic fields.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

MATH 846 – TOPICS IN COMBINATORICS
3 credits.

Topics in algebraic combinatorics such as (but not limited to) association schemes, hypergeometric series, classical orthogonal polynomials, codes, lattices, invariant theory, alternating sign matrices and domino tilings, statistical mechanical models, 6j-symbols, buildings and diagram geometries, matroids.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023

MATH 847 – TOPICS IN ALGEBRA
3 credits.

Topics may include: Lie groups, algebraic groups, Chevalley groups, simple groups and associated geometries, group cohomology, group rings, Hopf algebras, enveloping algebras, quantum groups, infinite-dimensional Lie algebras, Hecke algebras, automorphic forms, Galois representations, zeta and L-functions, abelian varieties.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022

MATH 848 – ADVANCED TOPICS IN NUMBER THEORY
3 credits.

This is an advanced graduate topic course in number theory. Topics will vary. Target audience: Advanced graduate students in number theory, representation theory, and algebraic geometry.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MATH 849 – AUTOMORPHIC FORMS
3 credits.

Classical and/or modern theory of automorphic forms. Representation theory of GL(2).
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

MATH 851 – TOPICS IN GEOMETRIC TOPOLOGY
3 credits.

Advanced Topics in Geometric Topology.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

MATH 853 – TOPICS IN ALGEBRAIC TOPOLOGY
3 credits.

Topics in Algebraic Topology.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2022

MATH 856 – TOPICS IN DIFFERENTIAL TOPOLOGY
3 credits.

The theory of differential manifolds such as differential forms and de Rham theorem, cobordism groups, Lie groups, homogeneous spaces, fiber bundles, characteristic classes.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2021

MATH 858 – INTRODUCTION TO DYNAMICS ON MODULI SPACES
3 credits.

An introduction to ergodic theory and dynamics on the moduli space of translation surfaces with applications to counting problems in rational billiards and on flat surfaces. Covers dynamical techniques inspired by homogeneous dynamics including the use of Margulis functions to establish quantitative recurrence results; the use of random walks, inspired by work of Benoist and Quint, to prove measure rigidity statements; and the use of Zimmer's theory of the algebraic hull to prove finiteness results.
Requisites: Graduate/professional standing or declared in Mathematics VISP (graduate or dissertator)
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply fundamental dynamical techniques and ergodic theorems to counting problems, for instance counting periodic trajectories on a billiard table or cylinders on a translation surface using the Siegel-Veech theorem, Nevo's ergodic theorem, and/or the trapezoid method of Eskin-Masur.
Audience: Graduate

2. Write clear and well-reasoned mathematical arguments to describe the frequency with which a trajectory will recur to a neighborhood of its starting point using Margulis functions.
Audience: Graduate

3. State the Eskin-Mirzakhani classification of SL(2,R) ergodic invariant measures on moduli spaces of translation surfaces and describe the use of random walks and the exponential drift argument of Benoist-Quint to prove measure rigidity statements.
Audience: Graduate

4. Apply results in ergodic theory and dynamics to solve novel problems in geometric topology.
Audience: Graduate

5. Analyze a range of mathematical proofs in dynamical systems on translation surfaces and their moduli spaces and recognize the underlying principles and techniques.
Audience: Graduate

MATH 863 – ADVANCED TOPICS IN ALGEBRAIC GEOMETRY
3 credits.

Geometry of several complex variables; algebraic groups, abelian varieties; topological aspects of algebraic geometry, including sheaf theory and homology theory; advanced theory of local rings; intersection theory of algebraic varieties.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

MATH 865 – ADVANCED TOPICS IN GEOMETRY
3 credits.

Selected from advanced projective geometry, non-Euclidean geometry, Riemannian geometry, distance geometry and the geometry of convex surfaces, geometry of numbers.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

MATH 873 – ADVANCED TOPICS IN FOUNDATIONS
3 credits.

Advanced topics from all areas of mathematical logic.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

MATH/E C E/STAT 888 – TOPICS IN MATHEMATICAL DATA SCIENCE
1-3 credits.

Advanced topics in the mathematical foundations of data science
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply advanced mathematical concepts to solve a variety of data science problems
Audience: Graduate

2. Analyze rigorously the mathematical properties of methods used in data science
Audience: Graduate

MATH 900 – GRADUATE TEACHING SEMINAR
1 credit.

Focuses on theory and practical skills relevant to teaching mathematics at the graduate or post-secondary level.
Requisites: Declared in Mathematics PhD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Design lesson plans and curricular activities based on research-supported approaches to teaching mathematics at the university level.
Audience: Graduate

2. Develop individualized strategies to foster inclusive learning environments in the mathematics classroom.
Audience: Graduate

3. Critically evaluate a variety of teaching approaches through self and peer evaluations and examination of case studies.
Audience: Graduate

4. Apply best practices in teaching and learning in a low-stakes environment to practice and receive feedback on the performance of those skills.
Audience: Graduate

MATH 921 – SEMINAR IN ANALYSIS
1-3 credits.

Selected topics in Analysis.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MATH 941 – SEMINAR-ALGEBRA
1-3 credits.

Selected topics in Algebra.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MATH 951 – SEMINAR IN TOPOLOGY
1-3 credits.

Selected topics in Topology.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MATH 967 – SEMINAR IN NUMBER THEORY
1-3 credits.

Selected topics in Number Theory.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MATH 975 – SEMINAR-THE FOUNDATIONS OF MATHEMATICS
1-3 credits.

Selected topics in Mathematical Logic.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MATH 990 – READING AND RESEARCH
1-3 credits.

Reading and research in all areas of Mathematics.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MECHANICAL ENGINEERING (M E)

M E 1 – COOPERATIVE EDUCATION PROGRAM
1 credit.

Work experience which combines classroom theory with practical knowledge of operations to provide students with a background upon which to base a professional career in industry.
Requisites: Sophomore standing
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and respond appropriately to real-life engineering ethics cases relevant to co-op work
Audience: Undergraduate

2. Synthesize and apply appropriate technical education to real world technical work
Audience: Undergraduate

3. Communicate effectively in writing and speaking with a range of audiences in the workplace, including those without disciplinary expertise
Audience: Undergraduate

4. Develop professional and transferable habits like time management skills, collaborative problem-solving skills, and research skills for learning new information
Audience: Undergraduate

M E 201 – INTRODUCTION TO MECHANICAL ENGINEERING
3 credits.

An introduction to the field of mechanical engineering. Explore fundamental concepts in engineering including modeling, experimentation, analysis, and design. Career paths, ethics, oral and written technical communication, and shop safety are also explored.
Requisites: (Concurrent enrollment in MATH 113), MATH 114, 217, 221, or placement into MATH 221
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Measure an electrical signal using digital equipment
Audience: Undergraduate

2. Design a component to execute a specified task
Audience: Undergraduate

3. Construct a prototype based on a design
Audience: Undergraduate

4. Interpret test data from a test or experiment
Audience: Undergraduate

5. Solve a quantitative engineering problem using computer tools
Audience: Undergraduate

M E 231 – GEOMETRIC MODELING FOR DESIGN AND MANUFACTURING
3 credits.

Introduction to basic methods and fundamental concepts in geometric description and modeling of mechanical form, components, and assemblies. Topics include elements of descriptive geometry, engineering drawing standards, introduction to computer modeling, and geometric dimensioning and tolerancing (GDT). Lectures are reinforced by the laboratory experience where students operate modern commercial computer-aided design systems to model and to learn the basics of engineering communication, specification, and annotation.
Requisites: Declared in Biomedical, Biological Systems, Chemical, Civil, Computer, Electrical, Environmental, Geological, Industrial, Mechanical or Nuclear Engineering, Mat Sci and Engin, Engin Physics, Engineering Mechanics or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Model fully-constrained, three-dimensional engineering components using software
Audience: Undergraduate

2. Model the assembly of three-dimensional components
Audience: Undergraduate

3. Predict mechanical motion of a mechanism in an assembly
Audience: Undergraduate

4. Apply geometric dimensioning and tolerancing to components and assemblies
Audience: Undergraduate

5. Solve simple descriptive geometry and orthographic projection problems
Audience: Undergraduate

6. Apply engineering dimensions to a component and create engineering drawings
Audience: Undergraduate

7. Solve tolerance stack-up for parts/assemblies on an engineering drawing
Audience: Undergraduate

M E 273 – ENGINEERING PROBLEM SOLVING WITH EES
1 credit.

This course will serve the dual purpose of providing students with a high level of proficiency in the Engineering Equation Solver software as well as giving students the opportunity to solve high-level engineering problems using this tool. Students leaving the course will have a very solid understanding of equation solving software including advanced features that would not be covered in any other class on campus. Students will also get another opportunity to apply sophisticated computing tools to engineering applications.
Requisites: MATH 222 or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Solve engineering problems involving multiple, non-linear algebraic equations
Audience: Undergraduate

2. Analyze data to visualize time dependent solutions
Audience: Undergraduate

3. Apply numerical integration schemes to one-dimensional steady-state and transient problems
Audience: Undergraduate

4. Solve complex engineering problems using numerical methods
Audience: Undergraduate

M E 291 – UNDERGRADUATE MECHANICAL ENGINEERING PROJECTS
1-3 credits.

Individual lab projects under staff supervision.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply basic physical and mathematical principles to engineering research problems
Audience: Undergraduate

2. Communicate technical concepts to a diverse audience via verbal or written media
Audience: Undergraduate

M E 299 – INDEPENDENT STUDY
1-3 credits.

Directed study projects as arranged with instructor.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply basic physical and mathematical principles to complete an engineering project
Audience: Undergraduate

2. Apply basic mechanical engineering principles to complete an engineering project
Audience: Undergraduate

3. Communicate technical concepts to a diverse audience via verbal or written media
Audience: Undergraduate

M E/E M A 307 – MECHANICS OF MATERIALS LAB
1 credit.

Data processing, tension/compression tests, creep stress concentrations, fatigue, fracture, composite materials, combined stress, beam flexure, dynamic loads, buckling.
Requisites: (M E 306, E M A 303 or concurrent enrollment) or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a tensile test
Audience: Undergraduate

2. Calculate material properties from tensile test data
Audience: Undergraduate

3. Compare experimentally determined values to theoretical values
Audience: Undergraduate

4. Plot experimental data in an efficient and effective manner
Audience: Undergraduate

5. Identify sources of error and uncertainty in mechanical tests
Audience: Undergraduate

M E 310 – MANUFACTURING: POLYMER PROCESSING AND ENGINEERING
3 credits.

Introduction to all important aspects of polymer processing and engineering including polymeric materials, material properties, design and manufacturing considerations, processing methods, part performance, post-consumer recycling and upcycling, societal responsibilities and ethics, and various techniques for modeling in materials processing like dimensional analysis, design of experiments, analytical solutions, and computer simulation.
Requisites: (M E 306 or E M A 303) and M E 231
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the relationship among materials, properties, processes, and performance of plastics products
Audience: Undergraduate

2. Describe polymer processes, process selection, and optimal design and apply the basic terminology associated with the field of polymer processing and manufacturing
Audience: Undergraduate

3. Conduct experiments, analyze and interpret the data
Audience: Undergraduate

4. Identify techniques and decision making tools for increased quality, product safety, decreased cost, reduced cycle times and reliability and productivity
Audience: Undergraduate

5. Identify ethical and sustainability concerns that arise in manufacturing
Audience: Undergraduate

M E 311 – MANUFACTURING: METALS AND AUTOMATION
3 credits.

An introduction to processes for manufacturing metal parts, designing parts to make them easier to manufacture with these methods, and approaches for increasing productivity. Manufacturing automation, control, and metrology for increased safety, productivity, and part quality. Engineering economics for determining the cost of manufacturing a part.
Requisites: (M S & E 350, 351, or 352 or declared in Biological Systems Engineering: Machinery Systems BS), M E 231, and (M E 306 or E M A 303)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Take an engineering drawing or CAD model of a part and develop a production method for making the part
Audience: Undergraduate

2. Design with manufacturing in mind so their designs are inherently easy/economical to produce
Audience: Undergraduate

3. Improve manufacturing of products in terms of rates and quantities (w.r.t. profitability)
Audience: Undergraduate

4. Improve manufacturing of products in terms of quality and repeatability (w.r.t. part functionality)
Audience: Undergraduate

5. Describe the impact of manufacturing on the economy, society, and the environment
Audience: Undergraduate

6. Identify ethical concerns that arise in manufacturing
Audience: Undergraduate

M E 331 – COMPUTER-AIDED ENGINEERING
3 credits.

Introduction to the fundamentals of Computer Aided Engineering. Topics include mathematical and programmable methods for modeling and design of mechanical shapes and assemblies; shape processing for manufacturing, including NC machining and 3D printing; and computer-aided analysis of structural, thermal and other physical properties.
Requisites: M E 231, (MATH 320, 340, 341, or 375), (M E 306 or E M A 303 or concurrent enrollment), (M E 240 or E M A 202), and (COMP SCI 200, 220, 300, 301, 310, or placement into COMP SCI 300), or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. comprehend Computer Aided Design (CAD) concepts such as 3D transformations, parametric curves and surfaces
Audience: Undergraduate

2. comprehend Computer Aided Engineering (CAE) concepts such as structural loads, restraints, and finite element analysis
Audience: Undergraduate

3. demonstrate ability to use CAD software for designing curves and surfaces
Audience: Undergraduate

4. demonstrate ability to use CAE software for structural and thermal analysis
Audience: Undergraduate

5. demonstrate ability to use CAE software for optimizing mechanical components
Audience: Undergraduate

M E 340 – DYNAMIC SYSTEMS
3 credits.

Mathematical modeling and analysis of dynamic systems with mechanical, thermal, and fluid elements. Topics: time domain solutions, analog computer simulation, linearization techniques, block diagram representation, numerical methods and frequency domain solutions. Students are assumed to have basic competence in particle and planar rigid body dynamics, matrix and vector algebra, and linear differential equations.
Requisites: (M E 240 or E M A 202) and (MATH 319, 320, or 375), or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop linear differential equations for mechanical, electrical, fluid, and thermal systems
Audience: Undergraduate

2. Solve linear differential equations using Laplace transform methods and numerical techniques
Audience: Undergraduate

3. Derive transfer functions and evaluate the system output response for impulse, step, and ramp input
Audience: Undergraduate

4. Create frequency response diagrams for various first and second-order transfer functions
Audience: Undergraduate

5. Calculate steady-state error and PID characteristics for simple feedback control systems
Audience: Undergraduate

M E 342 – DESIGN OF MACHINE ELEMENTS
3 credits.

Analysis and design of machine elements and machines; loads, stresses, deflections, material selection, fatigue failure, finite elements; mechanical power transmission components including gearing, bearings, shafting, and frictional devices.
Requisites: (M E 306 or E M A 303) and (M E 331, B M E 201, or concurrent enrollment or declared in Biological Systems Engineering), or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Sketch failure envelopes for both brittle and ductile static failure theories and use these to estimate safety factor against potential static stress failure
Audience: Undergraduate

2. Calculate safety factor for high cycle fatigue of steel components
Audience: Undergraduate

3. Assess safety factor for straight cut spur gears against bending and surface fatigue failure
Audience: Undergraduate

4. Predict the failure rate of components based on property and load distributions and estimate the cost of these failures in terms of human life and limb
Audience: Undergraduate

5. Quantify specifications of belt and pulley systems for successful transmission of power between parallel shafts
Audience: Undergraduate

6. Quantify specifications of rolling element bearings for successful shaft support
Audience: Undergraduate

M E 349 – ENGINEERING DESIGN PROJECTS
3 credits.

Applied engineering design projects. Emphasis on design of practical mechanical engineering systems, devices and/or components. Two 2-hr labs and one lecture per week. Lecture focuses on the design process, creativity, patents, and other applications to practical problems.
Requisites: Declared in Mechanical Engineering with senior standing and M E 331
Repeatable for Credit: No
Last Taught: Spring 2020
Learning Outcomes: 1. Define an engineering problem as it relates to clients and stakeholders, and translate stakeholder requirements into engineering specifications
Audience: Undergraduate

2. Research previous solutions to similar design problems
Audience: Undergraduate

3. Identify potentially relevant standards to design problems
Audience: Undergraduate

4. Work together on a team that fosters inclusiveness, delegate responsibility, and plan tasks and monitors effort to better achieve objectives that meet client requirements
Audience: Undergraduate

5. Build an effective physical or analytical prototype
Audience: Undergraduate

6. Communicate design progress in written and oral format
Audience: Undergraduate

7. Defend design decisions with engineering calculations
Audience: Undergraduate

M E 351 – INTERDISCIPLINARY EXPERIENTIAL DESIGN PROJECTS I
3 credits.

First of a two-course sequence (M E 351 and 352) in which students design and fabricate systems and devices, typically having an interdisciplinary aspect. In the first course, emphasis will be on project planning, team dynamics, problem identification, and conceptual design and evaluation.
Requisites: Declared in Mechanical Engineering with senior standing and M E 331
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define an engineering problem as it relates to clients and stakeholders, and translate stakeholder requirements into engineering specifications
Audience: Undergraduate

2. Research previous solutions to similar design problems
Audience: Undergraduate

3. Identify potentially relevant standards to design problem
Audience: Undergraduate

4. Work together on an team that fosters inclusiveness, delegates responsibility, and plans tasks and monitors effort to better achieve objectives that meet client requirements
Audience: Undergraduate

5. Build an effective physical or analytical prototype
Audience: Undergraduate

6. Present design progress in written and oral format
Audience: Undergraduate

7. Defend design decisions with engineering calculations
Audience: Undergraduate

M E 352 – INTERDISCIPLINARY EXPERIENTIAL DESIGN PROJECTS II
3 credits.

Design and fabricate systems and devices, typically having an interdisciplinary aspect. Emphasis will be on detailed design, fabrication, testing, and modification of concepts developed in the previous course (M E 351).
Requisites: Senior standing and M E 351
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define an engineering problem as it relates to clients and stakeholders, and translate stakeholder requirements into engineering specifications
Audience: Undergraduate

2. Research previous solutions to similar design problems
Audience: Undergraduate

3. Identify potentially relevant standards to design problem
Audience: Undergraduate

4. Work together on an team that fosters inclusiveness, delegates responsibility, and plans tasks and monitors effort to better achieve objectives that meet client requirements
Audience: Undergraduate

5. Build an effective physical or analytical prototype
Audience: Undergraduate

6. Present design progress in written and oral format
Audience: Undergraduate

7. Defend design decisions with engineering calculations
Audience: Undergraduate

M E 361 – THERMODYNAMICS
3 credits.

First and second laws of thermodynamics; thermodynamic properties of gases, vapors, and gas-vapor mixtures; energy-systems analysis including power cycles, refrigeration cycles and air-conditioning processes. Introduction to thermodynamics of reacting mixtures.
Requisites: (CHEM 103 or 109) and (E M A 201, PHYSICS 201, 207, or 247), or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define both open and closed systems using a sketch
Audience: Undergraduate

2. Apply the first law to properly analyze open steady flow systems and closed systems
Audience: Undergraduate

3. Apply the second law to properly analyze open steady flow systems and closed systems
Audience: Undergraduate

4. Calculate property changes for ideal gases, incompressible substances, and real substances such as water
Audience: Undergraduate

5. Calculate First and Second Law efficiencies of engineering devices
Audience: Undergraduate

M E 363 – FLUID DYNAMICS
3 credits.

Laws of mechanics and thermodynamics applied to fluids at rest and in motion; potential flow; dimensional analysis; viscous flow; pipe flow; boundary-layer theory; compressible flow.
Requisites: M E 361 and (MATH 319, 320 or 375), or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply control volume analysis to solve fluid mechanics problems, for fluids at rest and in movement
Audience: Undergraduate

2. Simplify the equations of fluid mechanics to solve realistic engineering problems involving fluids by making appropriate assumptions
Audience: Undergraduate

3. Calculate losses in piping systems and other internal flows using dimensionless correlations
Audience: Undergraduate

4. Calculate forces created by external flow on a solid immersed in a fluid using dimensionless correlations
Audience: Undergraduate

M E 364 – ELEMENTARY HEAT TRANSFER
3 credits.

Fundamental concepts of conduction, convection, radiation. Heat-exchanger principles.
Requisites: M E 361 and (M E 363 or concurrent enrollment), or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Predict the rate of heat transfer for steady state situations involving conduction, convection, and radiation
Audience: Undergraduate

2. Develop numerical models of 0-D, 1-D, and 2-D transient temperature distributions
Audience: Undergraduate

3. Develop computer models of radiation situations involving multiple grey surfaces
Audience: Undergraduate

4. Simulate and optimize heat exchangers for a variety of applications
Audience: Undergraduate

5. Qualitatively predict the velocity and temperature distribution associated with boundary layers in convection problems
Audience: Undergraduate

M E 368 – ENGINEERING MEASUREMENTS AND INSTRUMENTATION
4 credits.

Theory of modern instrumentation, the design and execution of experiments and the analysis of experimental data. Laboratory provides direct experience with concepts in the context of experimental design for hypothesis testing, for product evaluation and for control system design.
Requisites: (M E 306 or E M A 303), M E 361, 340, and (E C E 376, 230, or M E 376)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use common sensors such as thermocouples, thermistors, microphones and strain gauges to make engineering measurements
Audience: Undergraduate

2. Set up a digital data acquisition system to record, analyze and effectively display experimental data
Audience: Undergraduate

3. Calculate the uncertainty of a measurement and take action to reduce uncertainty through calibration and noise reduction
Audience: Undergraduate

4. Analyze an experiment and the results; troubleshoot any errors or deviations from expected theoretical values
Audience: Undergraduate

5. Analyze and interpret data in the frequency domain
Audience: Undergraduate

M E 370 – ENERGY SYSTEMS LABORATORY
3 credits.

Experimental evaluation and analysis of performance of various energy conversion systems such as turbines, compressors, refrigerators, fans, and internal combustion engines.
Requisites: M E 363 and (M E 364 or concurrent enrollment) and (M E 368 or concurrent enrollment)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Characterize the performance parameters for common energy systems
Audience: Undergraduate

2. Safely measure the operation of energy system equipment
Audience: Undergraduate

3. Utilize software tools to analyze the data from the operation of energy system equipment
Audience: Undergraduate

4. Work cooperatively in a team configuration
Audience: Undergraduate

5. Communicate findings from energy system experiments in written, oral, and discussion formats
Audience: Undergraduate

M E 376 – INTRODUCTION TO MECHATRONICS
4 credits.

Fundamentals of DC and AC circuit analysis and design, stressing tools needed to understand circuits typically used in instrumentation and control of physical systems (sensors/actuators); an introduction to the design of active and passive linear circuits for buffering and filtering signals; an introduction to digital circuits, Boolean logic, programming, especially as needed for computer interface operations in mechanical engineering applications (example: embedded microcontrollers). Laboratory exercises.
Requisites: (M E 340 or concurrent enrollment), (MATH 320, 319, or 376), and (PHYSICS 202, 208, or 248), or graduate/professional standing
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe and mathematically represent circuit element properties and their analogies to mechanical systems
Audience: Undergraduate

2. Apply Kirchoff's and Ohm's laws to design and analyze AC and DC circuits
Audience: Undergraduate

3. Design and apply active and passive AC and DC circuits for instrumentation or control systems
Audience: Undergraduate

4. Design and analyze signal conditioning circuits utilized in instrumentation or control systems
Audience: Undergraduate

5. Write software to configure hardware, drive state machines, and control algorithms
Audience: Undergraduate

6. Utilize digital logic, computer interfaces, sensors, actuators, and programming approaches to solve mechanical engineering problems
Audience: Undergraduate

7. Communicate with experts in the various disciplines associated with instrumentation of and computer control of machines and processes
Audience: Undergraduate

M E/B M E 414 – ORTHOPAEDIC BIOMECHANICS - DESIGN OF ORTHOPAEDIC IMPLANTS
3 credits.

Apply the design process for orthopaedic implants (total joint replacements). Topics include: library skills; joint anatomy; tissue properties; surgical approach; joint loading; implants materials; preclinical testing and analysis.
Requisites: Senior standing and M E 342, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply engineering mechanics (statics, dynamics, mechanics of materials) to analyze human joints
Audience: Both Grad & Undergrad

2. Describe sources and implications of patient-to-patient variability in functional anatomy, biomechanics, and disease states
Audience: Both Grad & Undergrad

3. Synthesize knowledge about functional anatomy, biomechanics, and disease states to define clinical needs and design inputs
Audience: Both Grad & Undergrad

4. Justify design decisions and testing plans based on rigorous engineering calculations through both written and oral communication
Audience: Both Grad & Undergrad

5. Formulate rigorous testing plans for design and device verification and validation based on established standards and/or guidance documents
Audience: Both Grad & Undergrad

6. Analyze interactions between multiple sources of variability
Audience: Graduate

M E/B M E 415 – BIOMECHANICS OF HUMAN MOVEMENT
3 credits.

An overview of experimental and modeling techniques used to study human movement. Specific topics will include locomotion, motion capture systems, force plates, muscle mechanics, musculoskeletal modeling, three dimensional kinematics, inverse dynamics, forward dynamic simulation and imaging based biomechanics. Homework and laboratory activities emphasize applications of movement biomechanics in orthopedics and rehabilitation.
Requisites: B M E 315 and M E 340, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and describe fundamental concepts and methods in movement biomechanics
Audience: Both Grad & Undergrad

2. Apply fundamental concepts and methods in biomechanics to acquire experience and gain confidence using engineering tools to study movement
Audience: Both Grad & Undergrad

3. Establish a framework for self-teaching and research through open-ended laboratory assignments and a research project
Audience: Both Grad & Undergrad

4. Constructively review and provide feedback on written research proposals related to movement biomechanics
Audience: Graduate

M E 417 – TRANSPORT PHENOMENA IN POLYMER PROCESSING
3 credits.

Description of the physical, thermal, mechanical, and rheological properties of polymeric materials relevant to their processing behavior. Review of the basic transport phenomena equations: mass, momentum, and energy. Analysis of various processing operations for the manufacture of polymeric articles, with particular emphasis on: extrusion, injection molding, blow molding, thermoforming, compression molding and additive manufacturing. Discussion of plastics recycling and environmental issues.
Requisites: Senior standing or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2023
Learning Outcomes: 1. Identify, formulate and solve problems related to the properties of polymeric material and how these properties are impacted by processing
Audience: Both Grad & Undergrad

2. Apply differential equations to transport phenomena
Audience: Both Grad & Undergrad

3. Demonstrate their understanding of various processing techniques including extrusion, injection molding, blow molding, thermoforming, compression molding, and additive manufacturing
Audience: Both Grad & Undergrad

4. Develop solutions to differential equations for transport problems that arise from polymer manufacturing processes
Audience: Graduate

M E 418 – ENGINEERING DESIGN WITH POLYMERS
3 credits.

Implications for plastics part design of polymer classification, structure, melt rheology, mixing, polymer blends, anisotropy, solidification, mechanical behavior, failure. Plastics design for electrical, optical, acoustic and barrier properties.
Requisites: Senior standing or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate an understanding of the basic polymer classifications
Audience: Both Grad & Undergrad

2. Apply knowledge of polymer classifications to part design
Audience: Both Grad & Undergrad

3. Utilize the techniques, skills and modern tools necessary for polymer part design
Audience: Both Grad & Undergrad

4. Synthesize knowledge about polymers and use insight and creativity to better understand and improve polymer parts
Audience: Graduate

M E 419 – FUNDAMENTALS OF INJECTION MOLDING
3 credits.

All major aspects of injection molding with emphases on materials, design, processing, process physics, computer-aided engineering (CAE), troubleshooting, and advanced molding processes.
Requisites: M E 310, M S & E 331, CHEM/M S & E 421, member of Engineering Guest Students, declared in Capstone Certificate in Polymer Processing and Manufacturing, or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply techniques and decision making tools for increased quality, product safety and reliability, and productivity
Audience: Undergraduate

2. Apply quality improvement methods that lead to better quality, decreased cost, reduced cycle time, and sustainability
Audience: Undergraduate

3. Demonstrate the use of concepts and practices of processing, materials, designs, general skill sets like control, computer-aided engineering (CAE), and optimization, and special topics that includes emerging and competing technologies and advanced molding processes
Audience: Undergraduate

4. Synthesize understanding in all aspects of injection molding and related processes, to take on tasks and challenges related to material processing
Audience: Undergraduate

5. Apply process insights and develop logical thinking, problem-solving skills, life-long learning attitude, independent research capabilities, as well as presentation and communication skills
Audience: Undergraduate

6. Develop independent research capabilities and critical thinking skills toward the special injection molding processes
Audience: Graduate

7. Apply in-depth knowledge of analytical and numerical simulation methods for injection molding
Audience: Graduate

M E/STAT 424 – STATISTICAL EXPERIMENTAL DESIGN
3 credits.

Introduction to statistical design and analysis of experiments. Topics include: principles of randomization, blocking and replication, randomized blocking designs, Latin square designs, full factorial and fractional factorial designs and response surface methodology. Substantial focus will be devoted to engineering applications.
Requisites: STAT 240, 301, 302, 312, 324, 371, or MATH/STAT 310
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe key concepts in the design and analysis of experiments.
Audience: Undergraduate

2. Generate experimental designs and apply appropriate analysis techniques.
Audience: Undergraduate

3. Compare different experimental design and analysis methods in various scenarios.
Audience: Undergraduate

4. Apply experimental design and analysis methods in real-world projects.
Audience: Undergraduate

5. Implement experimental design and analysis methods in statistical software like R.
Audience: Undergraduate

M E 429 – METAL CUTTING
3 credits.

Theory and applications of metal cutting; basic principles; significant features of current research. Chip formation mechanics, three-dimensional machining operations, tool life and machinability, economics of metal removal, and precision engineering.
Requisites: Senior standing and declared in Biomed, Biological Sys, Chemical, Civil, Computer, Electrical, Geological, Industrial, Mechanical or Nuclear Egr, Materials Sci & Egr, Egr Physics, Egr Mechanics, grad/professional standing or member of Egr Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply mechanics of materials, tribology, dynamics, conservation of mass, and heat transfer fundamentals to analyze chip formation, cutting temperatures, burr formation, chatter, and tool wear
Audience: Undergraduate

2. Recognize the interrelationships between process parameters and cutting performance
Audience: Undergraduate

3. Make a metal part on a CNC machine using G-code
Audience: Undergraduate

4. Present examples of how manufacturing impacts society, the economy, and the environment
Audience: Undergraduate

5. Apply professional codes to analyze problems in manufacturing ethics and arrive at defensible actions
Audience: Undergraduate

M E 437 – ADVANCED MATERIALS SELECTION
3 credits.

A structured approach is developed to address the complex problem of materials selection in design where multiple constraints and conflicting objectives need to be considered. Topics include: introductory fracture mechanics; corrosion and corrosion mitigation; effects of manufacturing processes and process selection; property development in metals, ceramics, polymers and composites; and material analysis techniques.
Requisites: (M S & E 350 and M E 310), M E 313, M S & E 332, graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify designs at risk of brittle fracture
Audience: Undergraduate

2. Apply a basic fracture mechanics approach to minimize chance of part failure
Audience: Undergraduate

3. Apply corrosion mitigation techniques to material selection and design problems
Audience: Undergraduate

4. Apply a systematic process to materials selection
Audience: Undergraduate

5. Interpret microstructure of metallic alloys and predict material property development
Audience: Undergraduate

M E/E C E 439 – INTRODUCTION TO ROBOTICS
3 credits.

Hands-on introduction to key concepts and tools underpinning robotic systems in use and development today. Intended to give students the tools to understand robotic systems, to explore robotics for their own purposes, and to pursue advanced study in the field. Students are expected to have familiarity with a high level programming language such as Python (recommended), MATLAB, Java or Julia.
Requisites: Senior standing or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Predict and control the behavior of common mechatronic actuators
Audience: Undergraduate

2. Predict and interpret the response of common sensors in relation to their environment
Audience: Undergraduate

3. Apply standard algorithms to predict and control the behavior of robotic manipulators
Audience: Undergraduate

4. Interpret the operation of a robot control system and add new functionality to it
Audience: Undergraduate

5. Specify a simple task for a robot, and implement sensors, actuators and a control system to accomplish it
Audience: Undergraduate

6. Analyze the ethical challenges presented by specific robotic applications
Audience: Undergraduate

M E 440 – INTERMEDIATE VIBRATIONS
3 credits.

Harmonic motion; natural frequencies and vibration of damped and undamped single and multi-degree of freedom systems; modal analysis; influence coefficients; lumped-mass modeling; dynamic load factors; Rayleigh's method; flow-induced vibrations; shaft whirl; balancing; vibration absorbers and tuned mass dampers; finite element modeling.
Requisites: (M E 306 or E M A 303) and (M E 340 or E M A/M E 540), or graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Derive the equations of motion of single and multi-degree of freedom systems
Audience: Undergraduate

2. Determine the natural frequencies and mode shapes of single and multi-degree of freedom systems
Audience: Undergraduate

3. Evaluate the dynamic response of single and multi-degree of freedom systems under impulsive, harmonic and periodic loading
Audience: Undergraduate

4. Apply modal analysis and orthogonality conditions to establish the dynamic characteristics of multi-degree of freedom systems
Audience: Undergraduate

5. Generate finite element models of discrete systems to simulate the dynamic response to initial conditions and external excitations
Audience: Undergraduate

M E/E C E 441 – KINEMATICS, DYNAMICS, AND CONTROL OF ROBOTIC MANIPULATORS
3 credits.

Robotics analysis and design, focusing on the analytical fundamentals specific to robotic manipulators. Serial chain robotic manipulator forward and inverse kinematics, differential kinematics, dynamics, trajectory generation, and controls. Builds on knowledge of high-level computational programming language such as Matlab.
Requisites: M E 340 and (MATH 320, 340, 341, or 375), graduate/professional standing, or member of Engineering Guest Students. Not open to students with credit for E C E 739 prior to fall 2024.
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze and design serial chain robotic manipulator kinematics
Audience: Both Grad & Undergrad

2. Simulate the dynamic motion of serial chain robotic manipulators
Audience: Both Grad & Undergrad

3. Form the equations of motion for robotic manipulators
Audience: Both Grad & Undergrad

4. Use feedback control for tracking and regulation of robotic manipulators for position, force, and hybrid control
Audience: Both Grad & Undergrad

5. Use trajectory generation methods to design robotic manipulator motion and force trajectories
Audience: Both Grad & Undergrad

6. Analyze the kinematics and controls of more complex serial chain manipulators
Audience: Graduate

7. Design the kinematics of serial chain manipulators using kinematic and dynamics analysis methods
Audience: Graduate

M E 444 – DESIGN PROBLEMS IN ELASTICITY
3 credits.

Analysis of elastic systems by strain-energy techniques. Determination of stresses and deflections in statically indeterminate structures encountered in design. Resilience in springs.
Requisites: M E 306, E M A 303, graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Solve for the octahedral stress, stress invariants, principal stresses and direction cosines of the principal stresses for a state of stress involving 3 orthogonal normal stresses and 3 orthogonal shear stresses
Audience: Undergraduate

2. Calculate strain energy density and strain energy for normal stresses from axial and bending loads and for shear stresses from torque loads within the elastic range
Audience: Undergraduate

3. Apply energy methods to linear elastic structural mechanics problems including the Principle of Virtual work, Reciprocity Theorem, Unit Load Method, Castigliano's Theorem, Stationary Potential Energy and the Rayleigh-Ritz Method
Audience: Undergraduate

4. Verify compatibility and equilibrium of displacement fields for plane elasticity problems and solve for the corresponding stresses and/or strains

Audience: Undergraduate

5. Analyze the stresses, strains and displacements caused by thermal, pressurization and rotational loading of axisymmetric plane elasticity problems (hollow and solid disks)
Audience: Undergraduate

M E 445 – MECHATRONICS IN CONTROL & PRODUCT REALIZATION
3 credits.

Fundamentals of electromechanical control systems with a focus on subsystem design and their impacts at the system level. Integration of microcontrollers into products for control and/or instrumentation. Creation of intelligent interfaces between motors and sensors. C programming. Control computer system architecture Software and hardware principles for computer control.
Requisites: M E 376, E C E 376, 230, or (B M E 201 and B M E 310), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022
Learning Outcomes: 1. Demonstrate understanding of the fundamentals of electromechanical control systems including motor and sensor interfaces and computer system architecture
Audience: Both Grad & Undergrad

2. Apply knowledge of microcontrollers embedded in products in order to create intelligent interfaces
Audience: Both Grad & Undergrad

3. Apply knowledge of software and hardware principles for computer control in order to develop and demonstrate control systems in lab
Audience: Both Grad & Undergrad

4. Practice good coding techniques in C and develop skills with troubleshooting both hardware and software
Audience: Both Grad & Undergrad

5. Demonstrate understanding of more advanced issues related to system level design issues
Audience: Graduate

M E 446 – INTRODUCTION TO FEEDBACK CONTROL
3 credits.

Overview of linear feedback control analysis and design techniques for mechanical systems. Modeling of linear dynamic mechanical systems (review), derivation of their defining differential equations, and analysis of their response using both transient and frequency response techniques; Analysis and design of feedback control of mechanical systems using classical control transform techniques such as root locus and frequency response; Analysis of system robustness through evaluation of phase and gain margins and the Nyquist stability criterion. Design of feedback controllers for mechanical systems using frequency domain loop-shaping methods. Design domains, including mechanical, thermal, and fluid feedback control systems. Effects of non-ideal system characteristics commonly encountered in mechanical systems, such as compliance, delay, and actuator and sensor saturation. Builds on knowledge of high-level computational programming language such as Matlab or Simulink.
Requisites: (M E 340 or E M A 545) and (MATH 319 or 320), graduate/professional standing, member of Engineering Guest Students, or declared in Capstone Certificate in Power Conversion and Control. Not open to students with credit for M E 346.
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Solve for the time-domain response of differential equations associated with physical dynamic systems
Audience: Both Grad & Undergrad

2. Simulate the time-domain response and frequency-response of physical dynamic systems using computer analysis and design tools such as Matlab
Audience: Both Grad & Undergrad

3. Analyze and design PID feedback controllers for simple first and second order physical systems
Audience: Both Grad & Undergrad

4. Analyze the stability of linear systems using the Nyquist stability criteria and its equivalent frequency domain representation
Audience: Both Grad & Undergrad

5. Analyze and design modern feedback control systems using frequency domain analysis and design techniques, including the use of frequency loop shaping to achieve desired transient and steady-state design specifications
Audience: Both Grad & Undergrad

6. Analyze and design complex linear feedback controllers for a range of mechanical dynamic systems, including systems with non-ideal characteristics such as flexible modes, time delay, actuator saturation, and unstable open-loop systems
Audience: Graduate

M E 447 – COMPUTER CONTROL OF MACHINES AND PROCESSES
3 credits.

Discrete control theory reduced to engineering practice through a comprehensive study of discrete system modeling, system identification and digital controller design. Selected industrial processes and machines utilized as subjects on which computer control is to be implemented. Focus: computer control economics and planning as well as the control theory and programming.
Requisites: M E 340, 346, or 446, graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Spring 2025

M E 448 – MECHANICAL SYSTEMS ANALYSIS
3 credits.

Integrated treatment of mathematical modeling and analysis of mechanical systems. Modeling of linear and nonlinear systems and their performance under transient, periodic and random loads.
Requisites: Senior standing and declared in Biomed, Biological Sys, Chemical, Civil, Computer, Electrical, Geological, Industrial, Mechanical or Nuclear Egr, Materials Sci & Egr, Egr Physics, Egr Mechanics, Applied Math, Egr and Physics, grad/prof or EGRG
Repeatable for Credit: No
Last Taught: Fall 2020
Learning Outcomes: 1. Analyze ideal mechanisms and trusses systems
Audience: Undergraduate

2. Apply Bayes theorem of probability
Audience: Undergraduate

3. Carry out statistical analysis of mechanisms and truss systems
Audience: Undergraduate

4. Use MATLAB toolbox for Monte Carlo analysis
Audience: Undergraduate

5. Quantify the reliability of designs through first-order methods
Audience: Undergraduate

6. Quantify the reliability of designs through second-order methods
Audience: Undergraduate

M E 449 – REDESIGN AND PROTOTYPE FABRICATION
3 credits.

Principles of design, manufacturing, and prototype evaluation. A semester long project provides the opportunity to redesign of a thermo-mechanical device (Stirling Engine) using knowledge/skills acquired both through this course and previous course offerings in thermal sciences, mechanics and dynamics, manufacturing, and design. Instruction and hands-on experience using the manufacturing tools/processes available in the CoE. Design, dimensioning and tolerancing, manufacturing, and quantitative analysis are all covered in a structured semester project.
Requisites: Senior standing and (M E 306 or E M A 303), (M E 311 or 313 or concurrent enrollment), and M E 331, or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate understanding of design, manufacturing and prototype evaluation
Audience: Both Grad & Undergrad

2. Redesign a thermo-mechanical device (Stirling Engine) using knowledge/skills in thermal sciences, mechanics and dynamics, manufacturing, and design
Audience: Both Grad & Undergrad

3. Utilize the techniques, skills and modern tools necessary for manufacturing small prototypes
Audience: Both Grad & Undergrad

4. Fabricate a Stirling Engine and test this prototype
Audience: Both Grad & Undergrad

5. Apply knowledge of design, dimensioning, and tolerancing
Audience: Both Grad & Undergrad

6. Write clear and concise technical reports and research articles
Audience: Graduate

M E 451 – KINEMATICS AND DYNAMICS OF MACHINE SYSTEMS
3 credits.

Graphical, analytical, and computer methods for the kinematic and dynamic analysis of mechanical linkages, mechanisms, and geared and cam systems.
Requisites: M E 240, E M A 202, PHYSICS 201, 207, 247, graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Formulate the equations of motion for mechanisms that display 3D motion
Audience: Undergraduate

2. Describe the concept of joints between bodies that make up a mechanism
Audience: Undergraduate

3. Derive the kinematics equations
Audience: Undergraduate

4. Derive the dynamics equations of motion
Audience: Undergraduate

5. Solve differential equations that govern the evolution of a system
Audience: Undergraduate

6. Use numerical algorithms to solve the differential algebraic equations associated with the time evolution of a multi-body mechanical system
Audience: Undergraduate

M E 455 – MICROROBOTICS
3 credits.

Microrobotics is an emerging interdisciplinary field at the intersection of robotics, microtechnology, materials science, and bioengineering gearing towards key applications in healthcare and biomedical sciences. Design, fabrication, powering/actuation, locomotion, localization, swarm operation and biomedical applications of microrobots.
Requisites: M E 342 and (M E 376 or B M E 310), or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Design and develop microrobots for biomedical applications
Audience: Both Grad & Undergrad

2. Employ scaling laws and micromechanics for microrobot design
Audience: Both Grad & Undergrad

3. Describe approaches to microrobot fabrication
Audience: Both Grad & Undergrad

4. Design and evaluate microrobot powering/actuation and locomotion strategies
Audience: Both Grad & Undergrad

5. Integrate localization and swarm operation techniques for microrobot control
Audience: Graduate

M E 458 – INTRODUCTION TO FEEDBACK CONTROL OF AUTONOMOUS SYSTEMS
3 credits.

Feedback control theory fundamentals; numerical optimal control algorithms underpinning autonomous systems; quadcopter kinematics dynamics; quadcopter control and trajectory planning; hands-on labs on a nano quadcopter platform.
Requisites: M E 446, E M A 545, E C E 332, or 334, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Express a dynamic system into its state space form and determine its linearized model around a given operating point
Audience: Both Grad & Undergrad

2. Use Lyapunov direct and indirect methods to determine the stability of nonlinear systems
Audience: Both Grad & Undergrad

3. Explain and assess controllability, observability, and stability of linear systems
Audience: Both Grad & Undergrad

4. Solve general optimal control problems using off-the-shelf numerical software
Audience: Both Grad & Undergrad

5. Solve linear quadratic problems using linear quadratic regulator
Audience: Both Grad & Undergrad

6. Apply differential flatness for quadcopter trajectory generation, and design linear tracking controllers for quadcopters
Audience: Both Grad & Undergrad

7. Apply the maximum principle to find the optimal solution of an unconstrained optimal control problem
Audience: Graduate

M E 459 – COMPUTING CONCEPTS FOR APPLICATIONS IN ENGINEERING
3 credits.

An overview of computing concepts that support modeling and simulation in engineering applications. Learn the basics of computer architecture, software development and the interplay between software and hardware components.
Requisites: COMP SCI 200, 220, 300, 301, 302, 320, or placement into COMP SCI 300, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Use Python and C to generate programs that can effectively perform data processing tasks on modern CPU architectures
Audience: Both Grad & Undergrad

2. Describe how a central processing unit (CPU) functions
Audience: Both Grad & Undergrad

3. Describe the roles of memory hierarchy and virtual memory in computing
Audience: Both Grad & Undergrad

4. Identify the role of the operating system in computing
Audience: Both Grad & Undergrad

5. Describe the implications of representing and carrying out operations with numbers using a finite number of bits
Audience: Both Grad & Undergrad

6. Identify computational bottlenecks associated with suboptimal memory accesses and/or poor instruction pipelining
Audience: Graduate

M E 460 – APPLIED THERMAL / STRUCTURAL FINITE ELEMENT ANALYSIS
3 credits.

The course is designed for undergraduate students with no finite element (FE) analysis experience or knowledge. By the end of the semester the student will be able to simulate 1D, 2D and 3D structural and thermal systems, including both the static and transient response, using a common, commercially available FE software package. Analyses will be performed using both GUI and APDL. The emphasis of the course is on becoming proficient with the software and capable of operating an FE package at a high level, including benchmarking and verifying the FE model using simple analytical checks. An additional emphasis of the course is on understanding the impact of the temperature distribution in an object on the stress field through thermal expansion.
Requisites: M E 306 or E M A 303, or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Generate an ANSYS FE model to assess the steady-state / static structural or thermal response of a 1-D, 2-D or 3-D component or structure
Audience: Both Grad & Undergrad

2. Determine an appropriate element type, specify the material properties and apply loads, boundary conditions and constraints for both thermal and structural ANSYS simulations
Audience: Both Grad & Undergrad

3. Apply time dependent loads and boundary conditions to perform both thermal and structural transient analyses
Audience: Both Grad & Undergrad

4. Postprocess a FE model solution in ANSYS to possibly determine quantities such as temperature, stress, displacements and natural frequencies (and associated mode shapes)
Audience: Both Grad & Undergrad

5. Generate an ANSYS FE model to assess the transient structural or thermal response of a 1-D, 2-D or 3-D component or structure
Audience: Graduate

M E 461 – THERMAL SYSTEMS MODELING
3 credits.

Analysis and design of engineering systems involving applications of thermodynamics, economics, heat transfer, and fluid flow.
Requisites: M E 364 or concurrent enrollment, or graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain the importance of advanced thermodynamics topics and novel cycles
Audience: Undergraduate

2. Apply the first and second laws of thermodynamics to complex thermal systems and system components
Audience: Undergraduate

3. Integrate rate mechanisms (i.e., heat transfer and fluid dynamics), economics, and optimization into the design and analysis of thermal systems
Audience: Undergraduate

4. Communicate the inherent uncertainty in the design and analysis of thermal systems
Audience: Undergraduate

5. Analyze yearly thermal system performance driven by weather variations
Audience: Undergraduate

6. Use a computer effectively to solve engineering problems
Audience: Undergraduate

7. Work in teams to solve open-ended design problems pertaining to thermal systems
Audience: Undergraduate

M E/M S & E 462 – WELDING METALLURGY
3 credits.

Metallurgical principles applied to welding; mechanisms of strengthening, phase equilibria, and microstructure of the weld zone. Modern processes including laser and electron beam welding.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Identify the specific types of fusion and solid-state processes for welding specific metals/alloys of specific geometries and joints
Audience: Undergraduate

2. Relate principles of heat transfer, fluid flow, mass transfer, chemical reactions, and phase transformations during welding to the development of microstructure, properties, and defects of welds
Audience: Undergraduate

3. Identify the causes and remedies of various defects in welds, such as gas porosity, loss of strength, loss of toughness, cracking, and corrosion
Audience: Undergraduate

4. Identify processes for welding dissimilar materials, such as aluminum alloys to steels, aluminum alloys to copper
Audience: Undergraduate

M E 468 – COMPUTER MODELING AND SIMULATION OF AUTONOMOUS VEHICLES AND ROBOTS
3 credits.

Introduction to the Robot Operating System (ROS). Concepts of vehicle dynamics modeling and simulation, with focus on tire, suspension, steering system, and powertrain modeling. Simulation of sensors (camera, lidar, radar, GPS, IMU). Terramechanics modeling for mobility on deformable terrains. Introduction to the autonomy stack (sensing, perception, planning, and control). Elements of artificial intelligence in autonomy. Elements of verification and validation.
Requisites: M E 459 and (COMP SCI 200, 220, 300, 301, 302, 320, or placement into COMP SCI 300), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Use computer simulation in the process of designing and analyzing new autonomous vehicles and robots
Audience: Both Grad & Undergrad

2. Create a ROS (Robot Operating System) infrastructure for a simple robot or small scale autonomous vehicle
Audience: Both Grad & Undergrad

3. Create a ROS infrastructure used in conjunction with an autonomy stack to simulate the behavior of a robot or autonomous vehicle
Audience: Both Grad & Undergrad

4. Identify the main modeling techniques used to approximate through computer simulation the real world dynamics/behavior of autonomous vehicles and robots
Audience: Both Grad & Undergrad

5. Gain a panoramic image of modeling and simulation requirements associated with the multi-disciplinary task of designing autonomous vehicles and robots
Audience: Undergraduate

6. Integrate the activities of designing, implementing, building, validating and positioning for release software for modeling and simulation of autonomous vehicles and robots
Audience: Graduate

7. Propose and evaluate alternate or novel methods to achieve modeling and simulation objectives, defend opinions
Audience: Graduate

M E 469 – INTERNAL COMBUSTION ENGINES
3 credits.

Fundamental principles of engine operation and application including cycle analysis, gas analysis, effect of operating conditions and engine design on air pollution.
Requisites: M E 361, or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the basic characteristics of internal combustion engine operation
Audience: Both Grad & Undergrad

2. Use thermodynamic principles to analyze various types of internal combustion engines
Audience: Both Grad & Undergrad

3. Recognize, describe, predict, and analyze internal combustion engines subject to modifications and improvements that are related to the state of the art
Audience: Both Grad & Undergrad

4. Communicate effectively through written reports related to ongoing timely research in the area of internal combustion engines
Audience: Graduate

M E 471 – GAS TURBINE AND JET PROPULSION
3 credits.

Principles of thermodynamics and fluid dynamics utilized in the analysis and design of gas-turbine cycles, components and systems for stationary, automotive and aircraft applications.
Requisites: M E 364, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Explain the importance of advanced thermodynamics topics and novel gas turbine cycles that are not covered (or too quickly covered) in undergraduate thermodynamics courses
Audience: Both Grad & Undergrad

2. Design and analyze various gas turbine components
Audience: Both Grad & Undergrad

3. Apply advanced gas turbine design concepts
Audience: Both Grad & Undergrad

4. Use a computer effectively to solve engineering problems
Audience: Both Grad & Undergrad

5. Carry out optimization of systems incorporating economic and other technical considerations
Audience: Graduate

M E 472 – ENERGY, SUSTAINABILITY, AND TECHNOLOGY
3 credits.

Thermodynamic analysis of energy conversion systems with emphasis on efficiency and greenhouse gas emissions; basic economic analysis of energy systems; radiative energy exchange with participating atmosphere; global energy balance; electricity production and transportation sustainability.
Requisites: M E 361 and (COMP SCI 200, 220, 300, 301, 310, or placement into COMP SCI 300), or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Evaluate the sustainability of energy conversion systems
Audience: Both Grad & Undergrad

2. Calculate changes in radiation trapping in the atmosphere due to different compounds
Audience: Both Grad & Undergrad

3. Apply simple economic models to define levelized cost of electricity production
Audience: Both Grad & Undergrad

4. Develop a simple model to predict carbon dioxide concentration in atmosphere
Audience: Both Grad & Undergrad

5. Analyze transportation sustainability for light- and heavy-duty applications
Audience: Both Grad & Undergrad

6. Model and evaluate the sustainability of domestic heating requirements

Audience: Both Grad & Undergrad

7. Coordinate models of energy conversion and greenhouse gas emissions

Audience: Graduate

M E/BSE 474 – FLUID POWER
3 credits.

Engineering principles of design and analysis of fluid power systems and fluid power components. Topics include hydraulic fluid properties, fluid flow and, positive displacement pumps, valves for pressure, flow, and directional control, linear and rotary actuators, accumulators, pressure compensation, load sensing, energy management and system efficiency.
Requisites: M E 363, CIV ENGR 310, CBE 320, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Analyze various positive displacement pumps for flow, pressure, power, and efficiency
Audience: Both Grad & Undergrad

2. Determine flow and pressure drop characteristics of spool-type and poppet-type proportional, on-off, and servovalves
Audience: Both Grad & Undergrad

3. Construct hydraulic system schematics and select components from a functional system description
Audience: Both Grad & Undergrad

4. Determine efficiency and design improvements for mobile and industrial hydraulic systems
Audience: Both Grad & Undergrad

5. Develop mathematical models of hydraulic system/components and solve using numerical techniques
Audience: Graduate

M E/BSE 475 – ENGINEERING PRINCIPLES OF AGRICULTURAL MACHINERY
3 credits.

Engineering design principles of machines for the production, processing and handling of crops for food, fuel, bio-mass and fiber. Environmental and biological factors that influence machine design and operation. Economic and capacity analysis of machines and systems.
Requisites: Declared in Biological Systems Engineering or Mechanical Engineering and (M E 240, E M A 202, PHYSICS 201, 207, or 247), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and describe key operating and design principles, concepts, and methods related to agricultural field machinery
Audience: Both Grad & Undergrad

2. Calculate relevant quantities regarding the design and engineering of agricultural field machinery
Audience: Both Grad & Undergrad

3. Critically review results of engineering calculations to ensure answers are realistic
Audience: Both Grad & Undergrad

4. Choose, synthesize and effectively utilize appropriate ASABE engineering standards, methods, and concepts regarding agricultural field machinery
Audience: Both Grad & Undergrad

5. Hone skills in teamwork, oral and written communication, and problem solving
Audience: Both Grad & Undergrad

6. Critically review emerging technology and apply relevant concepts to current issues with agricultural field machinery
Audience: Both Grad & Undergrad

7. Demonstrate an ability to formulate, analyze, and independently solve advanced engineering problems
Audience: Graduate

M E/BSE 476 – ENGINEERING PRINCIPLES OF OFF-ROAD VEHICLES
3 credits.

Engineering design principles of heavy-duty vehicles intended for off-road use: fuels, engine cycles, engine principles and construction, clutches, mechanical and hydrostatic transmissions, final drives, traction systems, traction modeling, dynamic behavior, suspension systems and braking.
Requisites: (M E 361 or concurrent enrollment), (M E 240, E M A 202, PHYSICS 201, 207, or 247), and declared in Biological Systems Engineering or Mechanical Engineering or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Identify, formulate, and solve engineering problems related to off-road vehicle dynamics and mobility
Audience: Both Grad & Undergrad

2. Glean relevant data from the engineering research literature and technical data sheets, and specify appropriate components and systems in the application of off-road vehicle design
Audience: Both Grad & Undergrad

3. Perform an experiment on off-road vehicle systems, analyze and interpret data, and use engineering judgment to draw conclusions
Audience: Both Grad & Undergrad

4. Apply knowledge gained in the course to evaluate off-road vehicle design alternatives
Audience: Both Grad & Undergrad

5. Critically review off-road vehicle research
Audience: Graduate

M E 477 – HEATING, VENTILATING, AND AIR CONDITIONING SYSTEMS
3 credits.

Apply knowledge of heat transfer, thermodynamics, and energy systems laboratory in the design of heating, ventilating, and air conditioning (HVAC) systems used in commercial buildings as well as other large buildings such as laboratories, healthcare facilities, and education facilities. Understand the engineering challenges in designing and deploying efficient and high-performing mechanical systems that provide building occupants comfort, quality indoor environment, while maintaining occupant safety. Principles of engineering ethics and its application to buildings and their HVAC system.
Requisites: M E 364 or concurrent enrollment, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Describe the role and function of HVAC systems in commercial buildings
Audience: Both Grad & Undergrad

2. Determine thermal loads in buildings and size HVAC systems to satisfy heating and cooling loads using principles of heat transfer and thermodynamics
Audience: Both Grad & Undergrad

3. Critically analyze alternative technologies for providing heating, ventilating, and air conditioning for buildings
Audience: Both Grad & Undergrad

4. Apply standards relevant to HVAC systems in commercial building applications to ensure their compliance
Audience: Both Grad & Undergrad

5. Develop a scorecard to effectively communicate comparative and relevant attributes of mechanical system alternatives for commercial buildings
Audience: Both Grad & Undergrad

6. Apply foundational principles of engineering ethics including strategies to enable future engineering professionals to combat, withstand, and persevere in situations where ethical dilemmas arise
Audience: Both Grad & Undergrad

7. Analyze complex integrated building mechanical systems to achieve specific performance objectives
Audience: Graduate

M E/E M A 488 – HONORS IN RESEARCH I
1-3 credits.

Independent work in aerospace engineering, engineering mechanics, or mechanical engineering, supervised by a qualified instructor.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions

M E 489 – HONORS IN RESEARCH
1-3 credits.

Undergraduate honors research projects supervised by faculty members.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply basic physical and mathematical principles to engineering research problems
Audience: Undergraduate

2. Apply basic mechanical engineering principles to engineering research problems
Audience: Undergraduate

3. Communicate technical concepts to a diverse audience via verbal or written media
Audience: Undergraduate

M E 491 – MECHANICAL ENGINEERING PROJECTS I
1-3 credits.

Individual lab projects under staff supervision.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply basic physical and mathematical principles to engineering research problems
Audience: Undergraduate

2. Apply basic mechanical engineering principles to engineering research problems
Audience: Undergraduate

3. Communicate technical concepts to a diverse audience via verbal or written media
Audience: Undergraduate

M E 492 – MECHANICAL ENGINEERING PROJECTS II
1-3 credits.

Continuation of M E 491.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Apply basic physical and mathematical principles to engineering research problems
Audience: Undergraduate

2. Apply basic mechanical engineering principles to engineering research problems
Audience: Undergraduate

3. Communicate technical concepts to a diverse audience via verbal or written media
Audience: Undergraduate

M E/B M E 505 – BIOFLUIDICS
3 credits.

Introduction to the physics of biological fluid flow with an emphasis on the cardiovascular system including blood rheology, pulsatile flow, wave travel, and topics relevant to blood flow measurement and biomedical device design.
Requisites: B M E 330, CBE 320, M E 363, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain the physical properties of a fluid and the consequence of such properties on fluid flow; compare and contrast non-Newtonian models for blood rheology
Audience: Both Grad & Undergrad

2. State the conservation principles of mass, linear momentum, and energy for fluid flow
Audience: Both Grad & Undergrad

3. Analyze systems using the conservation equations
Audience: Both Grad & Undergrad

4. Identify the relevant parameters that govern a fluid system and use dimensional analysis to identify the fundamental variables that define flow
Audience: Both Grad & Undergrad

5. Describe the flow dynamic metrics in different physiological or pathological conditions
Audience: Both Grad & Undergrad

6. Identify the role of other professionals in biofluid mechanics
Audience: Graduate

7. Foster skills to interact with clinical professionals
Audience: Graduate

M E/CIV ENGR/E M A 508 — COMPOSITE MATERIALS
3 credits.

Physical properties and mechanical behavior of polymer, metal, ceramic, cementitious, cellulosic and biological composite systems; micro- and macro-mechanics; lamination and strength analyses; static and transient loading; fabrication; recycling; design; analytical-experimental correlation; applications.
Requisites: (E M A 303 or M E 306), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. List the different types of composite materials and describe their manufacturing processes
Audience: Both Grad & Undergrad

2. Describe the mechanical behavior of various composite materials under different types of loading conditions
Audience: Both Grad & Undergrad

3. Derive mathematical models and solve them for engineering stresses and deformations in a composite structure
Audience: Both Grad & Undergrad

4. Describe special theories for heterogeneous and non-isotropic materials and solve boundary value problems associated with composite structures
Audience: Both Grad & Undergrad

5. Use the knowledge acquired in this class to design and conduct a complex analysis, design, and/or experiment to address key challenges relevant to composite materials
Audience: Graduate

M E/I SY E 510 — FACILITIES PLANNING
3 credits.

Introduction to plant location theory and analysis of models of plant location; models for determining plant size and time phasing; line balancing models; techniques for investigating conveyor and other material handling problems; and models of plant layout.
Requisites: I SY E 315, (I SY E 323 or E C E/COMP SCI/I SY E 524) and I SY E/PSYCH 349, or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify, formulate, and solve facilities layout problems by applying principles of engineering and mathematics
Audience: Both Grad & Undergrad

2. Apply engineering design to produce facilities design solutions that meet specified needs with consideration of productivity, safety, and economic factors
Audience: Both Grad & Undergrad

3. Utilize computer software to study and illustrate the operation of a manufacturing system
Audience: Both Grad & Undergrad

4. Collaborate with a team to develop solutions to engineering problems and communicate findings effectively
Audience: Both Grad & Undergrad

5. Demonstrate ability to lead a facilities planning project integrating quantitative techniques and management tools
Audience: Graduate

M E/I SY E 512 – INSPECTION, QUALITY CONTROL AND RELIABILITY
3 credits.

Inspection data for quality control; sampling plans for acceptance inspection; charts for process control. Introduction to reliability models and acceptance testing.
Requisites: (STAT/MATH 309, STAT 311, 224, 324, or STAT/MATH 431), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply statistical process control analysis for measuring and controlling quality
Audience: Undergraduate

2. Recognize, formulate, and analyze univariate continuous and discrete control charts
Audience: Undergraduate

3. Use Minitab to perform basic statistical process control analysis
Audience: Undergraduate

4. Communicate the results of the statistical process control analysis to management and other non-specialist users of engineering analyses
Audience: Undergraduate

5. Recognize, formulate, and analyze advanced continuous control charts
Audience: Graduate

6. Perform process capability and measurement system capability analysis

Audience: Graduate

M E 514 – POLYMER ADDITIVE MANUFACTURING
3 credits.

A quantitative and qualitative study of additive manufacturing processes. Emphasis on proper additive manufacturing technique selection for optimized final product design and properties, as well as presentation of emerging additive manufacturing techniques.
Requisites: Senior standing and (M E 310 or 313), graduate/professional standing, member of Engineering Guest Students, or declared in Capstone Certificate in Polymer Processing and Manufacturing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Compare the different additive manufacturing (AM) techniques and identify their strengths and weaknesses
Audience: Both Grad & Undergrad

2. Identify the key components and underlying principles of AM processes
Audience: Both Grad & Undergrad

3. Identify the latest developments and critical challenges of AM
Audience: Both Grad & Undergrad

4. Evaluate literature and/or news articles to assess the potential and maturity level of AM applications or technologies
Audience: Both Grad & Undergrad

5. Use a 3D printer to produce a part from 3D model data
Audience: Both Grad & Undergrad

6. Select the appropriate AM technology for specific product requirements
Audience: Both Grad & Undergrad

7. Identify key principles of design for AM
Audience: Both Grad & Undergrad

8. Recite the latest developments as presented in the archival journals in the field, such as the Journal of Additive Manufacturing
Audience: Graduate

9. Explain the transport phenomena equations to model the underlying physics that control additive manufacturing techniques
Audience: Graduate

M E/B M E 516 – FINITE ELEMENTS FOR BIOLOGICAL AND OTHER SOFT MATERIALS
3 credits.

Finite element modeling of soft materials, with an emphasis on biological tissues. Basics of the finite element method, verification and validation methods, and selection of constitutive models. Emphasis on finite element modeling for materials that are generally nonlinear, and that generally undergo large deformation.
Requisites: (M E 306 or E M A 303), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Define the finite element method, explain its mathematical basis, and articulate alternatives
Audience: Both Grad & Undergrad

2. Justify the selection of a constitutive model for a particular modeling application
Audience: Both Grad & Undergrad

3. Design and complete validation and verification analyses
Audience: Both Grad & Undergrad

4. Build and analyze a finite element model, and present relevant results
Audience: Both Grad & Undergrad

5. Complete a term project using finite element analysis individually
Audience: Graduate

M E/N E 520 – TWO-PHASE FLOW AND HEAT TRANSFER
3 credits.

Two-phase flow and heat transfer in engineering systems. Pool boiling and flow boiling. Phenomenological modeling.
Requisites: M E 361 and (M E 364 or CBE 320), or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

M E 529 – DESIGN & APPLICATIONS OF SMART MANUFACTURING PROCESSES
3 credits.

Introduction to smart manufacturing. Understand how a company can connect its operational technology systems (e.g., machine tools) to its information technology systems to improve operational efficiency. Covers terminology, sensors and data, industrial computing platforms, data workflow and analysis, cyber-security, human factors, sequential logic control, and case studies of their application in smart manufacturing. Provides the basis for making informed decisions about how manufacturing processes and systems can be designed to be more adaptive (flexible) by automating, collecting the right data, sharing that data, implementing control systems and understanding the impact on humans and organizational systems.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe elements of smart manufacturing
Audience: Graduate

2. Identify applications for smart manufacturing in their company and articulate arguments for implementing it as well as challenges that may be encountered
Audience: Graduate

3. Communicate with the various experts that will need to be engaged to implement smart manufacturing
Audience: Graduate

4. Make informed decisions about manufacturing automation, monitoring, control, and human factors
Audience: Graduate

M E/COMP SCI/E C E 532 – MATRIX METHODS IN MACHINE LEARNING
3 credits.

Linear algebraic foundations of machine learning featuring real-world applications of matrix methods from classification and clustering to denoising and data analysis. Mathematical topics include: linear equations, regression, regularization, the singular value decomposition, and iterative algorithms. Machine learning topics include: the lasso, support vector machines, kernel methods, clustering, dictionary learning, neural networks, and deep learning. Previous exposure to numerical computing (e.g. Matlab, Python, Julia, R) required.
Requisites: (MATH 234, 320, 340, 341, or 375) and (E C E 203, COMP SCI 200, 220, 300, 301, 302, 310, 320, or placement into COMP SCI 300), graduate/professional standing, or declared in Capstone Certificate in Computer Sciences for Professionals
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use matrices and vectors to formulate classification, prediction and matrix completion problems using techniques such as least squares, regularized least squares, the singular value decomposition, subspace methods, support vector machines, neural networks and kernel methods.
Audience: Both Grad & Undergrad

2. Implement machine learning techniques for classification, prediction and matrix completion problems in software, and validate their performance on datasets using cross validation.
Audience: Both Grad & Undergrad

3. Apply advanced techniques to formulate and prove optimality of various matrix based techniques in machine learning.
Audience: Graduate

M E 535 – COMPUTER-AIDED GEOMETRIC DESIGN
3 credits.

Designed to acquaint the student with computer-aided design technology used for geometric design of engineered products. Currently used methods of creating three-dimensional computer-aided design (CAD) models will be discussed. Paradigms of three-dimensional wire-frame modeling, surface modeling and solids modeling as applied in product design. Techniques for freeform curve and surface modeling will be emphasized.
Requisites: Senior standing or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Identify concepts, techniques and mathematics for free-form curves and surfaces modeling
Audience: Both Grad & Undergrad

2. Demonstrate skills in manipulating spline models with CAD software
Audience: Both Grad & Undergrad

3. Apply the concepts and principles to model complex geometric objects
Audience: Both Grad & Undergrad

4. Demonstrate skills in programming geometric objects
Audience: Graduate

M E 536 – DATA DRIVEN ENGINEERING DESIGN
3 credits.

Introduction to data-driven techniques for surrogate modeling based engineering design. Apply data-driven approaches to engineering design problems such as design of structural and thermofluid components and systems.
Requisites: (MATH 234 or 376), (MATH 320, 340, 341, or 375), and (I SY E 210, B M E 325, E C E 331, MATH/STAT 310, STAT 312, 324, 333 or 340), or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify concepts and techniques for data-driven engineering design
Audience: Both Grad & Undergrad

2. Demonstrate skills in constructing surrogate models for design problems
Audience: Both Grad & Undergrad

3. Demonstrate skills in applying data-driven models in design problems
Audience: Both Grad & Undergrad

4. Apply the data-driven methods to solve engineering design problems
Audience: Both Grad & Undergrad

5. Identify mathematics for data-driven engineering design
Audience: Graduate

M E/COMP SCI/E C E 539 – INTRODUCTION TO ARTIFICIAL NEURAL NETWORKS
3 credits.

Theory and applications of artificial neural networks: multi-layer perceptron, self-organization mapdeep neural network convolutional neural network, recurrent network, support vector machines genetic algorithm, and evolution computing. Applications to control, pattern recognition, prediction, and object detection and tracking.
Requisites: COMP SCI 200, 220, 300, 301, 302, 310, placement into COMP SCI 300, or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify if a given data analysis task is a pattern classification problem or a model approximation problem.
Audience: Undergraduate

2. Apply multi-layer perceptron neural network training algorithm to develop artificial neural network (ANN) based pattern classifiers and data predictors.
Audience: Undergraduate

3. Apply deep learning network for pattern classification
Audience: Undergraduate

4. Apply support vector machine (SVM) to develop pattern classifiers.
Audience: Undergraduate

5. Apply self-organization map and k-means to perform clustering operations of a given data set.
Audience: Undergraduate

6. Apply stochastic optimization methods, including simulated annealing, genetic algorithm and random search to solve a discrete optimization problem.
Audience: Undergraduate

M E/E M A 540 – EXPERIMENTAL VIBRATION AND DYNAMIC SYSTEM ANALYSIS
3 credits.

Application of digital data acquisition to the investigation of mechanical components, structures and systems using time histories, transforms and response functions to characterize free, forced and transient inputs. Introduction to sensors, instrumentation and methods appropriate for dynamic system response.
Requisites: (M E 440, E M A 545, or concurrent enrollment) or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply common laboratory techniques to measure dynamic system responses
Audience: Both Grad & Undergrad

2. Demonstrate knowledge of instrumentation, data acquisition, signal processing, and results display for dynamic systems
Audience: Both Grad & Undergrad

3. Formulate analytical models with parameters identified from measured signals
Audience: Graduate

M E 548 – INTRODUCTION TO DESIGN OPTIMIZATION
3 credits.

Introduces basic concepts and techniques used in the optimization of engineering design components and systems. Pose and solve typical optimization problems such as truss and finite-element-based optimization.
Requisites: M E 306 or E M A 303, or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Translate a loosely worded optimization problem into a mathematical statement
Audience: Both Grad & Undergrad

2. Use the MATLAB optimization toolbox
Audience: Both Grad & Undergrad

3. Apply the fundamental theorems of optimization
Audience: Both Grad & Undergrad

4. Analyze and optimize structural designs
Audience: Both Grad & Undergrad

5. Implement numerical methods of optimization
Audience: Graduate

M E 549 – PRODUCT DESIGN
3 credits.

A project oriented, interdisciplinary course with an emphasis on designing competitive, quality products. The product development process is covered from problem identification through detail design and evaluation. Included among the topics covered are: idea generation and evaluation, visualization, and quality.
Requisites: Senior standing and declared in Biomed, Biological Sys, Chemical, Civil, Computer, Electrical, Geological, Industrial, Mechanical or Nuclear Egr, Materials Sci & Egr, Egr Physics, Egr Mechanics, grad/professional standing or member of Egr Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply a structured design methodology to conceive and develop products that are not only feasible but viable and desirable
Audience: Both Grad & Undergrad

2. Integrate a range of low-fidelity prototyping methods and user testing into the design process, as a means of exploring and validating design concepts
Audience: Both Grad & Undergrad

3. Communicate to a diverse audience the ways in which proposed product attributes address user needs, through the use of sketches and storyboards
Audience: Both Grad & Undergrad

4. Situate the role of the engineer in the new product development process, and develop skills to collaborate effectively with peers from different disciplines (marketing, industrial design, human factors, etc.) who work together to bring new products to market
Audience: Both Grad & Undergrad

5. Develop advanced skills to collaborate effectively with peers from different disciplines (marketing, industrial design, human factors, etc.) who work together to bring new products to market
Audience: Graduate

M E 561 – INTERMEDIATE THERMODYNAMICS
3 credits.

Fundamentals; phase and chemical equilibria; availability; thermodynamic relationships.
Requisites: M E 361 or CBE 311, or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

M E 563 – INTERMEDIATE FLUID DYNAMICS
3 credits.

Incompressible differential and integral analysis for basic conservation laws, kinematics, exact solutions to Navier-Stokes, boundary layer theory, vorticity, potential flow, and selected topics.
Requisites: M E 363, CIV ENGR 310, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a differential and integral analysis of the mass and momentum conservation laws
Audience: Both Grad & Undergrad

2. Develop a mathematical working knowledge of the common manipulations that are performed for three dimensional time-dependent flows
Audience: Both Grad & Undergrad

3. Perform a boundary layer analysis
Audience: Both Grad & Undergrad

4. Develop analytical solutions to selected Navier-Stokes problems including kinematics and potential flows
Audience: Both Grad & Undergrad

5. Implement numerical solution to selected fluid problems
Audience: Graduate

M E 564 – HEAT TRANSFER
3 credits.

Applications of conduction, convection, and thermal-radiation principles to combined-mode problems; analytical and numerical techniques; heat-exchanger design; thermal stresses.
Requisites: M E 364, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop analytical models for conduction problems using separation of variables and Laplace transform techniques
Audience: Both Grad & Undergrad

2. Develop high order numerical models of conduction problems using explicit and implicit techniques
Audience: Both Grad & Undergrad

3. Develop models of radiation problems involving semi-grey surfaces using the radiosity technique
Audience: Both Grad & Undergrad

4. Use the Monte Carlo technique to determine view factors
Audience: Both Grad & Undergrad

5. Use the Integral Technique to solve convection problems
Audience: Graduate

M E/N E 565 – POWER PLANT TECHNOLOGY
3 credits.

Design and performance of power plants for the generation of electric power; fossil, solar, wind, hydro and nuclear fuels, cycle analysis, component design and performance, plant operation, control, economics and environmental impact.
Requisites: M E 361, CBE 310, 320, or CIV ENGR 324, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe how electricity is produced in a power plant
Audience: Both Grad & Undergrad

2. Apply physical principles to model power plants including power output and efficiency
Audience: Both Grad & Undergrad

3. Observe and collect data on current issues and designs associated to power generation
Audience: Both Grad & Undergrad

4. Describe codes and regulations associated with power production, and how power is sold on the market and transmitted to the customer
Audience: Both Grad & Undergrad

5. Critically review scientific literature pertaining to power plant design
Audience: Both Grad & Undergrad

6. Effectively present detailed information regarding operation and maintenance of power plant components
Audience: Graduate

M E/CBE 567 – SOLAR ENERGY TECHNOLOGY
3 credits.

Radiant energy transfer and its application to solar exchangers; energy balances for solar exchangers, review of theory, economics, and practice of solar energy applications.
Requisites: (M E 364, CBE 326, or concurrent enrollment), or graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Predict available solar radiation at a given location and time, for a given surface orientation
Audience: Undergraduate

2. Predict and model thermal and optical losses for solar thermal systems
Audience: Undergraduate

3. Calculate the load on a solar system
Audience: Undergraduate

4. Predict and model long term performance of solar thermal systems
Audience: Undergraduate

M E 569 – APPLIED COMBUSTION
3 credits.

Introduction to and analysis of combustion processes and combustion technology for gaseous, liquid, and solid fuels. Application to combustion engines, furnaces, fixed-bed, fluidized-bed, and suspension burning boilers.
Requisites: M E 364, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop analytical and computational techniques to analyze combustion chemical kinetics
Audience: Both Grad & Undergrad

2. Apply basic knowledge of combustion problems to understand practical energy conversion devices for power generation
Audience: Both Grad & Undergrad

3. Apply analytical techniques to describe transport-driven combustion phenomena
Audience: Graduate

M E/E M A 570 – EXPERIMENTAL MECHANICS
3 credits.

Experimental methods for design and analysis of mechanical components, structures and materials. Electrically and optically recorded stress, strain and deformation data; computer acquisition/reduction/presentation techniques; applications to static and transient events, sensors, transducer design, NDT, fracture and residual stresses.
Requisites: Senior standing and (M E 306, E M A 303 or 304) or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022
Learning Outcomes: 1. Apply knowledge of experimental techniques and measurement systems for mechanical components, structures and materials
Audience: Both Grad & Undergrad

2. Work in groups in the formulation of analytical models, configuration of measurement systems, interpretation of experimental and theoretical results, and presentation of conclusions
Audience: Both Grad & Undergrad

3. Use digital data acquisition systems, computer aided data reduction and display, and commercial software packages for modeling and data analysis
Audience: Both Grad & Undergrad

4. Evaluate clarity and/or accuracy of written work
Audience: Graduate

M E 572 – INTERMEDIATE GAS DYNAMICS
3 credits.

Thermodynamics and fluid dynamics of compressible gas flows with friction and heat transfer, and application to nozzles, shock tubes and propulsion devises. Wave phenomena and engine port tuning. Physics of high temperature gases and equilibrium, non-equilibrium and frozen flows.
Requisites: M E 363, or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

M E 573 – COMPUTATIONAL FLUID DYNAMICS
3 credits.

Provides an in-depth introduction to the methods and analysis techniques used in computational solutions of fluid mechanics and heat transfer problems. Model problems are used to study the interaction of physical processes and numerical techniques. Contemporary methods for boundary layers, incompressible viscous flows, and inviscid compressible flows are studied. Finite differences and finite volume techniques are emphasized. Knowledge of programming language such as Python, C++, MATLAB or Java required.
Requisites: M E 363, or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

M E/E C E 576 – PRINTED AND FLEXIBLE ELECTRONICS: MANUFACTURING, DEVICES, AND APPLICATIONS
3 credits.

Exploration of additive fabrication of thin-film electronics. Various techniques, materials, and applications of printable electronics with a key focus on mechanically flexible electronic devices. Identify the appropriate printing technology and materials to achieve desired device performance.
Requisites: E C E 230 or 376, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Define the broad field of printed/thin-film electronics
Audience: Both Grad & Undergrad

2. Describe the multiple techniques for printing electronics
Audience: Both Grad & Undergrad

3. Identify the appropriate technique for specific target applications
Audience: Both Grad & Undergrad

4. Describe applications of materials for insulating, conducting, and semiconducting, required for advanced thin-film electronics
Audience: Both Grad & Undergrad

5. Benchmark printed devices including sensors and thin-film transistors
Audience: Both Grad & Undergrad

6. Design printable electronic sensors to desired specifications
Audience: Graduate

7. Describe the current challenges of the field of printable electronics
Audience: Graduate

M E/E C E 577 – AUTOMATIC CONTROLS LABORATORY
4 credits.

Control theory is reduced to engineering practice through the analysis and design of actual systems in the laboratory. Experiments are conducted with modern servo systems using both analog and digital control. Systems identification and modern controls design are applied to motion and torque control.
Requisites: M E 346 or E C E 332, or graduate/professional standing or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

M E 578 – MARINE ROBOTICS
3 credits.

Modeling, control, perception, and navigation of autonomous marine robots, including Autonomous Surface Vehicles (ASVs) and Autonomous Underwater Vehicles (AUVs). Core topics include kinematics, dynamics, optimal control, state estimation, perception, communication, and guidance tailored for marine robotic systems. Development and testing of dynamic models, controllers, and perception algorithms on simulated/real marine robot platforms.
Requisites: (M E 340 or concurrent enrollment), (MATH 320 or 376), (PHYSICS 202, 208, or 248), and E C E/M E 439, or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the core principles of underwater robotics, including kinematics, dynamics, control, localization, and communication
Audience: Both Grad & Undergrad

2. Implement control and perception algorithms for Autonomous Surface Vehicles (ASVs) and Autonomous Underwater Vehicles (AUVs) to achieve specified tasks
Audience: Both Grad & Undergrad

3. Execute simulations/experiments with small autonomous robotic systems and analyze the resulting data to evaluate and improve system performance
Audience: Both Grad & Undergrad

4. Communicate technical findings about marine systems effectively
Audience: Both Grad & Undergrad

5. Assess the environmental and ethical implications of autonomous marine systems
Audience: Both Grad & Undergrad

6. Design optimal control systems for marine robots to ensure robust performance in dynamic and disturbed aquatic environments
Audience: Graduate

M E 601 – SPECIAL TOPICS IN MECHANICAL ENGINEERING
1-3 credits.

Advanced topics of special interest in various areas of Mechanical Engineering, such as vibrations, balancing, lubrication and wear, special manufacturing processes, automation, energy systems, etc.
Requisites: Senior standing or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and describe key theories, concepts, and methods in Mechanical Engineering
Audience: Both Grad & Undergrad

2. Apply key theories, concepts, and methods in Mechanical Engineering, using appropriate tools, processes, and/or software
Audience: Both Grad & Undergrad

3. Apply, Analyze or evaluate advanced theories, concepts, or methods in Mechanical Engineering
Audience: Graduate

M E/B M E 605 – SPECIAL TOPICS IN BIOMECHANICS
1-3 credits.

Various special topics in biomechanics.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and describe key theories, concepts, and methods in biomechanics
Audience: Both Grad & Undergrad

2. Apply key theories, concepts, and methods in biomechanics, using appropriate tools, processes, and/or software
Audience: Both Grad & Undergrad

3. Apply, analyze, or evaluate advanced theories, concepts, or methods in biomechanics
Audience: Graduate

M E/B M E 615 – TISSUE MECHANICS
3 credits.

Focus on solid mechanics of prominent musculoskeletal and cardiovascular tissues. Their normal and pathological behaviors (stiffness, strength, relaxation, creep, adaptive remodeling, etc.) in response to physiologic loading will be examined and quantified.
Requisites: M E 306 or E M A 303, or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Mathematically and conceptually define stress and strain tensors
Audience: Both Grad & Undergrad

2. Calculate stress given a deformation and a constitutive relationship
Audience: Both Grad & Undergrad

3. Describe key features of tissue mechanics
Audience: Both Grad & Undergrad

4. Describe structure-function relationships for biological tissues
Audience: Both Grad & Undergrad

5. Summarize and present current biomechanical knowledge on a specific tissue
Audience: Graduate

M E/I SY E 641 – DESIGN AND ANALYSIS OF MANUFACTURING SYSTEMS
3 credits.

Covers a broad range of techniques and tools relevant to the design, analysis, development, implementation, operation and control of modern manufacturing systems. Case studies assignments using industry data will be used to elaborate the practical applications of the theoretical concepts.
Requisites: I SY E 315, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify suitable analysis techniques to investigate processes related to manufacturing, planning, engineering or office operations within a manufacturing firm
Audience: Both Grad & Undergrad

2. Perform analysis to describe, predict and analyze behavior of a manufacturing system to meet desired managerial and economic objectives for a real-world or realistic manufacturing systems improvement project/case study
Audience: Both Grad & Undergrad

3. Develop recommendations that will improve manufacturing system performance (e.g. reduce flow time, increase throughput)
Audience: Both Grad & Undergrad

4. Collaborate effectively in teams to develop solutions to engineering problems and communicate findings effectively
Audience: Both Grad & Undergrad

5. Reflect on personal strengths and weaknesses with respect to team leadership and project management
Audience: Graduate

M E/I SY E 643 – PERFORMANCE ANALYSIS OF MANUFACTURING SYSTEMS
3 credits.

Examines the state of the art in the use of stochastic network theory to develop performance models of modern manufacturing systems.
Requisites: (I SY E 624 or STAT/I SY E/MATH/OTM 632) and (COMP SCI 200, 220, 300, 301, 302, 400, or placement into COMP SCI 300), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021
Learning Outcomes: 1. Model a variety of manufacturing problems as stochastic models using Markov Chain and Process theory
Audience: Both Grad & Undergrad

2. Identify the basic assumptions underlying stochastic models and understand what can happen when these assumptions do not hold
Audience: Both Grad & Undergrad

3. Apply queueing theory to model manufacturing systems
Audience: Both Grad & Undergrad

4. Apply the line balancing method for assembly systems design
Audience: Both Grad & Undergrad

5. Perform cost analysis for manufacturing systems
Audience: Both Grad & Undergrad

6. Apply the analytical approaches of performance analysis for manufacturing systems to real industry cases
Audience: Both Grad & Undergrad

7. Apply advanced Markov process method to solve complicated performance evaluation problems encountered in manufacturing production systems
Audience: Graduate

M E 699 – ADVANCED INDEPENDENT STUDY
1-3 credits.

Directed study projects as arranged with instructor.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply advanced physical and mathematical principles to engineering research problems
Audience: Graduate

2. Apply advanced mechanical engineering principles to engineering research problems
Audience: Graduate

3. Communicate technical concepts to a diverse audience via verbal or written media
Audience: Graduate

M E 702 – GRADUATE COOPERATIVE EDUCATION PROGRAM
1-2 credits.

Work experience that combines classroom theory with practical knowledge of operations to provide students with a background on which to develop and enhance a professional career. The work experience is tailored for MS students from within the U.S. as well as eligible international students.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and respond appropriately to real-life engineering ethics cases relevant to co-op work
Audience: Graduate

2. Synthesize and apply appropriate technical education to real world technical work
Audience: Graduate

3. Communicate effectively in writing and speaking with a range of audiences in the workplace, including those without disciplinary expertise
Audience: Graduate

4. Develop professional and transferable habits like time management skills, collaborative problem-solving skills, and research skills for learning new information
Audience: Graduate

M E/E M A 703 – PLASTICITY THEORY AND PHYSICS
3 credits.

Physical foundations of plasticity as a basis for choices made in the formulation of theories representing plastic deformation and their limitation. Motion of dislocations and formation and growth of deformation twins. Experimental results in the context of plasticity models. Traditional and research topics of plasticity and theories for rate-independent, rate-dependent, single and polycrystal descriptions. Numerical solution of equations and computational plasticity. Knowledge of mechanics of materials [such as E M A 303 or M E 306] and continuum mechanics [such as E M A 622] required.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Identify the physical sources of plastic deformation in materials
Audience: Graduate

2. Explain and apply traditional and advanced theories of plasticity
Audience: Graduate

3. Execute a computational study of plasticity with a common engineering material
Audience: Graduate

4. Given a material model, know how to evaluate the material parameters in the model
Audience: Graduate

5. Provide critical assessment of seminal and modern plasticity literature
Audience: Graduate

M E/E M A 708 – ADVANCED COMPOSITE MATERIALS
3 credits.

Contemporary topics in composite materials, including innovations in sandwich structures, textile composites, and architected materials; fracture mechanics; durability and damage tolerance; experimental techniques; transient, micro, nonlinear, inelastic and environmental effects; advanced manufacturing methods: repair and applications. Knowledge of basic composite materials [such as CIV ENGR/E M A/M E 508] is strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2016
Learning Outcomes: 1. Describe different types of advanced composites and manufacturing processes
Audience: Graduate

2. Describe the mechanical behavior of various composite materials under different types of loading conditions
Audience: Graduate

3. Mathematically model and solve for engineering stresses and deformations in a composite structure
Audience: Graduate

4. Assess the key challenges and impact of technical work being conducted in the area of composite materials
Audience: Graduate

M E/B M E 715 – ADVANCED TISSUE MECHANICS
3 credits.

Central topics in solid mechanics applied to soft tissues, including analysis of strain in the setting of large deformations, computation of stress in multiple experimental loading configurations, constitutive modeling of biomaterials using hyperelastic strain-energy functions, modeling tissue growth and remodeling, and the main theories for soft tissue failure will be covered. Application of finite elasticity theory in practical laboratory situations, and key papers and concepts in soft tissue mechanics.
Requisites: (M E/B M E 615, E M A 710, or 622 prior to Fall 2024) and graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Compute strain from multiple different types of marker and image data
Audience: Graduate

2. Compute stresses using data from uniaxial, biaxial, and inflation mechanical tests
Audience: Graduate

3. Construct and utilize constitutive models appropriate for soft tissues
Audience: Graduate

4. Formulate and analyze continuum models of biological growth
Audience: Graduate

5. Identify common failure criteria applied to soft tissues
Audience: Graduate

M E 717 – ADVANCED POLYMER PROCESSING
3 credits.

Advanced analysis and modeling of plastics extrusion, injection molding, and other processes; mold and equipment design; materials consideration. Knowledge of polymer processing [such as M E 417] strongly encouraged.
Requisites: Graduate/professional standing or declared in Capstone Certificate in Polymer Processing and Manufacturing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

M E 718 – MODELING AND SIMULATION IN POLYMER PROCESSING
3 credits.

This course is designed to acquaint the student with computer simulation technology used for the engineering of polymer processes. Knowledge of polymer processing [such as M E 417] strongly encouraged.
Requisites: Graduate/professional standing or declared in Capstone Certificate in Polymer Processing and Manufacturing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

M E/E M A 722 – INTRODUCTION TO POLYMER RHEOLOGY
3 credits.

Formulation of constitutive equations using embedded base vectors. Viscosity, normal stress differences, stress relaxation, elastic recoil. Polymer rheology; homogeneous strain history. Knowledge of differential equations [such as MATH 320] strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2023

M E 729 – ADVANCED MACHINING
3 credits.

Advanced topics of mechanical machining process with theory and its applications, material behavior during machining process, 5-axis machining, micro-machining, and difficult-to-cut materials. Ductile to brittle transition of crystalline materials such as metals and ceramics, subsurface damage, and residual stress using theoretical development, empirical observation, and molecular dynamics. Knowledge of metal cutting [such as M E 429], materials science [such as M S & E 350], and manufacturing processes [such as M E 311] required.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Describe techniques for mechanical machining of difficult-to-cut materials
Audience: Graduate

2. Adapt techniques for emerging materials
Audience: Graduate

3. Apply cutting theory, including understanding of ductile to brittle transition, residual stress and subsurface damage, and other advanced topics of machining
Audience: Graduate

4. Identify industry needs for scalable machining processes
Audience: Graduate

5. Identify manufacturing's impact on the global economy, the environment, social paradigms, and government policy
Audience: Graduate

6. Discuss professional and ethical responsibilities of manufacturing practices
Audience: Graduate

M E/E C E 732 – DYNAMICS OF CONTROLLED SYSTEMS
3 credits.

Emphasis on obtaining equations which define the behavior of physical systems frequently subjected to control; mechanical processing, fluid power, and thermal systems; analytical, experimental, and computer techniques. Knowledge of Automatic Controls [such as M E 446 or E C E 322] is required.
Requisites: Graduate/professional standing or declared in Capstone Certificate in Power Conversion and Control. Not open to students with credit for M E 746.
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Describe how physical state feedback affects dynamic stiffness of a control system
Audience: Graduate

2. Analyze the sensitivity of the system with eigenvalue migration analysis
Audience: Graduate

3. Develop improved control systems by implementing active state feedback which mimics the physical system and augments the system performance
Audience: Graduate

4. Differentiate command tracking from disturbance rejection. The student will characterize the necessary command feedforward structure in order to achieve optimal command tracking.
Audience: Graduate

5. Manipulate observer inputs and state feedback inputs to achieve zero-lag properties
Audience: Graduate

6. Draw the block diagram of physical systems identifying the appropriate inputs required for a properly formed observer
Audience: Graduate

7. Implement observers for state estimation in multi-variable control systems
Audience: Graduate

M E/E C E 733 – ADVANCED COMPUTER CONTROL OF MACHINES AND PROCESSES
3 credits.

Digital control theory, design methodology, and techniques for controller implementation on digital computers. Advanced single and multi-axis motion generation algorithms. Multiple processor control systems. Multiple objective control systems for machinery guidance and manufacturing processes. Precision control. Knowledge of continuous and discrete time control [such as M E 447 or E C E 332] is required.
Requisites: Graduate/professional standing. Not open to students with credit for M E 747.
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain and apply physics-based discrete time system modeling
Audience: Graduate

2. Analyze and design in both the continuous and discrete domains
Audience: Graduate

3. Analyze and design control systems using tools such as Matlab and Simulink
Audience: Graduate

4. Describe physics-based control structures for computer control systems
Audience: Graduate

M E 737 – SCIENTIFIC COMPUTING AND MACHINE LEARNING FOR ENGINEERING APPLICATIONS
3 credits.

Key computational topics for engineering applications will be discussed, encompassing both established classical numerical methods and the emerging field of machine learning. Knowledge of calculus [such as MATH 221], linear algebra and differential equations [such as MATH 320], probability [such as MATH 331] and programming in Python or MATLAB [such as COMP SCI 220] is required.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Implement representative machine learning methods for regression analysis to solve engineering problems
Audience: Graduate

2. Apply both classical numerical methods and machine learning techniques to solve Ordinary Differential Equations (ODEs) and Partial Differential Equations (PDEs)
Audience: Graduate

3. Evaluate the strengths and weaknesses of classical numerical methods and machine learning techniques for solving engineering problems
Audience: Graduate

4. Develop reduced-order models to accelerate computation
Audience: Graduate

M E 738 – ADVANCED ROBOTICS: MODERN MOTION PLANNING, ESTIMATION, AND CONTROL
3 credits.

Rigid body models of robots, constraints and contact, motion planning methods including sampling based, trajectory optimizations, state estimation algorithms including linear observers and filters, Kalman filters, optimization-based filters, feedback control methods including linear controls, Impedance Control, optimization-based controllers, Differential Dynamic Programming, Lyapunov Analysis and Design, and Underactuations. Knowledge of robotic systems [such as E C E/M E 439 and E C E/M E 441] is strongly recommended.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Describe the mathematical models of general robotic systems
Audience: Graduate

2. Plan motion that realizes desired tasks
Audience: Graduate

3. Estimate a robot's state from available sensors
Audience: Graduate

4. Control robot motion using appropriate controller designs
Audience: Graduate

M E 740 – ADVANCED VIBRATIONS
3 credits.

Vibration of mechanical components subject to dynamic loads; analytical, numerical and finite element methods applied to the analysis and design of mechanical systems consisting of cables, bars, shafts, beams, frames, rings, membranes, plates and shells. Knowledge of vibrations [such as M E 440] strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023

M E 746 – DYNAMICS OF CONTROLLED SYSTEMS
3 credits.

Emphasis on obtaining equations which define the behavior of physical systems frequently subjected to control; mechanical processing, fluid power, and thermal systems; analytical, experimental, and computer techniques. Knowledge of Automatic Controls [such as M E 446 or E C E 332] is required.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022
Learning Outcomes: 1. Describe how physical state feedback affects dynamic stiffness of a control system
Audience: Graduate

2. Analyze the sensitivity of the system with eigenvalue migration analysis.

Audience: Graduate

3. Develop improved control systems by implementing active state feedback which mimics the physical system and augments the system performance.
Audience: Graduate

4. Differentiate command tracking from disturbance rejection. The student will characterize the necessary command feedforward structure in order to achieve optimal command tracking.
Audience: Graduate

5. Manipulate observer inputs and state feedback inputs in order to achieve zero-lag properties.
Audience: Graduate

6. Draw the block diagram of physical systems identifying the appropriate inputs required for a properly formed observer.
Audience: Graduate

7. Implement observers for state estimation in multi-variable control systems.
Audience: Graduate

M E 747 – ADVANCED COMPUTER CONTROL OF MACHINES AND PROCESSES
3 credits.

Digital control theory, design methodology, and techniques for controller implementation on digital computers. Advanced single and multi-axis motion generation algorithms. Multiple processor control systems. Multiple objective control systems for machinery guidance and manufacturing processes. Precision control. Knowledge of digital control [such as M E 447] strongly encouraged.
Requisites: (M E 446 or E C E 332) and graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

M E 748 – OPTIMUM DESIGN OF MECHANICAL ELEMENTS AND SYSTEMS
3 credits.

Formulation and solution of mechanical design problems by use of mathematical programming methods.
Requisites: M E 548 and graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

M E 751 – ADVANCED COMPUTATIONAL DYNAMICS
3 credits.

Overview of techniques used to understand the time evolution (dynamics) of multi-body mechanical engineering systems. Modeling, equation formulation, and numerical methods used to determine the dynamics of multi-body mechanical systems. Rigid and flexible multi-body dynamics, friction and contact. Knowledge of Python or MATLAB strongly recommended. Knowledge of dynamic systems [such as M E 240 or 340] required.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Solve problems that pertain to the Kinematics and Dynamics of complex mechanical systems (mechanisms) made up of both rigid and deformable bodies
Audience: Graduate

2. Formulate basic multi-physics models
Audience: Graduate

3. Use Matlab or Python programming to produce a simulation engine that draws on the concepts introduced in this class
Audience: Graduate

4. Use third party software to solve real-life problems tied to mechanical systems that include rigid and compliant elements and might interact with a fluid
Audience: Graduate

M E 753 – FRICTION, LUBRICATION AND WEAR
3 credits.

Behavior of frictional surfaces under different types of loading. Mechanisms of heat generation and surface damage (wear, scuffing, pitting, fretting, etc.). Rheological effects. Effect of lubrication. Surface interaction in metal cutting. Design considerations. Knowledge of mechanics/strength of materials [such as E M A 303 or M E 306] strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

M E 758 – SOLID MODELING
3 credits.

Mathematical modeling, computer representations, and algorithms for manipulation of two- and three-dimensional shapes on a computer. Applications of shape modeling to design, representation, and analysis of mechanical parts and processes; other engineering and scientific applications of shape and solid modeling. Knowledge of advanced programming [such as COMP SCI 400] and knowledge of linear algebra [such as MATH 340] strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2020
Learning Outcomes: 1. Utilize advanced mathematical representations of shapes
Audience: Graduate

2. Translate mathematical representations to computer algorithms
Audience: Graduate

3. Apply shape modeling to design problems
Audience: Graduate

M E/COMP SCI/E C E/E M A/E P 759 – HIGH PERFORMANCE COMPUTING FOR APPLICATIONS IN ENGINEERING
3 credits.

An overview of hardware and software solutions that enable the use of advanced computing in tackling computationally intensive Engineering problems. Hands-on learning promoted through programming assignments that leverage emerging hardware architectures and use parallel computing programming languages. Students are strongly encourage to have completed COMP SCI 367 or COMP SCI 400 or to have equivalent experience.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

M E 761 – TOPICS IN THERMODYNAMICS
3 credits.

Thermostatic behavior of nonideal gases; equations of state, with emphasis on their empirical and statistical development, including mixture rules; more detailed study of chemical and phase equilibrium; selected applications of the foregoing; real gas processes, combustion, direct energy conversion devices. Knowledge of thermodynamics [such as M E 561] strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

M E 764 – ADVANCED HEAT TRANSFER I-CONDUCTION
3 credits.

Analytical methods in conduction; Bessel functions, separation of variables, Laplace transforms, superposition, oscillating solutions; computer methods; finite differences, finite elements. Knowledge of basic heat transfer [such as M E 564] strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use Duhamel's theorem to solve conduction problems
Audience: Graduate

2. Use Complex Combination to solve conduction problems
Audience: Graduate

3. Use Separation of Variables to solve conduction problems
Audience: Graduate

4. Use Superposition to solve conduction problems
Audience: Graduate

5. Use Finite Difference and Finite Element techniques to solve conduction problems
Audience: Graduate

M E 768 – PRECISION MEASUREMENTS
3 credits.

General concepts for predicting, characterizing, and reducing noise in measurements. Address the key questions of all experimentalists: (1) How can I improve my signal-to-noise ratio? (2) What is the ultimate detection limit of my measurement approach? Knowledge of Matlab programming and basic circuit design [such as E C E 230] is required.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Differentiate between different sources of measurement noise
Audience: Graduate

2. Employ noise circuit analysis to predict the detection limit of a measurement
Audience: Graduate

3. Characterize measurement noise in the frequency domain
Audience: Graduate

4. Design and test analog filter circuits
Audience: Graduate

5. Implement lock-in detection techniques to measure small signals
Audience: Graduate

M E 769 – COMBUSTION PROCESSES
3 credits.

Combustion theory and practice. Thermodynamics of combustion, flame theory, detonation, spray and droplet combustion related to various engine applications. Knowledge of internal combustion engines [such as M E 469], thermodynamics [such as M E 561], and combustion [such as M E 569] strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Write computer code to solve equilibrium combustion problems
Audience: Graduate

2. Write computer code to solve zero-dimensional transient combustion problems
Audience: Graduate

3. Write computer code to solve transport equations for a one-dimensional reacting flow
Audience: Graduate

4. Perform design level calculations using a commercial computational fluid dynamics or chemical kinetics code
Audience: Graduate

M E 770 – ADVANCED EXPERIMENTAL INSTRUMENTATION
3 credits.

Theory and design of instruments for transient physical phenomena especially related to internal combustion engines. Basic knowledge of kinetic theory of gases, statistical mechanics, and quantum mechanics for gases, and measurement theory [such as M E 601: Physics of Gases] required.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Identify sources of systematic and random uncertainties for measurement systems
Audience: Graduate

2. Perform uncertainty analysis for complex systems
Audience: Graduate

3. Define vocabulary and nomenclature associated with optical and laser-based diagnostics
Audience: Graduate

4. Perform basic optics calculations and gaussian beam propagation calculations
Audience: Graduate

5. Apply knowledge of physics to estimate diagnostic performance
Audience: Graduate

M E 774 – CHEM KINETICS OF COMBUST SYSTEMS
3 credits.

Application of gas-phase chemical reaction rate theory to power and propulsion systems, both earthbound and airborne. Aerothermochemistry, kinetics of combustion reactions, kinetics related to air pollutant generation. Development and comparison of transition state theory, collision theory and bond-energy-bond-order method. Intermediate knowledge of thermodynamics and combustion and basic understanding of kinetic theory of gases, statistical mechanics, and quantum mechanics for gases [such as M E 601: Physics of Gases] required.
Requisites: M E 569 and graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Define terminology associated with kinetics and reaction dynamics
Audience: Graduate

2. Solve chemical equilibrium using the method of element potentials
Audience: Graduate

3. Apply reaction rate theories for bimolecular and unimolecular reactions to estimate rate coefficients
Audience: Graduate

4. Solve and analyze reaction mechanisms using computational tools
Audience: Graduate

5. Identify dominant ignition pathways for hydrocarbon fuels
Audience: Graduate

M E/CIV ENGR/E M A 775 – TURBULENT HEAT AND MOMENTUM TRANSFER
3 credits.

Stochastic methods in turbulent heat and momentum transfer; fully developed turbulence; numerical methods including model applications to boundary layers, reacting flows, mass transfer, and unsteady flows; linear and non-linear stability and transition; emphasis on applications of interest to Mechanical, Aerospace, and Environmental Engineers. Knowledge of fluid mechanics [such as M E 363 or CBE 320] strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the physics and mathematics of turbulence theory and modeling
Audience: Graduate

2. Describe general features of turbulence
Audience: Graduate

3. Use analysis tools to solve problems and process data related to turbulence
Audience: Graduate

4. Use turbulence concepts to understand and explain turbulent behavior in more complex systems
Audience: Graduate

M E/E P 777 – VACUUM TECHNOLOGY
3 credits.

Topics defining modern vacuum technology, including the kinetic theory of gases, conductance, pumping systems, pump technologies, pressure measurement, gas-surface interactions, sealing technologies, leak detection, and residual gas analysis will be addressed through a combination of lectures, laboratory activities, problem solving, and group discussions. Knowledge of fluid mechanics [such as M E 363 or B M E 320] strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Use kinetic theory to determine key characteristics of a rarified gas such as the mean free path length, molecular flux and the average velocity
Audience: Graduate

2. Calculate the conductance of a vacuum system for molecular, viscous, and transitional flow regimes
Audience: Graduate

3. Calculate the time dependent pump down behavior of a vacuum system

Audience: Graduate

4. Repair a rotary vane vacuum pump
Audience: Graduate

5. Characterize the operation, advantages and disadvantages of low, medium, and high vacuum pumps
Audience: Graduate

6. Characterize the operation, advantages and disadvantages of low and high vacuum gauges
Audience: Graduate

7. Define and utilize appropriate leak detection methods for small, medium, and large leak rates
Audience: Graduate

M E 790 – MASTER'S RESEARCH AND THESIS
1-9 credits.

Directed study projects as arranged with instructor.
Requisites: Declared in a Mechanical Engineering graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

M E 890 – PHD RESEARCH AND THESIS
1-9 credits.

Directed study projects as arranged with instructor.
Requisites: Declared in a Mechanical Engineering graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

M E 903 – GRADUATE SEMINAR
0 credits.

Topics vary.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

M E 964 – SPECIAL ADVANCED TOPICS IN MECHANICAL ENGINEERING
1-3 credits.

Advanced topics in design, manufacturing, energy, etc.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and describe key theories, concepts, and methods in mechanical engineering
Audience: Graduate

2. Apply key theories, concepts, and methods in mechanical engineering, using appropriate tools, processes, and/or software
Audience: Graduate

3. Apply, analyze, or evaluate advanced theories, concepts, or methods in mechanical engineering
Audience: Graduate

M E 990 – DISSERTATOR RESEARCH AND THESIS
1-9 credits.

Directed study projects as arranged with instructor.
Requisites: Declared in Mechanical Engineering PhD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

M E 999 – ADVANCED INDEPENDENT STUDY
1-5 credits.

Directed study projects as arranged with instructor.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

MEDICAL GENETICS (MD GENET)

MD GENET/GENETICS 565 – HUMAN GENETICS
3 credits.

Principles, problems, and methods of modern human genetics. Focuses on how researchers discover the genetics of diseases and how those discoveries are used to improve clinical practice. Surveys aspects of (i) the molecular function of the human genome, (ii) the basic principles of human genetics including statistical genetics, quantitative genetics, and genomic variation in human populations, (iii) the genetics of rare disorders and common diseases, and genomic analysis approaches, including genome-wide association studies and sequencing, and (iv) how genetics are used in medicine and discussions covering ethical considerations of human genomic data.
Requisites: GENETICS 466, 468, BIOCORE 587, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Predict and describe how different classes of genetic variants, as defined by (a) mutation mechanism, (b) variant size, (c) population frequency, and (d) location in the genome, could affect molecular and cellular functions and risk for disease
Audience: Both Grad & Undergrad

2. Design experimental approaches to investigate the mechanisms of human genetic disorders
Audience: Both Grad & Undergrad

3. Explain and give examples of genetic inheritance patterns and the contribution of inherited factors to disease risk
Audience: Both Grad & Undergrad

4. Describe the design, strengths, and weaknesses of the various approaches for identifying genes or loci associated with a human disease or trait (e.g. linkage mapping, genetic association, sequencing), and interpret results from these studies
Audience: Both Grad & Undergrad

5. Explain how genetic information is used in the practice of medicine for diagnosis or to guide treatment and the limitations of current clinical diagnostic or treatment tools
Audience: Both Grad & Undergrad

6. Apply human genetics concepts to critically analyze published scientific studies and to describe experimental approaches that can be performed to address shortcomings and/or extend the findings of published work
Audience: Graduate

MD GENET/BIOCHEM/GENETICS 620 – EUKARYOTIC MOLECULAR BIOLOGY
3 credits.

Focuses on the basic molecular mechanisms that regulate DNA, RNA, and protein metabolism in eukaryotic organisms.
Requisites: BIOCHEM 501, 508 or graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recall core principles that govern the structure and function of DNA, RNA, and protein.
Audience: Both Grad & Undergrad

2. Describe techniques for quantifying the expression, interaction, and cellular localization of specific molecules and for determining their necessity and sufficiency in molecular processes.
Audience: Both Grad & Undergrad

3. Explain how molecular processes that control the synthesis, decay, interactions, localization, folding, and modification of molecules are silenced, initiated, maintained, and terminated.
Audience: Both Grad & Undergrad

4. Describe how information is transferred between molecules to alter cellular activity in response to developmental and environmental signals.
Audience: Both Grad & Undergrad

5. Critique and weigh the credibility of existing molecular data.
Audience: Both Grad & Undergrad

6. Develop and draw hypotheses that use existing data to account for as yet unexplained molecular processes in eukaryotic organisms.
Audience: Both Grad & Undergrad

7. Design discovery/observation, loss-of-function, and gain-of-function experiments to test molecular hypotheses.
Audience: Both Grad & Undergrad

8. Implement problem solving strategies in thesis research project.
Audience: Graduate

MD GENET/GENETICS/POP HLTH 636 – PUBLIC HEALTH GENOMICS
1 credit.

Provides an introduction to public health genomics through a review of fundamental principles of genetics, the use of genetic information in clinical and research settings, and its implications for disease management and prevention, and health promotion. Explores policies that guide public health and discusses current ethical, legal, and social implications of these policies.
Requisites: (Junior standing and ZOOLOGY/BIOLOGY/BOTANY 151) or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Discuss the impact of genetics on clinical care and public health practice
Audience: Both Grad & Undergrad

2. Critically discuss genetic/genomic policies and the relevant ethical, legal, and social implications (ELSI) of these policies
Audience: Both Grad & Undergrad

3. Read, summarize, critique, and relate current news articles to key concepts in public health genomics
Audience: Graduate

MD GENET/GENETICS 662 – CANCER GENETICS
3 credits.

Focuses on the genetic basis by which cancer manifests. Provides a comprehensive overview of how cancer is generated as a result of abnormalities at the DNA level, paying special attention to oncogenes, tumor suppressors, DNA mutations, DNA repair mechanisms, chromosomal instability, and tumor heterogeneity. Stresses the role of the immune system in combating cancer, the phenomenon of cancer resistance, anti-tumor strategies, and epigenetic influences on tumorigenesis. Highlights connections between course material and clinical relevance.
Requisites: GENETICS 466, 467 or BIOCORE 383
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Describe major research advances in cancer genetics
Audience: Undergraduate

2. Discuss the promises and challenges that await the field of cancer genetics.
Audience: Undergraduate

3. Apply your understanding of cancer genetics to generate research questions and improve hypothetical patient care
Audience: Undergraduate

4. Critically evaluate primary literature regarding cancer genetics
Audience: Undergraduate

5. Organize and deliver a scientific presentation to your peers
Audience: Undergraduate

MD GENET/GENETICS 677 – ADVANCED TOPICS IN GENETICS
1-3 credits.

Contents vary; consideration of subjects not included in the curriculum.
Requisites: Graduate/professional standing, GENETICS 466, 468, or BIOCORE 383
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply, analyze, or evaluate advanced theories, concepts, or methods in genetics and genomics.
Audience: Both Grad & Undergrad

2. Apply knowledge of experimental genetics and genomics to related research projects.
Audience: Graduate

MD GENET 699 – INDEPENDENT READING
1-3 credits.

Directed study projects as arranged with instructor.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2015
Learning Outcomes: 1. Apply concepts learned in coursework to real life situations
Audience: Undergraduate

2. Develop critical, analytical, and independent thinking skills
Audience: Undergraduate

MD GENET/GENETICS 707 – GENETICS OF DEVELOPMENT
3 credits.

A research-level analysis of the current status of the investigation of processes controlling differential gene activity and cellular behavior. The major emphasis is genetic. In successive years, the focus moves from the gene to the cell to the organism.
Requisites: Declared in Genetics graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Critically evaluate papers, form meaningful questions based on the material, and engage scientists in conversations about their work.
Audience: Graduate

2. Improve oral presentations and scientific writing (grants, review articles).
Audience: Graduate

3. Expand scientific literacy.
Audience: Graduate

MD GENET/GENETICS 708 — METHODS AND LOGIC IN GENETIC ANALYSIS
3 credits.

Contemporary issues in genetic, developmental, cell, and molecular biology are addressed in a discussion format. Invited speakers give research lectures and reading material is taken from the primary literature. The discussion focuses on evaluating genetic approaches to biological problems.
Requisites: Declared in Genetics graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Critically evaluate papers, form meaningful questions based on the material, and engage scientists in conversations about their work.
Audience: Graduate

2. Improve oral presentations and scientific writing (grants, review articles).
Audience: Graduate

3. Expand scientific literacy.
Audience: Graduate

MD GENET 911 — MODERN CLINICAL GENETICS: HOW TO APPROACH A RAPIDLY CHANGING FIELD
2 credits.

Genetics and genomics are rapidly evolving fields. In modern clinical care settings, clinicians will be exposed to genetic and genomic data, including that brought by patients, and knowing how to read genetic and genomic data is increasingly necessary in clinical practice. Genetics and genomics in a clinical setting spans a wide range of topics including diagnosis and treatment of genetic diseases. Familiarity with clinical genetic analysis, and the genetic approaches used in basic science, helps medical students better understand genetic disease background. Learn how to bridge basic concepts of human genetics and clinical genetics (actual diseases). Emphases will include research into human genetic diseases, including designing genetic testing, using model organisms and/or cell culture systems, and the development of genetic testing technologies.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Demonstrate understanding of basic concepts of human genetics
Audience: Graduate

2. Describe various genetic approaches and models for studying human genetic diseases
Audience: Graduate

3. Apply basic concepts of genetics to answering questions in human genetic diseases
Audience: Graduate

4. Explain fundamentals of clinical genetics, including genetic testing
Audience: Graduate

5. Model logical thinking process to organize scientific discussion and presentation
Audience: Graduate

MD GENET 999 — INDEPENDENT WORK
1-3 credits.

Directed study projects as arranged with instructor.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2010
Learning Outcomes: 1. Exhibit a broad understanding of general Genetics and Genomics principles.
Audience: Graduate

2. Conduct advanced independent research using a variety of approaches.

Audience: Graduate

MEDICAL HISTORY AND BIOETHICS (MED HIST)

MED HIST/HIST SCI/HISTORY 132 – BEES, TREES, GERMS, AND GENES: A HISTORY OF BIOLOGY
3 credits.

How did today's biology emerge out of the diverse traditions of agriculture and natural history (bees and trees), biomedicine and molecular biology (germs and genes), which stretch back into the eighteenth century? Examines classic texts and "game-changers" in the history of biology, putting them into broader scientific and social contexts to see how these different ways of knowing intertwined, competed, and yielded novel approaches to the study of life that still shape today's life sciences.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025

MED HIST/HIST SCI 212 – BODIES, DISEASES, AND HEALERS: AN INTRODUCTION TO THE HISTORY OF MEDICINE
3 credits.

A survey of different conceptions of how the body as a site of sickness has been understood from Antiquity to contemporary medicine. Includes consideration of the origins and evolution of public health, the changing social role of healers, and the emergence of the modern "standardized" body in health and illness.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025

MED HIST/ANTHRO 231 – INTRODUCTION TO SOCIAL MEDICINE
3 credits.

Provides analytical tools for the critical examination of the social, cultural, political and economic determinants of health conditions and medical practice. Pays special attention to how these factors determine how patients and providers experience and ideate disease and treatment, and how they respond to specific health care policies. Emphasizes the important role that conditions of structural violence and inequality play as determinants of health conditions in a globalized world.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2020
Learning Outcomes: 1. Identify and analyze within their social, cultural and economic contexts key historical issues, and their significance, in the history of healing practices and public health.
Audience: Undergraduate

2. Develop an understanding of the mutually shaping interactions between perceptions of health, illness and medical practices and culture and society.
Audience: Undergraduate

3. Analyze the role of social factors, race, gender, ethnicity, class, among others, in shaping cultural realities related to body normativity, health, medical practice, public health and medical education.
Audience: Undergraduate

4. Identify the role that patients, healthcare providers, institutions and the state play in modeling medical practice, ideas about the body, public health policies, and medical education.
Audience: Undergraduate

5. Discern the impact of programs of global health as they intersect with international politics in the shaping of ideas about human rights, race, medical hierarchies and public health policies.
Audience: Undergraduate

MED HIST/HIST SCI/RELIG ST 331 – SCIENCE, MEDICINE AND RELIGION
3 credits.

Introduction to the study of religion, science, and medicine. Focus on how religion, science, and medicine have shaped practices of knowledge production and meaning making with respect to human life, by considering theories of human history and racial progress; how logics of contagion structure human relationships and communal boundaries; the variety of ways of understanding and caring for bodies; and the place of humans within broader ecologies.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. read and interpret critically primary and secondary source texts about religion, science, and medicine
Audience: Both Grad & Undergrad

2. access and utilize a variety of resources and methods for critical inquiry and research in religious studies, history of science and medicine, and science and religion
Audience: Both Grad & Undergrad

3. categorize, analyze, and compare core concepts in religious studies, the history of science and medicine, and science and religion, such as the conflict thesis; knowledge production; creation/evolution; eugenics; race; gender; embodiment; care; health/healing; capitalism; and progress narratives
Audience: Both Grad & Undergrad

4. identify, evaluate, and interpret the interrelationships and impact of religious and and scientific worldviews as related to health, bodies and communities
Audience: Both Grad & Undergrad

5. perform textual analysis, primary source research and synthesis of scholarly ideas, in persuasive writing, oral communication, active listening, and with critical empathy
Audience: Both Grad & Undergrad

6. create conversations about complex topics that seek academic excellence, honesty, and integrity
Audience: Both Grad & Undergrad

7. engage with the academic literature on religion, science, and medicine that is pertinent to the student's specific research area and apply it to facilitate original primary source analysis
Audience: Graduate

MED HIST/PHILOS 344 – FOOD ETHICS
3 credits.

There are many ethical issues related to food production, distribution, consumption, and policy, including animal welfare, animal rights, vegetarianism and veganism, environmental impact, treatment of workers, prospects for agricultural reform, ethical responsibilities of corporate and industry actors, and labeling issues surrounding the use of genetically engineered foods. Some are more theoretical, such as which individuals affected by agriculture deserve direct moral consideration. Other are more practical, such as how to feed a growing global population. We will begin with a brief survey of ethical theories and methods of ethical reasoning, and then explore, from both personal and policy perspectives, several food ethics issues. Among the aims of the course are the goals of helping you think critically about the ethically relevant impacts of your own food choices and improving your understanding of ethical issues implicated in food systems.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2021
Learning Outcomes: 1. Think critically about arguments.
Audience: Undergraduate

2. Interpret complex texts accurately and analyze them logically.
Audience: Undergraduate

3. Think critically about ethical issues.
Audience: Undergraduate

4. Explain the social, economic, and/or environmental dimensions of the sustainability challenge(s) of modern food systems.
Audience: Undergraduate

5. Apply sustainability principles and/or frameworks to addressing the challenge of human and environmental harms arising from modern food systems.
Audience: Undergraduate

MED HIST/PATH-BIO 370 – ADDRESSING CONTROVERSY: THE SCIENCE, ETHICS, AND PUBLIC DISCUSSION OF ANIMAL RESEARCH
3 credits.

Addresses the science, ethics, history, and communication strategies associated with the use of animals in research. Seeks to identify and employ common ground among those with different perspectives to enable students to make good decisions about this contentious topic.
Requisites: Satisfied Communications A requirement
Course Designation: Gen Ed - Communication Part B
Breadth - Either Humanities or Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Identify and employ communication practices that encourage tolerant and non-threatening discussion of controversial topics.
Audience: Undergraduate

2. Explain how scientific knowledge is acquired, with special reference to research with animals.
Audience: Undergraduate

3. Explain and compare ethical principles associated with animal use in research.
Audience: Undergraduate

4. Explore and apply principles of effective communication of complex and value-laden science.
Audience: Undergraduate

5. Describe the history and evaluate the present status of the animal research controversy.
Audience: Undergraduate

6. Construct and critique written and verbal presentations about animal research.
Audience: Undergraduate

7. Refine and defend your own position on animal research in a respectful and non-judgmental way that encourages additional dialog.
Audience: Undergraduate

8. Identify common ground among differing perspectives on animal research, and develop best practices for communicating this subject to diverse audiences.
Audience: Undergraduate

9. Practice critical reading, logical thinking, and the use of evidence.
Audience: Undergraduate

10. Employ appropriate style and disciplinary conventions in writing and speaking.
Audience: Undergraduate

11. Learn to use core library resources specific to the discipline.
Audience: Undergraduate

MED HIST/PHILOS 505 – JUSTICE AND HEALTH CARE
3 credits.

Examines ethical issues in the distribution, financing, and delivery of health care (primarily in the United States). Explores key issues in U.S. health policy and forms the empirical foundation for the rest of the class. Engages is ongoing debates in moral and political philosophy over putative entitlements to health and health care. Investigates the nature, justifiability, and methods of health care rationing (including bedside rationing by doctors) and the myriad issues implicated by the near-universally shared goal of health care cost containment.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2019
Learning Outcomes: 1. Understand the conversation about justice and health care as an enterprise incorporating moral philosophy, bioethics, and evidence-based social science
Audience: Both Grad & Undergrad

2. Identify and clarify diverse moral norms and principles that underlie diverse convictions about justice and health care
Audience: Both Grad & Undergrad

3. Subject these norms and principles to dispassionate critical reasoning aimed at evaluating the force of underlying reasons for and against them
Audience: Both Grad & Undergrad

4. Write clear and concise essays subjecting issues concerning justice and health to dispassionate ethical analysis
Audience: Both Grad & Undergrad

5. Write a clear and concise 15-page essay arguing for a novel thesis concerning justice and health.
Audience: Graduate

MED HIST/HIST SCI/HISTORY 508 – HEALTH, DISEASE AND HEALING II
3-4 credits.

Medicine in Europe from the 18th century to mid-20th century, investigating changes in disease and demography, state interest in health care, the medical professions, and both scientific and alternative medical ideas.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Recognize the utility of humanistic methods for the study of medicine and public health
Audience: Undergraduate

2. Develop critical thinking skills through techniques of close reading and written analysis
Audience: Undergraduate

3. Understand essential developments in the evolving relationship between medicine and public health in modern societies.
Audience: Undergraduate

MED HIST/HIST SCI 509 – THE DEVELOPMENT OF PUBLIC HEALTH IN AMERICA
3 credits.

Health problems in the U.S. from the colonial period to the twentieth century; efforts made toward their solutions.
Requisites: Junior standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Identify major historical trends in the history of public health in the United States.
Audience: Undergraduate

2. Understand the tensions between individual rights and population health as they have played out in the past.
Audience: Undergraduate

3. Analyze the social, political, and cultural factors that have influenced societal responses to epidemics and pandemics in American history.
Audience: Undergraduate

4. Develop critical thinking skills by engaging with both primary sources and secondary texts to understand how historians have written the history of public health.
Audience: Undergraduate

5. Evaluate the ways in which understanding the past history of public health can shape policy making in the present.
Audience: Undergraduate

MED HIST/PHILOS 515 — PUBLIC HEALTH ETHICS
3 credits.

Focuses on ethical issues implicated in a population-level approach to disease prevention and health promotion. Explores prominent theoretical approaches to public health ethics and engages with several ethical tensions. Example issues include: the use of coercive or intrusive public health; the justification of patemalistic measures in societies; the extent to which societies should hold individuals responsible for their health conditions; the need to decide who receives life-saving treatment or vaccination; and climate changes and intergenerational justice; ethical issues in international pharmaceutical research.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Understand the conversation about public health ethics as an enterprise incorporating moral philosophy, bioethics, and evidence-based social science.
Audience: Both Grad & Undergrad

2. Identify and clarify diverse moral norms and principles that underlie diverse convictions about public health ethics.
Audience: Both Grad & Undergrad

3. Subject these norms and principles to dispassionate critical reasoning aimed at evaluating the force of underlying reasons for and against them.
Audience: Both Grad & Undergrad

4. Write clear and concise essays subjecting issues of public health ethics to dispassionate ethical analysis.
Audience: Both Grad & Undergrad

5. Write a clear and concise 15-page essay arguing for a novel thesis concerning public health ethics.
Audience: Graduate

MED HIST/AFROAMER/HIST SCI 523 — RACE, AMERICAN MEDICINE AND PUBLIC HEALTH
3 credits.

Provides historical perspectives on current dilemmas facing black patients and health care professionals.
Requisites: Junior standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify key developments, actors, ideas, and institutions in the broad history of race, medicine and public health in America between 1700 and 2000.
Audience: Both Grad & Undergrad

2. Analyze and write critically about primary and secondary historical sources by examining diverse interpretations of past events and ideas in their historical contexts.
Audience: Both Grad & Undergrad

3. Evaluate the ways in which ideas about race and assumptions about the meaning of racial difference influenced the care patients of color received and how they experienced their illnesses and injuries.
Audience: Both Grad & Undergrad

4. Understand how conceptions of race profoundly influenced the medical and nursing professions, as well as medical institutions (dispensaries, hospitals, and blood donation centers).
Audience: Both Grad & Undergrad

5. Evaluate the different methodological approaches historians have used to analyze the multiple histories of race, medicine, and public health in the United States in the last two centuries.
Audience: Graduate

MED HIST/ENGL/HIST SCI 525 — HEALTH AND THE HUMANITIES
3 credits.

Explores how a humanistic perspective can broaden our understanding of health and medicine. Specifically, we will examine the role of language and culture in the creation and circulation of biomedical knowledge; our lived experiences with illness (physical and mental); the intricate intersections of race, gender, sexuality, disability and medicine; the political dimensions of diagnosis, disease, and epidemics, and the role that fiction, creative non-fiction, comics, and film play in shaping our experiences with health and medicine as health care providers and as patients. The course does not assume any background in science or medicine. One of our recurrent topics, in fact, will be to consider how non-experts interact with medicine and its technical vocabularies. Although the primary objective of the course is to understand the cultural, social, and political dimensions of health and medicine, a secondary objective is for students to become more savvy patients and, for the few students who might emerge on the other side of the stethoscope one day, more well rounded health care professionals.
Requisites: Declared in the Health and the Humanities certificate
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

MED HIST/GEN&WS/HIST SCI 531 — WOMEN AND HEALTH IN AMERICAN HISTORY
3 credits.

Women as patients and as health professionals in America from the colonial period to the present.
Requisites: Sophomore standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

MED HIST/GEN&WS/HIST SCI 532 — THE HISTORY OF THE (AMERICAN) BODY
3 credits.

This course demonstrates that human bodies have social and cultural histories. It will highlight the social values placed on different bodies, the changing social expectations bodies create, and the role of science and medicine in creating the cultural meanings of bodies.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023

MED HIST/PHILOS 534 — ETHICS AND THE BRAIN
3 credits.

In-depth analysis of ethical issues arising from the practices and advances of brain science in clinical, research, legal, and consumer contexts. Includes a foundation in ethical theory and philosophical methodology.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Gain knowledge about neurological and neuroscientific technologies and practices.
Audience: Both Grad & Undergrad

2. Gain understanding of major ethical theories and approaches.
Audience: Both Grad & Undergrad

3. Learn to employ philosophical methodology.
Audience: Both Grad & Undergrad

4. Utilize ethical theories and approaches, and philosophical methodologies to critically interrogate the ethical dimensions of the brain sciences.
Audience: Both Grad & Undergrad

5. Develop the skill of writing rigorous, analytical philosophical papers.
Audience: Graduate

6. Expand research beyond material learned in class to incorporate outside scientific and philosophical work.
Audience: Graduate

MED HIST 545 – ETHICAL AND REGULATORY ISSUES IN CLINICAL INVESTIGATION
1 credit.

Explores and examines the ethical issues central to clinical research, regulations governing clinical investigation, and the role of good clinical practice for clinical trials.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Know the basic elements of the federal regulations for human subjects research ("The Common Rule").
Audience: Both Grad & Undergrad

2. Provide examples of a conflict between the Common Rule and ethical principles guiding human subjects research.
Audience: Both Grad & Undergrad

3. Develop a skeptical attitude about conventional wisdom on ethical and legal issues in human subjects research.
Audience: Both Grad & Undergrad

4. Write a critical analysis of an ethically complex research study.
Audience: Graduate

MED HIST/HIST SCI/POP HLTH 553 – INTERNATIONAL HEALTH AND GLOBAL SOCIETY
3 credits.

Major problems in international health from 1750 to the present. Focus on disease epidemiology and ecology; political economy of health; migration; quarantine; race, ethnicity, and health care; international health research; cross-cultural healing; mental and maternal health; growth of international health organizations.
Requisites: Junior standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Recognize the utility of humanistic methods for the study of modern international health
Audience: Undergraduate

2. Develop critical thinking skills through techniques of close reading and written analysis
Audience: Undergraduate

3. Understand essential developments in the evolving relationship between global history, politics, and public health on a global scale.
Audience: Undergraduate

MED HIST/PHILOS 558 – ETHICAL ISSUES IN HEALTH CARE
3 credits.

Ethical issues apparently created by new biomedical technologies, such as genetic screening, prenatal diagnosis, prolongation of life, treatment of severe birth defects, in vitro fertilization, behavior modification, psychosurgery, and transplantation.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Gain knowledge about ethical issues in healthcare

Audience: Both Grad & Undergrad

2. Communicate precisely and concisely in both writing and speech
Audience: Both Grad & Undergrad

3. Think critically about arguments related to ethical issues in health care with the aim of uncovering the truth
Audience: Both Grad & Undergrad

4. Practice interpretive charity and intellectual honesty, which includes appropriate attribution to others of their ideas, and recognition and frankness about the limitations of one's own ideas
Audience: Both Grad & Undergrad

5. Independently locate and engage with the latest relevant empirical and philosophical research relevant to evaluating ethical issues in health care
Audience: Graduate

6. Exhibit substantial synthetic and analytic abilities in considering the ethical dimensions of ethical issues in health care
Audience: Graduate

MED HIST 559 – TOPICS IN ETHICS AND HISTORY OF MEDICINE
3 credits.

A survey of ethical and social issues in medical ethics and history of medicine. Cooperating faculty may be drawn from philosophy, law, medical ethics, history, political science, public health, economics, education, and communication, as well as medicine and the biological sciences.
Requisites: Junior standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2020
Learning Outcomes: 1. Apply, analyze, or evaluate advanced theories, concepts, or methods in History of Medicine
Audience: Undergraduate

MED HIST/HIST SCI/HISTORY 564 – DISEASE, MEDICINE AND PUBLIC HEALTH IN THE HISTORY OF LATIN AMERICA AND THE CARIBBEAN
3 credits.

Examines the history of illness and medical practice in Latin America and the Caribbean from the colonial era until the present. Using an interdisciplinary set of sources, students will explore the different meanings of disease, body normativity, medical practice, and ideas about public health across different historical circumstances in the region.
Requisites: Junior standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019
Learning Outcomes: 1. Identify and analyze within their social, cultural and economic contexts key historical issues, and their significance, in the history of healing practices and public health in Latin America from the fifteenth century to the present.
Audience: Both Grad & Undergrad

2. Develop an understanding of the mutually shaping interactions between perceptions of health, illness and medical practices and culture and society in different Latin American historical scenarios.
Audience: Both Grad & Undergrad

3. Analyze the role of social factors -- race, gender, ethnicity, class, and sexual orientation, among others -- in shaping cultural realities related to body normativity, health, medical practice, public health and medical education in Latin America.
Audience: Both Grad & Undergrad

4. Analyze and synthesize information, provide evidence-based interpretations about the past, and develop arguments regarding social and cultural differences related to health and body concepts in different Latin American societies.
Audience: Both Grad & Undergrad

5. Identify the role patients, healthcare providers, institutions and the state played in modeling medical practice, ideas about the body, public health policies, and medical education in Latin America.
Audience: Both Grad & Undergrad

6. Discern the impact of international politics, acting through European and American programs of medical research and humanitarianism, in the shaping of ideas about race, medical hierarchies and public health policies in Latin American and Caribbean nations.
Audience: Both Grad & Undergrad

7. Understand the different methodological approaches and research strategies that historians, anthropologists, and other scholars have used to examine the histories of the medicine in Latin America from the sixteenth century to the present.
Audience: Graduate

MED HIST/C&E SOC/PHILOS 565 – THE ETHICS OF MODERN BIOTECHNOLOGY
3 credits.

An in-depth study of a selection of ethical issues arising from the application of modern biotechnology to microorganisms, plants, non-human animals, and human beings. We will aim at a discussion that is informed by empirical research and by work done in ethical theory, political philosophy, and other relevant disciplines, and whose character is rigorous, clear, nuanced, and unbiased.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Think critically about arguments.
Audience: Both Grad & Undergrad

2. Communicate precisely and concisely in both writing and speech.
Audience: Both Grad & Undergrad

3. Exchange reasons about controversial matters respectfully and with the aim of uncovering the truth.
Audience: Both Grad & Undergrad

4. Practice interpretive charity and intellectual honesty, which includes appropriate attribute to others of their ideas, and recognition and frankness about the limitations of one's own ideas.
Audience: Both Grad & Undergrad

5. Independently locate and engage with the latest relevant empirical and philosophical research.
Audience: Graduate

6. Exhibit substantial synthetic and analytic abilities by considering how an application of modern biotechnology ethically compares to the status quo and to other possible alternatives.
Audience: Graduate

MED HIST/ENGL/HIST SCI 599 – DIRECTED STUDY IN HEALTH AND THE HUMANITIES
1 credit.

Offers students enrolled in the Health and the Humanities certificate an opportunity to conduct independent research under the guidance of a faculty member. It allows students who have enrolled in or completed a Health and the Humanities Capstone an opportunity to go into greater depth on a topic covered in the capstone course. In consultation with a faculty member, students will design a project that builds on lessons learned or work completed as part of their capstone experience.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2020
Learning Outcomes: 1. Design scholarly research questions based on their knowledge of the existing literature
Audience: Undergraduate

2. Conduct original primary research by identifying, accessing, and interpreting appropriate sources
Audience: Undergraduate

3. Effectively convey the results of their research through writing or other creative media
Audience: Undergraduate

4. Work independently and manage a large project through to completion
Audience: Undergraduate

MED HIST/CRB 615 – REGENERATIVE MEDICINE ETHICS AND SOCIETY
3 credits.

Study of regenerative medicine and stem cell research within social, ethical and political contexts.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand current and past legal, political and social issues related to regenerative medicine. This includes laws and regulations, but also an understanding of clinical ethics issues, translational research and commercialization, and emerging, novel techniques requiring careful ethical consideration.
Audience: Both Grad & Undergrad

2. Understand more about relations of science, the state, and public, particularly around controversial or novel innovations and will learn how best to address emerging controversies and public concerns ethically in their professional careers.
Audience: Both Grad & Undergrad

3. Learn the guidelines for the responsible conduct of research for stem cell science, where to access regulatory and oversight documents, and how to apply for research protocols with ethics oversight.
Audience: Both Grad & Undergrad

4. Gain analytical skills for addressing policy, legal and social issues through research and writing exercises. Analytical and professional presentation skills will also be learned through classroom interactions and discussion.
Audience: Graduate

MED HIST 699 – INDEPENDENT STUDY IN MEDICAL HISTORY
1-3 credits.

Directed study projects as arranged with instructor.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024
Learning Outcomes: 1. Apply concepts learned in coursework to real life situations
Audience: Undergraduate

2. Read and effectively search scientific literature
Audience: Undergraduate

3. Develop critical, analytical, and independent thinking skills
Audience: Undergraduate

MED HIST 708 – HEALTH, DISEASE AND HEALING II
1 credit.

Advanced readings in primary and secondary literature concerning medicine in Europe from the 18th century to mid-20th century, investigating changes in disease and demography, state interest in health care, and medical professions, and both scientific and alternative medical ideas.
Requisites: Graduate/professional standing and concurrent enrollment in MED HIST/HIST SCI/HISTORY 508
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Become familiar with major debates in the historiography of modern European medicine and public health
Audience: Graduate

2. Understand how to conduct a review of scholarly literature in a specific field within the modern history of European medicine and public health
Audience: Graduate

MED HIST 709 – DEVELOPMENT OF PUBLIC HEALTH IN AMERICA
1 credit.

Advanced readings in primary and secondary literature concerning public health issues and problems in America from the eighteenth to the twentieth century, and efforts made toward their solutions.
Requisites: Graduate/professional standing and concurrent enrollment in MED HIST/HIST SCI 509
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Develop understanding of the historiography of American medicine and public health.
Audience: Graduate

2. histories of public health in the United States in the last two centuries.
Audience: Graduate

MED HIST 724 – HEALTH DISPARITIES RESEARCH: HISTORIES, PRACTICES, AND METHODS
2 credits.

Examination of the social and historical roots of health disparities, including histories, practices, and current methodologies informing contemporary health disparities research. Participate in or explore content such as reviewing case studies pertaining to landmark research with priority populations identified by the National Institutes of Health (NIH); engage with leading scholars from across the School of Medicine and Public Health; grant proposal writing, presentation of student-led research; prepare drafts of NIH Aims page.
Requisites: Declared in Medicine MD or Population Health Sciences PhD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Identify, analyze, and interpret historical structures underwriting health disparities across the 20th century United States and explain their significance to contemporary health outcomes.
Audience: Graduate

2. Explain the origin and development of health disparities research frameworks and conceptualizations; and provide key examples of landmark studies that have successfully utilized these research frameworks.
Audience: Graduate

3. Identify and analyze relevant literature pertaining to health disparities research and conceptualize potential research ideas that meaningfully engage with this literature.
Audience: Graduate

4. Develop 2-3 health disparities research questions, grounded in rigorous health disparities research-specific methods, analytics, and practices; and articulate these questions in both written and oral formats.
Audience: Graduate

5. Develop collaborative research and grant writing skills through sustained consultation with faculty instructors and peer grant writing workshops to culminate in a draft grant proposal aims page with post-submission faculty feedback.
Audience: Graduate

6. Position research question within relevant field literature to an audience of course peers, instructors, and visiting SMPH guest lecturers to solicit preliminary feedback on grant proposal aims page.
Audience: Graduate

7. Facilitate future collaborative research endeavors through presentation opportunities in collaboration with faculty instructors and the Center for Health Disparities Research (CHDR).
Audience: Graduate

MED HIST 729 – INTRODUCTION TO BIOETHICS
1 credit.

Opportunity to learn and employ foundational methods and principles of bioethics. Gain an understanding of modes of argument in bioethics and hone the craft of analyzing and constructing ethical arguments, and foreseeing and responding to potential objections.
Requisites: Declared in Medicine program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate understanding of foundational methods and principles of bioethics
Audience: Graduate

2. Clarify diverse moral values and principles that create bioethical dilemmas
Audience: Graduate

3. Critically assess these values and principles using analytical tools of bioethics
Audience: Graduate

4. Explicate others' ethical claims and arguments clearly and concisely
Audience: Graduate

5. Write a clear and concise argumentative paper defending an ethical thesis bearing on a pressing bioethics topic
Audience: Graduate

MED HIST 730 – TOPICS IN BIOETHICS
1 credit.

Survey in bioethics aimed at students in the health sciences. Topics to include a mix of important perennial issues and emerging problems.
Requisites: Declared in Medicine program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze controversies involving ethical issues in the health sciences and related social institutions
Audience: Graduate

2. Engage in interdisciplinary discourse
Audience: Graduate

3. Describe controversial issues from multiple perspectives
Audience: Graduate

4. Construct a clear and concise ethical argument
Audience: Graduate

MED HIST 740 – NARRATIVE MEDICINE AND PUBLIC HEALTH
2 credits.

Narrative medicine is the practice of using stories to understand health and illness in the context of people's lives. Whether through fiction or nonfiction, poetry or prose, text or graphics, giving voice to the stories of patients and caregivers allows their experiences to be heard, made sense of, and valued. Learning to listen to others and to express one's own vulnerabilities are valuable tools for all health practitioners, but they are especially valuable in the context of public health. The scope of public health interventions encourages practitioners to think in terms of populations, but efforts to improve quality of life through prevention must ultimately be grounded in individual lives. Explore how narrative medicine techniques can enrich the practice of public health, both through the power of listening to stories to understand how individuals experience health and through the power of telling stories to mobilize communities.
Requisites: (MED SC-M 810, 811, 812 and 813) or declared in Physician Assistant, Nursing, Physical Therapy, Pharmacy, or Genetic Counselor Studies.
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and employ narrative components such as plot, setting, characters, point of view, and tone
Audience: Graduate

2. Use narrative medicine skills in the context of clinical encounters and public health interventions.
Audience: Graduate

3. Express yourself in different modes (fiction, nonfiction, poetry, film, graphicnovels), and use both free writing and sustained writing techniques.

Audience: Graduate

4. Explain the connections between public health and individual experience, and the difference between viewing problems as personal problems vs public issues.
Audience: Graduate

5. Reflect on the meaning of health in the context of people's everyday lives, especially people who are different from themselves.
Audience: Graduate

MED HIST 741 – ETHICAL ISSUES IN PUBLIC HEALTH
2 credits.

Analyze ethical dimensions of population-level efforts to protect and promote health. Gain understanding of different ethical frameworks, their theoretical underpinnings, and their prospects for resolving real-world policy dilemmas in the context of medicine and public health. Hone the craft of constructing ethical arguments, and foreseeing and responding to potential objections.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Demonstrate understanding of public health ethics as an enterprise incorporating moral philosophy, bioethics, and evidence-based biological and social science
Audience: Graduate

2. Clarify diverse moral values and principles that create various public health dilemmas
Audience: Graduate

3. Critically assess these values and principles using tools of philosophical analysis
Audience: Graduate

4. Explain others' ethical claims and arguments clearly, concisely, and accurately
Audience: Graduate

5. Write a clear and concise argumentative paper defending an ethical thesis bearing on the practice of public health
Audience: Graduate

MED HIST 742 – ETHICS AND U.S. HEALTH CARE POLICY
2 credits.

Understand and analyze the U.S. health care system through the lens of ethical criticisms made by and on behalf of the diverse populations it serves. Gain understanding of philosophical debates over universal health insurance coverage, fair health care financing, effective cost-containment, and rationing. Hone the craft of constructing ethical arguments, and foreseeing and responding to potential objections.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Demonstrate understanding of U.S. health care policy and its implementing institutions
Audience: Graduate

2. Clarify diverse moral values and principles that underlie ethical debates about health insurance access, cost, and quality in the U.S. policy context
Audience: Graduate

3. Critically assess relevant ethical values and debates using tools of philosophical analysis
Audience: Graduate

4. Explain others' ethical claims and arguments clearly, concisely, and accurately
Audience: Graduate

5. Write a clear and concise argumentative paper defending an ethical thesis bearing on an important dimension of U.S. health care policy
Audience: Graduate

MED HIST 744 – INTRODUCTION TO THE MEDICAL HUMANITIES
2 credits.

Introduction to the medical humanities and their application to clinical practice, utilizing a variety of humanistic approaches, drawing from history, philosophy, anthropology, literary studies, and religious studies. Engage with a variety of forms of expression, including essays, poetry, film, podcasts, music, and visual art. These humanistic approaches complement the science-focused approach of contemporary medical education by enhancing students' ability to offer more compassionate and culturally competent care, and helping students build resiliency through using artistic forms of expression to process their experiences. Engage with the medical humanities through a different theme, such as the doctor-patient relationship, death and dying, or healing and wholeness.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the different humanistic approaches that fall under the umbrella of the medical humanities, and compare and contrast the strengths of these approaches for understanding health and illness.
Audience: Graduate

2. Apply techniques from the medical humanities to analyze literature, film, podcasts, and visual art.
Audience: Graduate

3. Locate one's own experiences of health and illness in broader societal and historical contexts, and recognize how the meaning and experience of health might differ for people occupying different social positions.
Audience: Graduate

4. Critically examine harms caused by medicine and scientific research in both a historical and contemporary context.
Audience: Graduate

5. Identify the ways in which the experiences of marginalized people may frequently be invalidated by the medical community, and understand how the invalidation of personal experience can constitute both physical and structural violence.
Audience: Graduate

6. Translate the experience of bearing witness into specific actions, taken on an individual or societal level, to help alleviate suffering and promote human flourishing.
Audience: Graduate

MED HIST 745 – CLINICAL ETHICS - INDIVIDUAL AND POPULATION CONSIDERATIONS
2 credits.

Examine how ethical issues in clinical practice affect public health outcomes. Gain an understanding of the ethical frameworks and practices that are employed in medicine, in order to understand the complex interplay between public health and clinical care. Develop the ability to identify the ethically salient features of a patient case and to employ ethical analysis to generate recommendations that improve public health outcomes.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate understanding of the interplay between clinical ethics as an applied domain grounded in clinical practice, and public health as the pursuit of health and wellbeing for all members of society
Audience: Graduate

2. Critically assess how the public health principles of trust, interdependence, and distributional justice are affected by clinical ethics principles such as beneficence and autonomy.
Audience: Graduate

3. Clarify diverse moral and cultural values that generate various clinical ethics and public health tensions.
Audience: Graduate

4. Identify the ethically salient features of a clinical case and evaluate their implication on moral decision-making and public health outcomes
Audience: Graduate

5. Clearly and concisely articulate issues related to public health and clinical ethics
Audience: Graduate

MED HIST 746 – RACE, SCIENCE, AND MEDICINE: PAST AND PRESENT
2 credits.

Examine ideas about race and ethnicity and their relationship to the history of "Western" medicine and science. Analyze the role of social, economic, cultural, and political developments in the shaping of scientific and medical notions of race and bodily difference. Study how skin color (and other elements of "racial identity") has influenced the experiences of patients and populations, physicians and nurses, and medical researchers. Discuss how conceptions of race have shaped both the health concerns and health outcomes of Americans in the past three hundred years, and the structure of medical institutions in the United States. Topics include the origins of racial classification, race and colonialism, the health and medical care of the enslaved, the use of enslaved people as research subjects, the history of racial disparities in medicine, structural racism of the medical establishment, race and reproduction, and the struggle for justice in health care during the past few decades.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and analyze within their social, cultural and economic contexts key historical issues, and their significance, in the history of the idea of race as it relates to scientific and medical developments.
Audience: Graduate

2. Develop an understanding of the mutually shaping interactions between ideas about race and perceptions of social hierarchy, health, illness and medical and anthropological categories.
Audience: Graduate

3. Understand how conceptions of race have influenced the medical and nursing professions, as well as medical institutions.
Audience: Graduate

4. Analyze the role of social factors like gender and class, among others, in shaping cultural realities related to race and body normativity.
Audience: Graduate

5. Identify the role that scientists, physicians, patients, healthcare providers, scientific institutions and the state play in modeling, ideas about race.
Audience: Graduate

6. Discern the impact of programs of global science as they intersect with international politics in the shaping of ideas about human rights, ethnicity, and race.
Audience: Graduate

MED HIST 747 – FEMINIST BIOETHICS
2 credits.

Gain an appreciation of the intersection of feminist themes with ethical issues in medicine and public health. Feminist epistemology and care ethics. Applied feminist bioethics topics, including abortion and maternal-fetal medicine. Apply a feminist lens to bioethical theories and topics, and identify and analyze an array of issues that arise from sex and gender.
Requisites: Declared in Medicine MD, Physical Therapy DPT, Physician Assistant MPAS, Genetic Counselor Studies MGCS, or Public Health MPH
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate understanding of the feminist approaches to bioethical theory and topics.
Audience: Graduate

2. Critically assess how public health is affected by feminist concerns such as epistemic injustice, sex bias in medicine, and the lack of women in research.
Audience: Graduate

3. Clearly and concisely articulate ethical and philosophical issues related to feminist bioethics topics.
Audience: Graduate

4. Identify how feminist bioethics concerns intersect with black bioethics concerns.
Audience: Graduate

5. Construct clearly and persuasively written arguments in feminist bioethics.
Audience: Graduate

MED HIST 750 – OUTBREAK!: EPIDEMICS, MIGRATION, AND THE CHANGING CONTOURS OF GLOBAL HEALTH
2 credits.

Explore national and international health projects aimed to address infectious disease epidemics in the context of changing ideas about human difference, the shifting economic and socio-political dimensions of international health, and the history of migration. Using a range of sources from historical documents, social science, films, and biomedical research, explore circumstances linking ideas about "alien" people (a term historically used to talk about enslaved people, Native Americans, minorities, and immigrants), and "plagues." Examine the relationship between ideas about disease and migration, risk factors and disease patterns related to migration, migrant populations' access to health-care resources, perceived threats of infectious diseases related to migrant populations and the ways such threats have shaped medical theories, and the institutional landscape of global health.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze evidence coming from a broad range of disciplines to discuss issues of public health as they relate to epidemics and immigrant populations.
Audience: Graduate

2. Describe clinical relevance of knowledge coming from disciplines such as history, anthropology, economics, sociology, and geography.
Audience: Graduate

3. Describe the cultural, social, and structural circumstances shaping the lives of mobile populations, and how such circumstances should inform clinical encounters with migrant communities.
Audience: Graduate

4. Describe circumstances that have shaped the health of immigrant populations, and governmental responses to epidemic diseases.
Audience: Graduate

5. Engage in policy discussions related to these issues.
Audience: Graduate

6. Demonstrate understanding of the historical links between ideas about race, epidemics, immigration, and public health policy in the United States.

Audience: Graduate

7. Critically engage with “Global Health” projects and how to identify the long history of colonial international medical humanitarianism shapes these initiatives.
Audience: Graduate

MED HIST 753 – INTERNATIONAL HEALTH AND GLOBAL SOCIETY
1 credit.

Advanced readings that examine major problems in modern international health. Focus on epidemiology and disease ecology; political economy of health; migration; quarantine; international health research; cross-cultural healing; mental and maternal health; growth of international health organizations.
Requisites: Graduate/professional standing and concurrent enrollment in POP HLTH/HIST SCI/MED HIST 553
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Become familiar with major debates in the historiography of modern global medicine and public health.
Audience: Graduate

2. Understand how to conduct a review of scholarly literature in a specific field, or to produce an original research paper, within the modern history of global medicine and public health.
Audience: Graduate

MED HIST 890 – READING AND RESEARCH
1-3 credits.

Independent reading, research and writing for medical professional students under the supervision of a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Read and effectively search scientific literature
Audience: Graduate

2. Design research questions based on coursework or literature searches
Audience: Graduate

3. Effectively convey research results through writing or other media
Audience: Graduate

4. Apply concepts learned in coursework to real life situations
Audience: Graduate

MED HIST/HIST SCI 919 – GRADUATE STUDIES IN MEDICAL HISTORY
3 credits.

Analyzes the scientific and social aspects of the development of modern medicine and public health in Europe and America.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024
Learning Outcomes: 1. Apply, analyze, or evaluate advanced theories, concepts, or methods in Medical History
Audience: Graduate

MED HIST/SURGERY 984 – TRANSPLANT ETHICS
2 credits.

Understand and analyze the ethics of transplantation practice and policy in the U.S. health care system, especially considering ethical criticisms made by and on behalf of the diverse populations it serves. Gain an understanding of philosophical debates over important issues in transplant ethics. Hone the craft of constructing ethical arguments, and foreseeing and responding to potential objections.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate understanding of transplant-related dimensions of the U.S. health care system.
Audience: Graduate

2. Critically analyze transplant candidate evaluation, deceased donor allocation policy, ethics of living donation, and novel transplant and procurement techniques using the tools of ethical analysis.
Audience: Graduate

3. Exposit others' ethical claims and arguments about transplant ethics clearly, concisely, and charitably.
Audience: Graduate

MED HIST 999 – ADVANCED INDEPENDENT STUDY
1-3 credits.

Independent research and writing for graduate students under the supervision of a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply concepts learned in coursework to real life situations
Audience: Graduate

2. Read and effectively search scientific literature
Audience: Graduate

3. Develop critical, analytical, and independent thinking skills
Audience: Graduate

MEDICAL MICROBIOLOGY AND IMMUNOLOGY (M M & I)

M M & I 301 – PATHOGENIC BACTERIOLOGY
2 credits.

Medically important bacteria, emphasizing the process of pathogenesis and host/parasite interactions, as well as intervention strategies, immunity and genetics as they apply to the pathogens.
Requisites: (BIOCORE 381 and 382), (ZOOLOGY/BIOLOGY 101 and 102), or ZOOLOGY/BIOLOGY/BOTANY 152
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2022
Learning Outcomes: 1. Identify and label parts of a bacterial cell and parts of bacterial genes and other genetic elements, and explain the function of thosefeatures to bacterial processes.
Audience: Undergraduate

2. Apply bacteriological and immunological concepts to draw conclusions about detection, treatment, and prevention of bacterial infection.
Audience: Undergraduate

3. Apply bacteriological and immunological concepts to draw conclusions about bacterial survival, proliferation, and transmission and humanhost responses including those leading to host damage.
Audience: Undergraduate

4. Demonstrate knowledge about the significance of historical discoveries in bacteriology and molecular biology.
Audience: Undergraduate

5. Demonstrate knowledge about specific bacterial pathogens and the diseases they cause including virulence mechanisms, distinctivebacterial and disease characteristics, and methods of disease prevention.
Audience: Undergraduate

M M & I 341 – IMMUNOLOGY
3 credits.

An introduction to the immune response to infectious disease. Examines the role of the host in host-parasite relationships using select microbial agents or antigens to illustrate the nonspecific and specific mechanisms of host defenses. Includes study of the nonspecific inflammatory response, the nature of microbial antigens, current concepts of antibody and cell-mediated immune reactions to infectious agents and the principles underlying the development of vaccines.
Requisites: ZOOLOGY/BIOLOGY 101 or ZOOLOGY/BIOLOGY/BOTANY 151 or BIOCORE 381
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Identify the common types of immune cells and describe their main functions
Audience: Undergraduate

2. Summarize how innate and adaptive immune cells recognize antigens and other ligands
Audience: Undergraduate

3. Differentiate between cell-mediated and humoral immune responses
Audience: Undergraduate

4. Understand immunological pathways used to respond to specific challenges (e.g. viruses, bacteria, fungi, parasites)
Audience: Undergraduate

M M & I/ENTOM/PATH-BIO/ZOOLOGY 350 – PARASITOLOGY
3 credits.

The biology of water-borne, food-borne, soil-borne and vector-borne parasites of animals including humans. Parasites are explored in the context of transmission, associated disease, diagnosis and treatment options, and environmental, cultural and socioeconomic drivers of disease epidemiology.
Requisites: ZOOLOGY/BIOLOGY 101 and 102, or ZOOLOGY/BIOLOGY/BOTANY 152 or ZOOLOGY 153, or BIOCORE 381
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Be conversant in terminology used in the field of Parasitology.
Audience: Undergraduate

2. Recall scientific and common names for parasites and hosts, and the name of the resulting disease in humans or animals.
Audience: Undergraduate

3. Attribute parasite behavior and characteristics to specific disease features in the host.
Audience: Undergraduate

4. Identify appropriate means to diagnose infections with parasites.
Audience: Undergraduate

5. Describe and identify factors that determine when, where, and why parasitic diseases exist.
Audience: Undergraduate

6. Integrate terminology, scientific nomenclature, diagnostic features and demographics to solve case studies where the parasitic culprit is unknown.
Audience: Undergraduate

7. Compare and contrast commonalities in parasite life cycles to demonstrate how flexibility in those life cycles has resulted in many different potential means of transmission.
Audience: Undergraduate

8. Deconstruct the impact of parasitic diseases on human and animal health, from disease symptoms and pathology in an individual, to socioeconomics in communities and countries.
Audience: Undergraduate

9. Identify reliable resources (primarily internet-based) available for researching the biology and epidemiology parasitic diseases.
Audience: Undergraduate

M M & I/PATH-BIO 528 – IMMUNOLOGY
3 credits.

Development and functions of immune response in animals; a comprehensive study of experimental humoral and cellular immunity.
Requisites: (CHEM 104 or CHEM 109) and (ZOOLOGY/BIOLOGY 101, ZOOLOGY/BIOLOGY/BOTANY 151 or BIOCORE 383), or graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify lymphatic tissues and describe their functions
Audience: Undergraduate

2. Differentiate between innate and adaptive immune responses
Audience: Undergraduate

3. State the products of B and T cell activation in adaptive immunity
Audience: Undergraduate

4. Describe the steps in B and T cell activation and the immune mechanisms regulating their activity
Audience: Undergraduate

5. Explain how the adaptive immune system recognizes diverse antigens
Audience: Undergraduate

6. Summarize coordination of innate and adaptive immune responses in host defense against cancer and infectious diseases
Audience: Undergraduate

7. List examples of when the immune system goes awry (hypersensitivity, autoimmunity)
Audience: Undergraduate

8. Apply course concepts to design new therapies for cancer, infectious disease, or organ transplant
Audience: Undergraduate

M M & I 554 – EMERGING INFECTIOUS DISEASES AND BIOTERRORISM
2 credits.

Identification of analysis and solution of emerging infectious disease problems and the problems of bioterrorism.
Requisites: ZOOLOGY/BIOLOGY/BOTANY 152, ZOOLOGY/BIOLOGY 101, (BIOCORE 383 and M M & I 301), MICROBIO 101, MICROBIO 303, or graduate/professional standing.
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022
Learning Outcomes: 1. Explain the problems due to infectious diseases in the pre-antibiotic era and how this has changed today
Audience: Both Grad & Undergrad

2. Describe the factors of infectious disease emergence and provide a disease example for each
Audience: Both Grad & Undergrad

3. Address a new Emerging Infectious Disease outbreak by identifying the problem, the reason this problem arose, and what can be done about it
Audience: Graduate

M M & I/BIOCHEM 575 – BIOLOGY OF VIRUSES
2 credits.

Broad coverage of animal virology taught at molecular level. Topics include virus structure, viral replication/lifecycle, aspects of pathogenesis and prevention.
Requisites: (BIOCORE 381 and 382), ZOOLOGY/BIOLOGY/BOTANY 151, M M & I 301, or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and recognize fundamental members of the predominant families of RNA and DNA viruses that affect animals (humans included) by causing viral diseases, including AIDS, cancer, flu, and COVID-19
Audience: Both Grad & Undergrad

2. Describe and demonstrate the basic concepts of virus particle structure and the biochemical mechanisms for entry and multiplication of diverse RNA and DNA viruses
Audience: Both Grad & Undergrad

3. Recognize and apply the basic principles of virus transmission and viral pathogenicity, combined with the factors that contribute to virus emergence and evolution, to situations involving virus outbreaks that affect global health
Audience: Both Grad & Undergrad

4. Identify and evaluate individual steps in a virus' replication cycle that can be effectively targeted by anti-viral drugs for pharmaceutical intervention of virus diseases
Audience: Both Grad & Undergrad

5. Design effective strategies for a) prevention of infection through development of viral vaccines and b) treatment of diverse human diseases by gene therapy through the design and administration of genetically engineered virus vectors
Audience: Both Grad & Undergrad

6. Use knowledge gained in lecture to critically assess primary literature and data presented in the weekly Molecular Virology Seminar Series
Audience: Graduate

M M & I/ONCOLOGY/PL PATH 640 – GENERAL VIROLOGY-MULTIPLICATION OF VIRUSES
3 credits.

The structure, multiplication, genetics, pathology and control of animal and plant viruses.
Requisites: (GENETICS 466 or 467) and (BIOCHEM 501 or 508) or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the major classes of viruses infecting animals and plants, and summarize their basic replication strategies.
Audience: Both Grad & Undergrad

2. Identify the major innate and adaptive antiviral immunity mechanisms of animals and plants, and examples of viral countermeasures against these.
Audience: Both Grad & Undergrad

3. Summarize the burdens and threats of viruses to public health, agriculture, etc.
Audience: Both Grad & Undergrad

4. Identify the major approaches and challenges to virus control at the single organism and host population levels, including why viruses are generally harder to control than bacteria, and major steps in developing new antiviral agents.
Audience: Both Grad & Undergrad

5. Illustrate beneficial uses of viruses and their genes in research, biotechnology and medicine.
Audience: Both Grad & Undergrad

6. Design and evaluate basic experiments to address specific questions in virology.
Audience: Both Grad & Undergrad

7. Read and evaluate primary literature papers in virology.
Audience: Graduate

M M & I/BOTANY/GENETICS/PL PATH 655 – BIOLOGY AND GENETICS OF FUNGI
3 credits.

Fungal genetics, genomics, and physiology using plant pathogenic fungi and the genetic models Aspergillus nidulans and Neurospora crassa as model systems to explore the current knowledge of fungal genetics and plant/fungal interactions.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Demonstrate a basic understanding of fungal biology and genetics
Audience: Graduate

2. Analyze current research topics in fungal genetics/biology
Audience: Graduate

3. Identify members of the fungal research community
Audience: Graduate

4. Write and critique research grants
Audience: Graduate

5. Critique and discuss peer reviewed manuscripts
Audience: Graduate

6. Develop and deliver oral presentations (research paper and own research)
Audience: Graduate

7. Improve communication skills (oral and written)
Audience: Graduate

M M & I 677 – ADVANCED TOPICS IN MEDICAL MICROBIOLOGY
1-3 credits.

Specialized topics of current interest in medical microbiology.
Requisites: Graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and describe key theories, concepts, and methods in medical microbiology and immunology
Audience: Both Grad & Undergrad

2. Apply, analyze, or evaluate advanced theories, concepts, or methods in medical microbiology and immunology
Audience: Graduate

M M & I 691 – FIRST SEMESTER SENIOR THESIS
3 credits.

First semester independent study with the goal to do the preliminary research to write a senior thesis in Medical Microbiology Immunology.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Identify a novel research question from the primary literature
Audience: Undergraduate

2. Develop a testable hypothesis around the novel research question
Audience: Undergraduate

3. Design experiments to test the hypothesis
Audience: Undergraduate

M M & I 692 – SECOND SEMESTER SENIOR THESIS
3 credits.

Second semester independent study with the goal to complete a senior thesis in Medical Microbiology Immunology.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Execute and analyze data from designed experiments
Audience: Undergraduate

2. Develop the next testable hypothesis from the primary data from the experiments
Audience: Undergraduate

3. Write an honors thesis describing the gap in knowledge, the hypothesis addressing the gap in knowledge and the results of the experiments designed to test the hypothesis
Audience: Undergraduate

M M & I 696 – CRITICAL THINKING IN MEDICAL MICROBIOLOGY AND IMMUNIOLOGY
3 credits.

Present assigned research papers from journals for critical evaluation. Write critiques of each paper evaluating the paper's introduction, methods, results, and discussion sections.
Requisites: M M & I 301 and 341
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022
Learning Outcomes: 1. Articulate next-generation, DNA and RNA sequencing approaches and critically review their use in immune system studies
Audience: Both Grad & Undergrad

2. Describe proteomic techniques and their immune applications
Audience: Both Grad & Undergrad

3. Interpret the use of metabolomics in immunometabolism research
Audience: Both Grad & Undergrad

4. Explain technological advances that allow us to analyze complex immune systems at the single-cell level
Audience: Both Grad & Undergrad

5. Design omics experiments for immunology research
Audience: Graduate

M M & I 699 – DIRECTED STUDY
1-3 credits.

Independent research in medical microbiology and immunology for undergraduates under the supervision of MMI faculty. Carry out literature reviews and laboratory bench work on an independent project; participate in laboratory meetings; and produce some written presentation of the work, usually in the form of a poster presentation at a local or national meeting.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply concepts learned in coursework to real life situations
Audience: Both Grad & Undergrad

2. Read and effectively search scientific literature
Audience: Both Grad & Undergrad

3. Develop critical, analytical, and independent thinking skills
Audience: Both Grad & Undergrad

4. Develop independent scientific research development skills
Audience: Graduate

M M & I 704 – INFECTIOUS DISEASES OF HUMAN BEINGS
3 credits.

Pathogenesis, clinical descriptions, and prevention.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the epidemiology, pathogenesis, and clinical presentation of the key infectious disease syndromes presented and relate these diseases with their causative agents
Audience: Graduate

2. Explain how key infectious diseases are diagnosed and treated
Audience: Graduate

3. Explain how key infectious diseases impact patient health and public health, and describe how they can be prevented
Audience: Graduate

4. Discuss the basic pharmacologic concepts of antimicrobial drug therapy and be able to apply these concepts in clinical infectious disease settings
Audience: Graduate

5. Explain the role of the clinical microbiology laboratory in the identification and treatment of infectious diseases
Audience: Graduate

M M & I 740 – MECHANISMS OF MICROBIAL PATHOGENESIS
3 credits.

Host-pathogen relationships in microbial diseases.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate understanding of the fundamentals of conserved strategies for bacterial pathogenesis across human, animal and plan pathogens
Audience: Graduate

2. Be able to critically read and review primary research literature in bacterial pathogenesis
Audience: Graduate

3. Develop grant writing skills
Audience: Graduate

4. Demonstrate understanding of how NIH grant review and study sections work and be able to critically review peer grants
Audience: Graduate

M M & I/PATH-BIO 750 – HOST-PARASITE RELATIONSHIPS IN VERTEBRATE VIRAL DISEASE
3 credits.

Detailed study of the pathogenesis of vertebrate viral disease, stressing viral invasion, dissemination, mechanisms of disease production, immune pathology, persistence, resistance, and transmission.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate understanding of mechanisms involved in pathogenesis of viral infections
Audience: Graduate

2. Obtain experience in critically reading scientific research
Audience: Graduate

3. Enhance scientific presentation skills
Audience: Graduate

4. Design and prepare funding applications for research projects in viral pathogenesis
Audience: Graduate

M M & I 760 – QUANTITATIVE SYSTEMS BIOLOGY AND DISEASE
3 credits.

An overview of methods used in quantitative systems biology, with a focus on biochemical systems relevant to the study of host-pathogen interactions, disease and microbial communities.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize biochemical systems and pathways relevant to the study of host-pathogen interactions, disease, and microbes and microbial communities.
Audience: Graduate

2. Develop mathematical models of biochemical systems by integrating basic mathematical and engineering concepts with principals from biochemistry, cellular and molecular biology, and immunology.
Audience: Graduate

3. Translate molecular pathways relevant to immunity and disease into computational models and simulations.
Audience: Graduate

4. Gain a working knowledge of resources and databases available for systems biology modeling and simulation.
Audience: Graduate

5. Use programming tools (e.g., MATLAB, Python) to implement and test a systems biology model.
Audience: Graduate

M M & I 770 – CURRENT TOPICS IN IMMUNOLOGY RESEARCH AND APPLICATIONS FOR HEALTH AND DISEASE
3 credits.

Designed to provide an overview of current immunology research and applications. Explores current advances and applications in immunology research including: adaptive immunity, innate immunity, mucosal immunology, autoimmunity, host-microbe interactions, and cancer immunology.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop knowledge of current immunology research areas and advances in both health and disease
Audience: Graduate

2. Describe common mechanisms by which immune dysfunction contributes to the pathophysiology of disease, including autoimmunity and cancer.
Audience: Graduate

3. Develop knowledge of cutting-edge research findings and common approaches to developing new treatments for immune related disorders.
Audience: Graduate

4. Evaluate primary immunology-related research articles and demonstrate critical reasoning with regards to methods and conclusions.
Audience: Graduate

5. Design new and feasible research directions at the cutting edge of immunology research by integrating instruction material and personally-researched scientific texts to formulate individual thoughts on topics not directly covered in lecture.
Audience: Graduate

M M & I 901 – SEMINAR
1 credit.

Seminar series led by MMI faculty members.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Gain overall breadth of knowledge in microbiology
Audience: Graduate

2. Provide a platform for student interaction with invited faculty from UW-Madison and other institutions
Audience: Graduate

3. Develop skills for communicating complex ideas in a clear and understandable manner
Audience: Graduate

M M & I 902 – THE ROLE OF THE HUMAN MICROBIOME IN HEALTH AND DISEASE
2 credits.

The human microbiome can profoundly influence the balance between health and disease. Advances in next-generation sequencing technology and bioinformatics enabled the detailed study of the trillions of microorganisms living in us and on us and their associations with both healthy and disease conditions. Current state of the art approaches to study the microbiome through examples of human diseases with a known microbiome component. Critically assess the microbiome literature and design clinical studies aiming to include the microbiome as a variable. Bioinformatics tools required to study complex microbial communities by reproducing published datasets from human patients and learn ecological concepts to interpret results in a clinically meaningful way.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate a clear understanding of the current literature regarding the human microbiome and its role in health.
Audience: Graduate

2. Compare and contrast current state-of-the art methodologies to study the human microbiome and further demonstrate the ability to apply this knowledge to critically assess clinical study outcomes involving microbiome data.
Audience: Graduate

3. Describe and explain how basic bioinformatic pipelines are used to analyze and interpret microbiome data.
Audience: Graduate

4. Apply learned ecological concepts to the analysis of a real human microbiome dataset generated by researchers at the UW-Madison.
Audience: Graduate

5. Design a human microbiome study, clearly defining possible endpoints and inherent limitations.
Audience: Graduate

M M & I 911 – MICROBIOLOGY DIAGNOSTICS IN PUBLIC HEALTH
2 credits.

Learn firsthand how a public health lab handles testing. Learn about the different areas of testing in the lab from the experts and how we work with the CDC and clinical labs for surveillance, diagnostics, and outbreak response. Useful training for diagnostic testing and those that will order these tests in their practice.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the different testing areas of the Communicable Disease Division at the Wisconsin State Laboratory of Hygiene (WSLH).
Audience: Graduate

2. Describe the basics of common diagnostic test methods like PCR, sequencing, culture, and serology. Interpret test results and understand the limitations of those tests.
Audience: Graduate

3. Describe how the WSLH works with epidemiologists to identify outbreaks of disease.
Audience: Graduate

4. Describe how the WSLH works between clinical labs and the CDC for public health.
Audience: Graduate

M M & I 990 – RESEARCH AND THESIS
1-12 credits.

Carry out an independent research project that represents novel science in the chosen area under the guidance of an MMI faculty member. Evidence of success is measured by publication of results as first-authored papers in peer-reviewed papers.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Exhibit a broad understanding of general medical microbiology and/or immunology principles
Audience: Graduate

2. Conduct independent research using a variety of approaches
Audience: Graduate

3. Think critically to address research challenges
Audience: Graduate

4. Exhibit and foster professional and ethical conduct in research
Audience: Graduate

5. Collaborate with other investigators within or outside the thesis lab
Audience: Graduate

MEDICAL PHYSICS (MED PHYS)

MED PHYS/PHYSICS 265 – INTRODUCTION TO MEDICAL PHYSICS
2 credits.

A general interest survey that introduces the principles and applications of medical physics. Topics include biomechanics, energy usage and temperature regulation, pressure, sound and hearing, ultrasound, electricity in the body, optics and the eye, ionizing radiation in diagnosis and therapy, radiobiology, and nuclear medicine.
Requisites: PHYSICS 104, 202, 208, or 248
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply physics concepts, such as force, energy, and pressure, to the study of human physiology
Audience: Undergraduate

2. Describe the relevance of physics concepts to the etiology of major disease, such as heart failure, sudden cardiac death, obstructive lung disease, and nerve conduction disorders
Audience: Undergraduate

3. Explain the principles of medical imaging based on x-rays, gamma rays, sound, and other physical phenomena
Audience: Undergraduate

4. Understand the principles of radiobiology that underlie radiation sickness and radiation therapy
Audience: Undergraduate

MED PHYS/H ONCOL 410 – RADIOBIOLOGY
2-3 credits.

Effects of ionizing radiations of living cells and organisms, including physical, chemical, and physiological bases of radiation cytotoxicity, mutagenicity, and carcinogenesis; lecture and lab.
Requisites: Graduate/professional standing or (PHYSICS 202 or 208 and ZOOLOGY/BIOLOGY/BOTANY 152 or 153)
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Gain an understanding of the physical, chemical and molecular basis of the action of radiation on biological systems
Audience: Both Grad & Undergrad

2. Describe the radiobiological principles forming the basis for the use of radiation as a cancer therapy
Audience: Both Grad & Undergrad

3. Understand the potential deleterious short and longer-term effects of radiation on normal tissues and organs and on the whole body
Audience: Both Grad & Undergrad

4. Describe how chemotherapy and molecularly targeted agent can alter response of biological systems to radiation.
Audience: Both Grad & Undergrad

5. Understand the principles of radiation protection
Audience: Graduate

MED PHYS/B M E/H ONCOL/PHYSICS 501 – RADIATION PHYSICS AND DOSIMETRY
3 credits.

Interactions and energy deposition by ionizing radiation in matter; concepts, quantities and units in radiological physics; principles and methods of radiation dosimetry.
Requisites: (PHYSICS 323, 449 and MATH 320) or graduate/professional standing or declared in Medical Physics VISP
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use the physics of microscopic structures of nucleus, nuclear decay, electronic structure of atoms to calculate nuclear decay lifespan and solid state energy band structure
Audience: Both Grad & Undergrad

2. Calculate the radiation power spectrum for an accelerating charge particle under different physical conditions
Audience: Both Grad & Undergrad

3. Calculate cross-sections for the following interaction processes between photons and matter: Rayleigh scattering, photoelectric effect, Compton scattering, and pair production
Audience: Both Grad & Undergrad

4. Calculate the scattering cross-section of Coulomb scattering and energy transfer cross-section in collisions processes and radiative energy loss processes
Audience: Both Grad & Undergrad

5. Calculate radiation dose for both external photon beams, neutron beams, and charged particle beams
Audience: Both Grad & Undergrad

6. Identify open research topics in radiation imaging, radiation therapy, and radiation protection fields
Audience: Graduate

MED PHYS/N E 506 – MONTE CARLO RADIATION TRANSPORT
3 credits.

Use of Monte Carlo technique for applications in nuclear engineering and medical physics. Major theory of Monte Carlo neutral particle transport is discussed. Standard Monte Carlo transport software is used for exercises and projects. Major emphasis is on analysis of real-world problems.
Requisites: N E 305 and (N E 405, N E 408, PHYSICS/B M E/H ONCOL/MED PHYS 501 or N E/MED PHYS 569) or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Use an industry-relevant software package to perform Monte Carlo radiation transport simulations for analysis of fixed source and/or multiplying systems
Audience: Both Grad & Undergrad

2. Explain how random processes are used to simulate a single particle transport history through an engineering system, including source, streaming and collisions
Audience: Both Grad & Undergrad

3. Explain how the paths of many particle transport histories are combined to provide estimates of engineering results
Audience: Both Grad & Undergrad

4. Analyze the statistical performance of a simulation and suggest ways to improve that performance
Audience: Both Grad & Undergrad

5. Apply Monte Carlo radiation transport to a problem related to your research
Audience: Graduate

MED PHYS 510 – FUNDAMENTALS OF CELLULAR, MOLECULAR, AND RADIATION BIOLOGY
3 credits.

Cellular, molecular, and radiation biology principles and their common application in medical physics.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explore a new phenomenon or modality in the medical physics area and apply the knowledge gained to research in the field
Audience: Both Grad & Undergrad

2. Describe fundamental biomolecule and molecular biology principles and their common applications in medical physics.
Audience: Both Grad & Undergrad

3. Describe fundamental cellular biology principles and their common applications in medical physics.
Audience: Both Grad & Undergrad

4. Describe fundamental radiation biology principles and their applications in medical physics.
Audience: Both Grad & Undergrad

5. Describe fundamental immunology principles and their applications in medical physics.
Audience: Both Grad & Undergrad

6. Demonstrate an ability to integrate key fundamental principles of immunology and cellular, molecular, and radiation biology in medical physics applications in both imaging as well as therapy.
Audience: Both Grad & Undergrad

7. Propose and discuss example medical physics applications of fundamental principles of immunology and cellular, molecular, and radiation biology.
Audience: Graduate

MED PHYS/B M E 535 – INTRODUCTION TO ENERGY-TISSUE INTERACTIONS
3 credits.

Explore physical interactions between thermal, electromagnetic and acoustic energies and biological tissues with emphasis on therapeutic medical applications.
Requisites: PHYSICS 202, 208, 248, or PHYSICS/MED PHYS 265, or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Derive and solve bioheat transfer problems relevant to therapeutic hyperthermia and hypothermia
Audience: Both Grad & Undergrad

2. Explain changes at the tissue and cellular levels during thermal therapies
Audience: Both Grad & Undergrad

3. Analyze technologies that apply electromagnetic and acoustic energy to tissue
Audience: Both Grad & Undergrad

4. Discuss medical applications and regulatory guidelines/requirements involving energy-tissue interactions
Audience: Both Grad & Undergrad

5. Demonstrate an advanced ability to synthesize recent literature, formulate technical problems, and describe plausible solutions
Audience: Graduate

MED PHYS 563 – RADIONUCLIDES IN MEDICINE AND BIOLOGY
2-3 credits.

Physical principles of radioisotopes used in medicine and biology and operation of related equipment; lecture and lab.
Requisites: MATH 234 and (PHYSICS 241 or 249) or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2018
Learning Outcomes: 1. Identify the components of radioactive decay that are relevant to nuclear medicine diagnostic imaging and radionuclide therapy.
Audience: Both Grad & Undergrad

2. Apply important nuclear physics concepts to understand the design of nuclear medicine imaging systems and scanners.
Audience: Both Grad & Undergrad

3. Differentiate the characteristics of radiotracers that make them suitable for research and clinical applications in human physiology.
Audience: Both Grad & Undergrad

4. Identify the defining strengths and limitations with utilizing the imaging modalities for conducting research investigations of human physiology and disease.
Audience: Graduate

MED PHYS/B M E 566 – PHYSICS OF RADIOTHERAPY
3 credits.

Ionizing radiation use in radiation therapy to cause controlled biological effects in cancer patients. Physics of the interaction of the various radiation modalities with body-equivalent materials, and physical aspects of clinical applications.
Requisites: PHYSICS/B M E/H ONCOL/MED PHYS 501
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate knowledge of the potentials and limits, with respect to fundamental physics, of ionizing radiation production and therapy
Audience: Both Grad & Undergrad

2. Apply the concepts and/or techniques of radiation physics in cancer therapy
Audience: Both Grad & Undergrad

3. Accurately compute radiation dose and dose delivery for clinically acceptable conditions
Audience: Both Grad & Undergrad

4. Communicate applied concepts in a clear and understandable manner
Audience: Undergraduate

5. Communicate complex applied concepts in a clear and understandable manner, including concepts of medical imaging, radiation biology, radiation production, and radiation detection as they apply to radiation physics in cancer therapy
Audience: Graduate

MED PHYS/B M E 567 – THE PHYSICS OF DIAGNOSTIC RADIOLOGY
4 credits.

Physics of x-ray diagnostic procedures and equipment, radiation safety, general imaging considerations; lecture and lab.
Requisites: MATH 234 and (PHYSICS 241 or 249) or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2018
Learning Outcomes: 1. Learn the physics and technology of medical x-ray system design and the parameters that determine image contrast, noise, spatial resolution, and patient radiation dose.
Audience: Both Grad & Undergrad

2. Gain a detailed knowledge of x-ray sources, x-ray detectors, and data acquisition strategies used in radiography, mammography, fluoroscopy, angiography and computed tomography.
Audience: Both Grad & Undergrad

3. Apply a knowledge of x-ray systems and physics to analyze and compare the performance of different medical x-ray imaging systems.
Audience: Both Grad & Undergrad

4. Through laboratory modules, receive hands on experience concerning the first three objectives. This includes learning the proper means for evaluating the performance and conducting measurements on x-ray systems which are commonly done by a clinical medical physicist.
Audience: Both Grad & Undergrad

5. Identify the defining strengths and limitations with utilizing the imaging modalities for conducting research investigations of human physiology and disease.
Audience: Graduate

MED PHYS/B M E 568 – MAGNETIC RESONANCE IMAGING (MRI)
2 credits.

Core course covering the physics associated with magnetic resonance imaging emphasizing techniques employed in medical diagnostic imaging. Major MRI topics include: physics of MR, pulse sequences, hardware, imaging techniques, artifacts, and clinical applications. At the completion of this course, students should have an understanding of the technical and scientific details of modern magnetic resonance imaging and its use in diagnosing disease. Graduate students who have not taken MATH 222 and PHYSICS 202 at UW-Madison must have the equivalent coursework in order to be successful in this course.
Requisites: Graduate/professional standing or (MATH 222 and PHYSICS 202, 208, 241, 244, 248 or 249)
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Identify the mechanisms in which nuclear magnetic resonance harnessed for imaging
Audience: Both Grad & Undergrad

2. Differentiate the different MRI sequences used and the appearance of disease aspects in each of these sequences
Audience: Both Grad & Undergrad

3. Evaluate potential biological effects of imaging on patients and effects of patients on imaging
Audience: Both Grad & Undergrad

4. Contextualize the acquired knowledge to formulate research questions to solve specific clinical needs
Audience: Graduate

MED PHYS/N E 569 – HEALTH PHYSICS AND BIOLOGICAL EFFECTS
3-4 credits.

Physical and biological aspects of the use of ionizing radiation in industrial and academic institutions; physical principles underlying shielding instrumentation, waste disposal; biological effects of low levels of ionizing radiation.
Requisites: MATH 234 and (PHYSICS 241 or 249), graduate/professional standing, or declared in Medical Physics VISP
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Investigate theoretical concepts that are used in radiation safety practice.
Audience: Both Grad & Undergrad

2. Evaluate the effectiveness of radiation safety practice considering theoretical, economic, political, and societal perspectives.
Audience: Both Grad & Undergrad

3. Consider the ethical consequences of radiation safety regulations.
Audience: Both Grad & Undergrad

4. Integrate knowledge into research and/or clinical work
Audience: Graduate

MED PHYS/B M E 573 – MATHEMATICAL METHODS IN MEDICAL PHYSICS
3 credits.

Mathematical fundamentals required for medical physics and biomedical applications, including signal analysis and mathematical optimization.
Requisites: (MATH 234 and 319), (MATH 234 and 320), or MATH 376 and (PHYSICS 202 or 208), graduate/professional standing, or declared in Medical Physics VISP
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Summarize the utility of signal analysis in one and several dimensions
Audience: Both Grad & Undergrad

2. Identify and apply convolutions and Fourier Transforms in one and several dimensions
Audience: Both Grad & Undergrad

3. Apply the properties of the Fourier Transform in medical physics and other biomedical settings
Audience: Both Grad & Undergrad

4. Illustrate the limitations of the Fourier transform, and recall the advantages of alternative signal analysis tools (e.g. wavelet transform)
Audience: Graduate

5. Distinguish between types of optimization problems, including convex vs non-convex, and unconstrained vs constrained
Audience: Both Grad & Undergrad

6. Recognize the relative performance of basic optimization algorithms
Audience: Both Grad & Undergrad

7. Formulate image reconstruction as an optimization problem
Audience: Both Grad & Undergrad

8. Formulate therapy planning as an optimization problem
Audience: Both Grad & Undergrad

9. Implement practical optimization algorithms using computational methods
Audience: Both Grad & Undergrad

MED PHYS/B M E 575 – DIAGNOSTIC ULTRASOUND IMAGING
2 credits.

Propagation of ultrasonic waves in biological tissues; principles of ultrasonic measuring and imaging instrumentation; design and use of currently available tools for performance evaluation of diagnostic instrumentation; biological effects of ultrasound.
Requisites: Graduate/professional standing or (MATH 234, 319, or 320 and PHYSICS 202 or 208)
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019
Learning Outcomes: 1. Explain principles underlying ultrasound propagation and biological effects of ultrasound.
Audience: Both Grad & Undergrad

2. Apply knowledge of clinical uses and limitations/artifacts of ultrasound imaging.
Audience: Both Grad & Undergrad

3. Recall the technical details of modern medical ultrasound devices and methods to measure acoustic parameters.
Audience: Both Grad & Undergrad

4. Utilize and integrate ultrasound imaging approaches for diagnostic and therapeutic research and clinical applications.
Audience: Graduate

MED PHYS/B M E 578 – NON-IONIZING DIAGNOSTIC IMAGING
4 credits.

Covers the physics associated with magnetic resonance imaging and diagnostic ultrasound emphasizing techniques employed in medical diagnostic imaging. Major MRI topics include: physics of MR, pulse sequences, hardware, imaging techniques, artifacts, and spectroscopic localization. Ultrasound based topics covered include: propagation of ultrasonic waves in biological tissues, principles of ultrasonic measuring and imaging instrumentation, design and use of currently available tools for performance evaluation of diagnostic instrumentation, and biological effects of ultrasound. Gain an understanding of the technical and scientific details of modern non-ionizing medical magnetic resonance and ultrasound devices and their use in diagnosing disease.
Requisites: MATH 234, (MATH 319 or 320) and (PHYSICS 202, 208, 241 or 248), or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Accurately describe, using the correct mathematics and terminology, how the signals for MRI and ultrasound are generated, the sensitivity of these techniques to tissue variations
Audience: Both Grad & Undergrad

2. Accurately describe, using the correct mathematics and terminology, spatial encoding methods for MRI and ultrasound and trade offs in imaging parameter and hardware selection
Audience: Both Grad & Undergrad

3. Identify and develop strategies to mitigate common artifacts
Audience: Both Grad & Undergrad

4. Understand how to apply the knowledge to their own research projects
Audience: Graduate

MED PHYS/B M E 580 – THE PHYSICS OF MEDICAL IMAGING WITH IONIZING RADIATION
4 credits.

Concepts and principles on the physics of medical imaging systems that form images using high energy photons are presented. Such systems are divided into two categories: (1) those based on the transmission of x-rays through the human body, including radiography, mammography, fluoroscopy, and computed tomography (CT), and (2) those based on the emission of gamma rays or annihilation radiation following radioactive decay of an internal radiolabeled molecule, including the gamma camera, single photon emission tomography (SPECT), and positron emission tomography (PET) and PET hybrid imaging systems. Emphasis is placed on understanding how physics, system design, and imaging technique determine image performance metrics such as contrast, signal-to-noise ratio, and spatial resolution. Clinical applications and radiation safety concepts are detailed for the different types of imaging systems.
Requisites: PHYSICS/B M E/H ONCOL/MED PHYS 501 and MED PHYS/B M E 573
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify the physical principles underlying imaging technologies used in radiology and nuclear medicine: radiography, mammography, fluoroscopy, computed tomography (CT), scintigraphy, single-photon emission tomography (SPECT), and positron emission tomography (PET).
Audience: Both Grad & Undergrad

2. Describe each imaging modality in terms of a general imaging framework in which (i) a form of energy or probe is introduced to the body, (ii) a clinically interesting signal is generated within the body, and (iii) this signal is detected and spatially localized to form an image.
Audience: Both Grad & Undergrad

3. Apply physics and engineering concepts to understand how the design and operation of an imaging system determines the contrast, noise, and spatial resolution of the images produced by the system.
Audience: Both Grad & Undergrad

4. Differentiate the characteristics of radiotracers that make them suitable for research and clinical applications in human physiology.
Audience: Both Grad & Undergrad

5. Identify the defining strengths and limitations with utilizing the imaging modalities for conducting research investigations of human physiology and disease.
Audience: Graduate

MED PHYS 581 – LABORATORY FOR MEDICAL IMAGING WITH IONIZING RADIATION
1 credit.

Presents concepts and principles on the physics of medical radiographic imaging systems, based on the transmission of x-rays. Emphasis is placed on understanding the operation of imaging equipment and how it is used in clinical applications. Evaluation of imaging systems, optimization of their use and design and the solution of image quality problems is investigated.
Requisites: B M E/MED PHYS 580
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the physical components of diagnostic x-ray imaging equipment
Audience: Both Grad & Undergrad

2. Summarize the operation and clinical uses of these imaging systems
Audience: Both Grad & Undergrad

3. Test and analyze the performance characteristics of diagnostic x-ray imaging equipment
Audience: Both Grad & Undergrad

4. Investigate factors that affect image quality and patient dose in x-ray imaging systems involving their use and design
Audience: Both Grad & Undergrad

5. Apply investigative thinking to the solution of image problems and artifacts
Audience: Both Grad & Undergrad

6. Apply what has been learned to their current research project
Audience: Graduate

MED PHYS/B M E/PHMCOL-M/PHYSICS/RADIOL 619 – MICROSCOPY OF LIFE
3 credits.

Survey of state of the art microscopic, cellular and molecular imaging techniques, beginning with subcellular microscopy and finishing with whole animal imaging.
Requisites: PHYSICS 104, 202, 208, or 248 or PHYSICS/MED PHYS 265
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

MED PHYS 651 – METHODS FOR NEUROIMAGING RESEARCH
3 credits.

Provides a practical foundation for neuroimaging research studies with statistical image analysis. Specific imaging methods include functional BOLD MRI, structural MRI morphometry, and diffusion tensor imaging. Lectures and associated in-class computer exercises will cover the physics and methods of image acquisition, steps and tools for image analyses, the basis for statistical image analyses and interpretation of the results.
Requisites: Graduate/professional standing or (PHYSICS 104, 202 or 208)
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop a basic understanding of magnetic resonance imaging, anatomical imaging methods, functional BOLD MRI (fMRI), and diffusion tensor imaging (DTI).
Audience: Both Grad & Undergrad

2. Learn and apply basic methods for statistical image analyses.
Audience: Both Grad & Undergrad

3. Gain hands-on experience with tools for processing and analyses of fMRI, DTI and anatomic brain images.
Audience: Both Grad & Undergrad

4. Develop and demonstrate skills to independently process, analyze, troubleshoot and interpret MRI neuroimaging data
Audience: Graduate

MED PHYS 662 – RAD LAB - DIAGNOSTIC RADIOLOGICAL PHYSICS
1 credit.

Provides hands on experience using and testing radiographic, fluoroscopic and mammographic x-ray systems. Imaging requirements, image quality, and radiation dose aspects of each modality are covered, along with practical methods for evaluating the performance of clinical units.
Requisites: MED PHYS/B M E 580 or declared in Medical Physics VISP
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the major components and geometry of radiographic, fluoroscopic and mammographic x-ray systems and how they function
Audience: Both Grad & Undergrad

2. Describe the characteristics of radiation dose in radiographic, fluoroscopic and mammographic x-ray systems scanning including the x-ray dose index, average dose in the scanned volume and effective dose; as well as the effect of scan parameters on the radiation dose to the patient
Audience: Both Grad & Undergrad

3. Perform a physicist's evaluation of a radiographic, fluoroscopic and mammographic x-ray systems including measurements of geometric accuracy, image quality and radiation dose
Audience: Both Grad & Undergrad

4. Explain the characteristics of radiographic, fluoroscopic and mammographic x-ray systems quality including pixel values, contrast, noise, low contrast detectability and spatial resolution
Audience: Graduate

5. Demonstrate understanding of some of the basic system tests, as recommended by the American College of Radiology (ACR), that are performed during routine quality assurance testing of a radiographic, fluoroscopic and mammographic x-ray systems
Audience: Graduate

MED PHYS 663 – RAD LAB - NUCLEAR MEDICINE PHYSICS
1 credit.

Provides an introduction to the technical skills required in nuclear medicine physics. This includes laboratory rotations in basic radiopharmaceutical production and quality control, basic operation and quality control testing on PET and SPECT scanners, time series image analysis of radiotracer studies and nuclear medicine dosimetry and radiation safety training. Gain a firsthand understanding of the professional duties performed by a nuclear medicine medical physicist.
Requisites: MED PHYS/B M E 580 or declared in Medical Physics VISP
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify the basic methods for the production of radionuclides used in nuclear medicine imaging, including cyclotron produced parent / progeny generators.
Audience: Both Grad & Undergrad

2. Illustrate how to perform evaluations/ testing of the nuclear medicine imaging systems for proper performance. This includes scanner characteristic measures that would be made for acceptance test and periodic QC measures.
Audience: Both Grad & Undergrad

3. Perform these evaluations/tests in an accurate fashion.
Audience: Both Grad & Undergrad

4. Analyze the results of these tests.
Audience: Both Grad & Undergrad

5. Create a report of these results which document the findings and communicate them to someone who is not a scientist.
Audience: Both Grad & Undergrad

6. Properly use individual radiation protection techniques during the testing.
Audience: Both Grad & Undergrad

7. Describe how radionuclides are synthesized into radiopharmaceuticals for human use. This includes how quality control tests are performed and the significance of each test.
Audience: Graduate

MED PHYS 664 – RAD LAB - HEALTH PHYSICS
1 credit.

Uses project-based learning (PBL) as a powerful teaching method to address common challenges and solutions addressed by medical health physicists. Each semester, students work on a different project that addresses concepts that are important in the current health physics environment.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Learn about health physics instrumentation through hands-on experiments
Audience: Both Grad & Undergrad

2. Operate health physics instrumentation to address relevant health physics problems
Audience: Both Grad & Undergrad

3. Learn statistical principles of laboratory data analysis.
Audience: Both Grad & Undergrad

4. Communicate lab results clearly and effectively through high quality written reports.
Audience: Both Grad & Undergrad

5. Integrate knowledge into other course material, research and/or clinical work.
Audience: Graduate

MED PHYS 665 – RAD LAB - CT, MRI, AND DSA PHYSICS
1 credit.

Provides hands on experience using and testing computerized tomography (CT), magnetic resonance imaging (MRI), and digital subtraction angiography (DSA) systems. Image quality, MRI and radiation safety, accreditation, and regulatory compliance issues with these modalities are also covered.
Requisites: B M E/MED PHYS 580 and 578 or declared in Medical Physics VISP
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the major components and geometry of current computed tomography (CT) scanners and the factors affecting image quality and radiation dose in CT scans.
Audience: Both Grad & Undergrad

2. Explain the characteristics of CT image quality including pixel values, contrast, noise, low contrast detectability and spatial resolution.
Audience: Both Grad & Undergrad

3. Describe the characteristics of radiation dose in CT scanning including: dose profiles, the CT dose index, average dose in the scanned volume and effective dose; as well as the effect of scan parameters on the radiation dose to the patient.
Audience: Both Grad & Undergrad

4. Perform a physicist's evaluation of a CT scanner including measurements of geometric accuracy, image quality and radiation dose.
Audience: Graduate

5. Explain the safety screening process that all patients must undergo in order to determine whether they are eligible to safely undergo an MRI exam.
Audience: Both Grad & Undergrad

6. Describe the function of i) the major components of the MRI system, including the main magnetic field, the radiofrequency transceiver, and the magnetic field gradients, ii) the elements included in every MRI room, including the radiofrequency shielding, the magnet rundown unit, and the cryogen exhaust system, and iii) patient safety considerations related to these components.
Audience: Both Grad & Undergrad

7. Understand some of the basic system tests, as recommended by the American College of Radiology (ACR), that are performed during routine quality assurance testing of an MRI system.
Audience: Graduate

8. Identify the components of a digital subtraction angiography system.
Audience: Both Grad & Undergrad

9. Understand the basic properties of DSA systems; contrast, signal to noise ratio, image dynamic range, and logarithmic image processing.
Audience: Both Grad & Undergrad

10. Understand dual-energy subtraction and its advantages and disadvantages compared to time subtraction.
Audience: Graduate

MED PHYS 666 – RAD LAB - MEDICAL ULTRASOUND PHYSICS
1 credit.

Introduces concepts and methodology for measuring acoustic properties of materials and for operating and performing physics tests of state of the art clinical ultrasound scanners. Set up and operate a laboratory apparatus employing single element ultrasound transducers. This is followed by hands on experiments that challenge students to explain physical and engineering characteristics of clinical scanners, details of operator controls, features of Doppler and color flow modes, and resolution limitations. Practical scanning exercises provide familiarity with selected applications of clinical ultrasound equipment, both for diagnosis and for guiding interventions. Routine quality assurance tests done by medical physicists are also performed.
Requisites: MED PHYS/B M E 578 or declared in Medical Physics VISP
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Provide a technical overview of ultrasound scanner operations, including relevant tissue properties involved in forming images, ultrasound transducer properties and types, signal processing, image frame rate limitations, and typical instrument controls.
Audience: Both Grad & Undergrad

2. Demonstrate basic operation of an ultrasound scanner (GE Logiq E9 or Siemens Acuson Sequoia). This will be done using basic ultrasound QA phantoms.
Audience: Both Grad & Undergrad

3. Describe Doppler and color flow modes and indicate technical factors needed to measure blood flow accurately.
Audience: Both Grad & Undergrad

4. Show how instrumentation settings affect gray scale imaging and Doppler data from selected sites, such as the human carotid artery, the heart, or the abdomen.
Audience: Both Grad & Undergrad

5. Show the difference between cystic and solid lesions using phantoms; demonstrate image guided interventions using phantoms.
Audience: Both Grad & Undergrad

6. Complete the tests (i.e., system set up and scanning) and report writing for basic quality assurance testing following American College of Radiology (ACR) guidelines.
Audience: Graduate

MED PHYS 671 – SELECTED TOPICS IN MEDICAL PHYSICS
1-4 credits.

In-depth examination of current and newly discovered modalities and/or phenomenons in medical physics. Critical reading of literature, hands-on lab work and exploration of medical issues related to discoveries will be included.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Explore a new phenomenon or modality in the medical physics area and apply the knowledge gained to research in the field
Audience: Graduate

2. Identify the physical principles underlying imaging technologies used in radiology and nuclear medicine: radiography, mammography, fluoroscopy, computed tomography (CT), scintigraphy, single-photon emission tomography (SPECT), and positron emission tomography (PET).
Audience: Both Grad & Undergrad

MED PHYS 674 – DATA SCIENCE IN MEDICAL PHYSICS
3 credits.

Concepts and principles of statistics and machine learning for medical physics-related research problems. Topics covered include probability and independence, discrete and continuous random variables and statistical distributions, random sampling and central limit theorem, inference for means, variances, proportions, moment generating functions, maximum likelihood, hypothesis testing, ANOVA, linear regression, correlation and basic design of experiments with application to quality assurance, reliability, and reproducibility.
Requisites: (PHYSICS/B M E/H ONCOL/MED PHYS 501 and B M E/MED PHYS 573) or (STAT/MATH 309 or 431) or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze experimental data by calculating mathematical expectation, co-variance, and variance for both discrete and continuous random variables from experimental measurements and determine statistical parameters using parametric statistical models
Audience: Both Grad & Undergrad

2. Draw proper statistical conclusions from experimental data by constructing confidence intervals for estimated statistical parameters from data at a given statistical significance level and formulate a statistical hypothesis for drawing possible conclusions. Construct test statistics to perform hypothesis testing using the P-value method and the rejection-zone method at a given significance level
Audience: Both Grad & Undergrad

3. Perform supervised learning using linear regression methods and interpret the regression results for experimental data as well as perform supervised learning using logistic regression methods for classification tasks such as image segmentation
Audience: Both Grad & Undergrad

4. Perform unsupervised learning using K-means clustering, Expectation-Maximization (EM) methods, and kernel tricks to recognize underlying patterns in experimental data as well as perform supervised learning using deep neural network modeling and backpropagation learning schemes
Audience: Graduate

MED PHYS 679 – RADIATION PHYSICS METROLOGY
3 credits.

Metrology, the science of measurement, is a critical component of medical physics. Topics covered: measurement statistics, determination of uncertainty, characteristics of ionization chambers, electrometers and other ionizing radiation measurement devices. Effects of instrumentation on clinical measurements.
Requisites: PHYSICS/B M E/H ONCOL/MED PHYS 501
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Integrate the physics and operation of ionization chambers and electrometers
Audience: Both Grad & Undergrad

2. Integrate the physics and operation of other instruments used for dosimetry
Audience: Both Grad & Undergrad

3. Analyze and apply the luminescent process and its use in metrology
Audience: Both Grad & Undergrad

4. Evaluate and demonstrate principles of uncertainty involved in metrology
Audience: Graduate

MED PHYS/PHYSICS 688 – RADIATION PRODUCTION AND DETECTION
4 credits.

Physics of ionizing radiation production and detection in medical science; ionization chambers, solid-state detectors, charged and neutral particles for external beam radiotherapy, radionuclides activated with accelerators for diagnostic and therapeutic applications, radiochemistry, and X-ray tube physics.
Requisites: PHYSICS/B M E/H ONCOL/MED PHYS 501
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Achieve competence in experimental measurement methods of radiation dose
Audience: Both Grad & Undergrad

2. Develop a functional understanding of the principles and operation of the major types of ionizing radiation detectors used in modern medical physics including ion chambers, scintillators, semiconductors, chemical detectors, and calorimeters.
Audience: Both Grad & Undergrad

3. Apply fundamental atomic and nuclear physics and chemistry to radiation production using charged and neutral particles with accelerators and reactors, especially in the context of radionuclide production for diagnostic and therapeutic medical applications.
Audience: Both Grad & Undergrad

4. Develop an understanding of the principles and operation of medical electron linear accelerators for radiation therapy.
Audience: Both Grad & Undergrad

5. Apply physics and engineering concepts to understand the basic hardware configuration of an x-ray tube, the production of electrons by thermionic emission, the acceleration of electrons to a target material, and the physical interactions in the target resulting in x-rays.
Audience: Both Grad & Undergrad

6. Apply what has been learned to their current research project.
Audience: Graduate

MED PHYS 699 – INDEPENDENT READING OR RESEARCH
1-3 credits.

Provides opportunities for graduate students to gain experience using the scientific method to address specific scientific problems. This includes selection of a research topic, performing literature reviews to evaluate peer-reviewed and other publications, developing a research design, identifying possible pitfalls, and performing and reporting on experiments performed. Communication of the research findings within and outside the university is encouraged.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply concepts learned in coursework to real life situations
Audience: Both Grad & Undergrad

2. Read and effectively analyze scientific literature
Audience: Both Grad & Undergrad

3. Develop critical, analytical, and independent thinking skills
Audience: Both Grad & Undergrad

4. Create literature reviews and publications
Audience: Graduate

MED PHYS 701 – ETHICS AND THE RESPONSIBLE CONDUCT OF RESEARCH AND PRACTICE OF MEDICAL PHYSICS
1 credit.

Addresses the concepts of ethics in the daily practice of medical physics and other scientific disciplines and provide tools for identifying resources. Special emphasis will be placed in how these principles have to be applied to ensure the confidentiality of the patients, the safety of the research subjects (human and animals), differentiation between ethical and legal issues, as well as the understanding of the principles that deal with authorships, intellectual property in the academic- and industry- based environment.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall and discuss the rationale behind the ethical principles governing medical physics practice
Audience: Graduate

2. Apply these principles to ensure the confidentiality of the patients, and the safety and respect of the research subjects (humans and animals).
Audience: Graduate

3. Ensure proper and honest data collection and analysis
Audience: Graduate

4. Identify and prevent conflict of interest
Audience: Graduate

5. Discuss and define authorships, and basic intellectual property concepts for the academic- and industry- based environment.
Audience: Graduate

MED PHYS/PEDIAT 705 – WOMEN AND LEADERSHIP: SCIENCE, HEALTH AND ENGINEERING
2 credits.

Multiple professional and scientific groups have identified the underrepresentation and lack of advancement of women in academia as a national workforce problem. Review evolving perspectives of leadership and how unconscious assumptions about the behaviors and traits of men, women, and leaders impede women's advancement. Emphasizes the implications for women in the fields of science, health and engineering and explore the potential impact on the advancement of knowledge and improvements in health. Provides the opportunity to apply evidence-based perspectives using experiential methods.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Be conversant with several definitions and styles of leadership, as well as with research on how leadership and gender intersect/interact, particularly in an academic context.
Audience: Graduate

2. Reflect on personal leadership goals and skills based on readings, discussion, and online reflection assignments.
Audience: Graduate

3. Demonstrate knowledge of effective evidence-based leadership strategies.
Audience: Graduate

4. Consider the integral link between women leaders and the advancement of women's health.
Audience: Graduate

MED PHYS/B M E 710 – ADVANCES IN MEDICAL MAGNETIC RESONANCE
3 credits.

Addresses the theory and applications of magnetic resonance (MR) in medicine, by providing the necessary theoretical background to understand advanced MR techniques including magnetic resonance imaging (MRI).
Requisites: MED PHYS/B M E 568 or 578
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall and apply principles of MR signal generation, relaxation, echo generation, and spatial encoding.
Audience: Graduate

2. Compose and test concepts of advanced MR image reconstruction concepts including partial Fourier MRI, parallel MRI, non-Cartesian MRI, compressed sensing.
Audience: Graduate

3. Apply and judge image processing methods for the analysis of MR images for biomarkers such as T1 and T2 mapping and metabolite maps.
Audience: Graduate

4. Summarize and organize advanced MR applications used in the clinic and research including quantitative MRI, BOLD MRI (fMRI), MR Angiography with and without contrast agents, motion sensitive MRI, perfusion and diffusion MRI, and PET-MRI.
Audience: Graduate

5. Organize and compose concepts on sampling theory, signal-to-noise, artifacts, and pulse sequences to design protocols for MRI data acquisition, reconstruction, or processing.
Audience: Graduate

6. Demonstrate scientific communication skills for MRI research by composing oral presentations, written reports, and critiquing the work of others.
Audience: Graduate

MED PHYS/B M I/COMP SCI/E C E 722 – COMPUTATIONAL OPTICS AND IMAGING
3 credits.

Computational imaging includes all imaging methods that produce images as a result of computation on collected signals. Learn the tools to design new computational imaging methods to solve specific imaging problems. Provides an understanding of the physics of light propagation and measurement, and the computational tools to model it, including wave propagation, ray tracing, the radon transform, and linear algebra using matrix and integral operators and the computational tools to reconstruct an image, including linear inverse problems, neural networks, convex optimization, and filtered back-projection. Covers a variety of example computational imaging techniques and their applications including coded apertures, structured illumination, digital holography, computed tomography, imaging through scattering media, compressed sensing, and non-line-of-sight imaging.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Apply ray and wave based light propagation models
Audience: Graduate

2. Explain the process of image formation in conventional imaging systems using theory and computational models
Audience: Graduate

3. Select and combine the different components required in an imaging system to perform light manipulation, collection, and image reconstruction

Audience: Graduate

4. Apply the linear matrix and integral operators that model light propagation
Audience: Graduate

5. Apply the linear inverse algorithms that allow an imaging system to reconstruct properties of the scene from collected data
Audience: Graduate

6. Simulate different computational imaging systems and perform computation on simulated datasets
Audience: Graduate

7. Understand the most common computational imaging techniques and be able to use and adapt them for their own applications
Audience: Graduate

MED PHYS/B M E/CHEM 750 – BIOLOGICAL OPTICAL MICROSCOPY
3 credits.

Covers several aspects of state-of-the-art biological and biophysical imaging with an emphasis on instrumentation, beginning with an overview of geometrical optics and optical and fluorescence microscopy. The bulk of the course will focus on advanced imaging techniques including nonlinear optical processes (multi-photon excitation, second harmonic generation, and stimulated Raman processes) and emerging super-resolution methods. Special emphasis will be given to current imaging literature and experimental design. Knowledge of physics-based optics [such as PHYSICS 202] strongly recommended.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Provide a clear, concise oral presentation critiquing a paper in the literature
Audience: Graduate

2. Write a hypothesis driven research proposal and present an oral defense
Audience: Graduate

3. Write a critical written assessment of literature papers
Audience: Graduate

4. Use course concepts to better design experiments and extract quantitative information
Audience: Graduate

5. Articulate a fundamental understanding of the function of a microscope

Audience: Graduate

MED PHYS 770 – ADVANCED BRACHYTHERAPY PHYSICS
3 credits.

The use of radioactive sources for radiotherapy including: materials used, source construction dosimetry theory and practical application, dosimetric systems, localization and reconstruction. Covers low dose rate, high dose rate and permanently placed applications.
Requisites: MED PHYS/B M E 566
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Demonstrate an understanding of common brachytherapy source isotopes, including energy, source construction, and half-life, as well as their clinical use in the treatment of gynecological, breast, prostate, and other cancer types.
Audience: Graduate

2. Create clinical treatment plans for gynecological, breast, and prostate brachytherapy treatments.
Audience: Graduate

3. Explain and understand each component of the TG-43 brachytherapy dose calculation formalism
Audience: Graduate

4. Gain familiarity with HDR afterloaders and the required quality assurance
Audience: Graduate

5. Demonstrate an understanding of LDR brachytherapy concepts including safe source handling, calibration, and quality assurance
Audience: Graduate

6. Understand radiation protection concepts relevant to brachytherapy including state/national regulations and the components of a quality management program for brachytherapy
Audience: Graduate

MED PHYS 772 – ADVANCED RADIATION TREATMENT PLANNING
3 credits.

Physics of clinical, computer-based radiotherapy planning is taught. Topics include dose algorithms, measurement data, commissioning, contouring and volume definition, beam placement, modifiers and apertures and plan evaluation. Forward based and inverse planning (including IMRT optimization) are taught.
Requisites: MED PHYS/B M E 566 and graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Design simple and intermediate forward-based photon and electron external beam plans using beam arrangements/energy, wedges and blocks intelligently with regards to underlying physics
Audience: Graduate

2. Create target and region at risk planning volumes, setup objectives for, and optimize, inverse planned intensity modulated plans.
Audience: Graduate

3. Evaluate dose distributions using a variety of metrics.
Audience: Graduate

4. Understand beam model commissioning process and limitations including data requirements and processing.
Audience: Graduate

5. Understand dose algorithms used in radiation therapy (including but not limited to: convolution superposition, Monte Carlo, pencil beam.)
Audience: Graduate

MED PHYS 775 – ADVANCED ULTRASOUND PHYSICS
3 credits.

Mathematical and physical foundations of the application of acoustics in diagnostic ultrasound. Derivation of wave equations for mechanical waves in fluids and solids from a continuum mechanics perspective. Diffraction theory and methods for acoustic field calculation (analytic, angular spectrum, simulations). Review of interactions of acoustic waves with biological tissue and methods to measure their acoustic properties. In-depth discussion of methods for structural image formation including ray-line scanning, plane wave compounding, synthetic aperture, coded excitation, and spatial coherent imaging. Introduction to novel functional imaging approach, including ultrafast Doppler, molecular ultrasound, functional ultrasound, and super-resolution imaging. Application of the acquired knowledge to perform a systematic literature review of the state-of-the-art of the field for the solution of a relevant clinical problem.
Requisites: B M E/MED PHYS 573 and 578
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Provide detailed physical explanations, based on advanced mathematical grounds, of (a) the basic principles of the propagation and interactions of mechanical waves in tissues, and (b) several ultrasound-based structural and functional imaging techniques
Audience: Graduate

2. Critically assess recent technological developments in medical ultrasound imaging by appraising the motivation, strengths, and limitations of published research in this area
Audience: Graduate

3. Based on a critical review of the state of the art of biomedical ultrasound, define the goal and specific aims of a research proposal focused on addressing a knowledge gap in the field and/or solving a relevant clinical problem using advanced concepts of ultrasound image acquisition, formation, and processing
Audience: Graduate

MED PHYS 777 – PRINCIPLES OF X-RAY COMPUTED TOMOGRAPHY
3 credits.

Understand the basic principles of x-ray computed tomography (CT), and how to think when a technical problem arises in CT. Accomplished through a review of the history of CT developments and key components of CT systems, lectures on various CT reconstruction algorithms, image quality, and radiation dose, origin and correction methods of various CT artifacts.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand the basic principles of x-ray CT imaging systems
Audience: Graduate

2. Understand the mathematical foundation of basic CT reconstruction algorithms
Audience: Graduate

3. Be able to implement filtered backprojection (FBP) reconstruction algorithms for various CT geometries
Audience: Graduate

4. Understand CT image quality metrics and their dependence on CT system properties
Audience: Graduate

5. Understand the physical origin of common CT image artifacts and the corresponding correction methods
Audience: Graduate

MED PHYS/B M E/E C E 778 – MACHINE LEARNING IN ULTRASOUND IMAGING
3 credits.

Concepts and machine learning techniques for ultrasound beamforming for image formation and reconstruction to image analysis and interpretation will be presented. Key machine learning and deep learning concepts applied to beamforming, compressed sampling, speckle reduction, segmentation, photoacoustics, and elasticity imaging will be evaluated utilizing current peer-reviewed publications.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Critically read and evaluate peer-reviewed journal papers describing machine learning applications in ultrasound imaging.
Audience: Graduate

2. Apply, implement and expand upon ideas from these publications to applications in ultrasound imaging.
Audience: Graduate

3. Present the results of their critical evaluation and implementation to the class.
Audience: Graduate

4. Write a research paper based on their findings suitable for publication.
Audience: Graduate

MED PHYS 780 – PHARMACOKINETIC MODELING IN BIOMEDICAL IMAGING
2 credits.

Concepts and techniques of pharmacokinetic modeling will be presented in the context of biomedical imaging. Examine applications in various specialties, e.g. neurology and oncology, using different imaging tools, e.g. positron emission tomography (PET) and magnetic resonance imaging (MRI).
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020
Learning Outcomes: 1. Understand fundamental principles of pharmacokinetic modeling within the context of biomedical imaging
Audience: Graduate

2. Implement appropriate mathematical models for given biological tracer systems
Audience: Graduate

3. Apply these skills to biomedical research questions
Audience: Graduate

4. Analyze biomedical imaging data to investigate pharmacokinetic properties
Audience: Graduate

5. Create a publication quality research paper
Audience: Graduate

MED PHYS 900 – JOURNAL CLUB AND SEMINAR
1 credit.

Provides medical physics graduate students with the opportunity to critically evaluate and report on published research and/or research seminar presentations by speakers, from both within the university and from the larger scientific community.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Understand the various areas of Medical Physics given in seminars
Audience: Graduate

2. Explore the subject of a seminar and understand medical terms
Audience: Graduate

MED PHYS 990 – RESEARCH
1-12 credits.

Provides graduate students with mentorship to support their development of independent research goals and methods needed to address specific scientific problems that will result in a comprehensive dissertation.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Conduct independent and focused research using a variety of approaches.
Audience: Graduate

2. Analyze and think critically to address research challenges.
Audience: Graduate

3. Exhibit and foster professional and ethical conduct in their research.
Audience: Graduate

4. Collaborate with other investigators within or outside their lab.
Audience: Graduate

MEDICAL SCIENCES - MEDICAL SCHOOL (MED SC-M)

MED SC-M 722 – CLINICAL ANATOMY AND RADIOLOGY
2 credits.

Study of the anatomy of the head and neck, body wall, body cavities, limbs, and pelvic outlet through complete dissection of human cadavers. Hands-on experience in interpreting radiological cross-sectional images. Surgical correlates will be presented by practicing surgeons.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 2 number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Rediscover and explore human anatomy through active dissection.
Audience: Graduate

2. Integrate anatomical concepts into surgical anatomy and approaches.
Audience: Graduate

3. Explore applications of radiology imaging in anatomy and clinical diagnosis.
Audience: Graduate

4. Develop a thoughtful and informative oral presentation and dissection video which combine anatomical, radiologic, and surgical concepts.
Audience: Graduate

MED SC-M 723 – INDEPENDENT ADVANCED ANATOMY DISSECTION
2 credits.

Complete dissection and advanced study of the anatomy, histology, embryology, and neuroanatomy of a specific anatomical region as defined by student-generated learning objectives.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 2 number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Formulate appropriate student learning objectives and develop a plan to achieve learning objectives
Audience: Graduate

2. Perform an advanced dissection of a specific anatomical region in alignment with formulated learning objectives
Audience: Graduate

3. Create a thoughtful and informative video presentation which integrates anatomy, histology, embryology, and neuroanatomy concepts of a specific anatomical region
Audience: Graduate

4. Demonstrate professionalism in day-to-day activities
Audience: Graduate

5. Communicate effectively and in a timely manner with peers and instructors
Audience: Graduate

6. Incorporate feedback into daily work
Audience: Graduate

MED SC-M 735 – MEDICAL SPANISH FOR HEALTH SCIENCE STUDENTS
1 credit.

Medical interviewing, physical examination and cultural competency skills to enhance their ability to provide care for Spanish-speaking patients and their families. Pertinent medical vocabulary for clinical histories and physical exams, and grammar components to facilitate effective and professional communication. For health science students with intermediate or advanced Spanish proficiency.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

MED SC-M 740 – OVERVIEW OF RURAL HEALTH
1 credit.

Designed to introduce students in Phase 1 of the ForWard Curriculum to the rural community, its people, the health care issues they face, and the practice of medicine in rural communities. Key concepts of rural medicine, including health resources, access to care, injuries and illnesses associated with farming and agri-business, safety and protective equipment, and health policies. Preparation for clinical training and work in rural areas of Wisconsin.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

MED SC-M 770 – PATIENTS, PROFESSIONALISM AND PUBLIC HEALTH
4 credits.

Introduction to concepts of health and disease, which vary from patient to patient and through time. View health from a population standpoint, with an introduction to basic public health concepts as well as how physicians may positively impact both individual and population level health. Woven within that framework are introductions to key aspects of professionalism, patient-centered history- taking, and core communication skills.
Requisites: Declared in Medicine program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

MED SC-M 771 – BODY IN BALANCE
11 credits.

Organized around physiological themes, the course includes material related to the cardiovascular system, hematology, nephrology, and pulmonology to present an integrated picture of how these systems function together to maintain homeostasis. In addition, there is significant content from other competency domains such as public health, ethics, evidence-based medicine, patient care/communication and clinical skills.
Requisites: Declared in Medicine program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

MED SC-M 772 – FOOD, FASTING & FITNESS
9 credits.

Organized around biomedical themes including nutrients, the digestive system, the biochemistry and endocrine control of metabolism, exercise and fitness and the removal of waste products and toxins to present an integrated picture of how these systems function together to maintain homeostasis. Integrates developmental content from competency domains, or "longitudinal threads", including communication, patient care, ethics, health information technology, public health, professionalism, quality improvement, patient safety, and scientific inquiry.
Requisites: Declared in Medicine program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

MED SC-M 773 – HUMAN FAMILY TREE
8 credits.

Focuses on molecular, genetic, embryologic, hormonal, anatomical and physiological factors that govern fertility, cell growth, fetal development, and pregnancy as well as the congenital anomalies that can occur when those processes are aberrant. Encompasses the full life-cycle spectrum including childhood growth and development, young adulthood/puberty, issues affecting adolescents and young adults, genetic basis of human disease, reproductive health, menopause, aging, unregulated cell growth (cancer) and end of life issues. Significant content from other competency domains, or "longitudinal threads", such as public health, advocacy, ethics, patient care/communication and clinical skills.
Requisites: Declared in Medicine program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

MED SC-M 774 – INVADERS AND DEFENSE
9 credits.

Integrated examination of how the immune system interacts with foreign microbes, the normal micro biome, and self tissues, both normal and malignant. Examines inflammation and the impacts of this type of response on normal cells, in wound healing, infectious disease, and inflammatory diseases including autoimmune disease and dermatologic conditions, including neoplasia of the skin. Covers the development of adaptive immune responses from vaccination, infectious processes, and organ transplantation. Covers the basic biology and pathophysiology of "invaders" of the human body, including viruses, fungi, and bacteria, along with their clinical diagnosis and therapy. Addresses malignant transformation of the immune effector cells themselves, including cancers of mature lymphoid cells and bone marrow derived malignancies.
Requisites: Declared in Medicine program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

MED SC-M 775 – MIND & MOTION
10 credits.

Introduction to core basic science, pathophysiologic, and diagnostic principles requisite for the care and treatment of patients with musculoskeletal, neurologic, and psychiatric presentations and disorders. Basic science concepts include those from the traditional disciplines of cell biology, histology, biochemistry, anatomy, embryology, neuroscience, and behavioral science. Regular integration of these topics with their pathologic and pathophysiologic counterparts. Integration of content related to other competency domains, or "longitudinal threads", that include patient care communication, evidence based medicine, health information technology, quality improvement patient safety, professionalism, scientific inquiry and public health.
Requisites: Declared in Medicine program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

MED SC-M 810 – SPECIALIZED CARE OF OBSTETRIC, GYNECOLOGIC, AND PEDIATRIC PATIENTS (SCOPE)
12 credits.

Develop clinical knowledge and skills necessary to care for patients in Pediatrics and Obstetrics and Gynecology, with emphasis on unique skills such as taking care of vulnerable populations as identified in women's and child health and working with caregivers in addition to the patient themselves. Increase knowledge of fundamental science concepts introduced in Human Family Tree during Phase 1 of the curriculum, such as embryology and teratology, genetic testing, and neurodevelopment. Clinical experiences will occur in a range of representative inpatient, outpatient and surgical settings. In structured educational sessions, compare and contrast selected topics in pediatric, obstetric, and gynecologic patient populations, highlighting the relevant physiology, pathophysiology, basic science, and public health topics.
Requisites: MED SC-M 770, 771, 772, 773, 774, and 775
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate an inclusive and humanistic approach to patient care.
Audience: Graduate

2. Demonstrate the relevant foundational knowledge for the diagnosis and/or differential diagnosis
Audience: Graduate

3. Appropriately interpret objective data such as vital signs and commonly used diagnostic studies (including CBC, urinalysis, CSF analysis, serum chemistries), accounting for the age of the patient, presence or absence of disease, and testing modality employed
Audience: Graduate

4. Describe the appropriate use of the following common medications (accounting for age/weight and other patient factors), including when it is NOT appropriate to treat with these medications: analgesics, antipyretics, antibiotics, bronchodilators, corticosteroids, IV fluids.
Audience: Graduate

5. Adapt your approach (medical interview and complete or focused physical examination) as is appropriate to your interaction with the patient and/or their caregivers, the patient's age/level of development, as well as the presenting concern and clinical setting
Audience: Graduate

6. Generate an appropriate differential diagnosis and plan for the presenting problem and patient's age
Audience: Graduate

7. Consider the invasiveness, benefits, limitations, costs, and evidence-based best practices when generating plans for patients in different clinical scenarios.
Audience: Graduate

8. Develop familiarity with common procedures performed in obstetrics and gynecology inpatient and outpatient settings.
Audience: Graduate

9. Responsibly manage information within the electronic health record (EHR) to effectively obtain and document patient care and utilize clinical decision support.
Audience: Graduate

10. Actively participate as an interprofessional team member to promote

MED SC-M 811 – CHRONIC AND PREVENTIVE CARE
12 credits.

Identify the roles of physicians, interdisciplinary providers, health care systems, and communities in screening, treating, and preventing common, chronic conditions. Activities are centered on health promotion, outpatient-based chronic disease management, and community health. Clinical experiences will occur in primary care, behavioral health, and other ambulatory and community-based settings that focus on chronic disease management.
Requisites: Declared in Medicine program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

MED SC-M 812 – ACUTE CARE
12 credits.

Focus on assessing patients with urgent medical conditions, providing acute inpatient care, and transitioning patients to other care settings or home under the care of other professionals. Provide acute care in inpatient and outpatient urgent care settings as well as on the inpatient wards, and develop acute management plans and subsequent transition of care plans. Clinical experiences in acute care settings such as the emergency department and inpatient medicine (both general and subspecialty), psychiatry, and neurology. Builds upon fundamental science concepts introduced in Body in Balance and Mind and Motion, including Ohm's Law, acid-base balance, and volume regulation. Organ system-based approach employing varied modalities. Complete an integrated patient-centered experience by participating in the care of a patient from an urgent admission through inpatient treatment and discharge.
Requisites: Declared in Medicine program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

MED SC-M 813 – SURGICAL AND PROCEDURAL CARE
12 credits.

Care of adults and children undergoing an operation or procedure, including perioperative preparation, operative care, and post-operative cares for core clinical conditions in the specialties of anesthesia, neurosurgery, ophthalmology, general surgery, otolaryngology, urology, cardiothoracic surgery, peripheral vascular surgery, orthopedics, plastic and reconstructive surgery, and gynecology, as well as interventional radiology, procedural cardiology and gastroenterology. Basic science concepts include cerebral spinal fluid production and flow, fluids and electrolytes, consciousness, inflammation and wound healing, and cancer biology. Anatomic approach using case discussions, podcasts, curated independent reading, online nationally supported modules, and simulation skills. Longitudinal patient care experience integrating communication, evidence based medicine, health information technology, quality improvement patient safety, professionalism, scientific inquiry, and public health.
Requisites: Declared in Medicine program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

MED SC-M 850 – INTRODUCTION TO HEALTHCARE SIMULATION
3 credits.

Learn the history and best practices of healthcare simulation. Gain global perspective on simulation terminology and best practices in simulation facilitation to advance safe, high-quality, patient-centered care.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 3 number of completions
Learning Outcomes: 1. Define healthcare simulation and describe applications in formal health professions education and post certification/licensure (practicing professionals) continuing education.
Audience: Graduate

2. Apply educational techniques to design competency-based education to healthcare disciplines and programs.
Audience: Graduate

3. Describe simulation methods that enhances standards of patient care, safety, and population health.
Audience: Graduate

MED SC-M 851 – INSTRUCTIONAL DESIGN IN SIMULATION
3 credits.

In-depth curriculum development and instructional design of a simulation activity. Practice conducting a thorough needs assessment. Develop clearly defined goals and objectives in determining best educational strategies as they relate to healthcare simulation.
Requisites: MED SC-M 850 or concurrent enrollment
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 2 number of completions
Learning Outcomes: 1. Identify Kern's six step approach to curriculum design
Audience: Graduate

2. Define the process of using Blooms Taxonomy to create effective learning objectives
Audience: Graduate

3. Describe the origins, use and value of learning objectives from the instructional design perspective
Audience: Graduate

4. Demonstrate understanding of value of appropriate educational strategies based on learner type, goals and objectives
Audience: Graduate

MED SC-M 852 – SIMULATION FACILITATION
3 credits.

Best-practices in simulation facilitation, including crucial components such as prebriefing, skills-based education, immersive experiences, debriefing, learner evaluation and curriculum assessment.
Requisites: MED SC-M 850 or concurrent enrollment
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 2 number of completions
Learning Outcomes: 1. Define simulation methodologies as they relate to meeting specific course objectives.
Audience: Graduate

2. Summarize best-practices in course construct pertaining to cognitive, psychomotor, and affective domains.
Audience: Graduate

3. Design and facilitate a simulation-based activity from scenario creation to evaluation and continuous improvement.
Audience: Graduate

MED SC-M 853 – DEBRIEFING IN HEALTHCARE SIMULATION
3 credits.

Continued development in health care simulation methodology. Best practices in debriefing both procedural and immersive simulation scenarios.
Requisites: MED SC-M 850 or concurrent enrollment
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 2 number of completions
Learning Outcomes: 1. Define the value in debriefing in health care simulation
Audience: Graduate

2. Compare and contrast procedural, immersive and clinical event debriefing
Audience: Graduate

3. Demonstrate how to navigate various debriefing scenarios, including difficult debriefing scenarios
Audience: Graduate

MED SC-M 902 – AMBULATORY ACTING INTERNSHIP
4 credits.

Designed for students to assume primary responsibility of patients in the outpatient setting. Work with direct oversight by a faculty attending physician as you interview and examine patients, decide upon accurate diagnoses and formulate an appropriate treatment plan. Offered among various specialties and across the statewide campus. A primary focus of this rotation is medical decision-making regarding the ordering of tests and labs, medications and other therapeutic interventions. Students are expected to demonstrate effective communication with patients.
Requisites: Declared in Medicine program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

MED SC-M 909 – INTERNSHIP PREP COURSE
3 credits.

Designed for students to apply the knowledge and skills developed over four years of medical school and prepare them for the transition from medical student to intern. The course will cover topics in the following domains: Common and Critical Medical Conditions, Laboratory Interpretation and Procedural Skills, Professionalism and Communication, Hospital and Team Functioning and Life Skills. Sessions will include core topics for all students and sessions for those who will pursue medical or surgical specialties.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019

MED SC-M 910 – MEDIC CLINICS SELECTIVE: A STUDY OF MARGINALIZED POPULATIONS AND INTERPROFESSIONAL COLLABORATION
2 credits.

Provides a two-pronged opportunity for fourth year medical students to re-engage with MEDiC clinics where they may have volunteered during their first and second years of medical school, further appreciating the complexities of serving marginalized populations, and to use their recent clinical experience to contribute as both mentors and collaborators with students from multiple health professional professions. Careful focus on the broad public health issues affecting the patients in MEDiC clinics and how these issues inform their health status, health care and health access. Investigate the role of race in health disparities, as well as the role of socio-economic status.
Requisites: Declared in Medicine program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

MED SC-M 911 – RACIAL HEALTH DISPARITIES IN WISCONSIN
2 credits.

Uses Wisconsin health disparities data as a tool to address the broader misconceptions about race, biology, and health. Includes an overview of the genetic mechanisms for species variation, human evolutionary history, human adaptation and clinical patterns, and misconceptions about the biological underpinnings of race and health outcomes with an emphasis on the social and environmental determinants of health.
Requisites: Declared in Medicine program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020

MED SC-M 912 – TEACHING IN THE CLASSROOM: LABORATORY-BASED LEARNING IN MEDICAL EDUCATION
2-4 credits.

Advanced course for medical students interested in teaching, pursuing careers in academic medicine and/or preparing to teach in residency. Develop knowledge and skills in the theory and practice of teaching and learning in laboratory-based environments such as the clinical teaching and assessment center (CTAC) and anatomy lab. Enhance and apply your skills with hands-on experiences observing and teaching classroom-based clinical skills and anatomy.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Create educational materials for teaching laboratory-based sessions using Backward Design principles
Audience: Graduate

2. Teach in classroom-based learning environments that utilize laboratory-based instruction
Audience: Graduate

3. Effectively facilitate laboratory-based learning activities, following appropriate guidelines and structure
Audience: Graduate

4. Use inclusive and effective evidence-based teaching strategies
Audience: Graduate

5. Provide useful feedback to learners
Audience: Graduate

6. Navigate classroom dynamics to create a positive, safe and respectful learning environment
Audience: Graduate

7. Identify strengths as well as opportunities to improve teaching based on self-reflection and feedback
Audience: Graduate

MED SC-M 913 – WISCONSIN ACADEMY FOR RURAL MEDICINE (WARM) INTERNSHIP PREPARATION ELECTIVE
1 credit.

Review and reinforce baseline skills you will need for internship training in any specialty, using interactive learning methods. Major topics include Radiology, Cardiology/Pulmonary, Urgent and Emergent situations, Procedural skills, Acute Illness, and Communication.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate familiarity with the use and appropriate ordering criteria for various Radiology modalities including xrays, Magnetic Resonance Imaging (MRI), Computed Tomography (CT) Scans, and ultrasound
Audience: Graduate

2. Demonstrate proper point-of-care ultrasound diagnostic use techniques
Audience: Graduate

3. Review electrocardiogram (EKG) interpretation and identify common clinical EKG findings
Audience: Graduate

4. Identify and discuss treatment of clinically significant arrhythmias
Audience: Graduate

5. Determine appropriate cardiac stress testing
Audience: Graduate

6. Discuss appropriate use of laboratory studies and interpretation in the clinical setting
Audience: Graduate

7. Review Advanced Cardiovascular Life Support (ACLS) including situations requiring use, skills, and knowledge
Audience: Graduate

8. Review diagnosis and treatment of urgent/emergent and acute situations including hypotension, sinus tachycardia, deep venous thrombosis/pulmonary embolism, chest pain, abdominal pain, fever, and dyspnea
Audience: Graduate

9. Appropriately prescribe antibiotics for certain common infectious diseases
Audience: Graduate

10. Approach common procedures including, central lines/venous access, chest tubes, dermatologic procedures, suturing/knot tying, lumbar puncture and other appropriate procedures
Audience: Graduate

11. Appropriately evaluate and treat acute pain
Audience: Graduate

12. Appropriately approach difficult conversations including delivering bad news, medical errors, death/autopsy request, and other clinically challenging situations
Audience: Graduate

13. Identify appropriate communication strategies for dealing with conflict, appropriate communication with colleagues and patients, written and

MED SC-M 914 – TEACHING IN THE CLASSROOM: CASE-BASED LEARNING IN MEDICAL EDUCATION
2-4 credits.

Advanced learning for those interested in teaching, pursuing careers in academic medicine and/or preparation for teaching in residency. Develop knowledge and skills in the theory and practice of teaching and learning specific to design, implementation and facilitation of case-based learning. Enhance and apply your skills with hands-on experiences observing and teaching in classroom-based sessions. Teaching opportunities include facilitating Patient Centered Education (PaCE), Integrated Radiology, Anatomy, and Histology (iRAH), simulation, medium/small group case-based learning and large group team-based learning.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Using Backward Design principles, prepare educational materials for teaching case-based sessions
Audience: Graduate

2. Teach in classroom-based learning environments that utilize case-based instruction
Audience: Graduate

3. Effectively facilitate case-based learning activities, following appropriate guidelines and structure
Audience: Graduate

4. Differentiate case-based learning (CBL), problem-based learning (PBL) and team-based learning (TBL)
Audience: Graduate

5. Use inclusive and effective evidence-based teaching strategies
Audience: Graduate

6. Provide useful verbal feedback to learners
Audience: Graduate

7. Navigate classroom dynamics to create a positive, safe and respectful learning environment
Audience: Graduate

MED SC-M 918 – INDEPENDENT READING AND RESEARCH IN MEDICAL SCIENCES
2-8 credits.

Independent research studies under the direct supervision of SMPH faculty. Each project is individualized to meet student learning objectives.
Requisites: Declared in Medicine program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Formulate appropriate student learning objectives
Audience: Graduate

2. Develop a plan to achieve learning objectives and demonstrate outcomes
Audience: Graduate

3. Demonstrate professionalism in day-to-day activities
Audience: Graduate

4. Demonstrate respect for project stakeholders, collaborators and mentors
Audience: Graduate

5. Communicate effectively and in a timely manner with project stakeholders, collaborators and mentors
Audience: Graduate

6. Incorporate feedback into daily work
Audience: Graduate

MED SC-M 930 – AMERICAN INDIAN HEALTH, HISTORY & TRIBAL GOVERNANCE
1 credit.

An inter-professional introduction on foundational knowledge regarding the history, structures and key health priorities of Wisconsin tribal nations delivered by a wide range of faculty and guest experts.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe key elements and events which shape the history of Wisconsin tribes
Audience: Graduate

2. Explain, distinguish, compare and contrast the key health priorities for various Wisconsin tribes
Audience: Graduate

3. Describe the role that upstream determinants of tribal health, including environment and culture play in shaping tribal health outcomes
Audience: Graduate

4. Identify how policies and tribal, state and federal systems impact Wisconsin tribal health
Audience: Graduate

5. Explore the role of trauma-informed care for communities which have experienced trauma, specifically describing how historical trauma affects the health of Wisconsin tribal communities
Audience: Graduate

MED SC-M 940 – ADVOCATING FOR PATIENTS: GETTING THE RIGHT CARE AT THE RIGHT TIME
2 credits.

Introduction to some of the core features of the U.S. Health Care System, as experienced by patients and the health care providers caring for them. Build your capacity for advocacy in clinical settings by exploring frameworks and strategies for addressing barriers and inequities, and communication tools to help patients and families better navigate complex systems and access community resources. Advocacy content concentrated on personal advocacy interests.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate understanding of advocacy and what advocates do
Audience: Graduate

2. Match advocacy roles to specific situations
Audience: Graduate

3. Identify value to advocacy of collaborative problem-solving, engaging diverse viewpoints
Audience: Graduate

4. Identify how health care coverage is financed in the U.S., and how this influences patient experiences
Audience: Graduate

5. List core reasons for high costs and current strategies to contain them
Audience: Graduate

6. Examine how cost factors might influence the roles of physician advocates
Audience: Graduate

7. Build communication skills that emphasize deep listening, empathy, and compassion
Audience: Graduate

8. Demonstrate knowledge of how to recognize how to shift one's role and relationship to build patients' and families' capacity to strengthen capacity for self-advocacy
Audience: Graduate

9. Develop "touchpoints" to reinforce your learning and commitment to full presence with patients
Audience: Graduate

10. Demonstrate understanding of the causes and effects of physician burnout
Audience: Graduate

11. Develop self-care and lifelong learning strategies
Audience: Graduate

12. Describe strategies for incorporating advocacy into a busy practice
Audience: Graduate

13. Identify your potential role as change agent within an organization
Audience: Graduate

MED SC-M 941 – ADVOCATING FOR POPULATIONS: PARTNERING TO IMPROVE COMMUNITY HEALTH
2 credits.

Introduction to advocacy for population health. Covers determinants of health and the systemic causes that specific populations experience with health and health care in the U.S. Explore a range of strategies and tools for creating productive change with, and on behalf of, groups of patients. Strengthen the ability to see connections between the experiences of individual patients and providers and the organizational, political, social, and economic structures that influence the experiences of all health care stakeholders.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Describe clinicians' roles in population health advocacy
Audience: Graduate

2. Identify key advocacy skills and approaches
Audience: Graduate

3. Demonstrate understanding of the levels of macro advocacy
Audience: Graduate

4. Define systems thinking as it relates to advocacy for populations
Audience: Graduate

5. Identify systems thinking tools to apply to population health problems
Audience: Graduate

6. Apply tools to a population health case study
Audience: Graduate

7. Demonstrate understanding of health systems participation in community advocacy
Audience: Graduate

8. Describe the role and value of Community Needs Assessments
Audience: Graduate

9. Identify models of community engagement and partnerships
Audience: Graduate

10. Evaluate advocacy orientations uniquely applicable to organizations
Audience: Graduate

11. Demonstrate knowledge of a behavioral science approach to motivate change
Audience: Graduate

12. Describe the role of individual well-being in organizational, sector, and societal change efforts
Audience: Graduate

MED SC-M 942 – NARRATIVE MEDICINE, STORYTELLING, AND PREPARING FOR RESIDENCY
2 credits.

Narrative medicine, developing narrative competence, storytelling, and personal reflection. Using medical humanities for personal statement writing, interview preparation and professional identity formation.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define narrative medicine and storytelling and how they can impact healthcare.
Audience: Graduate

2. Apply the skills of close reading, attentive listening, creative writing, and storytelling to develop your narrative competence.
Audience: Graduate

3. Reflect upon the experiences that have defined your development into a physician and apply this reflection to your residency personal statement and interview preparation.
Audience: Graduate

4. Apply the tools learned from this course to stay grounded in your purpose in medicine as you move on to the next stage in your training.
Audience: Graduate

MEDICAL SCIENCES - VETERINARY MEDICINE (MED SC-V)

MED SC-V 570 – ANIMAL HEALTH HISTORY RESTRAINT AND PHYSICAL EXAMINATION
1 credit.

Introduces use of the problem oriented medical record concepts, history taking, physical examination and basic restraint, and diagnostic and therapeutic techniques in large and small domestic animals.
Requisites: Declared in Doctor of Veterinary Medicine with first year standing
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate appropriate restraint of dogs, cows, and horses.
Audience: Undergraduate

2. Demonstrate safe and appropriate techniques for handling blood collection devices (needles, syringes, vacutainer sample tubes).
Audience: Undergraduate

3. Develop a systematic technique for physical examination of small and large animals.
Audience: Undergraduate

4. Demonstrate knowledge of normal values for temperature, pulse, respiratory rates for dogs, cats, horses, and cows.
Audience: Undergraduate

5. Describe and summarize physical examination findings in a format suitable for use in medical records.
Audience: Undergraduate

6. Collect and organize a comprehensive health history on a canine or feline patient.
Audience: Undergraduate

MED SC-V 576 – SMALL ANIMAL EMERGENCY AND CRITICAL CARE I
1 credit.

Introduction to to various topics of emergency and critical care medicine.
Requisites: Declared in Doctor of Veterinary Medicine
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize how to triage an ill/injured dog or cat
Audience: Undergraduate

2. Recognize signs of shock in a dog
Audience: Undergraduate

3. Recognize signs of shock in a cat
Audience: Undergraduate

4. Recognize methods of toxin decontamination
Audience: Undergraduate

5. List basic stabilization techniques for unstable patients
Audience: Undergraduate

MED SC-V 577 – SMALL ANIMAL EMERGENCY AND CRITICAL CARE II
1 credit.

Cover various topics in emergency and critical care medicine. Several areas of emergency and critical care medicine will be presented.
Requisites: MED SC-V 576
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe how to triage an ill/injured dog or cat
Audience: Undergraduate

2. Identify point of care diagnostics and when they should be utilized
Audience: Undergraduate

3. Create a prioritized problem list following a triage exam and initial diagnostics
Audience: Undergraduate

4. Recognize signs of shock in a dog
Audience: Undergraduate

5. Recognize signs of shock in a cat
Audience: Undergraduate

MED SC-V 625 – VETERINARY DIAGNOSTIC AND THERAPEUTIC TECHNIQUES
0-1 credits.

Formal laboratory instruction. Detailed examination techniques and diagnostic and therapeutic procedures relevant to veterinary procedures on all species of domestic animals.
Requisites: Declared in Doctor of Veterinary Medicine with third year standing
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply multiple medical techniques and skills necessary for practice.
Audience: Undergraduate

2. Recognize multiple medical tools utilized in practice
Audience: Undergraduate

3. Identify different specialties and specific procedures associated with that specialty.
Audience: Undergraduate

MED SC-V 629 – VETERINARY NUTRITION
1 credit.

Presents awareness of the importance of nutrition in the veterinary practice.
Requisites: Declared in Doctor of Veterinary Medicine with first year standing
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain the importance of clinical nutrition in veterinary practice
Audience: Undergraduate

2. Articulate the role of nutrition in maintaining animal health and productivity
Audience: Undergraduate

3. Integrate clinical nutrition information with basic biochemical and physiological information
Audience: Undergraduate

4. Understand nutrient groupings, basic nutrient definitions, and nutrient requirements well enough to have a solid foundation for future clinical nutrition instruction
Audience: Undergraduate

5. Evaluate the basic nutritional adequacy of a diet fed to an animal
Audience: Undergraduate

MED SC-V 632 – COMPANION ANIMAL AND EQUINE MEDICINE I
6 credits.

Basic concepts of well-animal companion animal and equine health care, nutrition, and reproduction will be presented. Discussion of the etiology, pathophysiology, diagnosis, treatment, and prevention of important internal medicine and reproductive diseases in these species will be emphasized.
Requisites: Declared in Doctor of Veterinary Medicine with third year standing
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize clinical signs, diagnose and treat common diseases in small animals
Audience: Undergraduate

2. Recognize clinical signs for common disease presentations in companion animals
Audience: Undergraduate

3. Describe important clinical features of diseases that aid in recognition in companion animals
Audience: Undergraduate

4. Construct an appropriate diagnostic plan to identify common diseases in companion animals
Audience: Undergraduate

5. Create a refined differential diagnosis list for common diseases in companion animals
Audience: Undergraduate

6. Identify treatment options for common diseases in companion animals based on patient needs, available resources, and client circumstances
Audience: Undergraduate

MED SC-V 633 – COMPANION ANIMAL AND EQUINE MEDICINE II
6 credits.

Basic concepts of well-animal companion animal and equine health care, nutrition, and reproduction will be presented. Discussion of the etiology, pathophysiology, diagnosis, treatment, and prevention of important internal medicine and reproductive diseases in these species will be emphasized.
Requisites: Declared in Doctor of Veterinary Medicine with third year standing
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize clinical signs, diagnose and treat common diseases in small animals and horses.
Audience: Undergraduate

2. Recognize clinical signs for common disease presentations in companion animals and horses.
Audience: Undergraduate

3. Describe important clinical features of diseases that aid in recognition in companion animals and horses.
Audience: Undergraduate

4. Construct an appropriate diagnostic plan to identify common diseases in companion animals and horses.
Audience: Undergraduate

5. Create a refined differential diagnosis list for common diseases in companion animals and horses.
Audience: Undergraduate

6. Identify treatment options for common diseases in companion animals and horses based on patient needs, available resources, and client circumstances.
Audience: Undergraduate

MED SC-V 634 – FOOD ANIMAL MEDICINE
5 credits.

Basic principles for food animal species. Integrates food animal medicine, theriogenology, nutrition and preventive medicine concepts.
Requisites: Declared in Doctor of Veterinary Medicine with third year standing
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Diagnose and treat medical and surgical conditions of food and fiber animals at the competency level expected of an Upper Midwest mixed animal practitioner
Audience: Undergraduate

2. Recommend protocols for the prevention of major infectious and metabolic diseases that are appropriate for different food and fiber animal production systems
Audience: Undergraduate

3. Design programs that optimize reproductive efficiency in food and fiber animal operations
Audience: Undergraduate

4. Integrate food animal medical and surgical principles with considerations of animal welfare, environmental impact, and public perception of animal agriculture
Audience: Undergraduate

MED SC-V 635 – SWINE MEDICINE
1 credit.

Focuses on basic swine medicine clinical skills including diagnosis and treatment of common swine diseases that present in individual pigs and populations. Influences of production practices and farm structure will be introduced as they impact the successful practice of swine medicine. Additionally, regulatory influences unique to swine veterinary medicine and principles of biosecurity/biocontainment and bioexclusion will be discussed.
Requisites: Declared in Doctor of Veterinary Medicine with third year standing
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate knowledge (commensurate with an entry-level mixed animal practitioner in the Upper Midwest) about basic swine medicine principles.
Audience: Undergraduate

2. Apply and integrate knowledge from medicine and epidemiology so that they can investigate disease outbreaks in swine operations.
Audience: Undergraduate

3. Acquire sufficient knowledge to pass the swine medicine questions on the NAVLE licensure exam.
Audience: Undergraduate

4. Define basic swine science terminology, farm structure and expected biological performance.
Audience: Undergraduate

5. Summarize the unique characteristics of swine populations that influence diagnosis and treatment of disease.
Audience: Undergraduate

6. Perform a systematic evaluation of a swine population that identifies the correct individual animals for physical exam or diagnostic testing.
Audience: Undergraduate

7. Describe the parameters, and the normal ranges expected for those parameters, on a physical exam of a healthy pig.
Audience: Undergraduate

8. Identify the correct restraint procedure for a specific age and class of pig.
Audience: Undergraduate

9. Describe the best testing strategy for a population given a common swine disease and diagnostic objective.
Audience: Undergraduate

10. Recommend a vaccination program to a swine farmer.
Audience: Undergraduate

11. Synthesize the following information to determine a case specific treatment plan for common pathogens found in swine: clinical relevance to swine health, zoonotic potential, clinical significance of strain variation in etiology, preferred diagnostic test, usefulness of serology, usefulness of oral fluids, efficacy of vaccination, and availability of legal antimicrobial treatments.
Audience: Undergraduate

MED SC-V 667 – SMALL ANIMAL NEUROLOGY
2 credits.

Provide instruction and guidance in obtaining a complete neurological history, interpreting examinations, diagnostic tests and rationally selecting an appropriate diagnosis and effective management for neurology cases.
Requisites: Declared in Doctor of Veterinary Medicine with fourth year standing
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a complete neurologic examination to localize neurologic lesions and explain relevant basic neuroanatomical pathways
Audience: Undergraduate

2. Develop a prioritized differential diagnosis and refined problem list for general neurological lesion localizations based on the neurologic exam
Audience: Undergraduate

3. Explain the differences between general neurologic imaging techniques and select appropriate diagnostic imaging for a patient
Audience: Undergraduate

4. Understand the pharmacokinetics, standard dosage, and recommended monitoring of patients treated long-term with antiepileptic drugs
Audience: Undergraduate

5. Administer appropriate drugs to treat status epilepticus and identify and monitor impacts of antiepileptic drugs in long-term patients
Audience: Undergraduate

6. Effectively communicate with clients the appropriate treatment options and medical management for patients with neurologic diseases
Audience: Undergraduate

7. Recognize situational limitations and offer or recommend referrals for a patient as needed
Audience: Undergraduate

MED SC-V 668 – CLINICAL DERMATOLOGY ROTATION
2 credits.

Develop the technical, clinical and knowledge skills to effectively examine, diagnose and manage the dermatology patient.
Requisites: Declared in Doctor of Veterinary Medicine with fourth year standing
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a client interview and obtain historical data that is necessary and pertinent to establishing the cause of skin disease in a dog or cat
Audience: Undergraduate

2. Identify and describe the major lesion types that may be found during dermatologic examination of a dog or cat
Audience: Undergraduate

3. Demonstrate performance of flea combing, skin scraping, and trichogram procedures as used to assess a patient for parasitic skin disease
Audience: Undergraduate

4. Perform and interpret the results of a skin cytology, combine the results with gross observations on dermatologic examination, and interpret these findings to suggest presence/absence and etiologic diagnosis of either yeast or bacterial skin infection, including providing initial treatment recommendations
Audience: Undergraduate

5. Perform and interpret the results of an ear cytology, using the results to suggest both an etiologic diagnosis of the condition and an appropriate initial treatment regimen
Audience: Undergraduate

6. Outline a logical diagnostic approach sequence (including examinations and tests to be performed) for a dog with a primary owner complaint of pruritic skin disease, aimed at creating a focused list of differential diagnoses specific to the pet's particular condition
Audience: Undergraduate

7. Provide a list of differential diagnoses for a dog with an owner primary complaint of nonpruritic, generalized, noninflammatory hair loss, along with diagnostic tests that would be useful to rule out each of the proposed differential diagnoses
Audience: Undergraduate

8. Describe the role of "foundation" and "accessory" treatments in canine atopic dermatitis; list the main available treatment options for each of these categories of treatments along with their advantages, disadvantages, contraindications, and potential adverse effects
Audience: Undergraduate

9. List the four main reaction patterns in feline skin that are suggestive of a hypersensitivity disorder, and tests that might be used to establish a definitive diagnosis for these patterns
Audience: Undergraduate

MED SC-V 669 – SMALL ANIMAL CARDIOLOGY ROTATION
2 credits.

Diagnostic techniques and therapy available for the management of cardiology patients.
Requisites: Declared in Doctor of Veterinary Medicine with fourth year standing
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Describe and apply appropriate techniques for full physical examinations on small animal cardiology patients
Audience: Undergraduate

2. Observe video recordings to identify techniques and procedures for less commonly seen diseases and abnormalities in cardiology
Audience: Undergraduate

3. Accurately perform a blood pressure measurement on small animal veterinary patients
Audience: Undergraduate

4. Evaluate thoracic radiographs and ECGs using appropriate systematic approaches to identify common abnormalities
Audience: Undergraduate

5. Describe and justify routine therapeutic procedures for arrhythmias and congestive heart failure in small animals
Audience: Undergraduate

MED SC-V 670 – SENIOR ROTATION IN LARGE ANIMAL MEDICINE SERVICE
2 credits.

Diagnosis and medical treatment of diseases of horses, cattle, sheep, goats and pigs. Examine, admit and discharge cases in the Veterinary Medical Teaching Hospital.
Requisites: Declared in Doctor of Veterinary Medicine with fourth year standing
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Obtain a complete and problem-specific medical history and physical exam
Audience: Undergraduate

2. Identify clinical problems from a history and physical examination
Audience: Undergraduate

3. Create ranked problem and differential diagnoses lists for relevant clinical problems
Audience: Undergraduate

4. Design appropriate diagnostic and therapeutic plans for patients
Audience: Undergraduate

5. Effectively and empathetically communicate with clients and colleagues to coordinate patient care
Audience: Undergraduate

MED SC-V 674 – SENIOR ROTATION IN AMBULATORY SERVICE
2 credits.

Diagnosis, treatment, and recommendation of preventive measures for common medical, surgical and management problems on farms. Examine the environmental influences associated with such problems.
Requisites: Declared in Doctor of Veterinary Medicine with fourth year standing
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Perform comprehensive physical examination of patients to create viable differential diagnoses.
Audience: Undergraduate

2. Create and adjust a diagnostic and treatment plan based on available resources and client needs.
Audience: Undergraduate

3. Perform clinical tasks and procedures that are commonplace in ambulatory practice.
Audience: Undergraduate

4. Develop individual animal and health management plans including vaccination programs, deworming strategies and nutritional management.
Audience: Undergraduate

5. Recognize communicable zoonotic diseases of animals, including management strategies and appropriate reporting at the state and federal level.
Audience: Undergraduate

6. Describe business management of a multiple person veterinary medical practice, including personnel, finance, pharmaceutical and equipment inventories, client relations and charging and billing for services.
Audience: Undergraduate

MED SC-V 675 – SPECIAL TOPICS
1-5 credits.

Topics vary.
Requisites: Declared in Doctor of Veterinary Medicine
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Develop competence and professional skills in veterinary medicine
Audience: Undergraduate

2. Explore current topics and trends in veterinary medicine
Audience: Undergraduate

3. Developing breadths of experiences related to veterinary medicine
Audience: Undergraduate

MED SC-V 678 – SMALL ANIMAL INTERNAL MEDICINE
2 credits.

Develop the ability to analyze, organize and integrate information effectively to make clinical decisions relating to the diagnosis, prognosis, management and control of diseases.
Requisites: Declared in Doctor of Veterinary Medicine with fourth year standing
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Obtain both a complete and a problem-specific medical history and physical examination
Audience: Undergraduate

2. Identify clinical problems from a history and physical examination
Audience: Undergraduate

3. Create ranked problem and differential diagnoses lists for relevant clinical problems
Audience: Undergraduate

4. Design appropriate diagnostic and therapeutic plans for patients
Audience: Undergraduate

5. Effectively and empathetically communicate with clients and colleagues to coordinate patient care
Audience: Undergraduate

6. Understand how to document patient plans, procedures, and treatments
Audience: Undergraduate

7. Use appropriate literature to solve clinical questions or scientific problems
Audience: Undergraduate

MED SC-V 679 – SMALL ANIMAL ONCOLOGY
2 credits.

To develop skills in clinical medicine, palpation, interpretation of laboratory data and become acquainted with oncology clientele.
Requisites: Declared in Doctor of Veterinary Medicine with fourth year standing
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Obtain a complete history and physical exam on oncology patients
Audience: Undergraduate

2. Understand the anatomical location of lymph nodes and basic biology and physical signs of common cancers in dogs and cats
Audience: Undergraduate

3. Demonstrate appropriate use of instrumentation and techniques for measuring masses and general tissue handling and oncological biopsy procedures
Audience: Undergraduate

4. Perform appropriate biopsy fine needle aspirate procedures to determine review cytology of patient samples
Audience: Undergraduate

5. Formulate a diagnostics and therapeutic plan for oncology patients based on available information and abnormal findings on testing and examination
Audience: Undergraduate

6. Model low-stress handling and humane restraint of chemotherapy patients and properly administer therapeutics
Audience: Undergraduate

7. Collaborate with team members to implement effective care for new and recheck oncology patients
Audience: Undergraduate

MED SC-V 699 – DIRECTED STUDY
1-5 credits.

Projects in the laboratory and/or through library work in specific subject areas under the direct guidance of a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply foundational veterinary knowledge and critical thinking to identify problems in veterinary medicine
Audience: Undergraduate

2. Develop professional veterinary medicine skills of interest by performing select techniques and procedures
Audience: Undergraduate

3. Communicate in written and/or verbal reports to veterinary colleagues and supervisors
Audience: Undergraduate

MED SC-V 701 – PRODUCTION MEDICINE I
2 credits.

Visit dairy farms, learn to identify production limiting problems, and develop a priority list based upon economic importance. The farm investigation consists of visual evaluations of farmstead and herd, interpretation of DHI records, and computer analysis of herd records.
Requisites: Declared in Doctor of Veterinary Medicine with fourth year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Evaluate medication and vaccine use in dairy calves and fresh cows
Audience: Graduate

2. Use injury and locomotion scoring to evaluate cow comfort and lameness in adult dairy cattle and assess hoof trimming at the herd level
Audience: Graduate

3. Use Microsoft Excel and free online software to perform statistical analysis on health and production data collected from DHIA and DairyCOMP 305
Audience: Graduate

4. Diagnose pregnancy and identify ovarian structures using transrectal palpation. Incorporate reproductive management strategies to improve fertility in dairy herds
Audience: Graduate

5. Provide obstetric manipulations to safely deliver malpositioned and/or oversized calves.
Audience: Graduate

6. Evaluate fresh cow diagnosis and treatment protocols on dairy farms
Audience: Graduate

7. Deliver written and verbal reports to dairy farmers and veterinary colleagues
Audience: Graduate

MED SC-V 703 – PRODUCTION MEDICINE II
2 credits.

Investigate and analyze farm and laboratory data and evaluate recommendations using benefit/cost analyses. Perform milking system, milking procedure, and environmental management evaluations.
Requisites: Declared in Doctor of Veterinary Medicine with fourth year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Evaluate transition cow risk factors on dairy farms

Audience: Graduate

2. Utilize transrectal ultrasound to diagnose pregnancy and identify ovarian structures and use reproductive management strategies to identify and re-inseminate non-pregnant cows
Audience: Graduate

3. Evaluate barn ventilation, freestall, and tiestall design
Audience: Graduate

4. Create partial budgets to assist farmers' decision making for on-farm management practices
Audience: Graduate

5. Evaluate milking parlor procedures to ensure timely let-down of milk and improve udder health in dairy cattle
Audience: Graduate

6. Use Food Armor® HACCP principles to promote food safety and proper drug use in food animals
Audience: Graduate

7. Deliver written and verbal reports to dairy farmers and veterinary colleagues
Audience: Graduate

MED SC-V 705 – PRODUCTION MEDICINE III-APPLIED DAIRY NUTRITION
2 credits.

Rotation for applying principles of nutrition to dairy practice.
Requisites: Declared in Doctor of Veterinary Medicine with fourth year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Investigate calf health management programs including nutrition, growth, sanitation, passive transfer, morbidity and mortality
Audience: Graduate

2. Use lung ultrasound to evaluate respiratory health in young cattle
Audience: Graduate

3. Develop on-farm troubleshooting strategies for adult cow and young calf health and performance problems
Audience: Graduate

4. Evaluate robotic milking systems
Audience: Graduate

5. Identify humane methods of euthanasia and provide euthanasia services using captive bolt
Audience: Graduate

6. Assess bull fertility through breeding soundness examinations
Audience: Graduate

7. Deliver written and verbal reports to dairy farmers and veterinary colleagues
Audience: Graduate

MED SC-V 708 – PRE-CLINICAL TOPICS IN VETERINARY MEDICINE
1-3 credits.

Selected topics in veterinary medicine covering materials such as, but not limited to, innovative trends in veterinary medicine, experimental practices, or trending topics in the field.
Requisites: Declared in Doctor of Veterinary Medicine
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 50 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply theoretical knowledge to real-world veterinary scenarios and case studies.
Audience: Graduate

2. Demonstrate competence in integrating concepts and skills to solve practical veterinary problems.
Audience: Graduate

3. Enhance practical competency in diverse areas of veterinary medicine through hands-on activities, simulations, or field experiences.
Audience: Graduate

4. Recognize connections and interdependencies between diverse topics within the veterinary profession.
Audience: Graduate

MED SC-V 710 – SMALL ANIMAL EMERGENCY MEDICINE ROTATION
2 credits.

Work jointly with faculty, residents and interns to assess emergent patients, formulate both treatment and diagnostic plans. Under direct supervision, demonstrate basic ER skills and procedures upon patients, as is appropriate.
Requisites: Declared in Doctor of Veterinary Medicine with fourth year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 2 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize indicators of emergency and prioritize a plan of action
Audience: Graduate

2. Perform a complete and accurate assessment of emergent patients
Audience: Graduate

3. Describe and apply appropriate basic procedural skills on emergent patients
Audience: Graduate

4. Recognize situational limitations and seek consults as needed
Audience: Graduate

MED SC-V 711 – SELECTIVE CLINICAL EXPERIENCES IN VETERINARY MEDICINE
1 credit.

Selected experiences in veterinary medicine to explore clinical environments and investigate various career paths within the veterinary profession before formal clinical rotations.
Requisites: Declared in Doctor of Veterinary Medicine
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 4 number of completions
Learning Outcomes: 1. Effectively bridge the gap between classroom learning in foundational sciences and its application in real clinical scenarios.
Audience: Graduate

2. Perform basic veterinary clinical skills, including physical examination techniques, patient handling, and restraint.
Audience: Graduate

3. Practice professional conduct and etiquette in a clinical setting, including interactions with clients, staff, and patients.
Audience: Graduate

4. Explore potential career paths in different areas of the veterinary profession.
Audience: Graduate

MED SC-V 714 – SMALL ANIMAL PRIMARY CARE ROTATION
2 credits.

Provide a practical, clinical experience by determining the diagnosis and treatment of general practice preventative medicine and diseases of dogs and cats. Provide an opportunity to evaluate and treat primary or first opinion cases (medicine, surgery) seen in private practice, to develop proficiency in client communications, and to create a skills base for management of preventive health, new pet and primary medical and surgical cases.
Requisites: Declared in Doctor of Veterinary Medicine with fourth year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 2 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Obtain an oral history and perform a complete physical examination to identify clinical problems and abnormalities
Audience: Graduate

2. Apply foundational veterinary knowledge and critical thinking to create problem lists and prioritized differentials
Audience: Graduate

3. Demonstrate appropriate use of instrumentation and techniques for proper tissue handling and basic surgery on live patients
Audience: Graduate

4. Create a preventative care plan for small animals
Audience: Graduate

5. Create patient discharge instructions and written medical records using appropriate language for effective communication and understanding
Audience: Graduate

MED SC-V 716 – SMALL ANIMAL WISCARES ROTATION
2 credits.

Lead cases by determining diagnosis and treatment of general practice preventative medicine and diseases of small animal species. Build clinical diagnostic and surgical skills, communication skills, interdisciplinary teamwork, self-reflection, and cultural humility skills.
Requisites: Declared in Doctor of Veterinary Medicine with fourth year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 1 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Incorporates animal welfare, client expectations, and economic considerations into the diagnostic or treatment plan
Audience: Graduate

2. Recognizes zoonotic diseases and responds accordingly
Audience: Graduate

3. Promotes the health and safety of people and the environment
Audience: Graduate

4. Listens attentively and communicates professionally
Audience: Graduate

5. Adapts communication style to colleagues and clients
Audience: Graduate

6. Demonstrates inclusivity and cultural competence
Audience: Graduate

MED SC-V 731 – FOUNDATIONS OF VETERINARY MEDICINE I
7 credits.

Develop a comprehensive understanding of the foundational concepts underpinning the normal, healthy animal. Through a structured approach comprising various modules, including foundations of homeostasis, movement and support, and circulation and respiration, delve into essential anatomical and functional elements vital for animal health. Emphasizing the intricate interplay of cells, tissues, organs, and organ systems, gain crucial insights into the mechanisms orchestrating communication and control to uphold homeostasis. Integrating disciplines such as anatomy, physiology, histology, embryology, and radiology, combine foundational knowledge with an emphasis on practical clinical applications and the development of critical thinking essential for navigating the complexities of veterinary practice.
Requisites: Declared in Doctor of Veterinary Medicine DVM with first year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the location, organization, development, and main purposes of the structures involved in a body system.
Audience: Graduate

2. Explain the relationship between the structure and function of organs within a system.
Audience: Graduate

3. Analyze the cause-and-effect relationships between different elements within a body system.
Audience: Graduate

4. Evaluate the importance of biochemical, electrical, and mechanical events within a body system.
Audience: Graduate

5. Predict the sequence of events necessary to restore homeostasis after disruption or dysfunction.
Audience: Graduate

6. Compare and contrast the functions of different body systems and describe how their combined actions maintain or restore homeostasis and health.
Audience: Graduate

7. Identify scientific literature from various sources and appraise information based on credibility and applicability.
Audience: Graduate

MED SC-V 732 – FOUNDATIONS OF VETERINARY MEDICINE II
7 credits.

Develop a comprehensive understanding of the foundational concepts underpinning the normal, healthy animal. Through a structured approach comprising various modules, including eating and eliminating, and cognition, senses and response, delve into essential anatomical and functional elements vital for animal health. Emphasizing the intricate interplay of cells, tissues, organs, and organ systems, gain crucial insights into the mechanisms orchestrating communication and control to uphold homeostasis. Integrating disciplines such as anatomy, physiology, histology, embryology, and radiology, combine foundational knowledge with an emphasis on practical clinical applications and the development of critical thinking essential for navigating the complexities of veterinary practice.
Requisites: Declared in Doctor of Veterinary Medicine DVM with first year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the location, organization, development, and main purposes of the structures involved in a body system.
Audience: Graduate

2. Explain the relationship between the structure and function of organs within a system.
Audience: Graduate

3. Analyze the cause-and-effect relationships between different events within a body system.
Audience: Graduate

4. Evaluate the importance of different biochemical, electrical, and mechanical events within a body system.
Audience: Graduate

5. Predict the sequence of events necessary to restore homeostasis after disruption or malfunction.
Audience: Graduate

6. Compare and contrast the functions of different body systems and describe how their combined actions maintain or restore homeostasis and health.
Audience: Graduate

7. Identify scientific literature from various sources and appraise information based on credibility and applicability.
Audience: Graduate

MED SC-V 733 – FOUNDATIONS OF VETERINARY MEDICINE III
7 credits.

Develop a comprehensive understanding of the foundational concepts underpinning the normal, healthy animal. Through a structured approach comprising various modules, including reproduction, barriers and defense, and healthy populations, delve into essential anatomical and functional elements vital for animal health. Emphasizing the intricate interplay of cells, tissues, organs, and organ systems, gain crucial insights into the mechanisms orchestrating communication and control to uphold homeostasis. Integrating disciplines such as anatomy, physiology, histology, embryology, radiology, and epidemiology combine foundational knowledge with an emphasis on practical clinical applications and the development of critical thinking essential for navigating the complexities of veterinary practice.
Requisites: Declared in Doctor of Veterinary Medicine DVM with first year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Describe the location, organization, development, and main purposes of the structures involved in a body system.
Audience: Graduate

2. Explain the relationship between the structure and function of organs within a system.
Audience: Graduate

3. Analyze the cause-and-effect relationships between different events within a body system.
Audience: Graduate

4. Evaluate the importance of different biochemical, electrical, and mechanical events within a body system.
Audience: Graduate

5. Predict the sequence of events necessary to restore homeostasis after disruption or malfunction.
Audience: Graduate

6. Compare and contrast the functions of different body systems and describe how their combined actions maintain or restore homeostasis and health.
Audience: Graduate

7. Identify scientific literature from various sources and appraise information based on credibility & applicability
Audience: Graduate

8. Explain the basic requirements for nutrition, husbandry and behavioral wellbeing to maintain health, welfare and production in select veterinary species.
Audience: Graduate

9. Apply the principles of causal inference to health, welfare, and production-related outcomes.
Audience: Graduate

10. Explain characteristics of laboratory tests and appropriately interpret test results.
Audience: Graduate

MED SC-V 736 – VETERINARY CLINICAL SKILLS I
2 credits.

Begin development of foundational clinical skills needed by veterinarians to excel in the current, demanding clinical veterinary environment. Emphasizing hands-on training to build a strong foundation in the correct handling, restraint, and physical examination of multiple species. Through a structured approach in various laboratories, move toward performance of these skills at a pre-novice I level.
Requisites: Declared in Doctor of Veterinary Medicine DVM with first year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Perform components of a physical examination on multiple veterinary species, using appropriate handling and restraint.
Audience: Graduate

2. Perform diverse clinical skills and procedures from multiple areas of veterinary medicine.
Audience: Graduate

MED SC-V 737 – VETERINARY CLINICAL SKILLS II
1 credit.

Advance development of foundational clinical skills needed by veterinarians to excel in the current demanding clinical veterinary environment. Engage in deliberate practice in handling and restraint techniques, as well as in-depth physical examinations of various species, demonstrating sustained performance at a pre-novice I level.
Requisites: Declared in Doctor of Veterinary Medicine DVM with first year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Perform components of a physical examination on multiple veterinary species, using appropriate handling and restraint.
Audience: Graduate

2. Perform diverse clinical skills and procedures from multiple areas of veterinary medicine.
Audience: Graduate

MED SC-V 738 – VETERINARY PROFESSIONAL SKILLS I
1 credit.

Develop critical, non-medical skills needed to excel in today's demanding clinical veterinary environment. Emphasizing a strong foundation in areas that complement veterinary medical expertise, fostering a more rewarding career, improving patient care, and creating a positive work environment for the veterinary healthcare team. Through a structured approach comprising various modules, including career, communication, ethics, financial, individual and team awareness, leadership, legal, mentorship, practice management, and wellbeing/wellness, delve into essential professional skills for future veterinarians. Emphasizing the following fundamental skills: communication in teams, giving and receiving constructive feedback, and self-reflection to better understand personal goals, needs, and motivations. Core aspects for a veterinary career are introduced: medical records and documentation, legal and ethical considerations, cultural responsiveness, and client communication.
Requisites: Declared in Doctor of Veterinary Medicine DVM with first year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize skills and strategies for time-management, team collaboration, communication, and personal wellness that can contribute success as a student and in a veterinary career.
Audience: Graduate

2. Describe and compare skills and strategies for leadership and collaboration in teams.
Audience: Graduate

3. Identify personal values and goals to create a personal-professional mission statement.
Audience: Graduate

4. Identify personal wellness needs and available wellness resources.
Audience: Graduate

5. Explain what feedback is, why it is important and describe the feedback cycle.
Audience: Graduate

6. Define the difference between legal requirements and ethical responsibility, and why ethics are important to veterinary medicine.
Audience: Graduate

7. Define components of legal medical records and the importance of using proper medical terminology in documentation.
Audience: Graduate

MED SC-V 739 – VETERINARY PROFESSIONAL SKILLS II
1 credit.

Develop critical, non-medical skills needed to excel in today's demanding clinical veterinary environment. Emphasizing a strong foundation in areas that complement veterinary medical expertise, fostering a more rewarding career, improving patient care, and creating a positive work environment for the veterinary healthcare team. Through a structured approach comprising various modules, including career, communication, ethics, financial, individual and team awareness, leadership, legal, mentorship, practice management, and wellbeing/wellness, delve into essential professional skills for future veterinarians. Develop a deeper grounding into key ethical and legal aspects of a veterinary career, including veterinarian-owner-client confidentiality, animal welfare, owner responsibility and euthanasia. Practice verbal and written communication skills in relation to commonly encountered scenarios. Veterinary career paths will be explored and defined; career planning networks developed.
Requisites: Declared in Doctor of Veterinary Medicine DVM with first year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Explain ethical concepts surrounding animal welfare and the ethical basis for veterinarian-owner-patient confidentiality.

Audience: Graduate

2. Reflect on personal, legal, and ethical perspectives and standards on death and euthanasia.
Audience: Graduate

3. Describe legal minimum care standards for owners and ranges of veterinary care perspectives.
Audience: Graduate

4. Describe and demonstrate communication strategies for discussing topics of a healthy pet visit.
Audience: Graduate

5. Demonstrate basic skills and strategies for career planning and compare career options within veterinary medicine.
Audience: Graduate

MED SC-V 741 – VETERINARY DISEASE AND DYSFUNCTION I
6 credits.

Explore animal diseases and dysfunction spanning multiple body systems. Through a structured approach comprising various modules, including foundations of disease, and barriers and defense, explore disease etiology, pathophysiology, clinical manifestations, diagnostic methodologies, therapeutic interventions, and preventive strategies. Interdisciplinary perspectives will be employed to develop an understanding of the mechanisms underlying various animal diseases. Apply didactic knowledge to real-world scenarios. Utilize foundational knowledge with an emphasis on practical clinical applications and the development of clinical reasoning essential for navigating the complexities of veterinary practice.
Requisites: Declared in Doctor of Veterinary Medicine DVM with first year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Identify clinical presentations through analysis of patient history and physical examination findings.
Audience: Graduate

2. Analyze key pathogenic mechanisms within clinical contexts, integrating patient history and clinical features.
Audience: Graduate

3. Formulate and prioritize a problem list through evaluation of clinical presentations and using knowledge of pathogenic mechanisms.
Audience: Graduate

4. Construct and rank an appropriate differential diagnosis list based on a thorough assessment of the problem list.
Audience: Graduate

5. Develop an initial diagnostic plan based on the problem list and differentials.
Audience: Graduate

6. Continually update ranked problem list, differential diagnosis, and diagnostic plan by integrating clinical, biochemical, pathologic, and imaging data.
Audience: Graduate

7. Apply a variety of therapeutic modalities-pharmacologic, biological, physical, surgical, environmental, and nutritional-to manage or prevent pathophysiologic mechanisms underlying disorders.
Audience: Graduate

8. Describe disease progression or resolution patterns.
Audience: Graduate

9. Assess treatment responses against expected outcomes and adjust management strategies accordingly.
Audience: Graduate

10. Apply principles of extra-label drug use, withdrawal times, and responsible drug administration in accordance with relevant regulations and guidelines.
Audience: Graduate

11. Access, analyze, and apply scientific literature and justify clinical decisions based on credibility and applicability of the information.
Audience: Graduate

MED SC-V 746 – VETERINARY CLINICAL SKILLS III
1 credit.

Extend development of foundational clinical skills needed by veterinarians to excel in the current demanding clinical veterinary environment. Engage in dynamic practice and simulations in handling, restraint, and in-depth physical examinations of various species to move towards performance of these skills at a pre-novice II level.
Requisites: Declared in Doctor of Veterinary Medicine DVM with first year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Perform components of a physical examination on multiple veterinary species, using appropriate handling and restraint.
Audience: Graduate

2. Perform diverse clinical skills and procedures from multiple areas of veterinary medicine.
Audience: Graduate

MED SC-V 748 – VETERINARY PROFESSIONAL SKILLS III
1 credit.

Develop critical, non-medical skills needed to excel in today's demanding clinical veterinary environment. Emphasizing a strong foundation in areas that complement veterinary medical expertise, fostering a more rewarding career, improving patient care, and creating a positive work environment for the veterinary healthcare team. Through a structured approach comprising various modules, including career, communication, ethics, financial, individual and team awareness, leadership, legal, mentorship, practice management, and wellbeing/wellness, delve into essential professional skills for future veterinarians. Explore mental and emotional well-being impacts, including ethical dilemmas, and interpersonal interaction with colleagues and clients. Discuss strategies for finding and building a mentor network. Explore worldview and value differences. Refine and practice communication strategies. Focus on giving and receiving feedback and develop a feedback action plan.
Requisites: Declared in Doctor of Veterinary Medicine DVM with first year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Reflect on and respond to factors, including ethical dilemmas in veterinary medicine, that impact wellbeing of veterinarians.
Audience: Graduate

2. Reflect on your worldview and ethical boundaries, how it may differ from others', and how this affects your decision making and interpersonal relationships.
Audience: Graduate

3. Demonstrate strategies for building teams and finding a mentor.
Audience: Graduate

4. Describe and demonstrate strategies for communicating with colleagues and clients.
Audience: Graduate

5. Give, receive, and develop a plan of action based on feedback as part of a team.
Audience: Graduate

MED SC-V 775 – EXTERNSHIP
1-24 credits.

Offers opportunities for faculty coordinated experience in the veterinary medical profession outside School of Veterinary Medicine.
Requisites: Declared in Doctor of Veterinary Medicine with fourth year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Understand real-world applications of foundational veterinary medical knowledge and skills
Audience: Graduate

2. Apply foundational veterinary knowledge and critical thinking to solve real-world problems
Audience: Graduate

3. Perform select techniques and procedures to develop various skills professional in veterinary medicine
Audience: Graduate

MEDICINE (MEDICINE)

MEDICINE/NURSING/PHM PRAC/SOC WORK 467 – INTERPROFESSIONAL COLLABORATIVE PRACTICE IN HIV CARE
1 credit.

Gain foundational knowledge and skills in interprofessional collaborative practice and HIV care. Explore the roles of medicine, nursing, pharmacy, and social work in the HIV care continuum. Discuss quality team-based care as a member of an interprofessional student team.
Requisites: Declared in Nursing BSN (Traditional, Collaborative, Accelerated), Social Work BSW, Medicine MD, Pharmacy PharmD, or Social Work MSW.
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the history and epidemiology of the HIV epidemic.
Audience: Both Grad & Undergrad

2. Define Interprofessional Collaborative Practice (ICP) and describe the characteristics of effective ICP.
Audience: Both Grad & Undergrad

3. Describe the natural history of HIV disease with and without antiretroviral therapy (ART).
Audience: Both Grad & Undergrad

4. Discuss US Dept of Health and Human Services guidelines and recommendations for prevention, screening, diagnosis, treatment, and management of HIV infection and HIV-related diseases in the United States.
Audience: Both Grad & Undergrad

5. Describe the HIV care continuum including testing, entry and retention in care, and treatment including associated stigma and discrimination as barriers.
Audience: Both Grad & Undergrad

6. Discuss dimensions of wellness (emotional, environmental, financial, intellectual, occupational, physical, social and spiritual).
Audience: Both Grad & Undergrad

7. Identify potential co-morbid conditions in the HIV infected population.
Audience: Both Grad & Undergrad

8. Discuss stigma and discrimination as barriers to prevention, care, and treatment.
Audience: Both Grad & Undergrad

9. Discuss the history of the Ryan White Care Act and other federal and state policies and their current importance in HIV prevention and HIV care.
Audience: Both Grad & Undergrad

10. Identify HIV care needs and common health issues among high risk and vulnerable populations.
Audience: Both Grad & Undergrad

11. Develop a plan of care for an HIV positive individual as part of an interprofessional team.
Audience: Both Grad & Undergrad

12. Develop skills working with mixed teams including undergraduate

MEDICINE 699 – INDEPENDENT STUDY
0-5 credits.

Self-directed work under the supervision and guidance of an Instructor and often in conjunction with a day-to-day mentor that is a graduate student, postdoc researcher or directly with the faculty. Students normally participate in aspects of ongoing research projects.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply concepts learned in coursework to real life situations
Audience: Undergraduate

2. Read and effectively search scientific literature
Audience: Undergraduate

3. Develop critical, analytical, and independent thinking skills
Audience: Undergraduate

MEDICINE 700 – INTRODUCTION TO CLINICAL AND HEALTH INFORMATICS
3 credits.

Overview of the field of applied clinical and health informatics will provide foundational knowledge of the core concepts of clinical and health informatics and how those principles are used to improve health and health care delivery.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the foundational principles and challenges of clinical and health informatics
Audience: Graduate

2. Summarize the use of health records in health care delivery, and practical challenges of their use
Audience: Graduate

3. Illustrate focus areas in informatics, such as public health, population medicine, and consumer informatics
Audience: Graduate

4. Identify emerging technologies in clinical and health informatics
Audience: Graduate

5. Apply health equity principles in evaluation of clinical and health information system and their delivery
Audience: Graduate

MEDICINE/CRB 701 – CELL SIGNALING AND HUMAN DISEASE
1 credit.

Landmark discoveries, as well as current knowledge and controversies in human health, with an emphasis on cancer biology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Critically evaluate the primary literature underlying medical knowledge.
Audience: Graduate

2. Practice presentation and leading discussion of primary literature.
Audience: Graduate

3. Read the basic evidence underlying landmark discoveries and controversies in cancer biology.
Audience: Graduate

4. Understand how grant proposals are written and evaluated.
Audience: Graduate

MEDICINE 702 – CLINICAL AND HEALTH INFORMATION SYSTEMS
3 credits.

Clinical and health information and communication systems form the backbone of our health care delivery system and public health infrastructure. Overview of the core systems used in health care delivery to explore the processes used to analyze, design, implement and evaluate these systems.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the role of information systems in health and health care delivery
Audience: Graduate

2. Summarize the various needs that information systems fill in health care delivery, including clinical, revenue cycle, and population health uses.
Audience: Graduate

3. Identify the steps for analysis, design, implementation, and evaluation of information and communication systems.
Audience: Graduate

4. Understand barriers to effective utilization of information and communication systems.
Audience: Graduate

5. Illustrate key features of clinical decision support and effective clinical documentation.
Audience: Graduate

MEDICINE/NURSING/POP HLTH 705 – SEMINAR IN INTERDISCIPLINARY CLINICAL RESEARCH EVIDENCE
2-3 credits.

Exploration of interdisciplinary clinical research questions including strategies for assessing the evidence and methodology for conducting various types of literature reviews. Emphasizes an interdisciplinary perspective.
Requisites: SOC/POP HLTH 797 and STAT/B M I 542
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop an answerable clinical research question.
Audience: Graduate

2. Search relevant scientific literature using several electronic databases and other sources of evidence (published and unpublished) across disciplines.
Audience: Graduate

3. Manage sources of evidence with reference management software.
Audience: Graduate

4. Critically review published clinical research on a chosen topic.
Audience: Graduate

5. Develop a search strategy and conduct a systematic review or other form of evidence review.
Audience: Graduate

6. Present a planned or actual evidence review to interdisciplinary peers.
Audience: Graduate

7. Describe the implications for translation of the proposed evidence review from an interdisciplinary perspective.
Audience: Graduate

MEDICINE 710 – IMPROVISATIONAL THEATRE FOR SCIENTISTS
1 credit.

Improvisers are experts in storytelling, spontaneity, and using observation skills to adjust to their audiences and team members accordingly. Among other skills, this 5-week course will teach you how to (1) effectively communicate your work to different audiences, (2) adjust your behavior in real time to respond to audience feedback, and (3) manipulate your vocal and physical presence to communicate more effectively.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Effectively communicate your work to different audiences
Audience: Graduate

2. Adjust your behavior in real time to respond to audience feedback
Audience: Graduate

3. Manipulate your vocal and physical presence to communicate more effectively
Audience: Graduate

MEDICINE 720 – ENDOCRINOLOGY AND METABOLISM
3 credits.

Provides a broad grounding in endocrinology and metabolism with an emphasis on human and human-related disorders wherever possible. Explores further the physiological and molecular mechanisms by which the endocrine regulation of metabolism acts to preserve mammalian health, and how dysfunction in these mechanisms leads to disease, with an emphasis on diabetes, obesity and hypertension.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop knowledge of how endocrinology and metabolism act to promote health at the physiological and molecular level, with an emphasis on humans wherever possible.
Audience: Graduate

2. Learn common mechanisms by which endocrine and metabolic dysfunction contribute to the pathophysiology of disease, including diabetes, obesity, and hypertension.
Audience: Graduate

3. Develop knowledge of cutting-edge research findings and common approaches to developing new treatments for metabolic disease and endocrine disorders.
Audience: Graduate

4. Evaluate primary research articles and demonstrate critical reasoning with regards to methods and conclusions.
Audience: Graduate

5. Demonstrate critical thinking with regards to course material through in-class interactive discussion with peers and faculty.
Audience: Graduate

6. Integrate instruction material and personally-researched scientific texts to formulate individual thoughts on topics not directly covered in lecture.
Audience: Graduate

MEDICINE 725 – PERCEPTIONS OF AGING
1 credit.

Designed to provide a broad understanding of how aging and the science of aging is perceived by the public, with an emphasis on the critical examination of movies in which aging is a major theme. Discussion topics will include the perception of aging and age-related diseases as a positive or negative theme; the biological plausibility of pro- or anti-aging mechanisms; the accuracy of aging science in media; and the clinical, cultural, and personal perceptions of end-of-life care, death, and bereavement.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Develop knowledge of how aging as well as the science of aging is perceived by the public.
Audience: Graduate

2. Develop knowledge novel techniques and approaches at the cutting edge of aging research.
Audience: Graduate

3. Demonstrate critical reasoning with regards to methods and conclusions drawn in popular media.
Audience: Graduate

4. Demonstrate critical thinking with regards to course material through in-class interactive discussion with peers and faculty.
Audience: Graduate

5. Integrate instruction material and personally-researched scientific texts to formulate individual thoughts on topics not directly covered in lecture.
Audience: Graduate

MEDICINE 750 – CAPSTONE PROJECT IN CLINICAL AND HEALTH INFORMATICS
3 credits.

Collective application of all other Clinical and Health Informatics graduate degree coursework. Addresses all ten American Medical Informatics Association (AMIA) competencies through a summative project to demonstrate the knowledge, skills, and attributes necessary for successfully working in health care informatics.
Requisites: Declared in Clinical and Health Informatics MS program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Effectively analyze, design, implement and evaluate an information or communication solution for a health care organization.
Audience: Graduate

2. Effectively formulate and communicate a project plan.
Audience: Graduate

3. Understand how the stakeholders, processes and culture of an organization impacts an informatics project.
Audience: Graduate

4. Apply leadership and organizational theories to an informatics project.
Audience: Graduate

5. Understand and navigate the unique aspects of a clinical/health informatics project (ex. security, privacy).
Audience: Graduate

6. Evaluate the success of an informatics project using an analytical approach to outcomes data.
Audience: Graduate

MEDICINE 809 – INTERSECTION OF HEALTH CARE AND INCARCERATION
2 credits.

Introduction to mass incarceration, health care systems in carceral settings, incarceration-related health disparities, race-related health disparities, social determinants of health, conducting research within carceral facilities, career pathways in correctional health.
Requisites: Declared in Medicine MD, Physical Therapy DPT, Physician Assistant MPAS, Genetic Counselor Studies MGCS, or Public Health MPH
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe how the criminal legal system in Wisconsin and the United States impacts the health of incarcerated people, including mental health and community health concerns.
Audience: Graduate

2. Identify individual and community health challenges for a person once they are released from incarceration, and propose ways to mitigate these challenges.
Audience: Graduate

3. Interpret clinical guidelines for ethical care of incarcerated individuals
Audience: Graduate

4. Recognize ethical conflicts that exist in delivering care in carceral facilities, as well as issues surrounding access or lack of access to relevant research.
Audience: Graduate

5. Develop concepts/best practices for system-wide improvements in the health care of incarcerated and formerly incarcerated individuals.
Audience: Graduate

MEDICINE 880 – THE BODY ELECTRIC: INTERSECTION OF CELLULAR ELECTROPHYSIOLOGY WITH CLINICAL ELECTROCARDIOGRAPHY
2 credits.

Mapping of cellular and conduction perturbations to observed changes on the surface ECG recording for inherited arrhythmia syndromes (e.g., long QT syndrome, Brugada syndrome), drug toxicities (Class IC and III antiarrhythmics, digoxin excess), cardiac arrest, electrolyte disturbances, and metabolic disturbances; Selection of appropriate therapies, including antiarrhythmics and device therapies, and how they affect cardiac electrophysiology and the clinical ECG.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Interpret and integrate ECG manifestations of metabolic causes of cardiac arrest and the non-shockable rhythms.
Audience: Graduate

2. Summarize the fundamental mechanisms of cardiac electrophysiology.
Audience: Graduate

3. Relate electrical signaling and neurohormonal regulation to cardiac function.
Audience: Graduate

4. Interpret and integrate ECG manifestations of basic mechanisms of cardiac arrhythmias.
Audience: Graduate

5. Interpret and integrate ECG manifestations of inherited arrhythmia syndromes.
Audience: Graduate

6. Compare and contrast basic mechanisms and ECG manifestations of inherited arrhythmia syndromes.
Audience: Graduate

7. Correlate the mechanisms of antiarrhythmic drugs with their effect on cardiac action potential.
Audience: Graduate

8. Interpret and integrate ECG manifestations of antiarrhythmic toxicity.
Audience: Graduate

9. Articulate the basic underpinnings and indications for catheter ablation.

Audience: Graduate

10. Articulate the basic underpinnings, indications for, and ECG manifestations of cardiac pacemakers and implantable cardioverter-defibrillators.
Audience: Graduate

11. Evaluate arrhythmias and therapeutic modalities of patients in the presenting to electrophysiology clinic.
Audience: Graduate

12. Research how arrhythmias are studied in the basic science setting.
Audience: Graduate

13. Categorize antiarrhythmic medications according to their appropriate use.
Audience: Graduate

MEDICINE 902 – CLINICAL & TRANSLATIONAL RESEARCH ELECTIVE
2-6 credits.

Unique opportunity for fourth year medical students in the PhD program to integrate clinical work with a clinical or translational research project, thus providing early exposure and hands-on experience with clinically-oriented research and the integrated career of a physician-scientist in the students' chosen clinical specialty. Course components construct the experience of six weeks in the life of a practicing physician-scientist, balancing clinical practice, research on a project relevant to community public health, study design, manuscript preparation, regulatory meetings, and public outreach - all under the guidance of a dedicated physician-scientist mentor. Intended for MSTP students in Phase 3 of ForWard curriculum
Requisites: Declared in Doctor of Medicine program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 2 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge of clinical research design
Audience: Graduate

2. Conduct clinical research project
Audience: Graduate

3. Demonstrate ability to integrate clinical medicine and research investigations
Audience: Graduate

4. Apply and adapt knowledge of the research regulatory process
Audience: Graduate

5. Describe the public health needs of the community and state of Wisconsin as they relate to the clinical research project and determine the impact of the research project on those concerns
Audience: Graduate

6. Assess public opinion (community members and constituents) of clinical research
Audience: Graduate

7. Exhibit skills in the analysis of clinical research data
Audience: Graduate

8. Communicate the outcomes and impact of a clinical research project to general public
Audience: Graduate

9. Communicate the results of a clinical research project to an academic audience
Audience: Graduate

MEDICINE 903 – MSTP LONGITUDINAL CLINICAL CLERKSHIP IN GRADUATE SCHOOL
1-12 credits.

This is a required clinical elective for MSTP students during their graduate years. During PhD training, all students are required to participate in a scholarly continuity clinical experience in their fields of interest. Each student will complete and certify 10 half-day sessions or equivalent with an academic clinical mentor and present in the MSTP seminar.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024
Learning Outcomes: 1. Take effective patient history
Audience: Graduate

2. Perform appropriate physical exam
Audience: Graduate

3. Synthesize acquired basic science knowledge and clinical skills to create differential diagnoses
Audience: Graduate

4. Generate and manage treatment plan
Audience: Graduate

5. Exhibit knowledge of disease and pathophysiology
Audience: Graduate

6. Demonstrate ability to balance medicine and research efforts
Audience: Graduate

7. Apply evidence-based medicine to clinical practice
Audience: Graduate

8. Analyze clinical/translational research literature in field of interest
Audience: Graduate

MEDICINE 905 – THE APPLIED PHYSIOLOGY OF MECHANICAL VENTILATION
2 credits.

Focus on the intersection between the physiology of the respiratory system and the mechanical engineering of ventilators, with particular attention to patient-ventilator interactions. Investigate the important physiologic trade-offs inherent in various strategies of mechanical ventilation. Apply these principles to patients with and without underlying pulmonary disease. Finally, evaluate a landmark study on tidal volume in ARDS, with particular attention to the scientific and ethical controversies that surround the trial. This course involves a modicum of physics and math.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate knowledge of respiratory system physiology and mechanics
Audience: Graduate

2. Demonstrate familiarity with how ventilators have been engineered
Audience: Graduate

3. Compare and contrast how patients and ventilators interact with each other in a variety of modes of mechanical ventilation and in a variety of disease states
Audience: Graduate

4. Apply understanding of mechanical ventilation to appraise lessons from ARDSNet trial
Audience: Graduate

5. Describe ethical and scientific challenges in establishing an appropriate control group for a clinical trial
Audience: Graduate

MEDICINE 906 – ACE ACUTE CARE FOR ELDERLY CONSULTATION SERVICES ELECTIVE
2 credits.

Working directly as part of the inpatient consult team at the UW Hospital, an opportunity to practice and improve inpatient care skills for hospitalized elders. Learn to use basic assessment tools to diagnose and care for patients with common geriatric syndromes, such as delirium, cognitive impairment, depression, and falls. Learn to use prescription techniques better suitable for elderly patients, expand understanding of how medical decision-making capacity is assessed, and adopt multi-disciplinary strategies to manage patients' long-term care goals.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Use basic capacity evaluation and diagnostic tools to assess elders for common geriatric syndromes.
Audience: Graduate

2. Practice inpatient management of these syndromes, and strategies for improving care transitions.
Audience: Graduate

3. Recognize and address polypharmacy and learn prescribing techniques that are appropriate for the patient's age.
Audience: Graduate

4. Develop basic strategies for holding goals of care conversations, and how to structure a multi-disciplinary plan of care.
Audience: Graduate

5. Become familiar with how medical decision-making capacity is assessed and the diagnostic tools used to determine capacity.
Audience: Graduate

6. Develop skills to improve the functional trajectory of the older patient through a collaborative, interdisciplinary approach.
Audience: Graduate

MEDICINE 907 – INPATIENT ENDOCRINOLOGY/DIABETES CONSULTS ELECTIVE
2 credits.

Involves patient care in the hospital, working in the role of a consultant. Improve knowledge and inpatient care management skills of common endocrine conditions, diabetes and thyroid disorders. Discusses other, less common, endocrinopathies as they present, including pituitary, adrenal and thyroid disorders.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Improve knowledge of inpatient and diabetes management in the acute care setting.
Audience: Graduate

2. Perform a hypothesis driven history
Audience: Graduate

3. Complete a targeted exam
Audience: Graduate

4. Develop and present a weighted differential diagnosis
Audience: Graduate

5. Using clinical evidence, select a working diagnosis
Audience: Graduate

6. Present diagnostic plan including laboratory and imaging modalities
Audience: Graduate

7. Present initial patient evaluation including assessments and plans
Audience: Graduate

8. Practice communicating effectively with interprofessional team members
Audience: Graduate

MEDICINE 908 – MY STORY:TECHNIQUES FOR INTERVIEWING PATIENTS
2 credits.

Teaches students My Life, My Story interviewing and writing techniques. My Life, My Story is a novel healthcare intervention developed at the Madison VA hospital. Program staff and trained community volunteer interview Veterans about their life stories and write up a short story based on the interview. These stories are then reviewed by the veteran and (with veteran approval) added to the VA medical record to be shared with the veteran's inpatient and primary care teams. The veteran also receives printed copies of the story for his/her family. The goal of the project is to foster a closer connection between VA providers and Veterans in their care.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate patient centered interviewing skills including nonjudgmental verbal and non-verbal communication
Audience: Graduate

2. Translate a patient story into a written summary while respecting human dignity and diversity
Audience: Graduate

3. Demonstrate efficient use of time when interviewing patients, and both writing and presenting patient stories
Audience: Graduate

MEDICINE 909 – INFECTIOUS DISEASE TRANSPLANT SERVICE ELECTIVE
2 credits.

Infectious disease management skills with a focus on transplant patients. Interaction occurs on the inpatient infectious disease transplant consult service at UW Hospital. In addition to extensive knowledge of infectious diseases in transplant patients, there is also an emphasis on major toxicities and drug interactions between antimicrobial agents, understanding the "net state of immunosuppression," and honing skills as a consultant in the hospital.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Develop and apply knowledge and skills in the practice of inpatient clinical infectious disease management with a focus on transplant patients.
Audience: Graduate

2. Discuss the “net state of immunosuppression.”
Audience: Graduate

3. Recognize major toxicities and drug interactions between antimicrobial agents.
Audience: Graduate

4. Demonstrate understanding of the role of consultants in the hospital.
Audience: Graduate

5. Perform a hypothesis driven history.
Audience: Graduate

6. Complete a targeted exam.
Audience: Graduate

7. Develop and present a weighted differential diagnosis.
Audience: Graduate

8. Using clinical evidence, select a working diagnosis.
Audience: Graduate

9. Present diagnostic plan including laboratory and imaging modalities.
Audience: Graduate

10. Interpret imaging and laboratory findings in the context of patient presentation.
Audience: Graduate

MEDICINE 910 – PHASE 3 INDEPENDENT READING AND RESEARCH IN MEDICINE
2-8 credits.

Independent research under the direct supervision of Medicine faculty. Each student's research project is individualized to meet student research goals within the context of faculty research needs.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Engage in clinical research through an apprenticeship-style learning experience with a physician-scientist mentor.

Audience: Graduate

2. Understand clinical research design by writing or contributing to a research proposal.
Audience: Graduate

3. Develop skills in the analysis of clinical research data.
Audience: Graduate

4. Develop a plan for communicating the results of the clinical research project.
Audience: Graduate

5. Improve verbal and written communication skills by preparing findings to be able to present clinical research experience and results.
Audience: Graduate

6. Formulate a hypothesis or specific objective if study does not involve hypothesis generating research.
Audience: Graduate

7. Conduct a thorough literature review of the specific research question.
Audience: Graduate

8. Select and apply statistical methodologies appropriate for the proposed analyses.
Audience: Graduate

9. Interpret results correctly and in context of previous findings from literature review.
Audience: Graduate

MEDICINE 911 – ADVANCED APPLIED CLINICAL INFORMATICS (APPLIED CLINICAL INFORMATICS PRACTICUM)
2 credits.

Clinical Informatics and the role of informaticians. Hands-on experience in Clinical Informatics within UW Health's Information Services and Physician Informatics infrastructure. Population health informatics. The principles of usability, human-computer interaction, and the Five Rights of clinical decision support. The components of implementing novel informatics tools in a large health system. The usability and impact of new Electronic Health Records (EHR) features on various users and populations and the various factors involved in decisions to approve or deny EHR requests.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the field of Clinical Informatics and the skills of an informatician.
Audience: Graduate

2. Appraise new EHR features for their usability and impact on patients, providers, the health system, and entire population.
Audience: Graduate

3. Define population health informatics.
Audience: Graduate

4. Explain to non-informaticist colleagues why certain EHR requests may get approved or denied based on workload, budget, operational considerations, and technical feasibility.
Audience: Graduate

5. Interpret and evaluate clinical informatics literature.
Audience: Graduate

6. Apply principles of usability, human computer interaction, and the “Five Rights” of clinical decision support to promote or refute new EHR requests or features.
Audience: Graduate

7. Discuss the necessary components for implementing novel informatics tools in a large health system.
Audience: Graduate

8. Demonstrate professionalism in evaluating and discussing Clinical Informatics topics and technology.
Audience: Graduate

MEDICINE 912 – TRANSPLANTATION, IMMUNOLOGY AND NEPHROLOGY ELECTIVE
2-4 credits.

Evaluate and treat patients on inpatient and outpatient transplant nephrology services. Common conditions include evaluation of transplant patients with AKI and immunology related problems. Learn the basic principles of immunosuppressant management and rejection management. Review biopsies daily with a pathologist and attend surgical transplant Grand Rounds.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Develop a differential diagnosis for native and transplanted kidney acute kidney injury (AKI).
Audience: Graduate

2. Describe the renal pathology in a transplanted kidney.
Audience: Graduate

3. Perform a hypothesis driven history.
Audience: Graduate

4. Complete a targeted exam.
Audience: Graduate

5. Develop and present a weighted differential diagnosis.
Audience: Graduate

6. Using clinical evidence, select a working diagnosis.
Audience: Graduate

7. Interpret imaging and laboratory findings in the context of patient presentation.
Audience: Graduate

8. Present current literature to support patient care.
Audience: Graduate

9. Communicate effectively with interprofessional team members.
Audience: Graduate

10. Write daily progress notes including assessments and plans using standard format.
Audience: Graduate

11. Present initial and follow up patient evaluations including assessments and plans.
Audience: Graduate

MEDICINE 913 – THE SCIENCE OF CLINICAL THERAPEUTICS
2 credits.

Enhance understanding of clinical therapies and evidence-based best practice in the acute care setting. Apply this knowledge to understand clinical interventions for diseases that are seen commonly in residency: Describe the multiple common diseases and conditions; discuss their molecular biology, physiology, pathophysiology, and pharmacology; choose appropriate pharmacologic and non-pharmacologic therapies; and apply molecular biology, physiology, pathophysiology, and pharmacology to decisions about therapeutic treatment. Appraise published basic science literature and clinical guidelines, and apply knowledge to clinical case scenarios.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Describe multiple common diseases and conditions
Audience: Graduate

2. Discuss molecular biology, physiology, pathophysiology and pharmacology of these diseases
Audience: Graduate

3. Choose appropriate pharmacologic and non-pharmacologic therapies for these diseases
Audience: Graduate

4. Apply molecular biology, physiology, pathophysiology and pharmacology to decisions about therapeutic treatment of these diseases
Audience: Graduate

5. Appraise published basic science literature and clinical guidelines
Audience: Graduate

6. Apply knowledge to clinical case scenarios
Audience: Graduate

MEDICINE 914 – DATA ANALYTICS FOR POPULATION HEALTH
2 credits.

The main concepts and challenges in medical data gathering and analysis. Identification of aspects of data gathering and measurement, including emerging data sources. Informatics concepts used in population health. Use of a self-reporting tools in an electronic health record to answer population health questions, including those surrounding health equity. Formulation of a population medicine-based clinical question, and development of a reporting strategy to answer the question. Communication of a population medicine issue, including a potential path for improvement and a description of the measurement of any impact of proposed change.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the main concepts and challenges in data gathering and analysis.
Audience: Graduate

2. Identify aspects of data gathering and measurement, including emerging data sources.
Audience: Graduate

3. Understand the informatics concepts used in population health.
Audience: Graduate

4. Learn to use self-reporting tools in an electronic health record to answer population health questions, including those surrounding health equity.
Audience: Graduate

5. Formulate a population medicine based clinical question and develop a reporting strategy to answer the question.
Audience: Graduate

6. Communicate a population medicine issue, propose a potential path for improvement, and describe how any impact of change could be measured.
Audience: Graduate

MEDICINE 916 – PALLIATIVE CARE ELECTIVE
2 credits.

Participating with the care of patients in the Palliative Care Unit, on the Palliative Care Consult Service, and through home visits or outpatient care opportunities, experience and understanding will be gained of fundamental palliative care concepts. Management of common symptoms, such as pain, dyspnea, and anxiety, while practicing and improving specificcommunication skills, such as delivering bad news, determining goals of care, or running a family meeting. Expand understanding of goals of care and decision-making for patients with serious illness, DNR orders, medical decision-making capacity, surrogate-decision-making, care of the patient at end of life, as well as psychosocial issues related to loss, grief, and bereavement.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate understanding of palliative medicine/hospice approach toward patients with serious or life-threatening illness.
Audience: Graduate

2. Experience the consultative and inpatient practice of palliative care and home hospice
Audience: Graduate

3. Improve confidence and skill in the appropriate delivery of bad news and discussing end-of-life issues with patients and families
Audience: Graduate

4. Practice working with interdisciplinary team (physician, nurse, social worker, chaplain) management of patients with serious illness
Audience: Graduate

5. Describe best practice in the appropriate use of opioids and other medical treatment to improve quality of life for palliative care patients
Audience: Graduate

MEDICINE 917 – SMOKING CESSATION: PUTTING EVIDENCE INTO PRACTICE ELECTIVE
2 credits.

Training in use of evidence-based smoking cessation treatments and application of smoking cessation research in order to be able to interpret such evidence throughout your career. A special emphasis will be placed on working with underserved and specific subgroups of smokers (e.g., low-income, racial minorities, mental health status) through specific treatment plans, pharmacotherapy, counseling, including motivational interviewing, and community-based interventions such as quit lines. We will also look at how to use health systems, such as electronic health records in conducting community-participatory research in subpopulations of smokers.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Attain proficiency in selecting and delivering evidence-based smoking cessation treatments.
Audience: Graduate

2. Examine the evidence-base for the 2008 Public Health Service recommendations for treating tobacco dependence.
Audience: Graduate

3. Develop an in-depth understanding of tobacco and tobacco dependence treatment in specific sub-populations (e.g., low-income, racial minorities, mental health status).
Audience: Graduate

4. Explore how systems-level changes, such as changes to electronic health records or accreditation standards, can influence health care and delivery of tobacco dependence treatment.
Audience: Graduate

5. Describe strategies for engagement in community participatory research.
Audience: Graduate

MEDICINE/B M I 918 – HEALTH INFORMATICS FOR MEDICAL STUDENTS ELECTIVE
2 credits.

Biomedical Informatics is an interdisciplinary field that combines knowledge of information sciences and medical sciences to optimize the use and application of biomedical data across the spectrum from molecules to individuals to populations. Offers an overview of the field of health informatics by providing students with the fundamental knowledge of the concepts of health informatics and how technology can be used in the delivery of health care.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Describe main concepts and challenges in health informatics.
Audience: Graduate

2. Identify the different aspects of electronic health records.
Audience: Graduate

3. Recognize medical safety issues related to chart maintenance and poor systems.
Audience: Graduate

4. Instruct patients in proper use of a personal health record (PHR).
Audience: Graduate

5. Compare and contrast the concept of learning health systems that is patient-centered, population-based, and promotes learning from data.
Audience: Graduate

6. Define population-based care and the informatics underlying it.
Audience: Graduate

7. Recognize different types of clinical decision support.
Audience: Graduate

8. Describe the area of quality measurement and improvement.
Audience: Graduate

9. Formulate how the area of quality measurement and improvement applies to clinical practice.
Audience: Graduate

10. Recognize the types and limitations of different types of quality measures.
Audience: Graduate

11. Formulate a clinical question as an answerable one, and then be able to select the appropriate resource and make optional use of it.
Audience: Graduate

12. Recognize growing role of genomics and personalized medicine in care.

Audience: Graduate

13. Describe and manage ethical issues in privacy and security.
Audience: Graduate

MEDICINE 919 – INDIVIDUALIZED PHASE 3 CLINICAL ELECTIVE IN MEDICINE
2-4 credits.

Care for hospitalized patients on general medicine or hospital medicine services. Admit new patients, round on previously admitted patients, participate in multidisciplinary rounds, and work to transition patients to the next level of care. Evaluate and manage both patients with common inpatient conditions and medically complex patients requiring collaboration with consulting specialties. Complete other patient care related learning activities as assigned by instructors (e.g., literature reviews, presentations on specific topics); these are dependent on the individual student, attending physician, and clinical site.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a hypothesis driven history and complete a targeted exam.
Audience: Graduate

2. Develop and present a weighted differential diagnosis, diagnostic and treatment plans.
Audience: Graduate

3. Complete written documentation in a comprehensive, concise, accurate and timely manner.
Audience: Graduate

4. Review, interpret and present current literature to support patient care.
Audience: Graduate

5. Develop clinically relevant questions to advance learning.
Audience: Graduate

6. Communicate effectively with patients, families, physicians and non-physician team members.
Audience: Graduate

7. Engage patients in shared decision making regarding tests, orders and procedures.
Audience: Graduate

MEDICINE 920 – ADVANCED INPATIENT GENERAL MEDICINE ELECTIVE
2-4 credits.

Direct patient care involving a spectrum of acute medical conditions on inpatient hospital units with appropriate supervision from residents and attendings. Generate a weighted differential diagnosis, initial work-up and management for acute medical conditions. Review, interpret, and present current literature pertinent on patient care in primary care setting.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Improve acute inpatient care skills for taking care of adult patients on hospital units.
Audience: Graduate

2. Develop and present a weighted differential diagnosis
Audience: Graduate

3. Review, interpret clinical evidence, and justify the working diagnosis
Audience: Graduate

4. Complete written documentation in a comprehensive, concise, accurate and timely manner
Audience: Graduate

5. Demonstrate techniques of shared decision making with patients about acute medical problems and underlying chronic medical conditions, including possible lifestyle changes to promote improved health.
Audience: Graduate

6. Learn the principles of transitions of care to safely return patients to nursing home or outpatient clinics.
Audience: Graduate

7. Develop clinically relevant questions to advance learning
Audience: Graduate

MEDICINE 921 – AMBULATORY MEDICINE ELECTIVE-STUDENT HEALTH
2-4 credits.

Learn to care for young adults with general medicine problems on the university campus during the academic year. Participate in history taking, diagnosis and treatment plans for patients. Direct supervision by house staff and attending physicians. Attend regularly scheduled supervisor-student meetings, which involve some or all of the following: participating in scheduled procedures, presenting cases and teaching topics, and discussing patient cases. Complete independent activities including some or all of the following: reading about patient conditions, completing problem sets, and preparing for direct patient care as needed. Complete other patient care related learning activities as assigned by instructors (e.g., literature reviews, presentations on specific topics); these are dependent on the individual student, the patients under the student's care, and the location.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022
Learning Outcomes: 1. Manage common ambulatory illnesses and injuries among adolescents and young adults.
Audience: Graduate

2. Apply principles of preventive medicine to clinical services in primary care.
Audience: Graduate

3. Integrate developmental and behavioral stages while assessing and managing health risks.
Audience: Graduate

4. Participate collaboratively in a multidisciplinary primary health care system.
Audience: Graduate

MEDICINE 922 – AMBULATORY GENERAL INTERNAL MEDICINE ADVANCED ELECTIVE
2-4 credits.

Focuses on fundamental aspects of adult patient health important to all physicians in internal medicine. Work with academic faculty in adult patient health in the ambulatory setting to refine clinical knowledge and skills essential for providing excellent health care. Will have the opportunity to provide supervised preventative care to adults of all ages, and includes common diseases such as asthma, migraine headache, dyslipidemia, diabetes mellitus, musculoskeletal concerns and heart disease.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Improve ambulatory care skills for taking care of adult patients.
Audience: Graduate

2. Identify and address comment adult health problems and concerns.
Audience: Graduate

3. Build skills as an outpatient practitioner.
Audience: Graduate

4. Develop and present a weighted differential diagnosis.
Audience: Graduate

5. Using clinical evidence, adapt and justify the working diagnosis.
Audience: Graduate

6. Complete written documentation in a comprehensive, concise, accurate and timely manner.
Audience: Graduate

7. Review, interpret and present current literature to support patient care.
Audience: Graduate

8. Develop clinically relevant questions to advance learning.
Audience: Graduate

MEDICINE 923 – APPLICATIONS OF EPISTEMIC PRINCIPLES IN MEDICAL SCIENCE
2 credits.

Explore the intellectual framework upon which medical science is built. Epistemology is the science and theory of knowing. It asks, "When is belief justified?" Gain an understanding of the foundational principles of epistemology, including rationalism and empiricism, and apply them to the development of medical knowledge. Assess the validity of claims, including the relative value of competing claims in the context of medical controversies. Uncover the epistemic blunders that led to mistaken beliefs in the medical profession and develop habits to resist repeating such mistakes in the present and future. Consider how our epistemological beliefs affected our responses to the Covid-19 pandemic.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Compare and contrast the promises and pitfalls of empiricism and rationalism in the context of medical science.
Audience: Graduate

2. Describe how the Evidence-Based Medicine movement fits in a historical context.
Audience: Graduate

3. Evaluate studies on the grounds of internal and external validity.
Audience: Graduate

4. Judge the validity of competing claims in a scientific controversy.
Audience: Graduate

5. Identify early warning signs of epistemic blunders and build mental habits to protect against them.
Audience: Graduate

6. Anticipate the epistemic challenges posed by novel or rapidly changing circumstances.
Audience: Graduate

MEDICINE 924 – CLINICAL TEACHING IN INTERNAL MEDICINE ELECTIVE
2 credits.

Resident-level experience in clinical teaching. Teach, coach, and provide feedback to Phase 2 medical students in the clinical setting of Acute Care. Assist in case-based learning and present your own didactics. Develop as a future educator and contribute to quality improvement of the Acute Care curriculum.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Hone evidence-based coaching skills when observing and providing feedback.
Audience: Graduate

2. Develop curriculum to teach students about common acute medical conditions.
Audience: Graduate

3. Effectively facilitate small group discussions.
Audience: Graduate

4. Assess feedback given by faculty mentor.
Audience: Graduate

5. Develop goals for future teaching.
Audience: Graduate

6. Evaluate the Acute Care Block activities and recommend changes
Audience: Graduate

MEDICINE 927 – COGNITIVE DECLINE IN LATINOS: THE INTERSECTION OF POLICIES, COMMUNITIES, AND HEALTHCARE
2 credits.

Introduces the diagnosis, treatment and management of cognitive decline in Spanish-Speaking populations, including the socioecological evaluations and coordination of care with community agencies after a diagnosis is made. Explore the intersections of health, culture and environment and delves into how public policies, healthcare processes and organizational factors affect the quality of care delivered to Spanish-Speaking individuals, and the availability and use of resources in the community.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Identify at least three (3) cultural factors, policies, practices and systems that impact healthcare delivery within Latino communities and the potential approaches to incorporate in practice to improve the care.
Audience: Graduate

2. Simulate communication strategies for culturally sensitive interactions with Latino patients and their primary family caregivers.
Audience: Graduate

3. Synthesize the processes and assessments required to diagnose and manage cognitive decline in Spanish-speaking Latino patients.
Audience: Graduate

MEDICINE 928 – INTERNAL MEDICINE INTERNSHIP PREP COURSE (IPC) ELECTIVE
1 credit.

Review and reinforce baseline skills needed for internship training in Internal Medicine. Lead and participate in simulations. Explore the interplay between medical care and communication. Discuss common challenges encountered early in residency and throughout a medical career and develop individualized plans to address these challenges. Major topics include acute illness, mock paging, cardiology/pulmonary, urgent and emergent situations, procedural skills, and communication.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Develop and practice an approach to initial assessment and management of various acute medical problems seen during Internal Medicine residency, with an emphasis on acute decompensation.
Audience: Graduate

2. Lead complex conversations on bad news, adverse events, and continuity of care in supervised simulations.
Audience: Graduate

3. Rapidly interpret diagnostic studies like EKGs, labs, and radiographs through frequent simulation.
Audience: Graduate

MEDICINE 930 – WOMEN'S HEALTH IN PRIMARY CARE ELECTIVE
2-4 credits.

Focuses on fundamental aspects of women's health important to all physicians in internal medicine. Work with academic faculty in women's health in the ambulatory setting to refine clinical knowledge and skills essential for providing excellent health care to women. Will have the opportunity to provide supervised preventative care to women of all ages, and includes common diseases such as asthma, migraine headache, dyslipidemia, diabetes mellitus, and heart disease - many have manifestations, risk factors or interventions which are different in women.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2019
Learning Outcomes: 1. Improve ambulatory care skills for taking care of women patients.
Audience: Graduate

2. Identify and address comment women health problems and concerns.
Audience: Graduate

3. Build skills as an outpatient practitioner.
Audience: Graduate

4. Develop and present a weighted differential diagnosis.
Audience: Graduate

5. Using clinical evidence, adapt and justify the working diagnosis.
Audience: Graduate

6. Complete written documentation in a comprehensive, concise, accurate and timely manner.
Audience: Graduate

7. Review, interpret and present current literature to support patient care.
Audience: Graduate

8. Develop clinically relevant questions to advance learning.
Audience: Graduate

MEDICINE 932 – BIOLOGY OF AGING AND AGE-RELATED DISEASES
2 credits.

Examine the biology of aging and related clinical aspects in geriatric care. Designed for medical students interested in understanding the biology of aging and how it relates to translational biomedical and clinical research as well as clinical practice. Aging and age-related diseases are examined via the combined expertise of basic scientists and clinicians in blocks of two lectures. Case studies and clinical research study design workshops provide the means to integrate didactic content in real world application. Additional materials include video vignettes focused on aging biology and on pharmacological interventions for the most common geriatric conditions.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate understanding of biology of aging and age-related diseases and disorders (KP1)
Audience: Graduate

2. Integrate scientific evidence into clinical practice concepts (KP1, KP2)
Audience: Graduate

3. Effectively communicate basic science concepts related to aging and age-related diseases and disorders (PL3, IC3)
Audience: Graduate

4. Demonstrate the ability to critically evaluate both basic science and clinical literature and use them to make decisions (KP2, PL1)
Audience: Graduate

5. Develop basic clinical research design plans utilizing integrated knowledge from modules and scientific literature
Audience: Graduate

6. Demonstrate conceptual proficiency in fundamental biology of aging with translational focus
Audience: Graduate

7. Demonstrate conceptual proficiency in mechanisms of disease or therapeutics in geriatric diseases and disorders
Audience: Graduate

8. Demonstrate basic clinical research design proficiency
Audience: Graduate

9. Show development of critical thinking skills including critical appraisal of medical literature
Audience: Graduate

10. Demonstrate understanding of evolution of clinical medicine with regard to incorporation of aging biology concepts into diagnosis and treatment in a geriatric setting
Audience: Graduate

MEDICINE 933 – GERIATRIC ELECTIVE
2-4 credits.

Exposure to patients in outpatient clinic and on the inpatient consult service. Other exposure to patients may occur in a nursing home setting. Learn diagnostic tools to assess elders for common geriatric syndromes including cognitive impairment, depression, and falls. Gain knowledge to recognize and address poly-pharmacy, learn prescribing techniques that are appropriate for the patient's age, and recommend age-appropriate treatment plans. Active role on the inpatient consult team focusing on the care of hospitalized elders.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Improve ambulatory care skills for taking care of older adults.
Audience: Graduate

2. Identify and address commons problems for hospitalized elders.
Audience: Graduate

3. Build skill as an inpatient consultant
Audience: Graduate

4. Develop skills to care for older adults in long-term care settings, such as nursing homes.
Audience: Graduate

MEDICINE 935 – HEMATOLOGY/ONCOLOGY ELECTIVE
2-4 credits.

Exposure to patients in outpatient hematology and oncology clinics and on the inpatient consultation service. Oncology-focused rotation topics include staging and prognosis of different malignancies, basics of chemotherapy classes, and indications for chemotherapy. Hematology content includes the diagnostic approach to clotting disorders, anemia, and/or abnormal blood counts. Different chemotherapy treatments for hematologic malignancy may be included in this course. Independent reading is expected; didactic conferences are site-specific.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Develop a diagnostic and therapeutic approach to patients with solid tumors and hematologic disorders.
Audience: Graduate

2. Perform a hypothesis driven history and complete a targeted exam.
Audience: Graduate

3. Develop and present a weighted differential diagnosis.
Audience: Graduate

4. Using clinical evidence, adapt and justify the working diagnosis.
Audience: Graduate

5. Present a diagnostic plan including laboratory and imaging modalities.
Audience: Graduate

6. Correctly interpret imaging and laboratory findings and communicate results to patients and team members.
Audience: Graduate

7. Complete written documentation in a comprehensive, concise, accurate and timely manner.
Audience: Graduate

8. Review, interpret and present current literature to support patient care.
Audience: Graduate

9. Develop clinically relevant questions to advance learning.
Audience: Graduate

10. Communicate effectively with patients, families, physicians and non-physician team members.
Audience: Graduate

11. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care.
Audience: Graduate

12. Engage patients in shared decision making regarding tests, orders and procedures.
Audience: Graduate

13. Avoid medical jargon when communicating with patients and families.
Audience: Graduate

14. Recognize limitations and seek assistance as appropriate.
Audience: Graduate

MEDICINE 938 – INPATIENT ACTING INTERNSHIP-INTERNAL MEDICINE
4 credits.

As an inpatient medicine acting intern (AI), you will have primary responsibility for patients actionable in four domains: 1. Management: As an AI, you will develop actionable management and treatment plans based on your history, physical exam and targeted data. 2. Communication: AIs will communicate with colleagues, primary care providers and consultants. AIs will demonstrate thorough patient hand-offs and write concise discharge summaries that will be integral to patient care. 3. Learning: Patient care issues will be the central guide for learning, directing reading, consultation and research. AIs will formulate questions based upon clinical dilemmas, research the appropriate literature and databases to find the answers, and apply findings to the care of individual patients. 4. Organization: As the primary inpatient provider for patients, AIs will develop efficiency in accomplishing the day to day tasks necessary for the coordination and management of patient care.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a hypothesis driven history
Audience: Graduate

2. Complete a targeted exam
Audience: Graduate

3. Develop and present a weighted differential diagnosis (EPA 2)
Audience: Graduate

4. Using clinical evidence, select a working diagnosis (EPA 2)
Audience: Graduate

5. Present diagnostic plan including laboratory and imaging modalities
Audience: Graduate

6. Interpret imaging and laboratory findings in the context of patient presentation
Audience: Graduate

7. Write admitting and daily orders (EPA 4)
Audience: Graduate

8. Justify orders based upon working diagnosis and cost-effectiveness (EPA 4)
Audience: Graduate

9. Complete written patient evaluation using standard format
Audience: Graduate

10. Write daily progress notes including assessments and plans using standard format
Audience: Graduate

11. Present initial patient evaluation including assessments and plans
Audience: Graduate

12. Based on case load, develop clinically relevant questions to further individual and team learning
Audience: Graduate

13. Give and receive patient handovers (EPA 8)
Audience: Graduate

MEDICINE 940 – ALLERGY AND CLINICAL IMMUNOLOGY ELECTIVE
2-4 credits.

Exposure to patients in an outpatient clinic setting with an attending physician and staff, to learn how to address common allergic disorders, such as allergic rhinitis, asthma, urticaria, drug and insect allergy. Focuses on skills in allergy-related history-taking, procedures used in the evaluation of allergy, and the importance of patient education and preventive management of allergic conditions.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Improve knowledge of diagnosis and management of allergic and immunologic disorders.
Audience: Graduate

2. Apply basic science knowledge in the clinical setting.
Audience: Graduate

3. Obtain patient's allergy history.
Audience: Graduate

4. Demonstrate understanding of procedures used in the evaluation of allergy.
Audience: Graduate

5. Provide appropriate patient education and preventive management.
Audience: Graduate

MEDICINE 942 – CLINICAL ELECTROPHYSIOLOGY ELECTIVE
4 credits.

Develop skills in basic electrocardiogram (EKG) and arrhythmia interpretation, pharmacologic management of arrhythmia, cardiac anatomy and use of electrophysiologic testing. Participate in the evaluation of patients referred for electrophysiology studies, focusing on the diagnosis and management of cardiac rhythm disturbances.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Develop skills in basic electrocardiogram (EKG) and arrhythmia interpretation.
Audience: Graduate

2. Become familiar with pharmacologic management of arrhythmia, cardiac anatomy.
Audience: Graduate

3. Use electrophysiologic testing to diagnose and manage cardiac rhythm disturbances.
Audience: Graduate

MEDICINE 943 – CARDIOLOGY CONSULTATION SERVICE ELECTIVE
2-4 credits.

Opportunities to learn the process involving the evaluation and management of a full spectrum of acute and chronic cardiovascular diseases, as well as preoperative consultation for hospitalized adult patients. Become familiar with the principles of effective consultation and how to operationalize this role, through evaluating patients, presenting relevant data, providing effective cardiac consultation as an integral member of a fast-paced inpatient team. Essential skills are taught, including: interpreting 12-lead electrocardiograms (ECGs) and cardiac rhythm data from telemetry with assistance, observing select cardiac diagnostic tests and reading studies with faculty or fellows. Attendance at weekly Cardiovascular Medicine Grand Rounds is required.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Become familiar with the evaluation and management of acute and chronic, often complex, cardiovascular conditions such as arrhythmias, MI, heart failure, valvular disease and shock that occur in adult patients hospitalized for other illnesses, traumatic injuries or surgery.
Audience: Graduate

2. Assess preoperative risk for non-cardiac surgery.
Audience: Graduate

3. Learn the indications for and data provided by common cardiac diagnostic tests including electrocardiogram (ECG), echo, stress tests, and coronary angiography.
Audience: Graduate

4. Learn the principles of consultation and how to function effectively in this role.
Audience: Graduate

5. Demonstrate competency in the performance of cardiovascular history and physical examinations.
Audience: Graduate

6. Accurately read and interpret normal ECGs with common abnormalities.

Audience: Graduate

7. Correlate cardiac laboratory information, such as: diagnostic coronary angiography, hemodynamic monitoring, and results in electrophysiological testing.
Audience: Graduate

8. Recognize the major signs and symptoms of cardiac disease.
Audience: Graduate

9. Evaluate and recommend appropriate diagnostic testing for common cardiovascular conditions.
Audience: Graduate

10. Witness cardiac catheterizations, various types of stress testing, and echocardiograms.
Audience: Graduate

11. Accurately interpret the results of various cardiovascular diagnostic tools.
Audience: Graduate

MEDICINE 945 – INPATIENT CARDIOLOGY
2-4 credits.

Supervised by house staff and attending physicians activities include: rounding on service patients, participating in scheduled procedures, presenting cases and teaching topics, and discussing patient cases. On an inpatient cardiology rotation, evaluate and manage a full spectrum of patients with acute and chronic cardiovascular problems and may provide perioperative consultations for hospitalized adult patients. Care for patients with chest pain, arrhythmias, MI, heart failure, valvular disease and shock. Learn the indications for and data provided by common cardiac diagnostic tests including ECG, echo, stress tests, bedside ultrasound and coronary angiography.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a hypothesis driven history and complete a targeted exam.
Audience: Graduate

2. Develop and present a weighted differential diagnosis.
Audience: Graduate

3. Using clinical evidence, adapt and justify the working diagnosis.
Audience: Graduate

4. Present a diagnostic plan including laboratory and imaging modalities.
Audience: Graduate

5. Correctly interpret imaging and laboratory findings and communicate results to patients and team members.
Audience: Graduate

6. Complete written documentation in a comprehensive, concise, accurate and timely manner.
Audience: Graduate

7. Review, interpret and present current literature to support patient care.
Audience: Graduate

8. Develop clinically relevant questions to advance learning.
Audience: Graduate

9. Communicate effectively with patients, families, physicians and non-physician team members.
Audience: Graduate

10. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care.
Audience: Graduate

11. Engage patients in shared decision making regarding tests, orders and procedures.
Audience: Graduate

12. Avoid medical jargon when communicating with patients and families.
Audience: Graduate

13. Recognize limitations and seek assistance as appropriate.
Audience: Graduate

MEDICINE 949 – ADULT INPATIENT/OUTPATIENT CARDIOVASCULAR DISEASES ELECTIVE
2-4 credits.

Exposure to both outpatient and inpatient settings, such as ward rounds, cardiac catheterization and electrophysiology labs, as well as operating rooms, to learn how to obtain an accurate history, perform a thorough cardiovascular examination, interpret patient's treadmill, nuclear, cardiology and echocardiogram performance, formulate an assessment and plan for further evaluation and treatment. Participate in the writing of orders and progress notes on in-patients for whom they are responsible and perform appropriate procedures under the direct supervision of staff. Submit input on patients' management plans, which will be closely supervised by an attending cardiologist.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Develop skills in diagnosis and management of cardiac patients with congenital and acquired cardiac disorders.
Audience: Graduate

2. Develop skills in the combined medical and surgical approach to cardiovascular disease.
Audience: Graduate

3. Use the appropriate technology and laboratory in the evaluation of patients with known or suspected cardiac disease.
Audience: Graduate

MEDICINE 951 – AMBULATORY CARDIOLOGY ELECTIVE
2-4 credits.

Provide a broad introduction to the cardiovascular syndromes and diseases that constitute a large part of the practice of adult medicine. This experience has been particularly useful for three groups: those who plan to enter an adult primary care discipline, those entering residency in emergency medicine, and those with an interest in adult cardiology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Refine skills in obtaining and interpreting the history provided by patients with chest pain, syncope, heart failure, and palpitations.
Audience: Graduate

2. Perform and interpret the cardiovascular physical exam.
Audience: Graduate

3. Improve ability to define, diagnose and begin the initial management of heart failure, acute coronary syndromes, stable ischemic heart disease, resistant hypertension, atrial fibrillation, and hyperlipidemia.
Audience: Graduate

4. Become familiar with resources for self-study for chest X-ray and electrocardiogram (EKG) interpretation.
Audience: Graduate

5. Develop expertise in the prediction of an individual patient's cardiovascular risk as well as guideline directed mitigation of that risk.
Audience: Graduate

6. Become familiar with the use of Baye's Theorem.
Audience: Graduate

MEDICINE 955 – HEPATOLOGY ELECTIVE
2 credits.

Exposure to inpatient and outpatient hepatology practice, focusing on functioning effectively as a consultant. The majority time is spent evaluating new and follow-up consultations in the outpatient and inpatient settings. Oral presentations and effective communication with the patient and the primary service are an essential part of this rotation.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the most common causes of chronic hepatitis and cirrhosis seen in the outpatient clinic.
Audience: Graduate

2. List a differential diagnosis, diagnostic and management plans for both new onset liver and decompensated end-liver stage disease.
Audience: Graduate

3. Perform effective and comprehensive evaluation of a patient with liver disease in clinic and the inpatient setting.
Audience: Graduate

4. Perform portions of the role of consulting MD in the inpatient and outpatient settings.
Audience: Graduate

MEDICINE 962 – ENDOCRINOLOGY ELECTIVE
2-4 credits.

Evaluation and management of inpatient and outpatient adult endocrine disorders. Common endocrine conditions include diabetes and thyroid disorders. Other endocrinopathies as they present.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the historical and physical exam features of common endocrine disorders.
Audience: Graduate

2. Perform a hypothesis driven history
Audience: Graduate

3. Complete a targeted exam
Audience: Graduate

4. Develop and present a weighted differential diagnosis
Audience: Graduate

5. Using clinical evidence, select a working diagnosis
Audience: Graduate

6. Complete written patient evaluation using standard format
Audience: Graduate

7. Write daily progress notes including assessments and plans using standard format
Audience: Graduate

8. Present initial patient evaluation including assessments and plans
Audience: Graduate

9. Communicate effectively with interprofessional team members
Audience: Graduate

MEDICINE 965 – GASTROENTEROLOGY CLINICAL ELECTIVE
2-4 credits.

Observe routine and advanced therapeutic endoscopic procedures in the Ambulatory Procedure Center and potentially in the Intensive Care Unit. Participate in the outpatient gastrointestinal (GI) clinics approximately one half day a week, which will include exposure to Inflammatory Bowel Disease, functional GI disorders, hereditary GI cancers, esophageal disorders, and pancreas and biliary disorders.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a focused history and exam and develop an assessment and plan for the most common disorders seen in an outpatient gastrointestinal (GI) practice: irritable bowel syndrome (IBS), inflammatory bowel disease (IBD), gastroesophageal reflux disease (GERD).
Audience: Graduate

2. Identify recommendations for colon cancer screening in patients at average risk and those with a family history of colon cancer.
Audience: Graduate

3. Identify the appearance of common gastrointestinal (GI) pathology on endoscopy.
Audience: Graduate

4. Summarize the appropriate risk stratification strategies and appropriate management of gastrointestinal (GI) hemorrhage.
Audience: Graduate

5. Develop a differential diagnosis for acute)gastrointestinal (GI) bleeding.
Audience: Graduate

MEDICINE 970 – INPATIENT-OUTPATIENT GASTROENTEROLOGY/HEPATOLOGY CONSULT SERVICE ELECTIVE
2-4 credits.

Inpatient consultative gastroenterology emphasize outpatient evaluation care of pts with gastrointestinal (GI) diseases, providing knowledge that nearly any clinical field can use. Develop the necessary problem solving skills and knowledge to efficiently safely evaluate manage common GI disorders other diseases which may also occur in pts with chronic intestinal diseases. Be able to recall the characteristic sign/symptoms test finding in the common GI syndromes. These disorders include: neoplasms of colon, stomach and esophagus; infectious diarrhea; malabsorption syndromes; viral drug-induced hepatitis; other primary secondary gastrointestinal diseases. Evaluation of inpts admissions, ambulatory outpts consults EM consults of the Sect. of GI. These include consultations in general GI hepatology, assisting in the endoscopic procedures on pts to provide a correlation between symptoms/signs endoscopic findings understanding the appropriate use of endoscopy.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Recall the characteristic signs/symptoms and test findings in the common gastrointestinal (GI) disorders of acid-peptic disease; inflammatory bowel disease; irritable bowel syndrome; neoplasms of colon, stomach, and esophagus; infectious diarrhea; malabsorption syndrome; viral and drug inducted hepatitis; and other common primary and secondary gastrointestinal diseases.
Audience: Graduate

2. Evaluate and develop a diagnostic plan for common gastrointestinal and liver diseases.
Audience: Graduate

3. Correlate symptoms with endoscopic and pathologic findings.
Audience: Graduate

4. Efficiently and safely evaluate and manage common gastrointestinal disorders.
Audience: Graduate

5. Recall the major indications, complications, and relative costs of the common gastroenterologic procedures including esophagogastroduodenscopoy, sigmoidoscopy, colonoscopy, and endoscopic retrograde cholangio-pancreatography (ERCP).
Audience: Graduate

MEDICINE 971 – INFECTIOUS DISEASE ELECTIVE
2-4 credits.

Inpatient clinical infectious disease management. Diagnostic approaches to infectious presentations, appropriate use of antimicrobials for treatment and prophylaxis. Role of consultants in the hospital via participation in consult team. Common conditions include cellulitis, line infections, osteomyelitis, septic arthritis, intra-abdominal infections, HIV, neutropenic fever and other infectious conditions.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Develop diagnostic approaches to patients with common infectious presentations.
Audience: Graduate

2. Identify appropriate use of antimicrobials for treatment and prophylaxis.

Audience: Graduate

3. Identify characteristics of an effective consultant and use these through direct participation in the consult team.
Audience: Graduate

4. Perform a hypothesis driven history.
Audience: Graduate

5. Complete a targeted exam.
Audience: Graduate

6. Develop and present a weighted differential diagnosis.
Audience: Graduate

7. Using clinical evidence, select a working diagnosis.
Audience: Graduate

8. Complete written patient evaluation using standard format.
Audience: Graduate

9. Write daily progress notes including assessments and plans using standard format.
Audience: Graduate

10. Present initial patient evaluation including assessments and plans.
Audience: Graduate

11. Communicate effectively with interprofessional team members.
Audience: Graduate

MEDICINE 972 – SURGICAL INFECTIOUS DISEASE ELECTIVE
2-4 credits.

Direct patient care involving a spectrum of surgical infectious diseases on an inpatient consultation service. Applying infectious disease principles in treatment of surgical site infections. Using diagnostic tools available for surgical infectious diseases across different surgical specialties. Reviewing and applying principles of antimicrobial therapy.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Summarize the varied spectrum of surgical infectious diseases across different surgical specialties as well as within the same specialty.
Audience: Graduate

2. Describe infectious disease principles in the context of treatment of surgical site infections.
Audience: Graduate

3. Identify preventive measures of surgical site infections.
Audience: Graduate

4. Recognize the diagnostic tools (microbiologic, radiologic) available for surgical infectious diseases.
Audience: Graduate

5. Review and summarize the principles of outpatient antimicrobial therapy.
Audience: Graduate

6. Identify the practices and values that foster belongingness in partnership with a diverse health care team and patient population (e.g., authenticity, respect, support).
Audience: Graduate

MEDICINE 976 – CLINICAL NEPHROLOGY ELECTIVE
2-4 credits.

Evaluation of patients on inpatient and outpatient adult nephrology services. Common conditions include recognizing and diagnosing the cause of acute kidney injury (AKI), assessing factors that can alter the course of chronic kidney disease (CKD), and knowing the steps to hemodialysis initiation. Diagnosis and management of nephrology patients along with opportunities to see patients pre or post renal transplant.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Refine skills in obtaining and interpreting the history provided by patients with acute and chronic kidney diseases.
Audience: Graduate

2. Complete a targeted exam.
Audience: Graduate

3. Define, diagnose and begin initial management for patients with common acute and chronic kidney diseases.
Audience: Graduate

4. Develop and present a weighted differential diagnosis.
Audience: Graduate

5. Using clinical evidence, select a working diagnosis.
Audience: Graduate

6. Interpret imaging and laboratory findings in the context of patient presentation.
Audience: Graduate

7. Present current literature to support patient care.
Audience: Graduate

8. Communicate effectively with interprofessional team members.
Audience: Graduate

9. Write daily progress notes including assessments and plans using standard format.
Audience: Graduate

10. Present initial and follow up patient evaluations including assessments and plans.
Audience: Graduate

MEDICINE 981 – PULMONARY DISEASE CLINIC / CONSULTS ELECTIVE
2-4 credits.

Focuses on the evaluation and management of patients with pulmonary complaints and complex pulmonary disorders both in the inpatient and outpatient settings. Common conditions include sarcoidosis, obstructive lung disease, interstitial lung disease, pulmonary infections and pleural disease. Learn the indications for and data derived from common pulmonary tests/diagnostic procedures including, pulmonary function tests, radiographic imaging, thoracentesis and fiberopticbronchoscopy withbronchoalveolar lavage and transbronchial biopsy. Indications and management of both non-invasive and invasive mechanical ventilation will also be a focus of this rotation. Finally, learn the principles of consultation and how to function effectively in this role.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Refine skills in obtaining and interpreting the history provided by patients with acute and chronic pulmonary diseases.
Audience: Graduate

2. Complete a targeted exam.
Audience: Graduate

3. Define, diagnose and begin initial management for patients with common acute and chronic pulmonary diseases.
Audience: Graduate

4. Develop and present a weighted differential diagnosis.
Audience: Graduate

5. Using clinical evidence, select a working diagnosis.
Audience: Graduate

6. Interpret imaging, laboratory and procedure findings in the context of patient presentation.
Audience: Graduate

7. Present current literature to support patient care.
Audience: Graduate

8. Write daily progress notes including assessments and plans using standard format.
Audience: Graduate

9. Present initial and follow up patient evaluations including assessments and plans.
Audience: Graduate

10. Learn the indications for, and data derived from common pulmonary tests/diagnostic procedures.
Audience: Graduate

11. Learn the indications and management of both non-invasive and invasive mechanical ventilation.
Audience: Graduate

12. Communicate effectively with interprofessional team members.
Audience: Graduate

13. Learn the principles of consultation and how to function effectively in this role.
Audience: Graduate

MEDICINE 985 – CRITICAL CARE MEDICINE ELECTIVE
2-4 credits.

Perform direct patient care in the ICU with appropriate supervision from residents, fellows, and attendings. Independent and guided evaluation of patient will occur daily; the ability to synthesize, distill and present large amounts of information are a key skill practiced during this course. Furthermore, critical care medicine involves many medical professions; effective inter-professional teamwork is emphasized. Independent reading is expected; didactic conferences are site-specific. Topics commonly addressed in critical care medicine include pulmonary and cardiovascular physiology and pathology, ventilator support, nutritional support, renal failure, fluids and electrolytes in critical illness, and hemodynamic monitoring.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Improved knowledge of diagnostic and therapeutic approach to critically-ill patients with respiratory failure, shock, sepsis, multi-organ failure and/or other life-threatening medical conditions.
Audience: Graduate

2. Perform a hypothesis driven history.
Audience: Graduate

3. Complete a targeted exam.
Audience: Graduate

4. Develop and present a weighted differential diagnosis.
Audience: Graduate

5. Using clinical evidence, select a working diagnosis.
Audience: Graduate

6. Present diagnostic plan including laboratory and imaging modalities.
Audience: Graduate

7. Interpret imaging and laboratory findings in the context of patient presentation.
Audience: Graduate

8. Write admitting and daily orders.
Audience: Graduate

9. Write daily progress notes including assessments and plans using standard format.
Audience: Graduate

10. Present initial patient evaluation including assessments and plans.
Audience: Graduate

11. Summarize patient's hospital course during rounds and manage day to day care.
Audience: Graduate

12. Give and receive patient handovers.
Audience: Graduate

13. Write transfer notes and/or discharge summaries.
Audience: Graduate

14. Communicate effectively with interprofessional team members.
Audience: Graduate

MEDICINE 988 – CLINICAL RHEUMATOLOGY ELECTIVE
2-4 credits.

Exposure to patients in both outpatient rheumatology clinics and seeing patient as consultants in the inpatient setting. Commonly encountered rheumatologic conditions include: osteoarthritis, rheumatoid arthritis, lupus, systemic sclerosis, polyarteritis nodosa, ankylosing spondylitis, gout, pseudogout, dermatomyositis, low back pain and shoulder pain. Involves independent evaluation of patients, and then presenting to an attending. Independent reading is expected; didactic conferences are site-specific.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Improved knowledge and interpretation of clinical and laboratory presentations of rheumatic diseases, including differential diagnosis, diagnostic approach and testing, and planning appropriate therapies.
Audience: Graduate

2. Complete a targeted exam.
Audience: Graduate

3. Present diagnostic plan including laboratory and imaging modalities.
Audience: Graduate

4. Present initial patient evaluation including assessments and plans.
Audience: Graduate

5. Present current literature to support patient care.
Audience: Graduate

6. Communicate effectively with interprofessional team members.
Audience: Graduate

MEDICINE 990 – RESEARCH
1-12 credits.

Independent research under the direct supervision of Medicine faculty. Each student's research project is individualized to meet student research goals within the context of faculty research needs.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Engage in clinical research through apprenticeship-style learning experience with a physician-scientist mentor

Audience: Graduate

2. Understand clinical research design by writing or contributing to a research proposal
Audience: Graduate

3. Develop skills in the analysis of clinical research data
Audience: Graduate

4. Develop a plan for communicating the results of the clinical research project
Audience: Graduate

5. Improve verbal and written communication skills by preparing findings to be able to present clinical research experience and results
Audience: Graduate

6. Formulate a hypothesis or specific objective if study does not involve hypothesis generating research
Audience: Graduate

7. Conduct a thorough literature review of the specific research question
Audience: Graduate

8. Select and apply statistical methodologies appropriate for the proposed analyses
Audience: Graduate

9. Interpret results correctly and in context of previous findings from literature review
Audience: Graduate

MEDIEVAL STUDIES (MEDIEVAL)

MEDIEVAL/FOLKLORE/SCAND ST 235 – THE WORLD OF SAGAS
3 credits.

The Icelandic sagas viewed in their social, cultural, and literary contexts. An introduction to one of the greatest bodies of vernacular literature of the early Middle Ages.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize, describe and analyze shifting geographic, cultural, and ethnic/racial factors in the Northern European region during the Viking Age, and put it into context
Audience: Undergraduate

2. Identify and distinguish between different types of sources used in the study of the Nordic region during the Viking Age
Audience: Undergraduate

3. Demonstrate a general understanding of major scholarly approaches, concepts and current research findings concerning the Nordic region during the Viking Age
Audience: Undergraduate

4. Synthesize information, engage in discussion and research, and argue persuasively about key topics in the Nordic region during the Viking Age
Audience: Undergraduate

5. Analyze the connections between images of the Vikings Age and the wider workings of modern culture
Audience: Undergraduate

6. Guide, mentor and support peers to achieve excellence in practice of the discipline
Audience: Undergraduate

7. Work in multi-disciplinary teams to analyze the cultural material from various disciplinary points of view
Audience: Undergraduate

MEDIEVAL/LITTRANS/RELIG ST 253 – OF DEMONS AND ANGELS. DANTE'S DIVINE COMEDY
3 credits.

Have you ever wondered about human nature? What is our place in this world? Through readings, videos, and original images, explore and discuss Dante's answers from one of the greatest world literary classics, his Divine Comedy. From Hell, through Purgatory to Paradise, we will travel together with Dante in a universal tale of the journey of the human soul. Along the way, learn about Dante, his life and his works, development of literary history, historical and socio-political context of medieval Europe, the Mediterranean and the Middle East. Make connections that cross today's geographic and cultural lines in an exploration of literary topics, the history of ideas, and shared history, pondering universal concepts and patterns in the development of civilization that can still be observed today.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Learn about Dante Alighieri, his life, and works
Audience: Undergraduate

2. Understand medieval civilization and its human culture(s)
Audience: Undergraduate

3. Describe literary, historical, cultural concepts and phenomena
Audience: Undergraduate

4. Analyze from multiple perspectives a text, a situation, a context
Audience: Undergraduate

5. Synthesize information acquired from primary and secondary sources
Audience: Undergraduate

6. Learn the dangers of anachronism
Audience: Undergraduate

MEDIEVAL/LITTRANS 255 – BLACK DEATH AND MEDIEVAL LIFE THROUGH BOCCACCIO'S DECAMERON
3 credits.

Have you ever wondered what it was like to live during the Black Death? Were our medieval and early-modern ancestors different from us, or are we challenged with similar problems? What can we learn from their lives? And, if we could, what could we teach each other? Discuss these topics while reading one of the world's greatest literary classics, Giovanni Boccaccio's Decameron, a text that will make us both laugh and cry. Through reading the Decameron, investigate medicine, art, culture, music, politics, religion, interpersonal and transcultural relations, warfare, fashion, gender and gender roles, as well as everyday life in the Middle Ages and early modernity. Also examines medieval written documents, twentieth-century feminist responses to the Decameron and filmic renditions of it, medieval frescoes, historical descriptions of the plague, and modern descriptions of, and reactions to, the COVID-19 pandemic.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Learn about Giovanni Boccaccio and his Decameron, medieval civilization and its human culture(s)
Audience: Undergraduate

2. Acquire intercultural knowledge and competence and apply them to past and current issues
Audience: Undergraduate

3. Analyze a text, a situation, a context
Audience: Undergraduate

4. Synthesize information acquired from primary and secondary sources
Audience: Undergraduate

5. Learn the dangers of anachronism
Audience: Undergraduate

6. Engage in problem solving
Audience: Undergraduate

7. Develop critical and creative thinking skills
Audience: Undergraduate

8. Engage in effective teamwork
Audience: Undergraduate

9. Design and construct new content based on skills acquired throughout the semester
Audience: Undergraduate

MEDIEVAL/HISTORY/RELIG ST 309 – THE CRUSADES: CHRISTIANITY AND ISLAM
3-4 credits.

An examination of the Crusades from both Christian and Islamic perspectives; the historical, social, and religious context and significance of the Crusades for both Christians and Muslims.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

MEDIEVAL/FOLKLORE/RELIG ST/SCAND ST 342 — NORDIC MYTHOLOGY
3 credits.

Mythology, literature, ritual, traditions, medieval folklore, and religion from Nordic areas and Scandinavia.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize, describe and analyze cultural phenomena, specifically pre-Christian Nordic Religion, and put it into context.
Audience: Undergraduate

2. Demonstrate an understanding of the major theories, approaches, concepts and current research findings concerning medieval Nordic mythology and religion.
Audience: Undergraduate

3. Synthesize the written and material information and use insight and creativity to demonstrate an understanding of the knowledge base from the field.
Audience: Undergraduate

4. Communicate effectively through written essays, oral presentations and discussion.
Audience: Undergraduate

5. Retrieve, analyze, and interpret the professional and lay literature providing information to both professionals and public.
Audience: Undergraduate

6. Guide, mentor and support peers to achieve excellence in practice of the discipline.
Audience: Undergraduate

7. Work in multi-disciplinary teams to analyze the cultural material from various disciplinary points of view
Audience: Undergraduate

MEDIEVAL/FOLKLORE/LITTRANS/SCAND ST 345 — THE NORDIC STORYTELLER
3 credits.

Exploring the oral nature and performance traditions of folklore, ethnography, tales and ballads, literature and culture from Nordic areas and Scandinavia.
Requisites: Satisfied Communications A requirement
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize, describe and analyze cultural phenomena, specifically Nordic Narrative, and put it into context.
Audience: Undergraduate

2. Demonstrate an understanding of the major theories, approaches, concepts and current research findings concerning Nordic Narrative and folklore studies.
Audience: Undergraduate

3. Synthesize the written and material information and use insight and creativity to demonstrate an understanding of the knowledge base from the field.
Audience: Undergraduate

4. Communicate effectively through written essays, oral presentations and discussion.
Audience: Undergraduate

5. Retrieve, analyze, and interpret the professional and lay literature providing information to both professionals and public.
Audience: Undergraduate

6. Work in multi-disciplinary teams to analyze the cultural material from various disciplinary points of view.
Audience: Undergraduate

MEDIEVAL/SCAND ST 407 – INTRODUCTORY OLD NORSE
3 credits.

Designed with a linguistic purpose: to obtain a reading knowledge of Old Norse-Icelandic through the study of Old Icelandic grammar and selections of Old Norse-Icelandic texts.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Demonstrate a basic understanding of Old Norse-Icelandic phonology and grammar with a focus on nominal and verbal inflection.
Audience: Undergraduate

2. Read and understand basic Old Norse-Icelandic texts in normalized editions and access more challenging texts with the help of a dictionary.
Audience: Undergraduate

3. Identify the characteristic features of the various genres of Old Norse-Icelandic texts.
Audience: Undergraduate

MEDIEVAL/SCAND ST 408 – INTERMEDIATE OLD NORSE
3 credits.

Designed with a linguistic purpose: to obtain a reading knowledge of Old Norse-Icelandic through the study of Old Icelandic grammar and selections of Old Norse-Icelandic texts.
Requisites: SCAND ST/MEDIEVAL 407
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate sufficient knowledge of Old Norse-Icelandic grammar and vocabulary to read Old Norse- Icelandic texts.
Audience: Undergraduate

2. Read and understand basic Old Norse-Icelandic texts in normalized editions and access more challenging texts with the help of a dictionary.
Audience: Undergraduate

MEDIEVAL/SCAND ST 409 – SURVEY OF OLD NORSE-ICELANDIC LITERATURE
3 credits.

Eddic and skaldic poetry; homilies and saints' lives, kings' sagas, sagas of the Icelanders; mythical-heroic sagas and romances; rimur.
Requisites: MEDIEVAL/SCAND ST 407 or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

MEDIEVAL/SPANISH 414 – LITERATURE OF THE CASTILIAN MIDDLE AGE (XII-XV CENTURIES)
3 credits.

The study of a particular author, work, topic, or literary genre of the Middle Ages and/or Early Renaissance (through the 15th century): Poema de mio Cid, mester de juglaria, Libro de buen amor, mester de clerecia, El conde Lucanor, La Celestina, etc.
Requisites: (CHICLA/SPANISH 222 or SPANISH 223) and SPANISH 224
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023
Learning Outcomes: 1. Analyze Castilian medieval literary texts (12th to 15th century).
Audience: Undergraduate

2. Describe the historical, political, social, and cultural context of medieval Castile.
Audience: Undergraduate

3. Apply communication skills in reading, speaking, listening, and writing in Spanish to analyze the form and content of Medieval texts.
Audience: Undergraduate

MEDIEVAL/ART HIST 415 – TOPICS IN MEDIEVAL ART
3 credits.

Advanced topics in Medieval art. Topics may include: "Death and the Afterlife in Medieval Art"; "Civic Art and Architecture and Public Space in Medieval Italy"; "Rome in the Middle Ages"; "Pilgrimage the Cult of the Saints in Medieval Byzantine Art."
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

MEDIEVAL/ENGL 423 – TOPIC IN MEDIEVAL LITERATURE AND CULTURE
3 credits.

Study of a topic in medieval literature.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MEDIEVAL/ENGL 424 – MEDIEVAL DRAMA
3 credits.

Dramatic traditions of medieval England, from early church rituals performed inside quiet monasteries in the tenth century to the elaborate and often raucous urban guild cycles and morality plays of the fifteenth, and with special attention to the significance of spirituality, work, and play in medieval culture.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023

MEDIEVAL/ENGL 425 – MEDIEVAL ROMANCE
3 credits.

Important early form of narrative fiction, covering tales of adventure, magic, courtly love, and King Arthur from the twelfth through the fifteenth century.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2022

MEDIEVAL/ENGL 426 – CHAUCERS COURTLY POETRY
3 credits.

Poetry of the most famous and influential medieval English poet, from his short lyrics on love through his dream visions of talking birds and castles built on ice to the historical romance Troilus and Criseyde. Readings will be in the original Middle English; no prior experience with the language is required.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023

MEDIEVAL/ENGL 427 – CHAUCER'S CANTERBURY TALES
3 credits.

Study of the most famous and influential medieval English poet through his best-known work and its playful and profound responses to some of the most pressing literary, social, political, and spiritual issues of his time. Readings will be in the original Middle English; no prior experience with the language is required.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

MEDIEVAL/SCAND ST 430 – THE VIKINGS
4 credits.

Within a historical framework, a thorough introduction to the culture, literature, and religion of the Vikings.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2022

MEDIEVAL/ITALIAN/RELIG ST 440 – POVERTY, ECOLOGY AND THE ARTS: ST. FRANCIS OF ASSISI
3 credits.

Focuses on literature about Francis of Assisi, from medieval accounts to contemporary literature, and related artistic portrayals of St. Francis as a religious symbol and model for economic, political and environmental justice.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Articulate the significance of Francis of Assisi as a multi-faceted historical, literary and symbolic figure, especially in relation to economic and environmental justice and reform.
Audience: Both Grad & Undergrad

2. Read and assess critically a range of literary genres that employ and depict Francis.
Audience: Both Grad & Undergrad

3. Compare interpretive models of Francis in literature and related artistic media over time and contexts.
Audience: Both Grad & Undergrad

4. Craft cogent written analysis of a literary and religious model such as Francis via selected interdisciplinary methods from religious studies, literary and historical scholarship.
Audience: Both Grad & Undergrad

5. Produce a research paper on a critical aspect of the presentation of Francis in selected works, employing one or more disciplinary approaches covered in the course.
Audience: Graduate

MEDIEVAL/SCAND ST 444 – KALEVALA AND FINNISH FOLK-LORE
4 credits.

Kalevala - the national epic of Finaland - and the oral literature of Finland.
Requisites: Junior standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022

MEDIEVAL/FOLKLORE/SCAND ST 446 – CELTIC-SCANDINAVIAN CULTURAL INTERRELATIONS
3 credits.

Examination of shared traditions and historical connections between the North and Northwest of Europe. Readings of medieval and pre-modern Scandinavian, Scottish, Welsh and Irish sagas, histories, talkes. Discussion of the role of folklore in modern Celtic and Scandinavian societies.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022

MEDIEVAL/AFRICAN/JEWISH/RELIG ST 462 – MUSLIMS AND JEWS
3 credits.

Explores the historical relationship between Muslims and Jews in a variety of contexts from the seventh century to the present. Surveys literary and cultural exchanges against the background of shifting political and social conditions across the Middle East, Europe, and the United States. Considers also the parallel legacies of anti-Semitism, Orientalism, and Islamophobia. Major themes include comparative religion, secularization, migration, and colonialism, as well as the politics of history and cultural memory. Introduces readings in English translation of medieval and modern texts originally written across languages, and especially in Hebrew and Arabic.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate contextual knowledge of major historical events, figures, social conditions, religious communities, and geographies of Muslim Iberia (al-Andalus) from the eighth to sixteenth centuries
Audience: Undergraduate

2. Situate al-Andalus in relation to wider developments in politics, culture, and religion of the Middle East and North Africa, from the eighth century to the present
Audience: Undergraduate

3. Understand the terms and conditions that have shaped Muslim-Jewish relations from the seventh century until the present, including frameworks of theology, lived religious experience, and Orientalist representation
Audience: Undergraduate

4. Integrate relevant theoretical frameworks, debates, and conversations regarding the distinction between historical writing and cultural memory
Audience: Undergraduate

5. Discern divergent and contradictory representations of the history of al-Andalus in contemporary memory culture
Audience: Undergraduate

6. Cultivate skills in textual analysis and evaluate a range of formal and structural elements in written and visual materials across genres (philosophy, literature, religion, film) as well as in primary and secondary historical sources
Audience: Undergraduate

7. Generate original ideas and texts, through coherent writing and compelling argumentation, by experimenting and taking risks, solving problems, and answering questions in a range of media
Audience: Undergraduate

MEDIEVAL/SPANISH 503 – SURVEY OF MEDIEVAL LITERATURE
3 credits.

Introduction to major 13th and 14th-century Castilian works.
Requisites: Graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2018

MEDIEVAL/ENGL 520 – OLD ENGLISH
3 credits.

The elements of Old English grammar with selected readings.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Honors - Accelerated Honors (!)
Repeatable for Credit: No
Last Taught: Fall 2025

MEDIEVAL/ENGL 521 – ADVANCED OLD ENGLISH LITERATURE
3 credits.

An intensive study of a major work or works of Old English, usually focusing on either Beowulf or the poems of a single manuscript. Line-by-line translation of the text will be supplemented by discussion of related issues (whether linguistic, thematic, or contextual) as well as by readings from relevant critical literature. Primary texts will be read in Old English.
Requisites: MEDIEVAL/ENGL 520
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Honors - Accelerated Honors (!)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2020

MEDIEVAL/SPANISH 541 – OLD SPANISH
3 credits.

Historical Spanish phonology, morphology, and syntax, with application to theories of language variation and change.
Requisites: Graduate/professional standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2018

MEDIEVAL/LATIN 563 – MEDIAEVAL LATIN
3 credits.

Introduction to chronological, geographical, and generic range of post-classical Latin, including not only the "medieval" period but the late antique, Renaissance, and beyond.
Requisites: LATIN 306 or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023
Learning Outcomes: 1. Analyze ancient classical Latin texts.
Audience: Undergraduate

2. Interpret ancient classical Latin texts.
Audience: Undergraduate

3. Evaluate ancient classical Latin texts.
Audience: Undergraduate

4. Explain and assess the position of the course topic in relation to the classical and near eastern tradition.
Audience: Undergraduate

5. Demonstrate competence in current scholarly approaches to course readings.
Audience: Graduate

MEDIEVAL/GERMAN 651 – INTRODUCTION TO MIDDLE HIGH GERMAN
3 credits.

Middle High German grammar and vocabulary with the goals of fluency and accuracy in reading medieval texts. Covers topics in phonology, morphology, syntax, and lexicon.
Requisites: (GERMAN 249, 258, and 262), (GERMAN 249 and 285), or graduate/professional standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

MEDIEVAL/ITALIAN 659 – DANTE'S DIVINA COMMEDIA
3 credits.

Lectures on Dante's life and times, reading Divine Comedy.
Requisites: ITALIAN 321, 322, or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

MEDIEVAL/ITALIAN 671 – THE 13TH CENTURY
3 credits.

Systematic study of the earliest literary texts in Italy; the rise of the love lyric among the Sicilian poets; representative narrative works. The development of the lyric from Guittoe d'Arezzo to the poets of the Dolce Stil Nuovo.
Requisites: ITALIAN 321, 322, or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022

MEDIEVAL 699 – DIRECTED STUDY
1-3 credits.

Advanced directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2012

MEDIEVAL/FRENCH 704 – LA LITTERATURE FRANCAISE DU XIV ET DU XV SIECLE
3 credits.

Study of important literary works of the 14th and 15th centuries. Taught in French.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020

MEDIEVAL/SPANISH 718 – TOPICS IN MEDIEVAL SPANISH LITERATURE
3 credits.

An advanced topics course focusing on themes, particular authors, individual works, or literary genres in medieval Spanish literature.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2019

MEDIEVAL/GERMAN 755 – OLD GERMANIC LANGUAGES
3 credits.

Old High German, Old Saxon, and Gothic on a rotating basis.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023

MEDIEVAL/ENGL 803 – TOPICS IN MEDIEVAL LITERATURE
3 credits.

Study of a topic in Medieval literature.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023

MEDIEVAL/SPANISH 842 – SEMINAR-MEDIEVAL LITERATURE
3 credits.

Seminar focusing on literary, textual criticism or theoretical topics relevant to Medieval Spanish literature.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2022

MICROBIOLOGY (MICROBIO)

MICROBIO 100 – THE MICROBIAL WORLD
3 credits.

Primarily for non-science majors. Roles of microorganisms and viruses in nature, health, agriculture, pollution control and ecology. Principles of disease production, epidemiology and body defense mechanisms. Biotechnology and the genetic engineering revolution.
Requisites: Not open to students with credit for MICROBIO 101 or 303.
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Understand, analyze, and evaluate information effectively.
Audience: Undergraduate

2. Describe what makes up a microorganism. How is the make up different between a microorganism and a human being?
Audience: Undergraduate

3. Define a disease. Describe how your body, your doctor, and the government fight disease.
Audience: Undergraduate

4. Understand where we came from. Analyze the various theories of how life originated and express an opinion on which is most plausible.
Audience: Undergraduate

5. Articulate the positive impacts microbes have on your health, the well-being of their host organisms, the cycling of important elements, and the environment.
Audience: Undergraduate

MICROBIO 101 – GENERAL MICROBIOLOGY
3 credits.

Survey of microorganisms and their activities; emphasis on structure, function, ecology, nutrition, physiology, genetics. Survey of applied microbiology--medical, agricultural, food and industrial microbiology. Intended to satisfy any curriculum which requires introductory level microbiology.
Requisites: CHEM 103, 108, 109, or 115. Not open to students with credit for MICROBIO 303
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the three Domains of the phylogenetic tree of life and draw inferences about evolutionary processes based on phylogenetic trees.
Audience: Undergraduate

2. Describe the basic cell structure of cells (bacteria, archaea, eukarya) and the structure of viruses and explain how this affects microbial function.
Audience: Undergraduate

3. Understand the impact of environmental conditions on microbial growth and how this impacts the abundance and distribution of microbes on Earth.
Audience: Undergraduate

4. Describe how microbes obtain nutrients and energy from the environment and how this is important to food production, waste treatment, sustainability and global ecosystems.
Audience: Undergraduate

5. Describe the flow and exchange of information in microbial cells and populations and understand how this affects microbial diversity and evolution.
Audience: Undergraduate

6. Compare different methods of microbial growth control and their impact on microbes.
Audience: Undergraduate

7. Compare and contrast the different ways in which microbes interact with their human hosts and the impacts on global health and disease.
Audience: Undergraduate

8. Describe the human immune response to microbes.
Audience: Undergraduate

MICROBIO 102 – GENERAL MICROBIOLOGY LABORATORY
2 credits.

Covers techniques and procedures used in general microbiology, including cultivation, enumeration, aseptic techniques, physiology and selected applications.
Requisites: MICROBIO 101, 303 or concurrent enrollment. Not open to students with credit for MICROBIO 304.
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate competencies in microbiological laboratory techniques.
Audience: Undergraduate

2. Isolate and identify bacteria.
Audience: Undergraduate

3. Keep careful records of observations.
Audience: Undergraduate

4. Develop hypotheses, and think critically and make valid conclusions about them.
Audience: Undergraduate

5. Assess the credibility of scientific sources.
Audience: Undergraduate

6. Communicate scientific findings and ideas effectively through writing.
Audience: Undergraduate

MICROBIO 150 – MICROBIOMES AND MICROBIOLOGY - FIRST-YEAR SEMINAR
1 credit.

Introduction to major questions related to the study of the microbiome. Acquire foundational research skills necessary for success as a microbiology or life sciences major. Engage with faculty and their cutting-edge research related to Microbiology. Explore department and campus resources and career options available in the field of microbiology.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the academic skills and practical steps required to succeed as a microbiology major
Audience: Undergraduate

2. Discuss the research and teaching interests of department faculty
Audience: Undergraduate

3. Describe the variety of career opportunities available to individuals with microbiology and life science backgrounds
Audience: Undergraduate

4. Identify university, college, and department resources that support success at UW-Madison
Audience: Undergraduate

5. Identify credible sources of information related to microbiome research
Audience: Undergraduate

6. Discuss the major research questions in the study of the microbiome
Audience: Undergraduate

MICROBIO 299 – INDEPENDENT STUDY
1-3 credits.

Research work for students under direct guidance of a faculty member in an area encompassing Microbiology. Students are responsible for arranging the work and credits with the supervising instructor.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Investigate a science topic in conjunction with other investigators to develop a deep understanding of a research problem.
Audience: Undergraduate

2. Identify a research problem and develop a series of experiments to test a hypothesis related to the problem under investigation.
Audience: Undergraduate

3. Carry out designed experiments and collect data related to the research problem under investigation.
Audience: Undergraduate

4. Analyze the results of experiments and use them to test the validity of the developed hypothesis.
Audience: Undergraduate

5. Communicate the results of investigations via written and/or oral means to an appropriate audience.
Audience: Undergraduate

MICROBIO 303 – BIOLOGY OF MICROORGANISMS
3 credits.

Basic biology of microorganisms, including structure, function, physiology, genetics, ecology, diversity, and evolution.
Requisites: (ZOOLOGY/BIOLOGY 101, ZOOLOGY/BIOLOGY/BOTANY 151, BIOCORE 383, or BIOLOGY/BOTANY 130) and (CHEM 104 or 109) or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the historical context of microbiology from a human and evolutionary perspective.
Audience: Undergraduate

2. Compare different microbial cell structures and predict behaviors based upon those structures.
Audience: Undergraduate

3. Explain how mutations occur in cells, the mechanisms organisms have to combat these changes, and how these changes relate to the evolution of species.
Audience: Undergraduate

4. Predict the modes of growth of microbes based upon the enzymes they contain and the metabolic breakdown of substrates.
Audience: Undergraduate

5. Describe the regulatory paradigms in microbes and predict the changes in behavior that occur when these pathways are disrupted.
Audience: Undergraduate

6. Explain the symbiotic and dysbiotic state in a host-microbe interaction and list factors that can affect this relationship.
Audience: Undergraduate

7. Compare common virulence factors and explain their effect on symbiotic relationships and how these virulence factors contribute to disease.
Audience: Undergraduate

MICROBIO 304 – BIOLOGY OF MICROORGANISMS LABORATORY
2 credits.

Introduction to modern laboratory techniques used to study the distribution and properties of microorganisms.
Requisites: MICROBIO 303 or concurrent enrollment
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate proficiency in microscopy, media preparation, aseptic technique, and microbiological measurements.
Audience: Undergraduate

2. Identify representative groups of microorganisms. Those that are important in: antibiotic production, sewage treatment, disease, food manufacturing, and the local environment.
Audience: Undergraduate

3. Characterize microbial isolates from nature and describe their taxonomy.
Audience: Undergraduate

4. Create detailed lab notes that describe accurately the experiments performed.
Audience: Undergraduate

5. Develop hypotheses, design experiments, perform experiments, collect data, analyse data critically, report data to others clearly and accurately, and communicate about scientific topics in a precise manner.
Audience: Undergraduate

MICROBIO 305 – CRITICAL ANALYSES IN MICROBIOLOGY
1 credit.

Train students to become scientific problem-solvers, to critically analyze data, and to comprehend the principles of microbiological research via active discussion of a combination of scholarly papers and contemporary, hot topics in our field.
Requisites: MICROBIO 303 or concurrent enrollment
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize the breadth of the field of microbiology and nature of the science.
Audience: Undergraduate

2. Describe the scientific method used in presented material.
Audience: Undergraduate

3. Demonstrate critical thinking and problem solving skills through an exploration of seminal papers and cutting-edge research in the field of microbiology.
Audience: Undergraduate

4. Critique primary scientific papers by identifying the hypothesis, analyzing the data being presented, and proposing future experiments or directions for a particular study.
Audience: Undergraduate

5. Communicate analysis of primary literature to others.
Audience: Undergraduate

MICROBIO/FOOD SCI 324 – FOOD MICROBIOLOGY LABORATORY
2 credits.

Lab exercises dealing with food preservation, spoilage, and food poisoning. Isolation, identification and quantification of specific microbes occurring in foods, and food fermentations by bacteria and yeast.
Requisites: (MICROBIO 102 or MICROBIO 304) and FOOD SCI/ MICROBIO 325 or concurrent enrollment
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Utilize laboratory techniques to identify microorganisms in food.
Audience: Undergraduate

2. Describe the principles involving food preservation via fermentation processes.
Audience: Undergraduate

3. Demonstrate understanding of the role and significance of microbial inactivation, adaptation, and environmental factors (i.e., water activity, pH, temperature) on growth and response of microorganisms in various environments.
Audience: Undergraduate

4. Identify the conditions, including sanitation practices, under which important pathogens and spoilage microorganisms are commonly inactivated, killed, or made harmless in foods.
Audience: Undergraduate

MICROBIO/FOOD SCI 325 – FOOD MICROBIOLOGY
3 credits.

Principles of food preservation, epidemiology of foodborne illness, agents of foodborne illness, food fermentations and biotechnology.
Requisites: MICROBIO 101, 303, or M M & I 301 or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and summarize the impacts of intrinsic and extrinsic factors on microorganisms.
Audience: Undergraduate

2. Calculate and apply thermal processing parameters to reductions in microbial numbers.
Audience: Undergraduate

3. Apply Hazard Analysis Critical Control Point (HACCP) concepts and principles to food production processes.
Audience: Undergraduate

4. Demonstrate knowledge of foodborne microbial pathogens.
Audience: Undergraduate

5. Describe methods and principles of sampling and testing food for microorganisms.
Audience: Undergraduate

6. Compare and contrast the principles, practices, and pathways of food fermentations.
Audience: Undergraduate

7. Analyze and use microbiological data sets.
Audience: Undergraduate

8. Evaluate the benefits and hazards of modern food production, organic foods, and genetically-engineered foods.
Audience: Undergraduate

MICROBIO/AN SCI/BOTANY 335 – THE MICROBIOME OF PLANTS, ANIMALS, AND HUMANS
3 credits.

Examination of the structure and function of microbial communities that live inside and on host organisms (plants, animals, and humans). Introduction to general concepts of the microbiome and microbiota, and their relationship to host nutrition, health, and disease.
Requisites: MICROBIO 101 or 303 or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe how microorganisms interact with plant and animal (including human) hosts in beneficial, neutral or detrimental ways.
Audience: Undergraduate

2. Express how the environment affects these host-microbe interactions.
Audience: Undergraduate

3. Summarize new molecular and bioinformatic methods that allow for the study of microbial communities.
Audience: Undergraduate

4. Describe how microbial communities are essential for life as we know it, and the processes that support life.
Audience: Undergraduate

5. Articulate several ways in which microbial communities are essential to plant and animal (including human) health.
Audience: Undergraduate

6. Explain our current knowledge about the diversity of microbial life and why its effects and potential benefits have not been fully explored.
Audience: Undergraduate

MICROBIO 345 – INTRODUCTION TO DISEASE BIOLOGY
3 credits.

Introduces the rich biology of infectious disease and how it impacts the biology of humans and other organisms, through the lens of global health. Steps beyond a narrow focus on the biological dimensions of disease to also cover the social, political, and cultural factors that shape the spread and persistence of disease in natural populations. Includes a survey of the various types of pathogens and the science behind infection, transmission, evolution, and virulence.
Requisites: ZOOLOGY/BIOLOGY 101, BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY/BOTANY 151, or BIOCORE 381
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe different types of parasites/pathogens and their modes of transmission
Audience: Undergraduate

2. Summarize the function of the human immune system in protecting against disease and in causing some of the damages associated with disease
Audience: Undergraduate

3. Read and analyze data on the health status of populations
Audience: Undergraduate

4. Assess environmental, medical and political strategies for controlling infectious diseases
Audience: Undergraduate

5. Identify the evolutionary processes that lead to adaptation and biological diversity
Audience: Undergraduate

6. Describe the genetic and behavioral reasons why there are increasing numbers of antibiotic resistant infections
Audience: Undergraduate

7. Evaluate global progress toward reaching MD6—to reduce the burden of HIV, TB, Malaria and other diseases
Audience: Undergraduate

8. Critically evaluate and effectively use textbooks, current research literature, online information, as well as information related to scientific and biological issues in the popular press
Audience: Undergraduate

MICROBIO 357 – GENERAL BIOINFORMATICS FOR MICROBIOLOGISTS
3 credits.

Provides foundational introduction to bioinformatics for microbiologists. Emphasis on the basic understanding of bioinformatics tools, analysis, and databases and their applications (e.g. Sequence alignment, Phylogenetic trees, Genome analyses). Topics include: command line manipulation, sequence alignment, file formats, phylogenetic trees, standard genome and protein databases, interpretation of microbial and viral genomes, and basic scientific computer programming.
Requisites: MICROBIO 303, BIOCHEM 501, 507, or graduate/professional standing
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Perform basic command line operations to navigate through an operating system
Audience: Undergraduate

2. Recognize basic sequence data formats, access them through publicly available datasets, and utilize them in bioinformatics applications
Audience: Undergraduate

3. Use sequence analysis programs by downloading and installing them locally on their own computers
Audience: Undergraduate

4. Use publicly available bioinformatics databases
Audience: Undergraduate

5. Create programs in a scientific programming language to conduct basic bioinformatics analyses
Audience: Undergraduate

6. Demonstrate mastery of basic bioinformatics skills by completing a hands-on final project focused on the recovery and analyses of microbial genomes from public databases
Audience: Undergraduate

MICROBIO 375 – SPECIAL TOPICS
1-4 credits.

Specialized subject matter of current interest to undergraduate students.
Requisites: None
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MICROBIO 399 – COORDINATIVE INTERNSHIP/COOPERATIVE EDUCATION
1-8 credits.

An internship under guidance of a faculty or instructional academic staff member in the Bacteriology department and a internship site supervisor. Students are responsible for arranging the work and credits with the faculty or instructional academic staff member and the internship site supervisor.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Workplace - Workplace Experience Course
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2013
Learning Outcomes: 1. Perform assigned responsibilities in a professional setting for 80 hrs/credit/semester.
Audience: Undergraduate

2. Identify and employ standards of professionalism at work site.
Audience: Undergraduate

3. Articulate through discussion with faculty mentor how concepts learned in microbiology relate to real work situations.
Audience: Undergraduate

4. Synthesize and apply knowledge from the microbiology curriculum and broader coursework to solve problems on the worksite.
Audience: Undergraduate

5. Create and submit a progress report to a faculty mentor, twice during the semester, one at mid-semester and one at the end of the semester.
Audience: Undergraduate

MICROBIO 400 – STUDY ABROAD IN MICROBIOLOGY
1-6 credits.

Provides an area equivalency for courses taken on Madison Study Abroad Programs that do not equate to existing UW courses.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions

MICROBIO/SOIL SCI 425 – ENVIRONMENTAL MICROBIOLOGY
3 credits.

Microbial interactions in soils, water, extreme environments and biofilms. Modern methods for studying microbial ecology. role of microbes in nutrient cycles and biogeochemistry. Use of microbes for mitigating manmade environmental problems of industrial, agricultural, and domestic origin.
Requisites: MICROBIO 303 and (CHEM 341 or 343), or graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

MICROBIO 450 – DIVERSITY, ECOLOGY AND EVOLUTION OF MICROORGANISMS
3 credits.

Fundamental concepts relating to the phylogenetic diversity, ecology and evolution of microbes. Active learning methods applying these concepts will promote a deeper understanding of microbiology.
Requisites: MICROBIO 303 or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Define the foundational principles of phylogenetics.
Audience: Undergraduate

2. Compare the major phyla within bacteria, archaea and eukaryotic microbes.
Audience: Undergraduate

3. Recognize general properties of viruses and the issues with their phylogenetic classification.
Audience: Undergraduate

4. Define ecology, its domains and distinguish it from other closely related fields.
Audience: Undergraduate

5. Develop a deeper understanding of methods available to characterize microbial communities.
Audience: Undergraduate

6. Explain Darwin's Theory of Natural Selection and the four postulates of natural selection.
Audience: Undergraduate

7. Describe the concept of adaptation and how over the history of science this concept has changed.
Audience: Undergraduate

8. Identify the major events in the history of microbial life.
Audience: Undergraduate

9. Develop an evolutionary understanding of the 3 domains of life.
Audience: Undergraduate

MICROBIO 470 – MICROBIAL GENETICS & MOLECULAR MACHINES
3 credits.

Examines modern microbial genetics and molecular processes. Emphasis on the use of eubacterial and eukaryotic microbes to elucidate cellular function. Discussion of experimental approaches to study microbes and their use in biotechnology, bioremediation, and medicine.
Requisites: MICROBIO 303 or concurrent enrollment or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use correct nomenclature to describe microbial genetic and molecular processes and experimental approaches.
Audience: Undergraduate

2. Recognize and apply concepts of genetics.
Audience: Undergraduate

3. Describe how the molecular machines in bacterial gene expression function and, how they contribute to final gene-encoded activities.
Audience: Undergraduate

4. Explain the mechanisms by which these molecular machines are regulated.
Audience: Undergraduate

5. Interpret molecular and genetic data in regard to specific experimental questions.
Audience: Undergraduate

6. Apply understanding of microbial genetics and molecular machines to design experimental approaches test research hypotheses.
Audience: Undergraduate

MICROBIO 520 – PLANETARY MICROBIOLOGY: WHAT LIFE HERE TELLS US ABOUT LIFE OUT THERE
3 credits.

Connects the molecular underpinnings of life with corresponding planetary scale changes in geochemistry. Focuses on the dynamics between life and environment over planet Earth's history from a microbial and molecular perspective, including the origins of life, and emergence of essential metabolisms and their evolution across billions of years of planetary evolution. Discusses how innovations such as translation machinery and carbon and nitrogen fixation were impacted by significant changes in the environment. Examines how understanding the origins of life on Earth may allow for the recognition of life elsewhere in the universe by exploring, assessing, and discussing various signs of life and the processes that expands life to planetary scale.
Requisites: MICROBIO 101 or 303 or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Evaluate the reliability of sources of information about biology
Audience: Both Grad & Undergrad

2. Synthesize key topics/concepts of planetary microbiology, astrobiology, and the molecular history of life
Audience: Both Grad & Undergrad

3. Describe the environments in which life on Earth might have originated, emerged, and persisted over billions of years
Audience: Both Grad & Undergrad

4. Analyze and describe the significant molecular innovations that impacted life on Earth
Audience: Both Grad & Undergrad

5. Describe the current origins of life scenarios on Earth and planetary conditions that may give rise to life elsewhere in the universe
Audience: Both Grad & Undergrad

6. Formulate an original hypothesis to guide future research based on a synthesis of current research into the connections between the origins, evolution, and molecular underpinnings of life and corresponding planetary scale changed
Audience: Graduate

MICROBIO/SOIL SCI 523 – SOIL MICROBIOLOGY AND BIOCHEMISTRY
3 credits.

Transformations of nutrients and contaminants in soils and groundwater by microorganisms: emphasis on enzymatic mechanisms and metabolic pathways. Approaches for analyzing microbial populations and activities including molecular techniques. Applications of microbial activities for bioremediation of contaminated soils and groundwater. Students should have completed one course in either Soil Science or Microbiology to feel comfortable with the course content.
Requisites: Senior standing, (CHEM 104, 109, or 116) and (ZOOLOGY/BIOLOGY 102, BOTANY/BIOLOGY 130, or ZOOLOGY/BIOLOGY/BOTANY 151), or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the soil environment from the perspective of a microbe
Audience: Both Grad & Undergrad

2. Explain the importance of soil microbes for globally important issues such as climate change, nutrient cycling, and biodiversity
Audience: Both Grad & Undergrad

3. Describe key methods used to study soil microbes and explain their limitations
Audience: Both Grad & Undergrad

4. Analyze microbial community data to answer the question, are the organisms in these communities different, and how
Audience: Both Grad & Undergrad

5. Discuss and critically evaluate scientific papers in soil microbiology at an advanced undergraduate level
Audience: Undergraduate

6. Conduct, analyze, and interpret a research project
Audience: Undergraduate

7. Discuss and critically evaluate scientific papers in soil microbiology at a graduate level
Audience: Graduate

8. Design, conduct, analyze, and interpret a research project, drawing on the broader literature
Audience: Graduate

MICROBIO 525 – FIELD STUDIES OF PLANETARY MICROBIOLOGY AND LIFE IN THE UNIVERSE
3 credits.

Explores the origins, early evolution, and most common traces left by our planet's form of microbial life. Discovery and interpretation of microbial biosignatures in the context of a simulated surface lander mission through travel to field sites. Introduction to microbial biosignatures as inferred through satellite and drone imagery interpretation, portable XRF elemental analysis, UV-VIS-IR spectrophotometry, body and trace fossil analysis and interpretation, and metagenome sequencing. Explore evidence and methods of detection of life on other planets.
Requisites: MICROBIO 520 or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Define basic categories and modes of biosignature production and preservation.
Audience: Both Grad & Undergrad

2. Describe the environmental and ecological attributes that enable biosignature preservation.
Audience: Both Grad & Undergrad

3. Articulate how different microenvironments can be present in an extreme environment (i.e., a salt flat), and how different instruments are required to explore these microenvironments at different scales of observation.
Audience: Both Grad & Undergrad

4. Explain the basic chemical drivers of life that exist in different microenvironments.
Audience: Both Grad & Undergrad

5. Hypothesize planetary and stellar conditions likely to lead to the long-term persistence of life on a planet.
Audience: Both Grad & Undergrad

6. Operate each of the main instruments that compose the payload package of the simulated spacecraft, organized in order of scale: Drone/imaging data (km-m); Outcrop scale detection/field microscope and hand lens (m-dm); Molecular characterization/spectrophotometer (mm-nm); Atomic characterization/XRD (nm-fm).
Audience: Both Grad & Undergrad

7. Formulate an original hypothesis to guide future research based on a synthesis of findings from the field experience with current understandings of the origins, evolution and molecular underpinnings of life and corresponding planetary scale changes.
Audience: Graduate

MICROBIO 526 – PHYSIOLOGY OF MICROORGANISMS
3 credits.

Biochemistry of microbial processes.
Requisites: (BIOCHEM 501 or 507 or concurrent enrollment) or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize the chemical logic and fundamental regulatory principles of central metabolism.
Audience: Undergraduate

2. Describe how the fundamental concepts in metabolism relate to real-world problems in areas such as microbiology, biotechnology, and human health.
Audience: Undergraduate

3. Recognize that the same fundamental principles that help us understand microbial metabolism also apply to higher organisms.
Audience: Undergraduate

4. Describe the interconnected nature of metabolism, where pathways work in concert by feeding, draining, and regulating each other.
Audience: Undergraduate

5. Describe the core mechanisms of energy generation in biology and how they impact the diversity of microbial life.
Audience: Undergraduate

MICROBIO 527 – ADVANCED LABORATORY TECHNIQUES IN MICROBIOLOGY
2 credits.

Provides a foundation in modern methods of research in the biomedical sciences. Coaching and practice in hypothesis-driven scientific questions, critical data analysis, and scientific writing.
Requisites: Declared in Microbiology and MICROBIO 304
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the conceptual design of an experiment.
Audience: Undergraduate

2. Given an experimental question, design and effectively execute an experiment that answers a scientific question.
Audience: Undergraduate

3. Find, and use correctly, information in the primary literature relevant to experiments being carried out.
Audience: Undergraduate

4. Properly and critically interpret data including understanding experimental limitations and controls.
Audience: Undergraduate

5. Effectively communicate their scientific findings through writing as well as present data/results clearly and effectively in a professional manner.
Audience: Undergraduate

6. Take complete, effective and detailed lab notes.
Audience: Undergraduate

MICROBIO/ONCOLOGY 545 – TOPICS IN BIOTECHNOLOGY
1 credit.

Seminars on current topics in agricultural, medical, and industrial biotechnology such as: microbiological production of food, drink, biopharmaceuticals; production methods, genetic engineering (vectors, recombination cloning), continuous fermentation; bioconversion processes and production of chemicals from biomass; plant biotechnology; transgenic animals.
Requisites: (ZOOLOGY/BIOLOGY 101, ZOOLOGY/BIOLOGY/BOTANY 151, BIOCORE 383, or BIOLOGY/BOTANY 130) and (CHEM 104 or 109) or graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Attend all lectures on a diverse range of speakers from the Biotechnology sector and related topics.
Audience: Undergraduate

2. Demonstrate an understanding of lectures though lecture evaluation sheets.
Audience: Undergraduate

3. Choose a current topic in Biotechnology and formulate an opinion paper on the challenges and potential utility.
Audience: Undergraduate

MICROBIO 551 – CAPSTONE RESEARCH PROJECT IN MICROBIOLOGY
2 credits.

Conduct independent research in either a PI's laboratory or in small groups in microbiology teaching laboratories. Discuss progress of projects and research ethics, write a research proposal, and prepare and present a poster with final results for the department Poster Session. The in-class students use microbiological, molecular, and bioinformatic approaches to investigate the microbial ecology of environmental microbial communities. Research-lab students will progress toward goals established by the research mentor / PI.
Requisites: MICROBIO 527
Course Designation: Gen Ed - Communication Part B
Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate proficiency in bacterial culturing, PCR, gel electrophoresis, Sanger sequencing, DNA quantitation, analytical micropipetting, and BLAST analysis.
Audience: Undergraduate

2. Complete a next-generation or genomics sequencing project on an under-study microbial environment and use bioinformatics tools to analyze large datasets of DNA and/or RNA sequences.
Audience: Undergraduate

3. Design and troubleshoot experiments, isolate targeted microbes, or microbial groups, from a given environment.
Audience: Undergraduate

4. Cultivate the ability to work in teams by designing and troubleshooting a team experiment and presenting their progress and findings throughout the semester.
Audience: Undergraduate

5. Improve scientific writing by preparing and revising drafts of a research proposal.
Audience: Undergraduate

6. Improve oral scientific communication by presenting powerpoint and poster presentations on scientific research.
Audience: Undergraduate

7. Explore ethical dilemmas in science through writing, discussion, and case studies.
Audience: Undergraduate

MICROBIO/BIOCHEM/GENETICS 612 – PROKARYOTIC MOLECULAR BIOLOGY
3 credits.

Molecular basis of bacterial physiology and genetics with emphasis on molecular mechanisms; topics include nucleic acid-protein interactions, transcription, translation, replication, recombination, regulation of gene expression.
Requisites: (BIOCHEM 501 or 507) and (MICROBIO 470, GENETICS 466 or 468) or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Access and evaluate original research literature.
Audience: Undergraduate

2. Demonstrate problem solving practices.
Audience: Undergraduate

3. Identify enzyme mechanisms responsible for transcription, translation, gene regulation, and replication in bacteria.
Audience: Graduate

4. Compare the structural bases for the mechanisms.
Audience: Graduate

5. Evaluate the experiments that led to our understanding of theses mechanisms.
Audience: Graduate

6. Deconstruct how these enzymes respond to nutritional and environmental signals in cells.
Audience: Graduate

7. Outline the evolutionary basis and selection pressure for these mechanisms in vivo.
Audience: Graduate

MICROBIO 626 – MICROBIAL AND CELLULAR METABOLOMICS
3 credits.

Provides an in-depth exploration of the use of mass spectrometry-based metabolomic approaches for the quantitative investigation of microbial and mammalian cellular metabolic processes. Using recent examples from primary literature, highlights the application of metabolomics, lipidomics, and metabolic flux analysis to diverse areas, including rational engineering of metabolic pathways, microbial biofuel production, discovery and characterization of new biochemical pathways, metabolic interactions within microbial communities, biochemical capabilities of the human gut microbiome, and mammalian cell metabolism.
Requisites: (BIOLOGY/ZOOLOGY 101, BOTANY/BIOLOGY/ZOOLOGY 151, BIOCORE 383, or BOTANY/BIOLOGY 130), (CHEM 341 or 343), and (BIOCHEM 301, 501, or 507), or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the instrumentation and analytical approaches commonly used in mass spectrometry-based metabolomics, lipidomics, and metabolic flux analysis studies.
Audience: Both Grad & Undergrad

2. Explain how isotope tracers are used to measure metabolic flux, elucidate metabolic network structure, and investigate pathway thermodynamics.
Audience: Both Grad & Undergrad

3. Critically evaluate primary scientific literature that utilizes metabolomics, lipidomics, or isotope tracer studies as a key research component.
Audience: Both Grad & Undergrad

4. Argue how fundamental concepts in cellular metabolism relate to real-world problems in areas such as microbiology, biotechnology, and human health.
Audience: Both Grad & Undergrad

5. Analyze and interpret published or unpublished metabolomics and lipidomics data to generate biological insights on microbial and/or cellular metabolism.
Audience: Both Grad & Undergrad

6. Analyze and interpret published or unpublished data from isotope-tracer studies to make inferences on pathway activity and metabolic network structure in microbial and/or mammalian cellular systems.
Audience: Both Grad & Undergrad

7. Formulate experimental designs that incorporate metabolomics and isotope tracers to test specific hypothesis related to cellular metabolism.
Audience: Graduate

MICROBIO 657 – BIOINFORMATICS FOR MICROBIOLOGISTS
3 credits.

Provides a practical and fundamental introduction to sequence-based analysis focused on microbial systems. Emphasis on gaining a basic understanding of the principles of both classical and newer algorithms useful for bioinformatic analysis. Topics include: BLAST; RNA-seq analysis; transcriptional binding prediction; genome sequence assembly, analysis and annotation; and comparative genomics. Note that this course requires that each student have access to a laptop that runs a linux/unix Operating System such as a Mac or a ChromeBook. PC Laptops running a VM are also acceptable. No prior knowledge of computational biology is required.
Requisites: MICROBIO 303, BIOCHEM 501, GENETICS 466, or 467 or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate use of the Unix/Linux-based operating system using command line.
Audience: Both Grad & Undergrad

2. Download and install sequence analysis programs locally on a computer.

Audience: Both Grad & Undergrad

3. Evaluate the outcomes of sequence data analysis and determine if an analysis is statistically relevant and robust.
Audience: Both Grad & Undergrad

4. Code complex and advanced programs in python that not only facilitate pipeline construction, but also more in-depth parsing of tool output.
Audience: Both Grad & Undergrad

5. Utilize bioinformatics tools to enable comparative genomics analysis that extend the standard use of those tools.
Audience: Both Grad & Undergrad

6. Evaluate primary literature and determine what available tools are most appropriate for solving a specific analysis problem.
Audience: Both Grad & Undergrad

7. Utilize advanced parameters in BLAST to facilitate complex comparisons across sequence data types.
Audience: Graduate

8. Demonstrate the ability to compile a program from source code so as to leverage local environmental variables for installation.
Audience: Graduate

MICROBIO/BMOLCHEM 668 – MICROBIOLOGY AT ATOMIC RESOLUTION
3 credits.

Three-dimensional protein structures form the basis for discussions of high resolution microbiology; how particular problems are solved with given protein architectures and chemistries and how themes of protein structure are modified and recycled.
Requisites: (BIOCHEM 501 or 507) and (MICROBIO 470 or 612) or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate proficient use of PyMol software for visualizing 3D structures.
Audience: Both Grad & Undergrad

2. Evaluate the quality of published structural models for biological macromolecules.
Audience: Both Grad & Undergrad

3. Identify common themes in structural biology which are used when addressing structural biology research questions.
Audience: Both Grad & Undergrad

4. Design and deliver a presentation to communicate scientific results to an audience of their peers.
Audience: Graduate

MICROBIO 681 – SENIOR HONORS THESIS
2-3 credits.

Individual study for majors completing theses for Honors degrees as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Investigate a science topic in conjunction with other investigators to develop a deep understanding of a research problem.
Audience: Undergraduate

2. Identify a research problem and develop a series of experiments to test a hypothesis related to the problem under investigation.
Audience: Undergraduate

3. Carry out designed experiments and collect data related to the research problem under investigation.
Audience: Undergraduate

4. Analyze the results of experiments and use them to test the validity of the developed hypothesis.
Audience: Undergraduate

5. Communicate the results of investigations via written and/or oral means to an appropriate audience.
Audience: Undergraduate

6. Write an honors thesis that contains an abstract, background, a demonstration of research skills, analysis of the research question, and a summary of the impact of the work.
Audience: Undergraduate

MICROBIO 682 – SENIOR HONORS THESIS
2-4 credits.

Second semester of individual study for majors completing theses for Honors degrees as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Investigate a science topic in conjunction with other investigators to develop a deep understanding of a research problem.
Audience: Undergraduate

2. Identify a research problem and develop a series of experiments to test a hypothesis related to the problem under investigation.
Audience: Undergraduate

3. Carry out designed experiments and collect data related to the research problem under investigation.
Audience: Undergraduate

4. Analyze the results of experiments and use them to test the validity of the developed hypothesis.
Audience: Undergraduate

5. Communicate the results of investigations via written and/or oral means to an appropriate audience.
Audience: Undergraduate

6. Write an honors thesis that contains an abstract, background, a demonstration of research skills, analysis of the research question, and a summary of the impact of the work.
Audience: Undergraduate

MICROBIO 691 – SENIOR THESIS
2 credits.

Individual study for majors completing theses as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Investigate a science topic in conjunction with other investigators to develop a deep understanding of a research problem.
Audience: Undergraduate

2. Identify a research problem and develop a series of experiments to test a hypothesis related to the problem under investigation.
Audience: Undergraduate

3. Carry out designed experiments and collect data related to the research problem under investigation.
Audience: Undergraduate

4. Analyze the results of experiments and use them to test the validity of the developed hypothesis.
Audience: Undergraduate

5. Communicate the results of investigations via written and/or oral means to an appropriate audience.
Audience: Undergraduate

6. Write a thesis that contextualizes the work, presents the research question, describes the experiments performed to answer the question, and analyzes the results.
Audience: Undergraduate

MICROBIO 692 – SENIOR THESIS
2 credits.

Second semester of individual study for majors completing theses as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Investigate a science topic in conjunction with other investigators to develop a deep understanding of a research problem.
Audience: Undergraduate

2. Identify a research problem and develop a series of experiments to test a hypothesis related to the problem under investigation.
Audience: Undergraduate

3. Carry out designed experiments and collect data related to the research problem under investigation.
Audience: Undergraduate

4. Analyze the results of experiments and use them to test the validity of the developed hypothesis.
Audience: Undergraduate

5. Communicate the results of investigations via written and/or oral means to an appropriate audience.
Audience: Undergraduate

6. Write a thesis that contextualizes the work, presents the research question, describes the experiments performed to answer the question, and analyzes the results.
Audience: Undergraduate

MICROBIO 699 – SPECIAL PROBLEMS
1-4 credits.

Individual advanced work in an area of Microbiology under the direct guidance of a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Investigate a science topic in conjunction with other investigators to develop a deep understanding of a research problem.
Audience: Undergraduate

2. Identify a research problem and develop a series of experiments to test a hypothesis related to the problem under investigation.
Audience: Undergraduate

3. Carry out designed experiments and collect data related to the research problem under investigation.
Audience: Undergraduate

4. Analyze the results of experiments and use them to test the validity of the developed hypothesis.
Audience: Undergraduate

5. Communicate the results of investigations via written and/or oral means to an appropriate audience.
Audience: Undergraduate

MICROBIO 710 – MICROBIAL SYMBIOSIS
3 credits.

Covers the themes and diversity of plant and animal associations with microbes with an emphasis on beneficial relationships. Examples will be drawn from recent literature.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

MICROBIO 731 – SEMINAR
1 credit.

Reviews of microbiological subjects, and reports on research work.
Requisites: Declared in Microbiology doctoral program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MICROBIO 810 – CURRENT ISSUES IN MICROBIOLOGY
1 credit.

Explores the diversity of scientific topics comprising the field of contemporary microbiology.
Requisites: Declared in Microbiology doctoral program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

MICROBIO 811 – ADVANCED PROBLEMS IN MICROBIOLOGY
1 credit.

Explores the diversity of scientific topics comprising the field of contemporary microbiology.
Requisites: Declared in Microbiology doctoral program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

MICROBIO 875 – SPECIAL TOPICS
1-4 credits.

Specialized subject matter of current interest to graduate students.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MICROBIO 899 – INDEPENDENT STUDY
1-9 credits.

Independent study or research under the direction of a faculty member in the area of biological science.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify a research problem and develop a series of experiments to test a hypothesis related to the problem under investigation.
Audience: Graduate

2. Carry out designed experiments and collect data related to the research problem under investigation.
Audience: Graduate

3. Analyze the results of experiments and use them to test the validity of the developed hypothesis.
Audience: Graduate

4. Communicate the results of investigations via written and/or oral means to an appropriate audience.
Audience: Graduate

MICROBIO/BIOCHEM 917 – REGULATION OF GENE EXPRESSION (ADVANCED SEMINAR)
1 credit.

Analysis of recent literature in topics related to prokaryotic and eukaryotic gene regulation, including regulation of transcription, translation, and genome organization.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss state-of-the-art research in gene expression and regulation
Audience: Graduate

2. Communicate and critically evaluate experimental results
Audience: Graduate

MICROBIO 990 – RESEARCH
1-9 credits.

Full lab and literature review of a problem in microbiology. Leads to preparation of thesis and publication.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MILITARY SCIENCE (MIL SCI)

MIL SCI 101 – FOUNDATIONS OF OFFICERSHIP
1 credit.

Introduction to life as a commissioned officer. Establishes fundamentals of leadership, Army values and skills required of a successful Army officer.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025

MIL SCI 102 – BASIC LEADERSHIP
1 credit.

Establishes foundation of basic leadership fundamentals such as problem solving, communications, briefing and effective writing, goal setting, techniques for improving listening and speaking skills and an introduction to counseling.
Requisites: None
Repeatable for Credit: No
Last Taught: Spring 2025

MIL SCI 110 – LEADERSHIP LAB 1A
1 credit.

Develop proficiency with hands-on experience in a field environment. Specific activities include military navigation, employment of communications and weapon systems, rappelling, and small unit tactics.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025

MIL SCI 111 – LEADERSHIP LAB 1B
1 credit.

Continuation of MIL SCI 110
Requisites: None
Repeatable for Credit: No
Last Taught: Spring 2025

MIL SCI 201 – INDIVIDUAL LEADERSHIP STUDIES
2 credits.

Identify successful leadership characteristics through observation of others and self through experiential learning exercises. Record observed traits (good and bad) in a dimensional leadership journal and discuss observations in small group settings. Learn map reading and land navigation skills, including conversion of magnetic and grid azimuths and resection.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025

MIL SCI 202 – LEADERSHIP AND TEAMWORK
2 credits.

Study examines how to build successful teams, various methods for influencing action, effective communication in setting and achieving goals, the importance of timing the decision, creativity in the problem solving process and obtaining team buy-in through immediate feedback.
Requisites: None
Repeatable for Credit: No
Last Taught: Spring 2025

MIL SCI 210 – LEADERSHIP LAB 2A
1 credit.

Implement small unit tactical training, learnArmy methods for approaching and reacting to tactical situations. Covers land navigation skills, information processing skills, and Army leadership principles.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025

MIL SCI 211 – LEADERSHIP LAB 2B
1 credit.

Army organization and planning methods, and the opportunity to practice and implement these methods in practical exercises.
Requisites: None
Repeatable for Credit: No
Last Taught: Spring 2025

MIL SCI 301 – LEADERSHIP AND PROBLEM SOLVING
2 credits.

Conduct self-assessment of leadership style, develop personal fitness regimen, and learn to plan and conduct individual/small unit tactical training while testing reasoning and problem solving techniques. Receive direct feedback on leadership abilities.
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Fall 2025

MIL SCI 302 – LEADERSHIP AND ETHICS
2 credits.

Examines the role communications, values and ethics play in effective leadership. Topics include ethical decision-making, consideration of others and survey Army leadership doctrine. Emphasis is on improving oral and written communication abilities, and increasing small unit tactics skills.
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Spring 2025

MIL SCI 310 – LEADERSHIP LAB 3A
1 credit.

Small unit tactical troop leading procedures are taught and practiced. Hand signals, operations orders, and land navigation skills are perfected for preparation for national advanced leadership camp.
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Fall 2025

MIL SCI 311 – LEADERSHIP LAB 3B
1 credit.

Learn in-depth leadership procedures, and practice the Army planning process for groups of 30 personnel. Learn how to conduct Army training and classes in order to teach other cadets based on prior knowledge.
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Spring 2025

MIL SCI 401 – LEADERSHIP AND MANAGEMENT
2 credits.

Develop proficiency in planning and executing complex operations, functioning as a member of a staff, and mentoring subordinates. Explore training management methods of effective staff collaboration, and developmental counseling techniques.
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Fall 2025

MIL SCI 402 – OFFICERSHIP
2 credits.

Includes fundamentals of military law, administrative and logistics procedures and practical exercises on establishing an ethical command climate. Presentations, briefings and leadership positions are used to train and evaluate.
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Spring 2025

MIL SCI 410 – LEADERSHIP LAB 4A
1 credit.

Learn how to allocate resources and time to adequately train large groups of people. Practice creating training plans, and bringing together all of the elements necessary to complete training. Opportunities to aid in the evaluation of others leadership, which gives them the ability to better review their own leadership.
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Fall 2025

MIL SCI 411 – LEADERSHIP LAB 4B
1 credit.

Learn the final elements of an Army officer's job. Mentor and plan training, as well as monitor the effectiveness of others. Learn fine points of improving others performance and getting the most out of subordinates.
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Spring 2025

MOLECULAR AND ENVIRONMENTAL TOXICOLOGY CENTER (M&ENVTOX)

M&ENVTOX/ONCOLOGY/PHM SCI/PHMCOL-M/POP HLTH 625 – TOXICOLOGY I
3 credits.

Basic principles of toxicology and biochemical mechanisms of toxicity in mammalian species and man. Correlation between morphological and functional changes caused by toxicants in different organs of the body.
Requisites: (BIOCHEM 501 or 508) and (ANAT&PHY 335, 435, or (BIOCORE 485 and 486)) and PATH 404; or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss the physiology and pathology of toxicology, understanding the basicfundamentals of toxicology and toxic agents
Audience: Both Grad & Undergrad

2. Demonstrate metabolism and breakdown of toxicants using a given dataset
Audience: Both Grad & Undergrad

3. Recognize various experimental models to obtain scientific results
Audience: Both Grad & Undergrad

4. Implement knowledge to design experiments applicable to one’s own research
Audience: Both Grad & Undergrad

5. Critique an example of toxicology in media and develop a presentation of this example
Audience: Both Grad & Undergrad

6. Explore new areas to assist in career development via journal club
Audience: Graduate

M&ENVTOX/PATH/PHM SCI/PHMCOL-M/POP HLTH 626 – TOXICOLOGY II
3 credits.

Survey of the basic methods and fundamental biochemical mechanisms of toxicity. Toxicity in mammalian organ systems, techniques for evaluating toxicity, as well as mechanisms of species specificity, and environmental interactions (with toxicant examples) are presented.
Requisites: POP HLTH/M&ENVTOX/ONCOLOGY/PHM SCI/PHMCOL-M 625
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain and identify the effects of toxicants on specific organs within the human body
Audience: Both Grad & Undergrad

2. Demonstrate metabolism and reactions of toxicants within organ systems using a given dataset
Audience: Both Grad & Undergrad

3. Classify different means of risk assessment and the conceptual rationale behind these methods
Audience: Both Grad & Undergrad

4. Implement knowledge to design experiments applicable to one's own research
Audience: Both Grad & Undergrad

5. Relate specific organ concepts with conceptual examples from M&ENVTOX 625 to enhance scientific understanding
Audience: Undergraduate

6. Appraise concepts to research to identify future research concepts.
Audience: Graduate

M&ENVTOX/CIV ENGR/SOIL SCI 631 – TOXICANTS IN THE ENVIRONMENT: SOURCES, DISTRIBUTION, FATE, & EFFECTS
3 credits.

Nature, sources, distribution, and fate of contaminants in air, water, soil, and food and potential for harmful exposure.
Requisites: (CHEM 104, 109, or 116) and (MATH 211, 217, or 221) and (PHYSICS 104, 202, 208, or 248), or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe how the physicochemical properties of an organic chemical and equilibrium and kinetic principles influence the distribution of the chemical in the environment
Audience: Both Grad & Undergrad

2. Estimate the physico-chemical properties of organic compounds using linear free energy relationships
Audience: Both Grad & Undergrad

3. Predict the behavior of hazardous organic chemicals in the environment

Audience: Both Grad & Undergrad

4. Derive and use equilibrium and kinetic box models for determining the fate of organic pollutants in the environment
Audience: Graduate

M&ENVTOX 699 – SPECIAL PROBLEMS
1-3 credits.

Directed study projects as arranged with instructor.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2022
Learning Outcomes: 1. Apply concepts learned in coursework to real life situations
Audience: Undergraduate

2. Read and effectively search scientific literature
Audience: Undergraduate

3. Develop critical, analytical, and independent thinking skills
Audience: Undergraduate

M&ENVTOX/POP HLTH 789 – PRINCIPLES OF ENVIRONMENTAL HEALTH: A SYSTEMS THINKING APPROACH
3 credits.

Provides an overview of the field of environmental health, using a systems thinking approach. Systems thinking recognizes that environmental health problem solving is complex and that solutions in one area may have positive or negative impacts on other areas. An introduction to the history of environmental health within the field of public health from the local to the federal and global level. Introduces multiple disciplines, methods and approaches to numerous environmental health topics. Includes introduction to methods and tools necessary for assessing human health risks from a variety of environmental hazards and exposures found in air, land, and water with a focus on physical and chemical risks. Additional details regarding specific hazard, exposure and health outcome data and their relationship to environmental health risk assessment, environmental health decision-making and management form a public health practice perspective will be discussed.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019
Learning Outcomes: 1. Summarize the history of environmental health sciences as a crucial aspect of public health and environmental justice.
Audience: Graduate

2. Discuss and predict why a systems thinking approach is appropriate for addressing environmental health problems and environmental justice.
Audience: Graduate

3. Explain differences in types and classes of environmental hazards (e.g., metals), their sources (e.g. air pollution, land use), how people are exposed and health effects.
Audience: Graduate

4. Understand core principles in toxicology (e.g., toxicokinetics, dose-response) pertain to the environmental health sciences.
Audience: Graduate

5. Analyze an environmental health issue using an environmental health sciences and systems thinking framework and make policy recommendations.
Audience: Graduate

M&ENVTOX 800 – SEMINAR
1 credit.

Current research in environmental toxicology and pathology and other topics of interest and importance to environmental toxicologists.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Design, develop, and present research to audiences of peers within and outside of research area.
Audience: Graduate

2. Evaluate data and appraise presentations.
Audience: Graduate

3. Recognize opportunities in research tools and professional development to further career trajectory.
Audience: Graduate

4. Synthesize data from others to apply towards own research.
Audience: Graduate

M&ENVTOX 801 – SCIENTIFIC COMMUNICATION IN MOLECULAR & ENVIRONMENTAL TOXICOLOGY
2 credits.

Provides an overview of scientific communication; specifically, students will be exposed to the various methods of communicating their science including articles, proposals, presentations / lectures, and posters. Strategies will demonstrate best practices for each method and enable students to critically define what sets apart good examples from poor. Classroom discussions allow for comprehension of these means. Assignments are designed to familiarize the students with these methods. Students will have classroom instruction and the opportunity to learn from peer mentors as well as laboratory directors on different preferences and approaches to science communication.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify best practices when communicating science in multiple forms
Audience: Graduate

2. Synthesize data to create a coherent hypothesis for research question
Audience: Graduate

3. Analyze sources and approaches necessary for a scientific literature review
Audience: Graduate

4. Integrate knowledge to critique a scientific publication that is under review
Audience: Graduate

5. Produce preliminary sections for use in a scientific manuscript
Audience: Graduate

6. Evaluate how to critique scientific proposals and compose meaningful feedback
Audience: Graduate

7. Produce a document for use as a preliminary exam and / or fellowship proposal
Audience: Graduate

8. Organize preliminary data generated in mentored laboratory into a research poster that is both appealing and informative
Audience: Graduate

9. Create a PowerPoint presentation, which will teach students and classmates about a scientific tool or otherwise professional development topic, whose knowledge will be beneficial to students as they advance their careers
Audience: Graduate

10. Produce a Teaching Philosophy statement to start a professional teaching portfolio
Audience: Graduate

M&ENVTOX 990 – RESEARCH
1-9 credits.

Independent research and writing for graduate students under the supervision of a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Exhibit a broad understanding of general toxicology principles
Audience: Graduate

2. Conduct independent research using a variety of approaches
Audience: Graduate

3. Think critically to address research challenges
Audience: Graduate

4. Exhibit and foster professional and ethical conduct in their research
Audience: Graduate

5. Collaborate with other investigators within or outside of the thesis lab
Audience: Graduate

MOLECULAR BIOLOGY (MOL BIOL)

MOL BIOL 681 – SENIOR HONORS THESIS
3 credits.

Individual mentored study for seniors completing theses for Honors in the Major as arranged with a faculty member. Must be declared in an honors program.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MOL BIOL 682 – SENIOR HONORS THESIS
3 credits.

Individual mentored study for seniors completing theses for Honors in the Major as arranged with a faculty member. Must have completed MOL BIO 681 and declared in an honors program.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MOL BIOL 686 – SENIOR HONORS SEMINAR IN MOLECULAR BIOLOGY
1 credit.

A seminar on the origins, present frontiers, and future prospects of molecular biology.
Requisites: Senior standing and declared in an Honors program
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2025

MOL BIOL 691 – SENIOR THESIS
3 credits.

Individual mentored study for seniors completing theses, as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MOL BIOL 692 – SENIOR THESIS
3 credits.

Individual mentored study for seniors completing theses, as arranged with a faculty member. Must have completed MOL BIOL 691.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MOL BIOL 699 – DIRECTED STUDIES IN MOLECULAR BIOLOGY
1-4 credits.

Individual research projects conducted under professorial supervision.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUSIC (MUSIC)

MUSIC 34 – STUDY ABROAD: MUSIC PERFORMANCE ENSEMBLE
1 credit.

A music performing ensemble course taken in a UW-Madison resident study abroad program. Enrollment in a UW-Madison resident study abroad program
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions

MUSIC 40 – WIND ENSEMBLE
1 credit.

Rehearsal and performance of music from wind ensemble and band literature. Audition required.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUSIC 41 – CONCERT BAND
1 credit.

Rehearsal and performance of music from wind ensemble and band literature. Students will audition for placement prior to the beginning of the semester
Requisites: Undergraduate students only (excludes Grad, Pharm, Law, Med, Vet Med, Guest, Special students)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUSIC 42 – VARSITY BAND
1 credit.

Rehearsal and performance of music for athletic events. Audition required.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUSIC 43 – UNIVERSITY BAND
1 credit.

Exploration and performance of standard band literature.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Exhibit accurate individual, sectional, and ensemble skills and advanced instrumental techniques while performing a varied repertoire of music
Audience: Undergraduate

2. Perform expressively a varied repertoire of music
Audience: Undergraduate

3. Utilize standard musical terminology to describe musical elements
Audience: Undergraduate

4. Utilize problem-solving skills to identify and correct problems within a rehearsal setting
Audience: Undergraduate

MUSIC 50 – CONCERT CHOIR
1 credit.

Choral vocal training, study and performance of concert literature. Audition required.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUSIC 52 – TREBLE CHOIR
1 credit.

Explore, rehearse, study, and perform choral repertoire for treble voices.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate musicianship through active contribution and participation in rehearsals and performances
Audience: Undergraduate

2. Demonstrate thorough preparation for rehearsals and performances
Audience: Undergraduate

MUSIC 53 – CHORAL UNION
1 credit.

Choral vocal training, study and performance. Audition required.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023

MUSIC 55 – MASTERS' SINGERS
1 credit.

Choral vocal training, study and performance of concert literature. Students will audition for placement prior to the beginning of the semester
Requisites: Undergraduate students only (excludes Grad, Pharm, Law, Med, Vet Med, Guest, Special students)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2020

MUSIC 56 – CHORALE
1 credit.

Choral vocal training, study and performance of concert literature. Audition required.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUSIC 58 – MADRIGAL SINGERS
1 credit.

Ensemble specializing in 16th- and 17th-century secular music. Audition required.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023

MUSIC 59 – UNIVERSITY CHORUS
1 credit.

Exploration and performance of standard choral literature.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUSIC 60 – ALL-UNIVERSITY STRING ORCHESTRA
1 credit.

Rehearsal and study of string orchestra literature at the introductory level.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUSIC 62 – UNIVERSITY SYMPHONY ORCHESTRA
1 credit.

Playing and public performance of music from symphonic repertoire. Audition required.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUSIC 101 – THE MUSICAL EXPERIENCE
3 credits.

Musical genres -- songs, opera and musical theater, chamber and orchestral music, and jazz -- in the context of social and cultural history.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

MUSIC 102 – JAZZ IN 20TH-CENTURY AMERICA
3 credits.

Examines cultural influences on the development of jazz. Explores historical and ethnographic works by scholars in ethnomusicology, history, anthropology, and communication in order to understand cultural influences of traditional and contemporary genres of jazz. Major topics include syncretism, nationalism, modernity, ethnicity, gender, colonialism, and globalization of modern America. Emphasis on cross-cultural understanding and interdisciplinarity in jazz performance.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize how past racial, gender and ethnic discrimination have constrained economic and artistic opportunities for jazz musicians. Identify how musicians challenged these discriminations to shape contemporary musical practices.
Audience: Undergraduate

2. Explain how different musical practices developed by different African diasporic communities since 1900 have contributed to shaping the sound of jazz.
Audience: Undergraduate

3. Demonstrate understanding of different musical practices developed by different African diasporic communities since 1900.
Audience: Undergraduate

4. Develop critical listening skills and the ability to evaluate historically significant recordings.
Audience: Undergraduate

5. Explain how political movements in America shaped critical responses to jazz music and how jazz musicians reacted to contemporary political events.
Audience: Undergraduate

6. Identify how race has shaped the political economy of music in the United States.
Audience: Undergraduate

7. Recognize how the evolution of musical technologies have shaped the aesthetic development of music.
Audience: Undergraduate

8. Develop tools to conduct ethnographic research on jazz-influenced musical phenomena.
Audience: Undergraduate

9. Practice forming opinions and creating arguments based on scholarship, and communicating opinions and arguments effectively.
Audience: Undergraduate

MUSIC/FOLKLORE 103 – INTRODUCTION TO MUSIC CULTURES OF THE WORLD
3 credits.

An introductory ethnomusicology course providing a variety of ways to approach musics typically not covered in music history courses. Active engagement with these musics within their larger world contexts.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Engage with various musics on students' own terms
Audience: Undergraduate

2. Speak and write clearly about what is heard.
Audience: Undergraduate

3. Recognize and contextualize the several genres of music that represent each cultural area selected for study in the course
Audience: Undergraduate

4. Think rigorously about how positionality, including your own, affects listening and knowledge practices
Audience: Undergraduate

5. Have learned something about yourself -- strengths, weaknesses, biases, desires, tendencies, curiosities
Audience: Undergraduate

MUSIC 104 – STUDY ABROAD: ELEMENTARY MUSIC APPRECIATION/THEORY/HISTORY
1-3 credits.

An elementary-level academic course in music taken in a UW-Madison resident study abroad program. Course does not require any previous background in music. Enrollment in a UW-Madison resident study abroad program
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

MUSIC 105 – STORYTELLING ON STAGE: INTRODUCTION TO MUSICAL THEATER AND OPERA
3 credits.

Introduction to musical theater and opera in Europe and America, with emphasis on the ways creators tell their stories through the interaction of music and drama. Topics include the histories and formations of the genres and their relationships to culture and society; principal creators and performers; distinctive features of representative works; relationships to film and other media; and treatments of race, class, gender, and other issues in selected examples of each genre.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2022
Learning Outcomes: 1. observe the interdependent relationship between musical composers, performers, and audiences that has shaped the histories of musical theater and opera
Audience: Undergraduate

2. promote critical thinking skills by linking course content with personal experiences and observations
Audience: Undergraduate

3. strengthen communication skills through written assignments and discussion
Audience: Undergraduate

4. identify representative passages from works studied
Audience: Undergraduate

5. understand the historical and social conditions under which opera and musical theater was produced in different times and places
Audience: Undergraduate

6. acquire vocabulary for identifying and describing features of selected works
Audience: Undergraduate

MUSIC 106 – THE SYMPHONY
3 credits.

Orchestral music from Haydn to present, relation to other arts.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2022

MUSIC 107 – MUSIC & FILM
3 credits.

A survey of film music by the major film composers. Will include study of film scores by, among others, Alfred Newman, Max Steiner, Bernard Herrmann, and Ennio Morricone, as well as a discussion of current trends and film composers. In addition, there will be discussion of the contributions of composers such as Aaron Copland, Serge Prokofiev and Leonard Bernstein. The techniques and styles of film music will be explored through lectures, required listening, readings and viewing of relevant films.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

MUSIC 108 – MUSIC AND TECHNOLOGY FROM EDISON TO THE PRESENT
3 credits.

How has modern technology shaped the composition, performance, and reception of music? In turn, how has music influenced technology? And what sorts of anxieties arose from these cultural currents? Evaluate the changing relationships between music and technology from the late Romantic era to the present day. Considering broader political, cultural, and aesthetic contexts, explore both popular and art music alongside important developments in instrument design, compositional techniques, media, and recording. Consider what it means for something to be considered a "technology" and the social, cultural, and environmental ramifications therein. Musicians to be studied include Bela Bartok, Karlheinz Stockhausen, Gyorgy Ligeti, Donna Summer, Grandmaster Flash, Afrika Bambaataa, Beyonce, and more. Gain a better understanding of the cultural and social constructions of technologies like the wax cylinder, radio, gramophone, microphone, synthesizer, and internet.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Describe what you hear in music using basic technical terminology.
Audience: Undergraduate

2. Recognize and contextualize several genres of music.
Audience: Undergraduate

3. Discuss musical meaning in relation to its social, political, and cultural contexts.
Audience: Undergraduate

4. Examine your relationship to music and sound in general.
Audience: Undergraduate

5. Express understanding of and appreciation for the ways that music, sound, and technology interact in our daily lives.
Audience: Undergraduate

MUSIC 113 – MUSIC IN PERFORMANCE
1 credit.

Descriptive lectures on chamber music with performances by instructor and others.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, for 3 number of completions
Last Taught: Fall 2025

MUSIC 121 – MUSICA PRACTICA 1
3 credits.

Strategies for composing, understanding, and writing about music.
Requisites: Declared in Music, Music: Performance or Music: Education
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

MUSIC 122 – MUSICA PRACTICA 2
3 credits.

Continuation of strategies for composing, understanding, and writing about music.
Requisites: MUSIC 121 and 171 and concurrent enrollment in MUSIC 172
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

MUSIC 151 – BASIC CONCEPTS OF MUSIC THEORY
3 credits.

Basic tools of music theory and compositional forms. Explores development of music through general survey of musical styles. Practical application of concepts includes listening maps and simple composition projects. Includes performance opportunities in simulated real world settings.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

MUSIC 171 – MUSICA PRACTICA: AURAL SKILLS 1
1 credit.

Intoductory istruction in aural skills.
Requisites: Concurrent enrollment in MUSIC 121
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

MUSIC 172 – MUSICA PRACTICA: AURAL SKILLS 2
1 credit.

Continuation of introductory instruction in aural skills.
Requisites: MUSIC 171 and concurrent enrollment in MUSIC 122
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

MUSIC 202 – DELTA BLUES
3 credits.

Traces the history of the blues in America's racial history. Begins by examining the living conditions that produced the blues in rural Mississippi (sharecropping, the cotton industry, the Great Flood of 1927). Continues by detailing the emergence of blues in the early recording industry (Paramount, OKeh), including the earliest examples (W.C. Handy, Mamie Smith), as well as the singers emerging in the 1920s (Blind Lemon Jefferson, Charley Patton, Robert Johnson). Follows migrations northward to Memphis (jug bands) and Chicago (electric blues), tracing the emerging importance of radio and live performance (King Biscuit Time, WDIA, the Chittlin' Circuit), living conditions in Chicago (Maxwell Street). Tracks early marketing of blues to white audiences (Josh White, Lead Belly). Ends with the reemergence of the blues as '60s folk music (Son House, Sonny Boy Williamson II) and British Invasion (Yardbirds). Supplemented with extensive musical selections, documentary footage of interviews.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2021
Learning Outcomes: 1. Identify representative styles, performers, and formal patterns relating to Delta blues.
Audience: Undergraduate

2. Identify major historical developments in the evolution of Delta blues.
Audience: Undergraduate

3. Understand blues performers in terms of their personal and social lives, and distinguish between these individual lives and the mythologizing narratives offered in their place.
Audience: Undergraduate

4. Describe and explain elements of blues and blues history verbally.
Audience: Undergraduate

5. Construct knowledge about musical repertories by researching them online and directly listening to them.
Audience: Undergraduate

MUSIC 203 — AMERICAN ETHNICITIES AND POPULAR SONG
3 credits.

Examination of the role played by popular song in the formation of ethnic and racial identities in the United States with particular emphasis placed on both music's role in the perpetuation of racism and its use as a form of protest and anti-racist activism.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2022
Learning Outcomes: 1. define race and ethnicity and commonly used terms and concepts related to them
Audience: Undergraduate

2. recognize ethnic and racial stereotypes and caricatures and analyze the effects of their use in American popular song
Audience: Undergraduate

3. explain the cultural power inherent in names and the act of naming and the use of popular song to amplify or diminish that power with respect to racially defined groups
Audience: Undergraduate

4. identify ways in which popular song contributes to the creation and maintenance of racially defined American spaces and places
Audience: Undergraduate

5. describe and critique the process of cultural appropriation in American popular music
Audience: Undergraduate

6. recall key events in the history of American protest music and apply knowledge of that history to the evaluation of current anti-racism initiatives
Audience: Undergraduate

MUSIC 204 — STUDY ABROAD: INTERMEDIATE MUSIC THEORY OR HISTORY
1-3 credits.

An intermediate-level academic course in music taken in a UW-Madison resident study abroad program. Course must be taught at an intermediate level as determined by the School of Music based on prerequisites and/or course syllabus. Enrollment in a UW-Madison resident study abroad program
Requisites: None
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No

MUSIC 211 — SURVEY OF THE HISTORY OF WESTERN MUSIC
3 credits.

Introduction to development of music in the European tradition, before 1750.
Requisites: MUSIC 122 and 172
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

MUSIC 212 — SURVEY OF THE HISTORY OF WESTERN MUSIC
3 credits.

Introduction to development of music in the European tradition, 1750 to the present.
Requisites: MUSIC 122 and 172
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe principal repertory in the western music canon for the period from 1750 up to about 1960.
Audience: Undergraduate

2. Differentiate the principal musical styles in the western music canon for the period from 1750 up to about 1960.
Audience: Undergraduate

3. Articulate and apply key terms related to the western music canon for the period from 1750 up to about 1960.
Audience: Undergraduate

4. Recognize and identify the large-scale historical trends for the period from 1750 up to about 1960.
Audience: Undergraduate

MUSIC 221 — MUSICA PRACTICA 3
3 credits.

Advanced strategies for composing, understanding, and writing about music.
Requisites: MUSIC 122 and 172
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

MUSIC 222 – MUSICA PRACTICA 4
3 credits.

Advanced strategies for composing, understanding, and writing about music.
Requisites: MUSIC 221 and concurrent enrollment in MUSIC 272
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

MUSIC 229 – JAZZ THEORY & COMPOSITION
3 credits.

Introduction to the applied theory of functional tonal and modal jazz harmony; analysis of song forms from the standard jazz repertoire; study of reharmonization techniques, chord substitution, and types of chord voicings; principles of melodic writing and motivic development, jazz counterpoint, and voice-leading considerations; and writing for common instruments in jazz ensembles. Students will analyze compositions from the standard jazz repertoire and apply the principles studied to create their own compositions for small jazz ensemble.
Requisites: MUSIC 122 and 172
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

MUSIC 236 – BASCOM COURSE
3 credits.

A low-enrollment course developing skills in critical reading, logical thinking, use of evidence, and use of library resources. Emphasis on writing in the conventions of specific fields.
Requisites: Satisfied Communications A requirement
Course Designation: Gen Ed - Communication Part B
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2022

MUSIC 240 – INTERPLAY BETWEEN MUSIC, ART, AND SOCIETY
3 credits.

Explore the relationships between the arts as they intersect with aspects of society, historically and in the present day, through various visual, auditory, and text-based expressive forms. Examine personal life experiences and ideas along with current issues related to music and art, and practice self-expression through the arts. No previous experience in any art form is necessary.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Discover and/or explore individual artistic and musical abilities
Audience: Undergraduate

2. Transform from passive to active music listener and from consumer to creator of art
Audience: Undergraduate

3. Explore societal issues and their relationship to the arts through written reflection assignments
Audience: Undergraduate

4. Examine the roles that the arts play in society and relate that to their own lives and communities.
Audience: Undergraduate

5. Create artistic works individually, and in groups, in order to foster curiosity, empathy, and community
Audience: Undergraduate

MUSIC 252 – INTRODUCTION TO CONDUCTING AND PEDAGOGY
2 credits.

Introduction to the basic elements in conducting. Students will learn elementary conducting skills including technique, score study, rehearsal preparation, rehearsal structure, private studio construction, teaching techniques, and professional marketing.
Requisites: MUSIC 212, 221, and 271
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

MUSIC 253 – CONDUCTING
2 credits.

Conducting techniques, emphasis on practical application to vocal and instrumental groups.
Requisites: MUSIC 212, 221, and 271
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the function of conducting and the various roles of the conductor throughout and rehearsal/performance process.
Audience: Undergraduate

2. Demonstrate the basic conducting patters/gestures associated with the range of musical meters and styles.
Audience: Undergraduate

3. Demonstrate the alterations to the conducting gestures needed to show/change dynamics, tempo, articulations, accents, and phrasing.
Audience: Undergraduate

4. Demonstrate the ability to initiate a proper breath, to start or stop a musical phrase, show internal cues and cut- offs, and choose and conduct the three fermata types.
Audience: Undergraduate

5. Exhibit a developing mastery over use of the left hand (or right hand) in conducting, choosing when and how best to employ it.
Audience: Undergraduate

6. Determine the range of possible conducting choices for any given piece of music.
Audience: Undergraduate

7. Analyze a piece of music, prepare a score study, and determine how this would affect the rehearsing and performance of that piece.
Audience: Undergraduate

MUSIC 254 – CONDUCTING
2 credits.

Continuation of conducting techniques, emphasis on practical application to vocal and instrumental groups.
Requisites: MUSIC 253
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop language to communicate musical ideas to an ensemble
Audience: Undergraduate

2. Demonstrate effective use of Cues
Audience: Undergraduate

3. Demonstrate effective use of Dynamics
Audience: Undergraduate

4. Demonstrate effective use of Fermatas & releases
Audience: Undergraduate

5. Demonstrate effective use of Subdivisions
Audience: Undergraduate

6. Demonstrate effective use of Accelerando and ritardando
Audience: Undergraduate

7. Demonstrate effective use of Asymmetrical meter
Audience: Undergraduate

8. Demonstrate effective use of Mixed-meter
Audience: Undergraduate

9. Demonstrate skill with Hand independence
Audience: Undergraduate

MUSIC 256 – UNIVERSITY OPERA
1-2 credits.

Opera role: preparation, rehearsal and performance in University opera production. Contact School of Music for audition information
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUSIC 257 – OPERA WORKSHOP
2 credits.

Performance of scenes from standard operas, including singing, accompanying, and dramatic action; instruction in voice projection, posture, and gesture; problems of staging, lighting, costuming, and scenery. Contact School of Music for audition information
Requisites: Consent of instructor
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUSIC 260 – GLOBAL HAND DRUMMING ENSEMBLE: SURVEY OF SELECTED GLOBAL HAND DRUMMING TRADITIONS
1 credit.

Exploration of a variety of global drumming traditions culminating in group performance opportunities. Learn specific techniques and rhythms as well as skills required to facilitate drum circles for all levels of players.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Study and perform music from various global cultures.
Audience: Undergraduate

2. Learn techniques and information required to facilitate community and school drumming groups.
Audience: Undergraduate

3. Illustrate competency in basic procedures for tuning and maintaining the instruments required for such an ensemble.
Audience: Undergraduate

4. Demonstrate a discerning ear and requisite skills for musical comparisons and analysis.
Audience: Undergraduate

5. Recognize nuances of musical style and rhythm in the context of drumming.
Audience: Undergraduate

MUSIC 262 – JAZZ ENSEMBLE
1 credit.

Assignments in performing ensemble literature. Audition and instructor consent required for students enrolling the first time
Requisites: MUSIC 262
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUSIC 265 – ENSEMBLE-WOODWIND
1 credit.

Assignments in performing ensemble literature. Audition and instructor consent required for students enrolling the first time
Requisites: MUSIC 265
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUSIC 266 – RESISTANCE MUSIC ENSEMBLE
1 credit.

Assignments in performing ensemble literature. Explore a variety of musical styles created from social movements and generational and cultural identity, through rehearsals and performance. Styles to be covered, studied, and performed include, but are not limited to Hip Hop, Reggae, Jazz, and Cumbia. Audition and instructor consent required for students enrolling the first time
Requisites: MUSIC 266
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Rehearse and competently perform in multiple live settings repertoire composed and recorded by marginalized groups and inspired by resistance to its given hegemony
Audience: Undergraduate

2. Perform music composed and/or recorded by the artist(s) studied with technical accuracy, stylistic authenticity and individual creativity
Audience: Undergraduate

3. Contextualize the repertoire in its culture and history
Audience: Undergraduate

4. Internalize the rhythmic concepts associated by the indicated musical style
Audience: Undergraduate

5. Make continual improvements in the areas of individual tone production, music reading, and improvisation, and develop and enhance ensemble communication and interaction
Audience: Undergraduate

MUSIC 267 – ENSEMBLE-BRASS
1 credit.

Assignments in performing ensemble literature. Audition and instructor consent required for students enrolling the first time
Requisites: MUSIC 267
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUSIC 268 – ENSEMBLE-PERCUSSION
1 credit.

Assignments in performing ensemble literature. Audition and instructor consent required for students enrolling the first time
Requisites: MUSIC 268
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUSIC 269 – ENSEMBLE-STRING
1 credit.

Assignments in performing ensemble literature. Audition and instructor consent required for students enrolling the first time
Requisites: MUSIC 269
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUSIC 270 – ENSEMBLE-GUITAR
1 credit.

Rehearsal, coaching and preparing guitar literature for performance of duos, trios, and quartets. Audition and instructor consent required for students enrolling the first time. Musicians other than guitarists are permitted to enroll and be incorporated into the ensembles.
Requisites: MUSIC 270
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUSIC 271 – MUSICA PRACTICA: AURAL SKILLS 3
1 credit.

Intermediate aural skills instruction.
Requisites: MUSIC 122 and concurrent enrollment in MUSIC 221
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

MUSIC 272 – MUSICA PRACTICA: AURAL SKILLS 4
1 credit.

Intermediate aural skills instruction.
Requisites: MUSIC 221 and concurrent enrollment in MUSIC 222
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

MUSIC 297 – SPECIAL TOPICS IN MUSIC
1-3 credits.

Exploration of wide-ranging topics in music history, music performance, music theory or music education.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Develop and apply foundational concepts of musical study in performance, theory, history, or pedagogy.
Audience: Undergraduate

2. Develop the ability to learn independently and to integrate knowledge across domains of research and applied studies.
Audience: Undergraduate

3. Communicate musical ideas and concepts verbally, in writing, or through public performance.
Audience: Undergraduate

4. Develop skill in working collaboratively and professionally in applied and academic settings.
Audience: Undergraduate

MUSIC/CURRIC 300 – PRINCIPLES OF MUSIC EDUCATION
2 credits.

Principles of music education, including philosophy, history, and current practices and curricular trends. Survey of music education in and out of schools as situated within diverse, pluralistic communities.
Requisites: Declared in Music: Education BM and sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain why music and music education are important, valuable, and meaningful.
Audience: Undergraduate

2. Demonstrate understandings of and dispositions toward music learning and teaching that are mindful, inclusive, respectful, empathic, relevant, and responsive to human difference.
Audience: Undergraduate

3. Develop and demonstrate awareness, sensitivity, and honor for human differences, including gender, sexuality, race, ethnicity, nationality, culture, class, language, religion, and ability.
Audience: Undergraduate

4. Demonstrate developing awareness of the connection between how you think about music learning and teaching and how those beliefs play out in all decisions that you make regarding your music classroom.
Audience: Undergraduate

5. Develop awareness of your own unique musical experiences and personality traits.
Audience: Undergraduate

6. Identify traits of successful music educators and the professional characteristics, expectations, sensitivity, and interpersonal skills required of music educators.
Audience: Undergraduate

MUSIC/CURRIC 301 – MUSIC LEARNING AND TEACHING 1
2 credits.

The learning and teaching of music at the elementary and middle school levels.
Requisites: MUSIC/CURRIC 300 and concurrently enrolled in MUSIC/CURRIC 337 and declared in Music: Education
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

MUSIC/CURRIC 302 – MUSIC LEARNING AND TEACHING 2
2 credits.

The learning and teaching of music at the high school level.
Requisites: MUSIC/CURRIC 301 and MUSIC/CURRIC 337
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

MUSIC/CURRIC 304 – COMPOSITION, ARRANGEMENT, AND ORCHESTRATION FOR THE MUSIC TEACHER
2 credits.

Introduction to the teaching of musical composition, arrangement, and orchestration. Special emphasis on how music technologies interact with conceptions of composition, arrangement, and orchestration; implications for music learning and teaching.
Requisites: MUS PERF 104
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

MUSIC 317 – MUSICAL WOMEN IN EUROPE AND AMERICA: CREATIVITY, PERFORMANCE, AND IDENTITY
3 credits.

Explores women's musical activities and issues related to them by focusing on composers, performers, and audiences in a wide range of contexts, from Europe in the Medieval Era through 21st-century America; no reading knowledge of music is required.
Requisites: Sophomore standing and declared in an Honors program
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. understand cultural processes that have privileged and rewarded the achievement of certain individuals and groups over that of others throughout history
Audience: Undergraduate

2. observe the interdependent relationship between musical composers, performers, and audiences that has shaped music's history, focusing on gender differences
Audience: Undergraduate

3. promote critical thinking skills by asking students to link course content with personal experiences and observations and understand the interconnectedness of various forms of art and culture through the implications of gender-related concerns on music's development
Audience: Undergraduate

4. strengthen written and oral communication skills through oral and written assignments, discussion, and presentations on related topics
Audience: Undergraduate

MUSIC/AFROAMER/DANCE 318 – CULTURAL CROSS CURRENTS: WEST AFRICAN DANCE/MUSIC IN THE AMERICAS
3 credits.

The influence of traditional West African dance/music heritage in historical, artistic, social contexts in the development of new hybrid forms of music/dance created by cross-pollination of cultures of Africans, Europeans and indigenous peoples in the New World.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

MUSIC 319 – TOPICS IN MUSIC AND ETHNICITY IN THE UNITED STATES
3 credits.

Explores music of ethnic groups in the U.S., including that of marginalized minorities, in its cultural context. Topics may include the music of African American, Asian American, Native American and Jewish communities.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

MUSIC 329 – JAZZ ARRANGING
3 credits.

Survey of standard musical techniques and devices for arranging lead-sheet-based jazz compositions for medium and large jazz ensembles through score study, musical exercises, and arranging projects for live ensembles. Topics include jazz counterpoint and melody writing; preparing arrangements through outlines and condensed scores; chord substitutions and reharmonization; ranges, timbres, notational and technical considerations of standard jazz instruments; motivic development; voicing techniques, including mechanical, spreads, upper structure triads, and voicings in 4ths, 5ths and clusters; and orchestration techniques, including couplings and concerted writing.
Requisites: MUSIC 229
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. read, comprehend, and analyze scores for medium and large jazz ensemble
Audience: Undergraduate

2. compose for all common jazz instruments
Audience: Undergraduate

3. compose contrapuntal melodies in a jazz idiom
Audience: Undergraduate

4. arrange for medium and large jazz ensemble using common voicing and orchestration techniques
Audience: Undergraduate

MUSIC 331 – JAZZ IMPROVISATION
3 credits.

Theoretical concepts, development of aural skills, and analysis procedures related to the jazz idiom. Audition required.
Requisites: Consent of instructor
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

MUSIC 332 – JAZZ IMPROVISATION
3 credits.

More advanced theoretical concepts, development of aural skills, and analysis procedures related to the jazz idiom.
Requisites: MUSIC 331
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

MUSIC/CURRIC 337 – PRACTICUM IN TEACHING MUSIC
1 credit.

Observation and participation in K-12 music education settings.
Requisites: Declared in Music: Education and concurrent enrollment in MUSIC/CURRIC 301 or 302
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Workplace - Workplace Experience Course
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUSIC 340 – PEDAGOGY
1-2 credits.

Pedagogical methods for applied music offered on all instruments and voice by appropriate applied staff. Survey of music, methods, and materials.
Requisites: MUS PERF 401, 402, 403, 405, 407, 409, 411, 413, 415, 417, 419, 421, 423, 425, 427, 431, 433, 435, 437, 439, or 440
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUSIC/CURRIC 344 – TEACHING VOCAL STYLES IN THE MUSIC CLASSROOM
1 credit.

Introduction to the teaching and learning of diverse vocal styles. Special emphasis on what makes each style distinct, as well as the acquisition practices associated with each style.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2019

MUSIC 346 – REPERTOIRE
1-2 credits.

A comprehensive study of sources, analysis, and style of repertoire for a particular instrument(s) or voice(s).
Requisites: MUS PERF 401, 402, 403, 405, 407, 409, 411, 413, 415, 417, 419, 421, 423, 425, 427, 431, 433, 435, 437, 439, or 440
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUSIC 405 – SEMINAR: CULTURAL STUDY OF MUSIC
3 credits.

Explores various topics in music research from the perspective of contemporary cultural theory and history. Develops skills in critical analysis of music and culture, drawing from literatures in postcolonial studies, critical race theory, studies of empire, colonialism, and capitalism.
Requisites: MUSIC 212 or declared in Music, Music: Education, or Music: Performance graduate program
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2022

MUSIC/CURRIC 409 – STUDENT TEACHING IN GENERAL AND VOCAL MUSIC
6-12 credits.

Supervised student teaching in general and vocal K-12 settings.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Workplace - Workplace Experience Course
Repeatable for Credit: No
Last Taught: Fall 2025

MUSIC/CURRIC 410 – STUDENT TEACHING IN GENERAL AND INSTRUMENTAL MUSIC
6-12 credits.

Supervised student teaching in general and instrumental K-12 settings.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Workplace - Workplace Experience Course
Repeatable for Credit: No
Last Taught: Spring 2025

MUSIC 411 – SURVEY OF MUSIC IN THE MIDDLE AGES
3 credits.

Major genres and composers of monophonic and polyphonic music, sacred and secular in Western Europe and England (ca. 7th-14th centuries).
Requisites: MUSIC 212 or declared in Music, Music: Education, or Music: Performance graduate program
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

MUSIC 412 – SURVEY OF MUSIC IN THE RENAISSANCE
3 credits.

Major genres and composers of sacred and secular music (ca. 15th-16th centuries).
Requisites: MUSIC 212 or declared in Music, Music: Education, or Music: Performance graduate program
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

MUSIC 413 – SURVEY OF MUSIC IN THE BAROQUE ERA
3 credits.

Major genres and composers of sacred and secular music in Western Europe (ca. 1600-1750).
Requisites: MUSIC 212 or declared in Music, Music: Education, or Music: Performance graduate program
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021

MUSIC 414 – SURVEY OF MUSIC IN THE CLASSIC ERA
3 credits.

Major genres and composers in Western Europe (ca. 1750-1827).
Requisites: MUSIC 212 or declared in Music, Music: Education, or Music: Performance graduate program
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

MUSIC 415 – SURVEY OF MUSIC IN THE ROMANTIC ERA
3 credits.

Major genres and composers in Europe (ca. 1820-1910).
Requisites: MUSIC 212 or declared in Music, Music: Education, or Music: Performance graduate program
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

MUSIC 416 – SURVEY OF MUSIC IN THE TWENTIETH CENTURY
3 credits.

Major genres and composers in Europe and the United States.
Requisites: MUSIC 212 or declared in Music, Music: Education, or Music: Performance graduate program
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022

MUSIC 417 – JAZZ HISTORIES
3 credits.

Examination of jazz history with an emphasis on scholarship, criticism, and fictional representations of jazz culture especially as they relate to the African American diaspora. Emphasis on relationship between the history of racial inequality in the United States and the development of jazz and jazz scholarship.
Requisites: MUSIC 212 or declared in Music, Music: Education, or Music: Performance
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate familiarity with jazz scholarship by scholars and critics
Audience: Undergraduate

2. Describe the historical significance of prominent scholars and jazz figures as they relate to the history of African American communities the United States
Audience: Undergraduate

3. Analyze the role of oral history (especially by African American artists) in disrupting the knowledge base established by written histories
Audience: Undergraduate

4. Engage with a respected jazz artist by engaging with a class guest
Audience: Undergraduate

5. Demonstrate familiarity with key terms and concepts in discussions of jazz and jazz history
Audience: Undergraduate

6. Describe the large-scale historical and cultural trends relating to the performance and discussion of jazz from approximately 1900 to the present
Audience: Undergraduate

7. Communicate informed opinions based on primary source materials and oral histories, based on knowledge from scholarly materials
Audience: Undergraduate

MUSIC 419 – MUSIC IN THE UNITED STATES
3 credits.

Explores a variety of genres within their social and historical contexts including folk songs and ballads, the Native American Pow Wow, New England psalmody, popular song repertories, musical theater and opera, concert music, blues and jazz.
Requisites: MUSIC 212 or declared in Music, Music: Education, or Music: Performance graduate program
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023

MUSIC/CURRIC 420 – TEACHING POPULAR INSTRUMENTAL MUSIC 1
1 credit.

Development of critical perspectives, musical knowledge, and pedagogical skills needed to teach instrumental popular music. Focus on popular string instruments, their electronic counterparts, and emerging technologies for the performance and production of popular music.
Requisites: Declared in Music: Education BM and sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop basic skills necessary for teaching and learning various popular music styles on the guitar, bass, and drum set.
Audience: Undergraduate

2. Develop a series of instructional strategies for teaching, focusing on lesson plans and curricular units that incorporate instruments commonly used in popular music.
Audience: Undergraduate

3. Develop critical perspectives on popular music by exploring the intersection of popular music with issues of identity, technology, and globalization.
Audience: Undergraduate

MUSIC/CURRIC 421 – TEACHING POPULAR INSTRUMENTAL MUSIC 2
1 credit.

Development of critical perspectives, musical knowledge, and pedagogical skills needed to teach instrumental popular music. Focus on popular percussion instruments, their electronic counterparts, and emerging technologies for the performance and production of popular music.
Requisites: Declared in Music: Education BM and sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop skills associated with digital audio workstations (DAWS), including inputting MIDI, manipulating audio files, and recording.
Audience: Undergraduate

2. Examine and implement pedagogies of popular music associated with DAWs.
Audience: Undergraduate

3. Critically interrogate issues of power and identity (including race, gender, class, and ability) in music education and schooling through popular music.
Audience: Undergraduate

MUSIC 422 – FUNDAMENTALS OF MUSIC PRODUCTION
3 credits.

Introduction to the theory and practices of digital audio recording and editing. Covers basic background knowledge of signal flow, culminating in hands-on operation of a digital audio workstation. Introduction to industry standard software and hardware. Related equipment, including microphones, virtual instruments, and outboard processors are covered. Ear Training terms and skills, studio definitions and nomenclature for equipment, and terminology used in the current professional environment. Learn how to make music "in the box" using only a computer, then transition to working with real musicians.
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the science of sound, including concepts like the Nyquist Theorem, how we perceive pitch and amplitude, resonance, and how audio becomes digitized.
Audience: Undergraduate

2. Practice all phases of a recording project from pre-production to recording, editing, and mixing.
Audience: Undergraduate

3. Record high-quality audio applying various stereo and mono recording techniques.
Audience: Undergraduate

4. Use recording industry standard software and virtual instruments to create musical compositions.
Audience: Undergraduate

MUSIC 461 – COLLEGIUM MUSICUM
1 credit.

Early Music Ensemble specializing in performance of instrumental and vocal early music, using the school's collection of replicas of early instruments. Audition required.
Requisites: Consent of instructor
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUSIC 463 – ACTING FOR SINGERS
1 credit.

Acting and stagecraft skills, including text-targeted work, with a focus on the dramatic aspects of the operatic craft. Text work in will involve a step-by-step process designed to facilitate the assimilation of English and foreign-language texts in rehearsal and performance. Work in these areas will be applied to arias and scenes from the operatic and theatrical repertoire.
Requisites: MUS PERF 144, 205, 505 or concurrent enrollment in MUS PERF 505, or 705 or concurrent enrollment in MUS PERF 705
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 2 number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Develop stagecraft skills, particularly those specific to opera
Audience: Both Grad & Undergrad

2. Establish a methodological approach to acting operatic material through attention to texts, individual emotional preparation, personalization, and moment-to-moment work
Audience: Both Grad & Undergrad

3. Work fluidly back and forth between foreign-language texts and their English translations (using literal, word-for-word translations as well as vernacular English language paraphrasing) arriving at a sense of “owning the text”
Audience: Both Grad & Undergrad

4. Incorporate the fundamentals of Stanislavsky and/or Chekhov acting technique methodologies into rehearsal and performance
Audience: Both Grad & Undergrad

5. Cultivate a sense of ensemble within both small and large groups, fostering a true understanding of collaboration
Audience: Both Grad & Undergrad

6. Support colleagues’ work and receive their support in return
Audience: Undergraduate

7. Develop intermediate-level stagecraft skills, particularly those specific to opera
Audience: Undergraduate

8. Expand the understanding of the symbiotic relationship between acting and singing in operatic performance
Audience: Graduate

9. Integrate other areas of music and voice study (music history, music theory, foreign language diction) into stagework
Audience: Graduate

10. Improve the performer's effectiveness in audition and performance
Audience: Both Grad & Undergrad

11. Communicate verbally and in writing concepts concerning acting techniques for classical singers
Audience: Both Grad & Undergrad

MUSIC 465 – MARCHING BAND TECHNIQUES
1 credit.

Exploration of methods and materials related to marching band teaching, philosophy, and performance.
Requisites: MUSIC 42 or declared in Music, Music: Education, or Music: Performance
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, for 2 number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Understand methods and materials related to secondary school marching band design and administration
Audience: Undergraduate

2. Design a marching band show, including creating charts with computer-assisted drill-writing software
Audience: Undergraduate

3. Connect fundamental musical knowledge to visual concepts in creating imagery and explain the reasoning behind design choices
Audience: Undergraduate

4. Establish a methodical approach for teaching within a marching band setting
Audience: Undergraduate

5. Identify marching band performance practice trends by exploring a concise history of the art form
Audience: Undergraduate

6. Evaluate, discuss, and support the work of peers
Audience: Undergraduate

7. Communicate verbally and in writing concepts related to Marching Band Techniques
Audience: Undergraduate

MUSIC 466 – DICTION FOR SINGERS
2 credits.

Italian, German, and French diction as related to vocal music; transcription into the International Phonetic Alphabet (IPA).
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

MUSIC 467 – LANGUAGE DICTION FOR SINGING I
2 credits.

English, German, Italian, and French diction as related to vocal music.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

MUSIC 468 – LANGUAGE DICTION FOR SINGING II
2 credits.

Continuation of English, German, Italian, and French diction as related to vocal music.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

MUSIC 497 – SPECIAL TOPICS IN MUSIC
1-3 credits.

Exploration of wide-ranging topics in music history, music theory or music education.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUSIC 499 – DIRECTED STUDY
1-3 credits.

Individual research and projects with faculty. Students must have project and instructor assignment approved by department
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUSIC 502 – FIGURED BASS AND BASSO CONTINUO
3 credits.

Study of theory and practice of 17th and 18th-century figured bass and basso continuo realization and performance. Participants develop extemporized and written realizations that emulate the discipline, style traits, and musical vitality suggested in historical sources.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021

MUSIC 511 – HISTORICAL PERFORMANCE PRACTICES
3 credits.

Examination of historical evidence for performance practice and its relevance to modern performances of the music of earlier eras.
Requisites: MUSIC 212 or declared in Music, Music: Education, or Music: Performance graduate program
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

MUSIC 513 – SURVEY OF OPERA
3 credits.

Historical development of opera; investigation of main stylistic features of representative masterworks.
Requisites: MUSIC 212 or declared in Music, Music: Education, or Music: Performance graduate program
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022

MUSIC/FOLKLORE 515 – PROSEMINAR IN ETHNOMUSICOLOGY
3 credits.

Introduction to ethnomusicology, including historical survey of major works in the field, classification of musical instruments, measurement of tuning systems and concepts of scale, mode and rhythm in non-Western music.
Requisites: Graduate/professional standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

MUSIC/FOLKLORE 516 – ETHNOGRAPHIC METHODS FOR MUSIC AND SOUND
3 credits.

Focuses on the tools (material, methodological, and ethical) for doing ethnographic fieldwork in musical contexts.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Demonstrate familiarity with a body of (ethno)musicological and anthropological literature on ethnographic methods.
Audience: Graduate

2. Decipher and explicate difficult texts with increased confidence.
Audience: Graduate

3. Design and carry out ethnographic research projects.
Audience: Graduate

4. Demonstrate an awareness of power dynamics and your own position as researcher.
Audience: Graduate

5. Facilitate discussions effectively.
Audience: Graduate

6. Track key terms across (ethno)musicological and anthropological literature, describing how ethnographers' relationships with these have changed over time.
Audience: Graduate

MUSIC 517 – PROSEMINAR IN MUSIC THEORY
3 credits.

Consider the meaning of the words "analysis" and "theory," specifically as they have been applied to the study of music. Gain an overview of music theory in higher education: the origin of contemporary analytical praxis, as well as critiques of that model. Take a deeper dive into current trends in analysis, focusing on non-conforming, ecumenical, and otherwise "non-theoretical" ways of talking and writing about music, including narrative, semiotics, hermeneutics, performance-based schemata, and others.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Articulate important trends in music analysis
Audience: Graduate

2. Examine and debate the role of music theory and analysis within academia
Audience: Graduate

3. Hone critical writing and research skills essential for graduate study
Audience: Graduate

4. Actively participate in vibrant seminar discussions
Audience: Graduate

5. Imagine and implement original analytical techniques
Audience: Graduate

MUSIC 523 – ORCHESTRATION I
3 credits.

History of orchestration and arranging; study of representative works by means of scores, recordings, and attendance at rehearsals of University organizations; scoring for band, chorus, and orchestra.
Requisites: MUSIC 222 or declared in Music, Music: Education, or Music: Performance graduate program
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022

MUSIC 529 – JAZZ ARRANGING
3 credits.

Survey of standard musical techniques and devices for arranging lead-sheet-based jazz compositions for medium and large jazz ensemble through score study, musical exercises, and arranging projects for live ensembles. Topics include jazz counterpoint and melody writing; preparing arrangements through outlines and condensed scores; chord substitutions and reharmonization; ranges, timbres, notational and technical considerations of standard jazz instruments; motivic development; voicing techniques, including mechanical, spreads, upper structure triads, and voicings in 4ths, 5ths and clusters; and orchestration techniques, including couplings and concerted writing.
Requisites: Declared in Music: MA, Music: Performance DMA, or Music: Performance MM
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Read, comprehend, and analyze scores for medium and large jazz ensemble
Audience: Graduate

2. Compose for all common jazz instruments
Audience: Graduate

3. Demonstrate sophisticated skill-level in composing contrapuntal melodies in a jazz idiom
Audience: Graduate

4. Demonstrate mature ability to arrange for medium and large jazz ensemble using an advanced range of voicing and orchestration techniques
Audience: Graduate

MUSIC 531 – ADVANCED JAZZ IMPROVISATION
3 credits.

Examine musical improvisation from performers and select repertoire primarily from the Jazz Canon. Explore harmonic, melodic, rhythmic, and cultural expansion into the 20th and 21st centuries of improvisational performance practice. Learn elements needed to transform from a performer into a viable and competent improvisor. Emphasis on cross-cultural understanding and interdisciplinarity.
Requisites: (MUSIC 331 and 332) or MUS PERF 541
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Identify (literally and aurally) chord structures, scales and modes in the Major, Harmonic Minor, Melodic Minor, Harmonic Major, and Melodic Minor #5 structures.
Audience: Graduate

2. Formulate and perform spontaneous melodies over song progressions and song forms.
Audience: Graduate

3. Solve rhythmic placement of their improvisation within a steady pulse.
Audience: Graduate

4. Demonstrate understanding of music theory and the application to improvisation.
Audience: Graduate

5. Apply historical and contemporary concepts of musical styles and forms, and research approaches specific to the given instrument.
Audience: Graduate

6. Demonstrate performance practice in real time, processing melodies spontaneously within a consistent pulse over a song form.
Audience: Graduate

7. Demonstrate understanding of melodic, harmonic, and rhythmic devices for improvisation over a chord and song form.
Audience: Graduate

8. Utilize techniques, skills, and modern approaches to performance practice
Audience: Graduate

9. Demonstrate decorum and community responsibility when performing with others
Audience: Graduate

10. Identify, describe, and analyze improvisation of themselves, their peers, and from recordings
Audience: Graduate

11. Examine technical literature and resolve ambiguities in the nomenclature
Audience: Graduate

12. Synthesize knowledge using insights and creativity to better understand themselves and improve their performance practice and improvisation.
Audience: Graduate

MUSIC 540 – ADVANCED PEDAGOGY
2 credits.

Advanced pedagogical methods for performance.
Requisites: Graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

MUSIC 541 – SEMINAR IN CHORAL LITERATURE
2 credits.

Seminar in Choral Literature from Renaissance to the Present.
Requisites: Graduate/professional standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUSIC 542 – CHORAL LITERATURE AND PERFORMANCE PRACTICES OF TODAY
2 credits.

Seminar in Choral Literature from Renaissance to the Present.
Requisites: Graduate/professional standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

MUSIC 543 – ADVANCED STRING PEDAGOGY
2 credits.

Survey of contemporary and historical string pedagogy with implications for multiple teaching settings and applied research.
Requisites: Graduate/professional standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

MUSIC 544 – ADVANCED STRING PEDAGOGY
2 credits.

Survey of contemporary and historical string pedagogy with implications for multiple teaching settings and applied research, with an emphasis on individual projects and applied research.
Requisites: MUSIC 543
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

MUSIC 546 – STRING LITERATURE
2 credits.

Relationship of string solo, ensemble and orchestral literature to history, style, form, genre, and performance practice. Emphasis on bibliographic sources; research project required.
Requisites: Senior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

MUSIC 550 – PERCUSSION LITERATURE
2 credits.

Examines a select body of Western art music composed for percussion during the twentieth and twenty-first Centuries. Important compositional styles and repertoire will be presented and discussed with an emphasis on historical perspective and compositional technique.
Requisites: Senior standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

MUSIC 551 – CLASS PIANO PEDAGOGY
3 credits.

Techniques for teaching older beginners or adults in class or individual instruction, piano literature sources and references, evaluation of repertoire and analysis of methods and structure.
Requisites: Graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021

MUSIC 553 – ADVANCED CONDUCTING SEMINAR
2 credits.

Study/analysis of conducting techniques; score reading/interpretation of masterpieces from standard repertoire.
Requisites: Declared in Music, Music: Education, or Music: Performance graduate program
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUSIC 554 – ADVANCED CONDUCTING
2 credits.

Continuation of study and analysis of conducting techniques and score reading.
Requisites: MUSIC 553
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020

MUSIC 556 – UNIVERSITY OPERA
1-2 credits.

Opera role: preparation, rehearsal and performance in University opera production.
Requisites: Graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUSIC 557 – OPERA WORKSHOP
2 credits.

Performance of scenes from standard operas or of whole operas; singing, accompanying, and dramatic action; instruction in voice projection, posture and movement; problems of staging, lighting, costume and scenery. Audition required.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUSIC 558 – MADRIGAL SINGERS
1 credit.

Ensemble specializing in 16th and 17th century secular music. Audition required.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023

MUSIC 559 – GRADUATE CHORAL UNION
1 credit.

Weekly rehearsals in preparation of public performance of a masterwork for chorus and orchestra at end of semester. Audition required.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023

MUSIC 560 – PRACTICUM IN ADVANCED STUDIO TEACHING-PIANO
1 credit.

Observation and teaching of an advanced undergraduate student under the direct supervision of a studio professor.
Requisites: MUSIC 548
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUSIC 562 – JAZZ ENSEMBLE
1 credit.

Assignments in performing ensemble literature. Students enrolling for the first time should contact the School of Music for audition information
Requisites: Graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUSIC 565 – ADVANCED ENSEMBLE-WOODWIND
1 credit.

Assignments in performing ensemble literature. Students will audition for placement prior to the beginning of the semester
Requisites: Graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUSIC 567 – ADVANCED ENSEMBLE-BRASS
1 credit.

Assignments in performing ensemble literature. Students will audition for placement prior to the beginning of the semester
Requisites: Graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUSIC 568 – ADVANCED ENSEMBLE-PERCUSSION
1 credit.

Assignments in performing ensemble literature. Students will audition for placement prior to the beginning of the semester
Requisites: Graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUSIC 569 – ADVANCED ENSEMBLE-STRING
1 credit.

Assignments in performing ensemble literature. Students will audition for placement prior to the beginning of the semester
Requisites: Graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUSIC 570 – UNIVERSITY SYMPHONY ORCHESTRA
1 credit.

Performance plus additional study of performance practice and orchestral literature. Students will audition for placement prior to the beginning of the semester
Requisites: Graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUSIC 572 – ADVANCED ENSEMBLE-CLASSICAL GUITAR
1 credit.

Rehearsal, coaching and preparing guitar literature for performance of duos, trios, and quartets. Students will audition for placement prior to the beginning of the semester
Requisites: Graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

MUSIC 573 – CONTEMPORARY CHAMBER ENSEMBLE
1 credit.

Assignments in performing ensemble literature. Students will audition for placement prior to the beginning of the semester
Requisites: Graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2021

MUSIC 574 – WIND ENSEMBLE
1 credit.

Limited instrumentation for students having attained exceptional level of performance ability. Students will audition for placement prior to the beginning of the semester
Requisites: Graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUSIC 576 – CONCERT BAND
1 credit.

Rehearsal and performance from band literature; additional study of performance practice. Students will audition for placement prior to the beginning of the semester
Requisites: Graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUSIC 577 – CHORALE
1 credit.

Performance and study of choral chamber music. Students will audition for placement prior to the beginning of the semester
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

MUSIC 578 – CONCERT CHOIR
1 credit.

Performance plus additional study of performance practice and choir literature. Students will audition for placement prior to the beginning of the semester
Requisites: Graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUSIC 591 – ORGAN LITERATURE AND DESIGN
2 credits.

Survey of organ literature with parallel study of organ design and construction.
Requisites: Senior standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2020

MUSIC 608 – MUSIC COMMUNITY ENGAGEMENT
2-3 credits.

Actively participate in a diverse exploration of community. Create collaborative music engagement projects and evaluate the impact of the project's implementation. Opportunity to increase self-awareness, enhance creative capacity, and cultivate music career aspirations.
Requisites: Declared in Music, MA, PhD, Music: Performance, MM, DMA, or Music: Education MM
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024
Learning Outcomes: 1. Describe current music community engagement initiatives occurring within one's area of expertise.
Audience: Graduate

2. Develop personal and artistic skills through the design, implementation, and evaluation of music community engagement projects.
Audience: Graduate

3. Support the mission of social service agencies and non-profit organizations through music community engagement collaborations.
Audience: Graduate

4. Articulate one's music career vision through a lens of creativity, quality, and a spirit of generosity.
Audience: Graduate

MUSIC/L I S 619 – MUSIC RESEARCH METHODS AND MATERIALS
3 credits.

Historical and contemporary bibliography resources for musical scholarship; general reference tools of scholarly work and specific musicological works.
Requisites: Graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

MUSIC 621 – RENAISSANCE POLYPHONY
3 credits.

Analysis and stylistic composition.
Requisites: Senior standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

MUSIC 622 – BAROQUE COUNTERPOINT
3 credits.

Analysis and stylistic composition.
Requisites: Senior standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022

MUSIC 623 – FORM AND ANALYSIS
2-3 credits.

Study of modern analytical techniques; practice in analysis of representative works.
Requisites: Senior standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

MUSIC 624 – FORM AND ANALYSIS II
2-3 credits.

Continuation of study of modern analytical techniques; practice in analysis of representative works.
Requisites: Senior standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

MUSIC 629 – JAZZ THEORY AND ANALYSIS
3 credits.

Introduction to contemporary research into jazz theory through analysis of lead sheet jazz compositions, analysis of large ensemble jazz compositions and improvised solos, and critical readings of jazz theory publications.
Requisites: Declared in Music MA, Music: Performance DMA, or Music: Performance MM
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. analyze jazz lead sheets, large ensemble compositions, and improvisations with an emphasis on both syntax and music-historical and theoretical contexts
Audience: Graduate

2. develop a critical framework engage contemporary research into jazz theory and analysis
Audience: Graduate

3. critically examine issues of history, culture, authenticity, and law and authorship that inform jazz recordings and performances
Audience: Graduate

MUSIC 632 – GRADUATE INSTRUMENTAL CONDUCTING LABORATORY
1 credit.

Develop conducting skills through experience leading an ad hoc ensemble of 9-20 musicians in rehearsal and performance on a range of orchestral and wind ensemble repertoire.
Requisites: Concurrent enrollment in MUS PERF 532, 732, 990, or 999
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate effective and refined gestural vocabulary on the podium
Audience: Graduate

2. Demonstrate knowledge of broad repertoire in instrumental ensemble repertoire
Audience: Graduate

3. Implement score study skills as they apply to conducting a live instrumental ensemble
Audience: Graduate

4. Model rehearsal techniques before live musicians
Audience: Graduate

5. Employ self-reflection in identifying the quality of one's own work
Audience: Graduate

6. Demonstrate skills in a performance setting
Audience: Graduate

7. Assess other colleagues' conducting, creating a safe community for learning and development
Audience: Graduate

MUSIC 681 – SENIOR HONORS THESIS
3 credits.

Mentored individual study and research for students in the major writing an honors thesis.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2014

MUSIC 682 – SENIOR HONORS THESIS
3 credits.

Mentored individual study and research for students in the major writing an honors thesis.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2015

MUSIC 749 – SEMINAR IN VOCAL TECHNIQUES
2 credits.

Study and analysis of various vocal techniques: pedagogical and historical viewpoints.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

MUSIC 751 – SEMINAR IN PIANO PEDAGOGY
3 credits.

Interpretive and technical approaches to advanced keyboard performance.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUSIC 752 – PIANO PEDAGOGY WORKSHOP
1 credit.

Designed to assist the DMA student in piano performance and pedagogy in developing a pedagogical workshop for piano teachers. The project will culminate in a public workshop which may address any approved area of keyboard pedagogy.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

MUSIC 791 – SEMINAR IN PIANO LITERATURE
3 credits.

Applied piano literature including representative works from all periods.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUSIC 792 – SEMINAR IN VOCAL LITERATURE
3 credits.

Comprehensive study of vocal literature including representative works from various periods.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

MUSIC 796 – SEMINAR IN DUO SONATA LITERATURE
3 credits.

Comprehensive study of major works for single instrument and piano with primary focus on interpretive and technical issues for the collaborative musician.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

MUSIC 798 – SEMINAR-INSTRUMENTAL LITERATURE
2 credits.

Comprehensive study of major works for specific instruments with primary focus on interpretive and technical issues for the advance musician.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

MUSIC 799 – INDEPENDENT WORK
1-3 credits.

Faculty-mentored individual study and research.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUSIC 821 – HISTORICAL MUSIC THEORIES 1
3 credits.

The development of musical concepts and issues in music-theoretical discourse from antiquity through the 17th century.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023

MUSIC 822 – HISTORICAL MUSIC THEORIES 2
3 credits.

The development of musical concepts and issues in music-theoretical discourse from the 17th century through the present.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

MUSIC 823 – SCHENKERIAN ANALYSIS
3 credits.

Studies in the theoretical concepts and analytical methods of Heinrich Schenker.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2020

MUSIC 911 – SEMINAR IN MUSICOLOGY
3 credits.

Topics in musicology, dealing primarily with an important aspect or genre or music or segment of a stylistic period.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUSIC/FOLKLORE 915 – SEMINAR IN ETHNOMUSICOLOGY
3 credits.

Topics in ethnomusicology within a cross-cultural framework; melodic typology, scale and tuning systems, mode, rhythm, ornamentation, improvisation techniques, oral and written traditions of composition, notation systems, and function of music society.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

MUSIC 921 – CURRENT ISSUES IN MUSICAL THOUGHT 1
3 credits.

Topics of current theoretical or compositional concern and in-depth discussions of recent publications.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

MUSIC 925 – FORM AND ANALYSIS SEMINAR
3 credits.

Explore musical analysis, using different techniques to study various types of music. Engage with music's structure and meaning, with an emphasis on performance and listening skills.
Requisites: Declared in Music: Performance MM or DMA, Music: Education MM, Music MA, PHD, or doctoral minor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Explore different ways to analyze and apply these methods to various types of music.
Audience: Graduate

2. Create new ideas based on traditional music theory.
Audience: Graduate

3. Engage in a detailed and thoughtful analysis of music's structure and meaning.
Audience: Graduate

4. Apply insights to making deliberate interpretative choices in performance, using clear and well-argued writing to complement analysis.
Audience: Graduate

MUSIC 927 – SEMINAR IN COMPOSITION
3 credits.

Topics directly related to composition, including musical forms, contemporary performance practice, electronic music, intermedia.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUSIC/CURRIC 946 – PAST PERSPECTIVES ON MUSIC EDUCATION
3 credits.

Focus on analysis of music education in primary and secondary schools via examination of historical, philosophical, and psychological sources. Explore ideas that have shaped the field in the past and investigate the influence of these ideas on current thinking and practice.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the history of music education
Audience: Graduate

2. Articulate the concept of interest convergence and how it can apply to the history of music education
Audience: Graduate

3. Demonstrate ability to connect theory and practice in music educational approaches
Audience: Graduate

MUSIC 990 – MASTERS THESIS
1-4 credits.

Individual research study with faculty mentor for writing thesis.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUSIC 999 – PHD DISS/DMA PROJECT
1-3 credits.

Individual research study with faculty mentor.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUSIC-PERFORMANCE (MUS PERF)

MUS PERF 21 – BRASS FUNDAMENTALS
1 credit.

Prepares music educators for teaching brass instruments (horn, trumpet trombone, euphonium, and tuba) in K-12 school settings.
Requisites: Declared in Music: Education BM
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain and demonstrate proper care and maintenance of brass instruments.
Audience: Undergraduate

2. Demonstrate fundamental technical playing proficiency on trumpet, horn,trombone, euphonium, and tuba.
Audience: Undergraduate

3. Explain and demonstrate the function of the embouchure, tongue, and oral cavity in tone production.
Audience: Undergraduate

4. Demonstrate proper breathing and explain its impact on brass performance.
Audience: Undergraduate

5. Demonstrate knowledge of intonation issues and fixes.
Audience: Undergraduate

6. Demonstrate an understanding of trumpet and horn transpositions.
Audience: Undergraduate

7. Demonstrate an understanding of the clefs most often used in trombone writing.
Audience: Undergraduate

8. Explain the harmonic series and function of the valves and slide.
Audience: Undergraduate

9. Demonstrate the ability to diagnose and solve the common problems of beginning brass students.
Audience: Undergraduate

10. Demonstrate knowledge of method books, etude books, and appropriate solo repertory.
Audience: Undergraduate

11. Demonstrate knowledge of recommended makes and models of brass instruments and accessories.
Audience: Undergraduate

12. Demonstrate knowledge of relevant and important brass instrument performers in all genres.
Audience: Undergraduate

13. Play each brass instrument with a proper setup and an understanding for how to identify and produce a characteristic sound.
Audience: Undergraduate

MUS PERF 22 – STRINGS FUNDAMENTALS
1 credit.

Prepares music educators for teaching orchestral string instruments (violin, viola, violoncello, and double bass) in K-12 school settings.
Requisites: Declared in Music: Education BM
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain and demonstrate proper care and maintenance of orchestral string instruments.
Audience: Undergraduate

2. Demonstrate fundamental technical playing proficiency on violin, viola, violoncello, and double bass.
Audience: Undergraduate

3. Explain and demonstrate the function of the left hand, bow arm, and vibrato in tone production.
Audience: Undergraduate

4. Demonstrate knowledge of intonation issues and fixes.
Audience: Undergraduate

5. Demonstrate an understanding of strings transpositions.
Audience: Undergraduate

6. Demonstrate an understanding of the clefs most often used in viola, violoncello, and double bass compositions.
Audience: Undergraduate

7. Demonstrate the ability to diagnose and solve the common problems of beginning strings students.
Audience: Undergraduate

8. Demonstrate knowledge of method books, etude books, and appropriate solo repertory.
Audience: Undergraduate

9. Demonstrate knowledge of recommended makes and models of string instruments and accessories, including instrument sizing to match students' physical size.
Audience: Undergraduate

10. Demonstrate knowledge of how to select and replace strings.
Audience: Undergraduate

11. Demonstrate knowledge of relevant and important string instrument performers.
Audience: Undergraduate

12. Play each string instrument with appropriate posture and a characteristic sound.
Audience: Undergraduate

MUS PERF 23 – WOODWIND FUNDAMENTALS
1 credit.

Prepares music educators for teaching woodwind instruments (flute, clarinet, saxophone, oboe, and bassoon) in K-12 school settings.
Requisites: Declared in Music: Education BM
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain and demonstrate basic care and maintenance of woodwind instruments.
Audience: Undergraduate

2. Demonstrate basic playing proficiency on flute, clarinet, saxophone, oboe, and bassoon.
Audience: Undergraduate

3. Explain and demonstrate the function of the embouchure and proper air support.
Audience: Undergraduate

4. Demonstrate knowledge of most common intonation issues and fixes.
Audience: Undergraduate

5. Demonstrate the ability to diagnose and solve some of the most common problems of beginning woodwind students.
Audience: Undergraduate

6. Demonstrate basic knowledge of method books, etude books, and appropriate solo repertory.
Audience: Undergraduate

7. Demonstrate knowledge of recommended manufacturers and models of woodwind instruments and accessories.
Audience: Undergraduate

MUS PERF 27 – FUNDAMENTALS-PERCUSSION
1 credit.

Exploration of the fundamentals of the percussion.
Requisites: Declared in the undergraduate Music program, Music: Performance BM, or Music: Education BM
Repeatable for Credit: No
Last Taught: Fall 2025

MUS PERF 44 – STUDY ABROAD: BEGINNING INSTRUCTION IN MUSIC PERFORMANCE
1 credit.

Beginning class or private music performance instruction taken in a UW-Madison resident study abroad program. Enrollment in a UW-Madison resident study abroad program
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions

MUS PERF 51 – BASIC CLARINET
1-2 credits.

Individual instruction in clarinet performance at the basic level. Instructor consent is required for students enrolling for the first time.
Requisites: MUS PERF 51
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2022

MUS PERF 65 – BASIC TUBA
1-2 credits.

Individual instruction in tuba performance at the basic level. Instructor consent is required for students enrolling for the first time.
Requisites: MUS PERF 65
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022

MUS PERF 76 – BASIC GUITAR
1-2 credits.

Individual instruction in guitar performance at the basic level. Instructor consent is required for students enrolling for the first time.
Requisites: MUS PERF 76
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

MUS PERF 77 – BASIC STRING BASS
1-2 credits.

Individual instruction in string bass performance at the basic level. Instructor consent is required for students enrolling for the first time.
Requisites: MUS PERF 77
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022

MUS PERF 101 – BEGINNING CLASS PIANO
2 credits.

Group instruction in beginning piano.
Requisites: Declared in the undergraduate Music program, Music: Performance BM, or Music: Education BM
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

MUS PERF 102 – BEGINNING CLASS PIANO
2 credits.

Continuation of group instruction in beginning piano.
Requisites: MUS PERF 101 or placement into MUS PERF 102 and declared in Music, Music: Performance BM, or Music: Education BM
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

MUS PERF 103 – ELEMENTARY CLASS PIANO
2 credits.

Group instruction in elementary piano.
Requisites: MUS PERF 102 or placement into MUS PERF 103 and declared in Music, Music: Performance BM, or Music: Education BM
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

MUS PERF 104 – INTERMEDIATE CLASS PIANO
2 credits.

Group instruction in intermediate piano.
Requisites: MUS PERF 103 or placement into MUS PERF 104 and declared in Music, Music: Performance BM, or Music: Education BM
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

MUS PERF 108 – JAZZ CLASS PIANO
2 credits.

Development of basic jazz piano skills for solo, accompaniment, and ensemble playing; discussion of the role of the piano in various jazz ensemble formats; introduction to chord symbols, jazz voicings, melodic improvisation, and bass lines; continued development of sound technical skills for the piano. Students will apply these concepts to the performance of lead sheets from the standard jazz repertoire.
Requisites: MUS PERF 102 or placement into MUS PERF 103 and declared in Music, Music: Performance BM, or Music: Education BM
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

MUS PERF 143 – INTRODUCTION TO PERFORMANCE: VOICE
1 credit.

Voice for the non-music major beginning voice student; basic concepts of vocal technique, tone production, breathing, and diction for singing; basic musicianship; singing in class by the student individually and in small groups.
Requisites: Consent of instructor
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

MUS PERF 144 – VOCAL INSTRUCTION FOR NON-VOICE MAJORS
1-2 credits.

Vocal instruction for the non-voice major. Basics of classical vocal technique; however, repertoire may include other musical styles, such as musical theater or jazz, as approved by instructor.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 146 – MUSIC LESSONS FOR NON-MAJORS
1-2 credits.

Private applied music performance instruction for non-music majors and for music majors seeking study on a secondary instrument. Not for keyboard or vocal performance study. Opportunity for study with a faculty member may be limited. Audition is required.
Requisites: Consent of instructor
Repeatable for Credit: Yes, for 8 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Accomplish measurable progress in instrumental performance proficiency
Audience: Undergraduate

2. Growth in understanding of elements of music and application of this understanding to interpretation and performance
Audience: Undergraduate

3. Demonstration of effective learning strategies
Audience: Undergraduate

MUS PERF 148 – FIRST YEAR COMPOSITION
3 credits.

Continuation of instruction in music composition at the beginning level.
Requisites: Declared in the undergraduate Music program, Music: Performance BM, or Music: Education BM
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

MUS PERF 200 – ELEMENTARY/INTERMEDIATE PIANO FOR NON-PIANO MAJORS
2 credits.

Individual piano instruction for non-piano majors.
Requisites: Consent of instructor
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Nurture individual creative growth as a pianist.
Audience: Undergraduate

2. Gain musical and technical proficiency in piano performance.
Audience: Undergraduate

3. Develop creative and efficient practice strategies.
Audience: Undergraduate

4. Develop skills in phrasing, stylistic interpretation and musical understanding.
Audience: Undergraduate

5. Enhance critical listening skills and ear-training skills.
Audience: Undergraduate

6. Improve sense of keyboard topography through relevant technical exercises and repertoire study.
Audience: Undergraduate

7. Deepen understanding of keyboard repertoire (duo and/or collaborative works).
Audience: Undergraduate

8. Explore strategies for optimal performance and healthful biomechanics.

Audience: Undergraduate

MUS PERF 201 – ELEMENTARY/INTERMEDIATE PIANO
2-4 credits.

Individual piano instruction for piano majors.
Requisites: Declared in the undergraduate Music program, Music: Performance BM, or Music: Education BM
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 203 – ELEMENTARY/INTERMEDIATE ORGAN
2-4 credits.

Individual organ instruction for majors.
Requisites: Declared in the undergraduate Music program, Music: Performance BM, or Music: Education BM
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022

MUS PERF 205 – ELEMENTARY/INTERMEDIATE VOICE
2-4 credits.

Individual voice instruction for majors.
Requisites: Declared in the undergraduate Music program, Music: Performance BM, or Music: Education BM
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 207 – ELEMENTARY/INTERMEDIATE FLUTE
2-4 credits.

Individual flute instruction for majors.
Requisites: Declared in the undergraduate Music program, Music: Performance BM, or Music: Education BM
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 209 – ELEMENTARY/INTERMEDIATE OBOE
2-4 credits.

Individual oboe instruction for majors.
Requisites: Declared in the undergraduate Music program, Music: Performance BM, or Music: Education BM
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 211 – ELEMENTARY/INTERMEDIATE CLARINET
2-4 credits.

Individual clarinet instruction for majors.
Requisites: Declared in the undergraduate Music program, Music: Performance BM, or Music: Education BM
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 213 – ELEMENTARY/INTERMEDIATE SAXOPHONE
2-4 credits.

Individual saxophone instruction for majors.
Requisites: Declared in the undergraduate Music program, Music: Performance BM, or Music: Education BM
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 215 – ELEMENTARY/INTERMEDIATE BASSOON
2-4 credits.

Individual bassoon instruction for majors.
Requisites: Declared in the undergraduate Music program, Music: Performance BM, or Music: Education BM
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 217 – ELEMENTARY/INTERMEDIATE HORN
2-4 credits.

Individual horn instruction for majors.
Requisites: Declared in the undergraduate Music program, Music: Performance BM, or Music: Education BM
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 219 – ELEMENTARY/INTERMEDIATE TRUMPET
2-4 credits.

Individual trumpet instruction for majors.
Requisites: Declared in the undergraduate Music program, Music: Performance BM, or Music: Education BM
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 221 – ELEMENTARY/INTERMEDIATE TROMBONE
2-4 credits.

Individual trombone instruction for majors.
Requisites: Declared in the undergraduate Music program, Music: Performance BM, or Music: Education BM
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 223 – ELEMENTARY/INTERMEDIATE EUPHONIUM
2-4 credits.

Individual euphonium instruction for majors.
Requisites: Declared in the undergraduate Music program, Music: Performance BM, or Music: Education BM
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 225 – ELEMENTARY/INTERMEDIATE TUBA
2-4 credits.

Individual tuba instruction for majors.
Requisites: Declared in the undergraduate Music program, Music: Performance BM, or Music: Education BM
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 227 – ELEMENTARY/INTERMEDIATE PERCUSSION
2-4 credits.

Individual percussion instruction for majors.
Requisites: Declared in the undergraduate Music program, Music: Performance BM, or Music: Education BM
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 231 – ELEMENTARY/INTERMEDIATE VIOLIN
2-4 credits.

Individual violin instruction for majors.
Requisites: Declared in the undergraduate Music program, Music: Performance BM, or Music: Education BM
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 233 – ELEMENTARY/INTERMEDIATE VIOLA
2-4 credits.

Individual viola instruction for majors.
Requisites: Declared in the undergraduate Music program, Music: Performance BM, or Music: Education BM
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 235 – ELEMENTARY/INTERMEDIATE CELLO
2-4 credits.

Individual cello instruction for majors.
Requisites: Declared in the undergraduate Music program, Music: Performance BM, or Music: Education BM
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 237 – ELEMENTARY/INTERMEDIATE DOUBLE BASS
2-4 credits.

Individual instruction in double bass performance.
Requisites: Declared in the undergraduate Music program, Music: Performance BM, or Music: Education BM
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate ability to diagnose performance deficiencies
Audience: Undergraduate

2. Employ developing aural skills in investigating sound and intonation
Audience: Undergraduate

3. Show foundational technical performance skills (arco and pizzicato)
Audience: Undergraduate

4. Demonstrate developing strength for stamina and physical longevity
Audience: Undergraduate

5. Demonstrate knowledge of performance practices appropriate to the music studied
Audience: Undergraduate

6. Show basic technical proficiency on the instrument in jury performance
Audience: Undergraduate

7. Describe instruments and musical tone succinctly, both verbally and in writing
Audience: Undergraduate

MUS PERF 239 – ELEMENTARY/INTERMEDIATE HARP
2-4 credits.

Individual harp instruction for majors.
Requisites: Declared in the undergraduate Music program, Music: Performance BM, or Music: Education BM
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 240 – ELEMENTARY/INTERMEDIATE GUITAR
2-4 credits.

Individual guitar instruction for majors.
Requisites: Declared in the undergraduate Music program, Music: Performance BM, or Music: Education BM
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 241 – ELEMENTARY/INTERMEDIATE JAZZ STUDIO INSTRUCTION
2-4 credits.

Individual studio instruction in jazz performance.
Requisites: Concurrent enrollment in MUSIC 262 and declared in Music, Music: Education BM, or Music: Performance BM
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, for 8 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate technical proficiency with the instrument or voice.
Audience: Undergraduate

2. Show competency and fluency in core improvisation, accompaniment, solo, and ensemble performance techniques common to the jazz genre.
Audience: Undergraduate

3. Interpret and improvise jazz in a performance practice appropriate to the idiom.
Audience: Undergraduate

4. Demonstrate a knowledge of the standard jazz repertoire.
Audience: Undergraduate

5. Contextualize the performance of jazz and related musics in history and culture.
Audience: Undergraduate

MUS PERF 242 – ACCOMPANYING
2 credits.

Individual instruction in collaborative musical performance.
Requisites: MUS PERF 201 or 203
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

MUS PERF 247 – SECOND YEAR COMPOSITION
3 credits.

Individual instruction in music composition.
Requisites: MUS PERF 148
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

MUS PERF 248 – SECOND YEAR COMPOSITION
3 credits.

Continuation of individual instruction in music composition.
Requisites: MUS PERF 247
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

MUS PERF 249 – ELEMENTARY/INTERMEDIATE COMPOSITION
2-4 credits.

Individual composition instruction for majors.
Requisites: Declared in the undergraduate Music program, Music: Performance BM, or Music: Education BM
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Develop ability to express musical ideas in a coherent and effective manner
Audience: Undergraduate

2. Demonstrate basics of melodic construction, harmonic voicing, counterpoint, and other compositional skills
Audience: Undergraduate

3. Develop ability to express oneself in various musical textures (monophonic, homophonic, heterophonic, contrapuntal)
Audience: Undergraduate

4. Practice composing musical threads that are held together in successful rhythmic composites, using a variety of rhythms
Audience: Undergraduate

MUS PERF 251 – KEYBOARD SKILLS
2 credits.

Keyboard skills for the piano major.
Requisites: Concurrent enrollment in MUS PERF 201 or 203
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

MUS PERF 339 – ADVANCED TECHNIQUES: HARP
1-2 credits.

Performance study topics as assigned for harp.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2020

MUS PERF 342 – PIANO ACCOMPANYING LAB
1 credit.

Laboratory in piano accompanying for piano emphasis majors and doctoral minors.
Requisites: MUS PERF 201
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 347 – THIRD YEAR COMPOSITION
3 credits.

Individual instruction in music composition.
Requisites: MUS PERF 248
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

MUS PERF 348 – THIRD YEAR COMPOSITION
3 credits.

Continuation of individual instruction in music composition.
Requisites: MUS PERF 347
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

MUS PERF 401 – ADVANCED PIANO
2-4 credits.

Individual piano instruction for undergrad piano majors and doctoral minors. Instructor consent is required for students enrolling for the first time.
Requisites: MUS PERF 401
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 402 – ADVANCED HARPSICHORD
2-4 credits.

Upper-level harpsichord study of advanced repertoire and basso continuo; for harpsichordists who have mastery of basic technique and repertoire. Instructor consent is required for students enrolling for the first time.
Requisites: MUS PERF 402
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022

MUS PERF 403 – ADVANCED ORGAN
2-4 credits.

Advanced individual organ instruction. Instructor consent is required for students enrolling for the first time.
Requisites: MUS PERF 403
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022

MUS PERF 405 – ADVANCED VOICE
2-4 credits.

Advanced individual voice instruction. Instructor consent is required for students enrolling for the first time.
Requisites: MUS PERF 405
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 407 – ADVANCED FLUTE
2-4 credits.

Advanced individual flute instruction. Instructor consent is required for students enrolling for the first time.
Requisites: MUS PERF 407
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 409 – ADVANCED OBOE
2-4 credits.

Advanced individual oboe instruction. Instructor consent is required for students enrolling for the first time.
Requisites: MUS PERF 409
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 411 – ADVANCED CLARINET
2-4 credits.

Advanced individual clarinet instruction. Instructor consent is required for students enrolling for the first time.
Requisites: MUS PERF 411
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 413 – ADVANCED SAXOPHONE
2-4 credits.

Advanced individual saxophone instruction. Instructor consent is required for students enrolling for the first time.
Requisites: MUS PERF 413
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 415 – ADVANCED BASSOON
2-4 credits.

Advanced individual bassoon instruction. Instructor consent is required for students enrolling for the first time.
Requisites: MUS PERF 415
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 417 – ADVANCED HORN
2-4 credits.

Advanced individual horn instruction. Instructor consent is required for students enrolling for the first time.
Requisites: MUS PERF 417
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 419 – ADVANCED TRUMPET
2-4 credits.

Advanced individual trumpet instruction. Instructor consent is required for students enrolling for the first time.
Requisites: MUS PERF 419
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 421 – ADVANCED TROMBONE
2-4 credits.

Advanced individual trombone instruction. Instructor consent is required for students enrolling for the first time.
Requisites: MUS PERF 421
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 423 – ADVANCED EUPHONIUM
2-4 credits.

Advanced individual instruction in euphonium. Instructor consent is required for students enrolling for the first time.
Requisites: MUS PERF 423
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 425 – ADVANCED TUBA
2-4 credits.

Advanced individual tuba instruction. Instructor consent is required for students enrolling for the first time.
Requisites: MUS PERF 425
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

MUS PERF 427 – ADVANCED PERCUSSION
2-4 credits.

Advanced individual percussion instruction. Instructor consent is required for students enrolling for the first time.
Requisites: MUS PERF 427
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 431 – ADVANCED VIOLIN
2-4 credits.

Advanced individual violin instruction. Instructor consent is required for students enrolling for the first time.
Requisites: MUS PERF 431
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 433 – ADVANCED VIOLA
2-4 credits.

Advanced individual viola instruction. Instructor consent is required for students enrolling for the first time.
Requisites: MUS PERF 433
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 435 – ADVANCED CELLO
2-4 credits.

Advanced individual cello instruction. Instructor consent is required for students enrolling for the first time.
Requisites: MUS PERF 435
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 437 – ADVANCED DOUBLE BASS
2-4 credits.

Advanced instruction in double bass performance.
Requisites: MUS PERF 437
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate ability to identify and strategically address performance deficiencies
Audience: Undergraduate

2. Employ developing aural skills in investigating sound and intonation
Audience: Undergraduate

3. Show technical performance skills (arco and pizzicato)
Audience: Undergraduate

4. Demonstrate developing strength for stamina and physical longevity
Audience: Undergraduate

5. Demonstrate knowledge of performance practices appropriate to the music studied
Audience: Undergraduate

6. Show technical proficiency on the instrument in performance
Audience: Undergraduate

7. Contextualize double bass performance using reference to current and past practices
Audience: Undergraduate

8. Describe instruments and musical tone succinctly, both verbally and in writing
Audience: Undergraduate

MUS PERF 439 – ADVANCED HARP
2-4 credits.

Advanced individual harp instruction. Instructor consent is required for students enrolling for the first time.
Requisites: MUS PERF 439
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 440 – ADVANCED GUITAR
2-4 credits.

Advanced individual classical guitar instruction. Instructor consent is required for students enrolling for the first time.
Requisites: MUS PERF 440
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 441 – ADVANCED JAZZ STUDIO INSTRUCTION
2-4 credits.

Individual applied music performance instruction in jazz.
Requisites: MUS PERF 441 and concurrent enrollment in MUSIC 262.
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, for 8 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate high technical proficiency with the instrument or voice.
Audience: Undergraduate

2. Show comprehensive competency and fluency in core improvisation, accompaniment, solo, and ensemble performance techniques common to the jazz genre.
Audience: Undergraduate

3. Interpret and improvise jazz in a performance practice appropriate to the idiom.
Audience: Undergraduate

4. Demonstrate a thorough knowledge of the standard jazz repertoire
Audience: Undergraduate

5. Contextualize the performance of jazz and related musics in history and culture.
Audience: Undergraduate

6. Synthesize musical abilities with skills for leading a jazz ensemble.
Audience: Undergraduate

MUS PERF 447 – FOURTH YEAR COMPOSITION
3 credits.

Advanced individual instruction in music composition.
Requisites: MUS PERF 348
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

MUS PERF 448 – FOURTH YEAR COMPOSITION
3 credits.

Continuation of advanced individual instruction in music composition.
Requisites: MUS PERF 447
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

MUS PERF 449 – ADVANCED COMPOSITION
2-4 credits.

Individual composition instruction for majors.
Requisites: MUS PERF 449
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Develop ability to express musical ideas in a coherent and effective manner
Audience: Undergraduate

2. Demonstrate grasp of melodic construction, harmonic voicing, counterpoint, and other compositional skills
Audience: Undergraduate

3. Develop ability to express oneself in various musical textures (monophonic, homophonic, heterophonic, contrapuntal)
Audience: Undergraduate

4. Practice composing musical threads that are held together in successful rhythmic composites, using a variety of rhythms
Audience: Undergraduate

5. Demonstrate progressing ambition in the creation of your compositions in length and size of ensemble, focusing on skills needed to compose orchestral compositions and large choral works, or extended digital audio workstation (DAW) works of longer lengths
Audience: Undergraduate

MUS PERF 457 – JAZZ COMPOSITION AND ARRANGING
3 credits.

Study of music composition and arranging in the jazz idiom. Requires audition.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

MUS PERF 458 – JAZZ COMPOSITION AND ARRANGING
3 credits.

Continuation of music composition and arranging in the jazz idiom.
Requisites: MUS PERF 457
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021

MUS PERF 498 – COMPOSITION CAPSTONE PROJECT
2 credits.

Individually directed creation and presentation of original musical work. Requires concurrent enrollment in MUS PERF 449.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. develop and apply deeper knowledge of compositional techniques
Audience: Undergraduate

2. apply skills for managing the logistics in presentation of their work, including speaking to an audience
Audience: Undergraduate

3. exhibit understanding and expression of their own "voice" in composing
Audience: Undergraduate

MUS PERF 499 – SENIOR RECITAL
2 credits.

Preparation and public performance of a senior-level recital.
Requisites: 6 credits from: MUS PERF 401, 402, 403, 405, 407, 409, 411, 413, 415, 417, 419, 421, 423, 425, 427, 431, 433, 435, 437, 439, or 440
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

MUS PERF 501 – MASTERS LEVEL-PIANO
4 credits.

Masters level individual piano instruction.
Requisites: Declared in Music: Performance graduate program
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 505 – MASTERS LEVEL-VOICE
4 credits.

Masters level individual voice instruction.
Requisites: Declared in Music: Performance graduate program
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 507 – MASTERS LEVEL-FLUTE
4 credits.

Masters level individual flute instruction.
Requisites: Declared in Music: Performance graduate program
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 509 – MASTERS LEVEL-OBOE
4 credits.

Masters level individual oboe instruction.
Requisites: Declared in Music: Performance graduate program
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

MUS PERF 511 – MASTERS LEVEL-CLARINET
4 credits.

Masters level individual clarinet instruction.
Requisites: Declared in Music: Performance graduate program
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 513 – MASTERS LEVEL-SAXOPHONE
4 credits.

Masters level individual saxophone instruction.
Requisites: Declared in Music: Performance graduate program
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 515 – MASTERS LEVEL-BASSOON
4 credits.

Masters level individual bassoon instruction.
Requisites: Declared in Music: Performance graduate program
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2021

MUS PERF 517 – MASTERS LEVEL-HORN
4 credits.

Masters level individual horn instruction.
Requisites: Declared in Music: Performance graduate program
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023

MUS PERF 519 – MASTERS LEVEL-TRUMPET
4 credits.

Masters level individual trumpet instruction.
Requisites: Declared in Music: Performance graduate program
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 521 – MASTERS LEVEL-TROMBONE
4 credits.

Masters level individual trombone instruction.
Requisites: Declared in Music: Performance graduate program
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 523 – MASTERS LEVEL-EUPHONIUM
4 credits.

Masters level individual euphonium instruction.
Requisites: Declared in Music: Performance graduate program
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2022

MUS PERF 525 – MASTERS LEVEL-TUBA
4 credits.

Masters level individual tuba instruction.
Requisites: Declared in Music: Performance graduate program
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 527 – MASTERS LEVEL-PERCUSSION
4 credits.

Masters level individual percussion instruction.
Requisites: Declared in Music: Performance graduate program
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 531 – MASTERS LEVEL-VIOLIN
4 credits.

Masters level individual violin instruction.
Requisites: Declared in Music: Performance graduate program
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 532 – ADVANCED CONDUCTING
2 credits.

Master's level individual conducting instruction.
Requisites: Declared in Music: Performance MM
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Broaden practical knowledge of standard orchestral repertoire
Audience: Graduate

2. Develop and integrate score study skills and strategies
Audience: Graduate

3. Identify and demonstrate off-podium skills necessary as a conductor
Audience: Graduate

4. Explore conducting techniques in order to acquire an effective and refined gestural vocabulary on the podium
Audience: Graduate

5. Assess the conducting profession
Audience: Graduate

MUS PERF 533 – MASTERS LEVEL-VIOLA
4 credits.

Masters level individual viola instruction.
Requisites: Declared in Music: Performance graduate program
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023

MUS PERF 535 – MASTERS LEVEL-CELLO
4 credits.

Masters level individual individual cello instruction.
Requisites: Declared in Music: Performance graduate program
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 537 – MASTER'S LEVEL DOUBLE BASS
4 credits.

Individual instruction in double bass at the Master's level.
Requisites: Declared in Music: Performance MM
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate ability to identify and strategically address performance deficiencies
Audience: Graduate

2. Employ advanced aural skills in investigating sound and intonation
Audience: Graduate

3. Show technical performance skills (arco and pizzicato) across a range of musical styles
Audience: Graduate

4. Use holistic strength for stamina and physical longevity
Audience: Graduate

5. Demonstrate knowledge of performance practices across a range of musical styles
Audience: Graduate

6. Articulate attributes of past and current practitioners of double bass performance
Audience: Graduate

7. Use historical resources in speaking and writing about double bass performance
Audience: Graduate

8. Describe instruments and musical tone succinctly, both verbally and in writing
Audience: Graduate

MUS PERF 539 – MASTER'S LEVEL HARP
4 credits.

Individual instruction in harp at the Master's level.
Requisites: Declared in Music: Performance MM
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and strategically address technical issues related to hand and body positioning.
Audience: Graduate

2. Apply technique to achieve evenness, warm tone, rhythmic integrity, facility and clean playing.
Audience: Graduate

3. Interpret and execute accurate fingerings, pedaling, muffling, extended techniques, articulation and dynamic scope.
Audience: Graduate

4. Show contextual understanding of repertoire studied, including composer background, historical context, and musical analysis.
Audience: Graduate

5. Employ a variety of practice techniques to improve creative problem-solving.
Audience: Graduate

6. Mitigate performance anxiety using breath, positive self-talk, mock performances, mindfulness, visualization and thorough preparation.
Audience: Graduate

7. Demonstrate wide ranges of character, atmosphere, and musical phrasing that produce sound appropriate for the emotional content of the music.
Audience: Graduate

MUS PERF 540 – MASTERS LEVEL-GUITAR
4 credits.

Masters level individual classical guitar instruction.
Requisites: Declared in Music: Performance graduate program
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2020

MUS PERF 541 – MASTERS LEVEL JAZZ STUDIO INSTRUCTION
4 credits.

Individual studio instruction in jazz performance.
Requisites: Declared in Music: Performance MM or DMA
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate high technical proficiency of instrument performance
Audience: Graduate

2. Show comprehensive competency and fluency in core improvisation, accompaniment, solo, and ensemble performance techniques commonly used in the jazz genre
Audience: Graduate

3. Develop and deepen a personal artistic voice through critical engagement with the jazz idiom
Audience: Graduate

4. Interpret and improvise jazz in a performance practice appropriate to the idiom
Audience: Graduate

5. Develop a personal repertoire based on a thorough knowledge of composition and arranging techniques and familiarity with the standard jazz repertoire
Audience: Graduate

6. Contextualize the performance of jazz and related musics in history and culture
Audience: Graduate

MUS PERF 542 – MASTERS LEVEL COLLABORATIVE PIANO
2-3 credits.

Individual instruction in collaborative musical performance.
Requisites: Declared in Music: Performance MM
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify personal strengths and weaknesses as a collaborative artist and develop strategies to address problems
Audience: Graduate

2. Employ advanced aural skills in investigating sound and balance with musical partners
Audience: Graduate

3. Improve piano technique, stylistic awareness, interpretive decision-making and listening skills.
Audience: Graduate

4. Describe performance practices across a range of musical styles
Audience: Graduate

5. Improve sight-reading proficiency
Audience: Graduate

6. Manage multiple musical assignments simultaneously
Audience: Graduate

7. Demonstrate excellent communication skills in rehearsals, lessons and performance – both verbal and musical – with partners and faculty
Audience: Graduate

MUS PERF 547 – MASTERS LEVEL COMPOSITION
3 credits.

Private composition at the master's degree level.
Requisites: Declared in Music: Performance graduate program
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 561 – ORGAN IMPROVISATION AND LITURGY
2 credits.

Development of organ improvisation skills; survey of liturgical practices and styles.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021

MUS PERF 562 – ORGAN IMPROVISATION AND LITURGY
2 credits.

Continued development of organ improvisation skills.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022

MUS PERF 701 – DOCTORAL LEVEL-PIANO
4 credits.

Individual piano instruction at the doctoral level.
Requisites: Declared in Music: Performance graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 703 – DOCTORAL LEVEL-ORGAN
4 credits.

Individual organ instruction at the doctoral level.
Requisites: Declared in Music: Performance graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2021

MUS PERF 705 – DOCTORAL LEVEL-VOICE
4 credits.

Individual voice instruction at the doctoral level.
Requisites: Declared in Music: Performance graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 707 – DOCTORAL LEVEL-FLUTE
4 credits.

Individual flute instruction at the doctoral level.
Requisites: Declared in Music: Performance graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

MUS PERF 709 – DOCTORAL LEVEL-OBOE
4 credits.

Individual oboe instruction at the doctoral level.
Requisites: Declared in Music: Performance graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 711 – DOCTORAL LEVEL-CLARINET
4 credits.

Individual clarinet instruction at the doctoral level.
Requisites: Declared in Music: Performance graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

MUS PERF 713 – DOCTORAL LEVEL-SAXOPHONE
4 credits.

Individual saxophone instruction at the doctoral level.
Requisites: Declared in Music: Performance graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 715 – DOCTORAL LEVEL-BASSOON
4 credits.

Individual bassoon instruction at the doctoral level.
Requisites: Declared in Music: Performance graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 717 – DOCTORAL LEVEL-HORN
4 credits.

Individual horn instruction at the doctoral level.
Requisites: Declared in Music: Performance graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 719 – DOCTORAL LEVEL-TRUMPET
4 credits.

Individual trumpet instruction at the doctoral level.
Requisites: Declared in Music: Performance graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 721 – DOCTORAL LEVEL-TROMBONE
4 credits.

Individual trombone instruction at the doctoral level.
Requisites: Declared in Music: Performance graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 723 – DOCTORAL LEVEL EUPHONIUM
4 credits.

Individual euphonium instruction at the doctoral level.
Requisites: Declared in Music: Performance DMA
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate musicianship through solo repertoire, etudes, and orchestral/band excerpts
Audience: Graduate

2. Demonstrate mastery of advanced euphonium techniques
Audience: Graduate

3. Apply advanced practice skills
Audience: Graduate

4. Demonstrate professionalism in performance and/or music education settings
Audience: Graduate

5. Describe and demonstrate diverse styles, periods, and genres of music
Audience: Graduate

6. Apply advanced euphonium pedagogical techniques and approaches
Audience: Graduate

MUS PERF 725 – DOCTORAL LEVEL TUBA
4 credits.

Individual tuba instruction at the doctoral level.
Requisites: Declared in Music: Performance graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 727 – DOCTORAL LEVEL PERCUSSION
4 credits.

Individual percussion instruction at the doctoral level.
Requisites: Declared in Music: Performance graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 731 – DOCTORAL LEVEL-VIOLIN
4 credits.

Individual violin instruction at the doctoral level.
Requisites: Declared in Music: Performance graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 732 – DOCTORAL LEVEL CONDUCTING
2 credits.

Individual conducting instruction at the doctoral level.
Requisites: Declared in Music: Performance graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 733 – DOCTORAL LEVEL-VIOLA
4 credits.

Individual viola instruction at the doctoral level.
Requisites: Declared in Music: Performance graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 735 – DOCTORAL LEVEL-CELLO
4 credits.

Individual cello instruction at the doctoral level.
Requisites: Declared in Music: Performance graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 737 – DOCTORAL LEVEL DOUBLE BASS
4 credits.

Individual instruction in double bass at the doctoral level.
Requisites: Declared in Music: Performance DMA
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Communicate originality, artistry, and creativity through performance
Audience: Graduate

2. Demonstrate ability to identify and strategically address performance deficiencies
Audience: Graduate

3. Employ advanced aural skills in investigating sound and intonation
Audience: Graduate

4. Show technical performance skills (arco and pizzicato) across a range of musical styles
Audience: Graduate

5. Use holistic development of strength for stamina and physical longevity

Audience: Graduate

6. Demonstrate knowledge of performance practices across a range of musical styles
Audience: Graduate

7. Articulate attributes of past and current practitioners of double bass performance
Audience: Graduate

8. Use historical resources in speaking and writing about double bass performance
Audience: Graduate

9. Describe instruments and musical tone succinctly, both verbally and in writing
Audience: Graduate

MUS PERF 740 – DOCTORAL LEVEL-GUITAR
4 credits.

Individual guitar instruction at the doctoral level.
Requisites: Declared in Music: Performance, DMA and concurrent enrollment in MUSIC 572
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Develop a refined classical guitar technique applicable to a broad range of musical styles.
Audience: Graduate

2. Demonstrate comprehensive knowledge of classical guitar repertoire.
Audience: Graduate

3. Communicate a high level of individual artistry and creativity through performance.
Audience: Graduate

MUS PERF 742 – DOCTORAL LEVEL COLLABORATIVE PIANO
2 credits.

Individual instruction in collaborative piano performance. Designed to deepen and continue development as a collaborative artist.
Requisites: Declared in Music: Performance DMA
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify personal strengths and weaknesses as a collaborative artist and develop strategies to address problems
Audience: Graduate

2. Employ advanced aural skills in investigating sound and balance with musical partners
Audience: Graduate

3. Improve piano technique, stylistic awareness, interpretive decision-making and listening skills
Audience: Graduate

4. Describe performance practices across a range of musical styles
Audience: Graduate

5. Improve sight-reading proficiency
Audience: Graduate

6. Manage multiple musical assignments simultaneously
Audience: Graduate

7. Demonstrate excellent communication skills in rehearsals, lessons and performance – both verbal and musical – with partners and faculty
Audience: Graduate

MUS PERF 747 – DOCTORAL LEVEL COMPOSITION
3 credits.

Doctoral level composition.
Requisites: Declared in Music: Performance graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 990 – MASTERS RECITAL
1-4 credits.

Preparation and public performance of a Masters Recital.
Requisites: Declared in Music: Performance graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

MUS PERF 999 – DMA RECITAL
1 credit.

Preparation and public performance of a Doctoral Recital that comprises a portion of the degree requirements for all Doctor of Musical Arts degrees.
Requisites: Declared in Music: Performance graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

NAVAL SCIENCE (NAV SCI)

NAV SCI 101 – INTRODUCTION TO NAVAL SCIENCE
2 credits.

Introduction to the naval profession emphasizing the missions, organization, and components of the Navy and Marine Corps. Topics include terminology, military justice, job specialties, seapower, and naval leadership. Includes lab. Intended for first year Naval ROTC students.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025

NAV SCI 102 – SEAPOWER-MARITIME AFFAIRS
3 credits.

Historical survey of the U.S. Navy and American concepts of seapower from 1775 to the present. Includes the evolution of maritime strategy in support of U.S. National Strategy. Current issues in maritime affairs. Includes lab. Open to non-ROTC students on a space available basis, with consent of instructor.
Requisites: None
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023

NAV SCI 175 – INTRODUCTORY NAVAL LABORATORY I
0-1 credits.

Laboratory class covering officer education in naval orientation and other topics dealing with the professional development of future naval officers. Intended for freshman NROTC students.
Requisites: Enrolled in Naval ROTC program
Repeatable for Credit: No
Last Taught: Fall 2025

NAV SCI 176 – INTRODUCTORY NAVAL LABORATORY II
0-1 credits.

Laboratory class covering officer education in naval sea power and other topics dealing with the professional development of future naval officers. Intended for freshman NROTC students.
Requisites: Enrolled in Naval ROTC program
Repeatable for Credit: No
Last Taught: Spring 2025

NAV SCI 201 – NAVAL LEADERSHIP AND MANAGEMENT
3 credits.

A study of organizational behavior and management within the context of the naval organization. Topics include a survey of managerial functions and a study of behavioral aspects of organizations with emphasis on motivation and leadership. Includes lab. Open to non-ROTC students on a space available basis, with consent of instructor.
Requisites: None
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

NAV SCI 202 – NAVIGATION
3 credits.

Introduction to concepts and techniques used to navigate U.S. Navy and civilian ships. Charts and publications, compasses, tides and currents, dead reckoning, piloting, celestial and electronic navigation; day's work in navigation and Nautical Rules of the Road. Includes lab. Open to non-ROTC students on a space available basis, with consent of instructor.
Requisites: None
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

NAV SCI 275 – ELEMENTARY NAVAL LABORATORY I
0-1 credits.

Laboratory class covering officer education in naval engineering and other topics dealing with the professional development of future naval officers. Intended for sophomore NROTC students.
Requisites: Enrolled in Naval ROTC program
Repeatable for Credit: No
Last Taught: Fall 2025

NAV SCI 276 – ELEMENTARY NAVAL LABORATORY II
0-1 credits.

Laboratory class covering officer education in naval weapons and other topics dealing with the professional development of future naval officers. Intended for sophomore NROTC students.
Requisites: Enrolled in Naval ROTC program
Repeatable for Credit: No
Last Taught: Spring 2025

NAV SCI 301 – NAVAL ENGINEERING
3 credits.

The basic principles and components of ship propulsion systems including steam, diesel, gas turbine, and nuclear power plants. Other topics include ship construction, buoyancy and stability, damage control, electrical distribution, and air conditioning/ refrigeration. Includes lab. Open to non-ROTC students on a space available basis, with consent of instructor.
Requisites: None
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

NAV SCI 302 – NAVAL WEAPONS
3 credits.

Introduction to the properties and behavior of electronic, electromagnetic, and mechanical systems used in naval weapons systems. Topics and concepts include wide range of academic disciplines, all of which are applied to the maritime uses of radar, sonar, communications, electro-optics, computers, missile, and electronic warfare systems. Open to non-ROTC students on a space available basis, with consent of instructor.
Requisites: None
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

NAV SCI 350 – FUNDAMENTALS OF MANEUVER WARFARE
3 credits.

History of maneuver warfare and the development of the concepts, principles, and doctrine of military operations through study of selected examples from modern history. Open to non-ROTC students on a space available basis, with consent of instructor
Requisites: None
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

NAV SCI 351 – LAND CAMPAIGNS
3 credits.

Evolution of weapons, strategy, tactics and material; the classic principles of war by study of selected battles and campaigns; survey of military and foreign policy, basic strategic concepts, and principles of warfare. Includes lab. Open to non-ROTC students on a space available basis, with consent of instructor.
Requisites: None
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

NAV SCI 375 – INTERMEDIATE NAVAL LABORATORY I
0-1 credits.

Laboratory class covering officer education in naval navigation and other topics dealing with the professional development of future naval officers. Intended for junior NROTC students.
Requisites: Enrolled in Naval ROTC program
Repeatable for Credit: No
Last Taught: Fall 2025

NAV SCI 376 – INTERMEDIATE NAVAL LABORATORY II
0-1 credits.

Laboratory class covering officer education in naval operations and other topics dealing with the professional development of future naval officers. Intended for junior NROTC students.
Requisites: Enrolled in Naval ROTC program
Repeatable for Credit: No
Last Taught: Spring 2025

NAV SCI 401 – NAVAL OPERATIONS
3 credits.

In depth study of the professional and efficient operation of U.S. Navy ships. Fleet communications, tactical employment, relative motion plotting, seamanship, and a lecture series on Joint Warfare and the Employment of Naval Forces as an element of National Security Strategy. Open to non-ROTC students on a space available basis, with consent of instructor.
Requisites: None
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

NAV SCI 402 – NAVAL LEADERSHIP AND ETHICS
3 credits.

Capstone course. Integrates an exploration of Western moral traditions and ethical philosophy with military leadership, professional ethics, and the Uniform Code of Military Justice. Includes lab. Intended for Senior NROTC students. Open to non-ROTC students on a space available basis, with consent of instructor.
Requisites: None
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

NAV SCI 475 – ADVANCED NAVAL LABORATORY I
0-1 credits.

Laboratory class covering officer education in naval management and other topics dealing with the professional development of future naval officers. Intended for senior NROTC students.
Requisites: Enrolled in Naval ROTC program
Repeatable for Credit: No
Last Taught: Fall 2025

NAV SCI 476 – ADVANCED NAVAL LABORATORY II
0-1 credits.

Laboratory class covering officer education in naval leadership and other topics dealing with the professional development of future naval officers. Intended for senior NROTC students.
Requisites: Enrolled in Naval ROTC program
Repeatable for Credit: No
Last Taught: Spring 2025

NAV SCI 575 – PROFESSIONAL NAVAL LABORATORY I
0-1 credits.

Laboratory class covering officer education in naval orientation and other topics dealing with the professional development of future naval officers. Intended for senior NROTC students.
Requisites: Enrolled in Naval ROTC program
Repeatable for Credit: No
Last Taught: Fall 2025

NAV SCI 576 – PROFESSIONAL NAVAL LABORATORY II
0-1 credits.

Laboratory class covering officer education in naval orientation and other topics dealing with the professional development of future naval officers. Intended for senior NROTC students.
Requisites: Enrolled in Naval ROTC program
Repeatable for Credit: No
Last Taught: Spring 2021

NEUROLOGICAL SURGERY (NEURSURG)

NEURSURG 699 – NEUROSURGERY: DIRECTED IN STUDY IN RESEARCH
1-3 credits.

Offers undergraduates majoring in an area of the biological sciences, and interested in preparing for advanced coursework in graduate or medical school, an opportunity to participate in neurological surgery research.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

NEURSURG 919 – INDIVIDUALIZED NEUROLOGICAL SURGERY ELECTIVE
2-4 credits.

Individually scheduled clinical elective, directly supervised by Neurological Surgery senior residents and attending physicians. Regularly scheduled supervisor-student meetings, which involve some or all of the following: rounding on service patients, participating in scheduled operative procedures, participating in sub-specialty clinics, presenting cases and teaching topics, and discussing patient cases. Independent activities include reading about patient conditions and preparing for direct patient care as needed. Other patient care-related learning activities as assigned by instructors, dependent on the individual student, the patients under the student's care, and the location.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Perform a hypothesis driven history and complete a targeted exam
Audience: Graduate

2. Develop and present a weighted differential diagnosis for medical and surgical conditions
Audience: Graduate

3. Using clinical evidence, adapt and justify the working diagnosis, and demonstrate an understanding of the surgical anatomy
Audience: Graduate

4. Present a diagnostic plan including laboratory and imaging modalities
Audience: Graduate

5. Correctly interpret imaging and laboratory findings and communicate results to patients and team members
Audience: Graduate

6. Develop and implement effective patient management plans
Audience: Graduate

7. Complete written documentation in a comprehensive, concise, accurate and timely manner
Audience: Graduate

8. Review, interpret, and present current literature to support patient care
Audience: Graduate

9. Communicate effectively with patients, families, physicians and non-physician team members
Audience: Graduate

10. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care
Audience: Graduate

11. Engage patients in shared decision-making regarding tests, orders, and procedures
Audience: Graduate

12. Avoid medical jargon when communicating with patients and families
Audience: Graduate

13. Recognize limitations and seek assistance as appropriate
Audience: Graduate

NEURSURG 921 – INPATIENT NEURO ICU ELECTIVE
1-12 credits.

Direct supervision by Neurocritical Care attending physicians. Regularly scheduled supervisor-student meetings, which involve some or all of the following: rounding on service patients, observing procedures in the unit, presenting cases and teaching topics, and discussing patient cases. Independent activities, including reading about patient conditions and preparing for direct patient care, as needed. Other patient care related learning activities as assigned by instructors: these are dependent on the individual student and the patients under the student's care.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a hypothesis driven history and complete a targeted exam
Audience: Graduate

2. Develop and present a weighted differential diagnosis
Audience: Graduate

3. Using clinical evidence, adapt and justify the working diagnosis
Audience: Graduate

4. Present a diagnostic plan including laboratory and imaging modalities
Audience: Graduate

5. Correctly interpret imaging and laboratory findings and communicate results to patients and team members
Audience: Graduate

6. Complete written documentation in a comprehensive, concise, accurate and timely manner
Audience: Graduate

7. Review, interpret and present current literature to support patient care
Audience: Graduate

8. Develop clinically relevant questions to advance learning
Audience: Graduate

9. Communicate effectively with patients, families, physicians and non-physician team members
Audience: Graduate

10. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care
Audience: Graduate

11. Engage patients in shared decision-making regarding tests, orders and procedures
Audience: Graduate

12. Avoid medical jargon when communicating with patients and families
Audience: Graduate

13. Recognize limitations and seek assistance as appropriate
Audience: Graduate

NEUROLOGY (NEUROL)

NEUROL 699 – DIRECTED RESEARCH IN NEUROLOGY
1-3 credits.

Offers the undergraduate student majoring in the life sciences (including biology, chemistry psychology, or related fields) and with interest in preparing for advanced coursework in graduate or medical school, an opportunity to participate in basic and translation research in neuroscience and neurological disorders.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Develop a clear research question or problem and formulate a hypothesis.
Audience: Undergraduate

2. Deliver an “elevator pitch” describing your research.
Audience: Undergraduate

3. Conduct research using methods employed by your lab and under the supervision of your PI and senior laboratory personnel.
Audience: Undergraduate

NEUROL 735 – NEUROBIOLOGY OF DISEASE
2 credits.

Overview of the major categories of human neurological and opthalmological disease to fundamental topics in neurobiology.
Requisites: Graduate/professional standing and NTP/NEURODPT 610
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Recognize the clinical aspects (diagnosis and available treatments) for a number of neurological diseases
Audience: Graduate

2. Critically discuss current papers in the neurobiology of disease literature
Audience: Graduate

3. Demonstrate understanding of the latest findings and treatments for a number of neurological disorders
Audience: Graduate

4. Sharpen communication skills by presenting scientific papers and leading discussions
Audience: Graduate

NEUROL 910 – INDEPENDENT READING AND RESEARCH FOR FOURTH YEAR MEDICAL STUDENTS
1-12 credits.

Independent research under the direct supervision of Neurology faculty. Each project is individualized to meet the research goals of the student within the context of the faculty's research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Apply concepts learned in coursework to real life situations
Audience: Graduate

2. Read and effectively search scientific literature
Audience: Graduate

3. Develop critical, analytical, and independent thinking skills
Audience: Graduate

NEUROL 913 – COGNITION AND NEUROANATOMY
2 credits.

Basic science concepts will be integrated to examine the relationship between neuroanatomy and cognition (e.g., learning and memory, executive function, visual perceptual abilities, etc.). Utilize stroke, epilepsy, dementia and other neurodegenerative disorders from clinical practice to demonstrate the connection between brain structure and cognitive function. Hands on experience in neuropsychological test administration and interpretation will be integrated into learning. Brain imaging correlates for clinical cases will be presented by a clinical neurologist.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Differentiate cognitive profiles and neuroanatomical correlates of dementia
Audience: Graduate

2. Differentiate cognitive profiles and neuroanatomical correlates of stroke
Audience: Graduate

3. Differentiate cognitive profiles and neuroanatomical correlates of epilepsy
Audience: Graduate

4. Understand factors needed to determine cognitive capacity
Audience: Graduate

5. Learn to administer and interpret MOCA, SLUMS, and MMSE accurately
Audience: Graduate

NEUROL 914 – NEUROLOGY, ADULT NEUROLOGICAL DISORDERS & DIET
2 credits.

Gain insight into the role of diet and nutrition in adult neurological diseases while utilizing analytical and evidence-based medicine research skills. Learn the role of diet and nutrition in the exacerbation and the treatment of adult neurological disorders (e.g., epilepsy, Alzheimer's disease, multiple sclerosis, chronic pain).
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Summarize the fundamental associations between diet and adult neurological disorders under study (e.g., Epilepsy, Alzheimer's disease, Multiple Sclerosis, Chronic Pain).
Audience: Graduate

2. Identify and critically evaluate landmark articles in field.
Audience: Graduate

3. Apply evidence from research, readings, and discussions to interpretation of case studies
Audience: Graduate

4. Identify a question or topic of interest and prepare a written (book review, case report, mini review) or oral presentation (PowerPoint) in the area of diet/nutrition and an adult brain disorders.
Audience: Graduate

5. Give and receive feedback through a peer-review process.
Audience: Graduate

6. Analyze the scientific method used in a clinical and translational research study.
Audience: Graduate

7. Summarize the application of scientific research to patient care.
Audience: Graduate

8. Describe how clinical and translational research findings are discussed with patients.
Audience: Graduate

NEUROL 915 – NEUROLOGY, PEDIATRIC NEUROLOGICAL DISORDERS & DIET
2 credits.

Explore the role of diet and nutrition in pediatric neurological diseases while utilizing your analytical and evidence-based medicine research skills. Gain understanding of the role of diet and nutrition in the exacerbation and the treatment of pediatric neurological disorders (e.g., autism, Fragile X Syndrome, phenylketonuria [PKU], spina bifida).
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Summarize the fundamental associations between diet and pediatric neurological disorders under study (e.g., Autism, Fragile X Syndrome, Phenylketonuria (PKU), Spina Bifida).
Audience: Graduate

2. Identify and critically evaluate landmark articles in the field.
Audience: Graduate

3. Apply evidence from research, readings, and discussions to interpretation of case studies.
Audience: Graduate

4. Identify a question or topic of interest and prepare a written (book review, case report, mini review) or oral presentation (PowerPoint) in the area of diet/nutrition and a pediatric brain disorder.
Audience: Graduate

5. Give and receive feedback through a peer-review process.
Audience: Graduate

6. Analyze the scientific method used in a clinical and translational research study.
Audience: Graduate

7. Summarize the application of scientific research to patient care
Audience: Graduate

8. Describe how clinical and translational research findings are discussed with patients
Audience: Graduate

NEUROL 919 – NEUROLOGY INDIVIDUALIZED CLINICAL ELECTIVE
1-12 credits.

Individually scheduled clinical elective, directly supervised by Neurology senior residents and attending physicians. Regularly scheduled supervisor-student meetings, which involve some or all of the following: rounding on service patients, observing procedures in the unit or clinic, examination of patients in an ambulatory setting, presenting cases and teaching topics, and discussing patient cases. Independent activities, including reading about patient conditions and preparing for direct patient care, as needed. Other patient care related learning activities as assigned by instructors: these are dependent on the individual student and the patients under the student's care.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a hypothesis driven history and complete a targeted exam.
Audience: Graduate

2. Develop and present a weighted differential diagnosis.
Audience: Graduate

3. Using clinical evidence, adapt and justify the working diagnosis.
Audience: Graduate

4. Present a diagnostic plan including laboratory and imaging modalities.
Audience: Graduate

5. Correctly interpret imaging and laboratory findings and communicate results to patients and team members.
Audience: Graduate

6. Complete written documentation in a comprehensive, concise, accurate and timely manner.
Audience: Graduate

7. Review, interpret and present current literature to support patient care.
Audience: Graduate

8. Develop clinically relevant questions to advance learning.
Audience: Graduate

9. Communicate effectively with patients, families, physicians and non-physician team members.
Audience: Graduate

10. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care.
Audience: Graduate

11. Engage patients in shared decision-making regarding tests, orders and procedures.
Audience: Graduate

12. Avoid medical jargon when communicating with patients and families.
Audience: Graduate

13. Recognize limitations and seek assistance as appropriate.
Audience: Graduate

NEUROSCIENCE (NEURODPT)

NEURODPT/NTP 610 – CELLULAR AND MOLECULAR NEUROSCIENCE
4 credits.

Study of original papers leading to an understanding of the molecular basis of electrical activity in neurons. Topics include voltage-sensitive currents, molecular biology of neuronal receptorrs, synaptic transmission and sensory transduction.
Requisites: ZOOLOGY/PSYCH 523 and (PHYSICS 202, 208, or 248), or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the major anatomical parts of a neuron and summarize their functions
Audience: Both Grad & Undergrad

2. Name the major classes of voltage-gated ion channels responsible for the resting potential and action potential. Describe their functional roles in generating those potentials, with respect to concepts such as voltage-dependence, activation, inactivation and propagation. Identify the structural motifs in these proteins that permit their function
Audience: Both Grad & Undergrad

3. Summarize the sequence of events in the presynaptic terminal that lead from depolarization to neurotransmitter release, including the role of calcium. Explain the quantal hypothesis of neurotransmitter release and the experimental evidence that supports it. Describe the exocytosis/endocytosis cycle
Audience: Both Grad & Undergrad

4. Summarize basic principles of ligand/receptor interactions. Interpret the meaning of quantities such as the dissociation constant (Kd) and the maximum response (Vmax). Explain the experimental evidence that led to the equations (e.g., Hill Equation) that describe these principles
Audience: Both Grad & Undergrad

5. Name the major classes of ligand-gated ion channels that support fast synaptic transmission and differentiate their functions with respect to excitation versus inhibition. Identify the structural motifs in these proteins that permit their specific functions. Solve equations that describe the behavior of simple chemical and electrical systems as a function of time
Audience: Both Grad & Undergrad

6. Explain what second messengers and signaling cascades are and how they participate in regulating neuronal function. Describe the major processes leading from DNA to RNA to the production of proteins and explain how these processes are regulated with respect to the structure of chromatin and the action of transcriptional activators and repressors
Audience: Both Grad & Undergrad

7. Define the concept of sensory transduction. Describe the key components of transduction and their interactions in the following systems: vision, olfaction, touch and hearing. Explain how sensory cells can be "tuned" to respond to specific aspects of a stimulus (e.g., color, frequency, etc)
Audience: Both Grad & Undergrad

NEURODPT/NTP/PSYCH 611 – SYSTEMS NEUROSCIENCE
4 credits.

Introduction to the anatomy and physiology of the mammalian nervous system. Lectures will cover the neuroanatomy of the major subdivisions of the human brain, the major sensory and motor systems, and higher order functions. Lab/discussion sections will emphasize readings from the primary literature and hands-on dissections.
Requisites: NEURODPT/NTP 610 or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the organization and structure of mammalian nervous system, including the spinal cord, brainstem, thalamus, cerebral cortex, cerebellum, basal ganglia, limbic system, and their interconnections on a systems leve
Audience: Both Grad & Undergrad

2. Demonstrate a solid understanding of the functions of the sensory and motor systems that underlie perception and action
Audience: Both Grad & Undergrad

3. Demonstrate a solid understanding of higher brain functions and behavior, including learning and memory and executive function
Audience: Both Grad & Undergrad

4. Demonstrate knowledge about approaches of modern neuroscience research including neuroanatomy, neurophysiology, functional brain imaging, behavioral assays, and quantitative data analysis methods
Audience: Both Grad & Undergrad

5. Develop and apply critical thinking to evaluate original neuroscience research
Audience: Graduate

6. Develop ability to formulate hypotheses and to apply knowledge learned from the course to design experiments for hypothesis testing
Audience: Graduate

NEURODPT 629 – MOLECULAR AND CELLULAR MECHANISMS OF MEMORY
3 credits.

Focuses on the cell signaling and the resulting structural changes that occur at neuronal synapses during memory formation. The aim is to understand how the synaptic changes underlying memory occur.
Requisites: Graduate/professional standing or ANAT&PHY 335, 435, PHYSIOL 335, 435 or ZOOLOGY/PSYCH 523
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe how the neural activity at the synapse which occurs during a memory-inducing event (a memorable event) leads to the ability to recall that event, when the animal or person does recall that event, either spontaneously or by prompting.
Audience: Both Grad & Undergrad

2. Apply a variety of biological techniques to understand the biochemical processes that are involved in memory. Learn the principles of these advanced techniqes and apply them appropriately to work out mechanisms.
Audience: Both Grad & Undergrad

3. Formulate why alterations in synaptic strength between neurons in an autoassociative network lead to the ability to recall an event which involved the activation of neurons in that network. This is the concept of pattern completion, which is the core of memory formation and is an incredibly important overall concept.
Audience: Both Grad & Undergrad

4. Succinctly present research proposals that are students' extensions of work that has been published, including a strong component of originality on the part of the student.
Audience: Both Grad & Undergrad

5. Formulate the basics of synaptic transmission mechanisms including presynaptic release of neurotransmitter and effects of neurotransmitter interactions with the post synaptic membrane on biochemistry and electrophysiology of the dendritic spine. These include unique properties of the dendritic spine including anatomy,biochemical composition.
Audience: Both Grad & Undergrad

6. Formulate the concept of neural plasticity, the strengthening and weakening of transmission between presynaptic terminals and post synaptic dendritic spines. The realization that this occurs as the result of interaction between a large number of proteins. Describe the structure of the synapse in detail that includes the roles played by structural proteins and protein kinases and phosphatases in affecting synaptic strength.
Audience: Both Grad & Undergrad

7. Describe the application of the use of advanced optical approaches such as FRET (fluorescence resonance energy transfer) and several others. Formulate how they reveal detailed information about the movements and alterations in properties of the key macromolecules that comprise the synaptic region. Formulate how information is derived from these measurements to explain events of synaptic plasticity.
Audience: Both Grad & Undergrad

8. Formulate an approach using one or more of these techniques to answer an unresolved question regarding the mechanisms of plasticity.
Audience: Graduate

NEURODPT/NTP 640 – COMPUTATIONAL NEUROSCIENCE: FROM SINGLE CELLS TO WHOLE BRAIN MODELS
3 credits.

Theory and application of methods in computational neuroscience across various levels of organization from single cells to global brain dynamics and cognition. Computational neuroscience is an approach to understanding the development and function of nervous systems in mechanistic terms at many different structural scales. Topics include biophysical properties of neurons and synapses, neural plasticity, sensory systems, neural circuits, whole brain analysis and modeling, and different views on brain function. Includes primers on relevant computational techniques (ICA, information theoretical approaches, dynamical systems) and a computational problem set. Starts with an introduction to MATLAB (used for problem sets).
Requisites: PSYCH/ZOOLOGY 523, PSYCH 454, MATH 221, and (PHYSICS 104, 202, 208, or 248); or graduate/professional standing and NEURODPT/NTP 610 and PSYCH/NEURODPT/NTP 611
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain the basic functioning of a neuron in biophysical terms (including how action potentials are generated, the role of dendrites, and postsynaptic integration).
Audience: Both Grad & Undergrad

2. Summarize the computational properties of sensory neurons reacting to sensory stimuli (tuning curves, receptive fields, feature selectivity).
Audience: Both Grad & Undergrad

3. Demonstrate technical familiarity in evaluating the statistical and information theoretical properties of neuronal activity (basics of signal detection theory, spike train statistics, firing rate models, PCA/ICA analysis).
Audience: Both Grad & Undergrad

4. Name various types of neural circuit models and their areas of application.
Audience: Both Grad & Undergrad

5. List the main differences between artificial neural networks as developed in computer science and computational models of biological neural networks.
Audience: Both Grad & Undergrad

6. Demonstrate how to characterize the dynamical properties of neurons and neural networks.
Audience: Both Grad & Undergrad

7. Summarize the hierarchical organization of the brain in computational terms (canonical microcircuit, mini-columns, functional brain networks).
Audience: Both Grad & Undergrad

8. Distinguish between anatomical, functional, and effective cortical connectivity.
Audience: Both Grad & Undergrad

9. Summarize main theoretical approaches to understanding brain functioning (graph theory, dynamical systems, information processing, decoding, whole-brain computational models).
Audience: Both Grad & Undergrad

10. Run and adapt MATLAB scripts for building and simulating neural

NEURODPT/GENETICS 650 – FUNCTIONAL GENOMICS OF BRAIN DISORDERS
3 credits.

Functional genomics methods (RNA-seq, ATAC-seq, Hi-C, ChIP-seq, Tag, etc.) and their applications in the study of molecular and cellular mechanisms governing brain development, evolution, and neurodevelopmental and neuropsychiatric disorders. Overview of relevant aspects of Genetics and Neuroscience, including genomic approaches for gene discovery for human disorders and key properties of brain cells and circuit development. Bioinformatic approaches for analyzing genome-scale data sets. Critical consideration of experimental design and analysis strategies through reading and discussion of primary research literature and the development of an original research proposal. Emphasis will be placed upon how to effectively communicate science (written and oral).
Requisites: GENETICS 466, 468, BIOCORE 383, PSYCH/ZOOLOGY 523, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Recognize potential strengths, limitations, and assumptions of published scientific studies.
Audience: Undergraduate

2. Describe the genomics tools used to study brain development and disorders, including how these tools are run and how to interpret the results they generate.
Audience: Both Grad & Undergrad

3. Summarize current studies in genomics, brain development, evolution, and neurodevelopmental and neuropsychiatric disorders from primary scientific literature.
Audience: Both Grad & Undergrad

4. Design a research project that utilizes functional genomics approaches to interrogate fundamental questions of brain disorders, development, evolution, and function.
Audience: Both Grad & Undergrad

5. Evaluate the strengths, limitations, and assumptions of published and proposed research studies, including methods, results, conclusions, and context of the field.
Audience: Graduate

6. Critique study design and interpretation and communicate critiques in a constructive manner.
Audience: Graduate

NEURODPT/PSYCH/ZOOLOGY 674 – BEHAVIORAL NEUROENDOCRINOLOGY SEMINAR
2 credits.

Behavior results from a complex interplay among hormones, the brain, and environmental factors. Behaviors and their underlying neural substrates have evolved in response to specific environmental conditions, resulting in vast species diversity in behavioral and neuroendocrine solutions to environmental problems. Designed to explore the primary literature on the neuroendocrine underpinnings of behavior spanning from feeding to sex differences in complex social behaviors. A range of taxonomic groups will be discussed, including (but not limited to) mammals, birds, and fish.
Requisites: ZOOLOGY/BIOLOGY 101, ZOOLOGY/BIOLOGY/BOTANY 151, BIOCORE 383 or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify how behaviors and their underlying neural substrates have evolved in response to specific environmental conditions
Audience: Both Grad & Undergrad

2. Discuss and explore the primary literature on the neuroendocrine underpinnings of behavior spanning from feeding to sex differences in complex social behaviors
Audience: Both Grad & Undergrad

3. Identify and discuss hormones, the brain, and environmental factors as they relate to behavioral evolution and biological diversity
Audience: Both Grad & Undergrad

4. Develop and apply critical thinking to evaluate neuroendocrinological research
Audience: Graduate

5. Communicate effectively about concepts, theories and approaches of neuroendocrinology and behavioral research
Audience: Graduate

NEURODPT 675 – SELECTED TOPICS IN PHYSIOLOGY
1-3 credits.

Topics include: advanced cardiovascular physiology, advanced respiratory physiology, advanced endocrinology, membrane transport physiology and neurobiology.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2019
Learning Outcomes: 1. Apply, analyze, or evaluate advanced theories, concepts, or methods in Neuroscience and Physiology, including but not limited to: ion channels, advanced cardiovascular physiology, advanced respiratory physiology, advanced endocrinology, membrane transport physiology and neurobiology
Audience: Both Grad & Undergrad

2. Identify and describe key theories, concepts, and methods in Physiology and Neuroscience, including but not limited to: ion channels, advanced cardiovascular physiology, advanced respiratory physiology, advanced endocrinology, membrane transport physiology and neurobiology and apply the knowledge gained to research in the field
Audience: Graduate

NEURODPT 699 – DIRECTED STUDY
1-4 credits.

Independent work.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply concepts learned in coursework to real life situations
Audience: Undergraduate

2. Read and effectively search scientific literature
Audience: Undergraduate

3. Develop critical, analytical, and independent thinking skills
Audience: Undergraduate

NEURODPT 747 – SENSORY AND MOTOR SYSTEMS
2 credits.

Overview of the basic science principles of sensory and motor systems in the central and peripheral nervous system, with clinicians providing complementary presentations on their relevant experiences in the clinic. Topics include Somatosensory pathways in spinal cord, brainstem and cerebrum, Motor neurons in spinal cord and brainstem and the descending systems that control them, Blood Supply of the CNS and affiliated vascular syndromes, Cerebellum, Basal Ganglia and associated pathways, Eye Movement control, Vestibular, Auditory, and Visual systems and organization of Cerebral Cortex.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and summarize the main sensory and motor structures within the nervous system.
Audience: Graduate

2. Explain how elements in the nervous system interact to enable specific sensory and motor functions.
Audience: Graduate

3. Describe how pathology in specific neural pathways leads to particular clinical neurological signs and symptoms (e.g., ischemic stroke syndromes).
Audience: Graduate

4. Predict the location of damage in the nervous system based on symptoms and signs.
Audience: Graduate

NEURODPT/ZOOLOGY 765 – DEVELOPMENTAL NEUROSCIENCE
3 credits.

Analysis of neural development with emphasis on experimental approaches. Combination of lectures and discussions of primary literature. Topics include neural induction, patterning, mechanisms of axon guidance, neural crest cell migration and differentiation, cortical development, and synapse formation and elimination.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Gain an extensive understanding of mechanisms of neural development
Audience: Graduate

2. Acquire the ability to critically analyze current studies in neural development
Audience: Graduate

NEURODPT 990 – RESEARCH AND THESIS
1-9 credits.

Research supervised by individual faculty members.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Exhibit a broad understanding of general Neuroscience principles
Audience: Graduate

2. Conduct independent research using a variety of approaches
Audience: Graduate

3. Think critically to address research challenges
Audience: Graduate

4. Exhibit and foster professional and ethical conduct in their research
Audience: Graduate

5. Collaborate with other investigators within or outside the thesis lab
Audience: Graduate

NEUROSCIENCE TRAINING PROGRAM (NTP)

NTP/NEURODPT 610 – CELLULAR AND MOLECULAR NEUROSCIENCE
4 credits.

Study of original papers leading to an understanding of the molecular basis of electrical activity in neurons. Topics include voltage-sensitive currents, molecular biology of neuronal receptorrs, synaptic transmission and sensory transduction.
Requisites: ZOOLOGY/PSYCH 523 and (PHYSICS 202, 208, or 248), or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the major anatomical parts of a neuron and summarize their functions
Audience: Both Grad & Undergrad

2. Name the major classes of voltage-gated ion channels responsible for the resting potential and action potential. Describe their functional roles in generating those potentials, with respect to concepts such as voltage-dependence, activation, inactivation and propagation. Identify the structural motifs in these proteins that permit their function
Audience: Both Grad & Undergrad

3. Summarize the sequence of events in the presynaptic terminal that lead from depolarization to neurotransmitter release, including the role of calcium. Explain the quantal hypothesis of neurotransmitter release and the experimental evidence that supports it. Describe the exocytosis/endocytosis cycle
Audience: Both Grad & Undergrad

4. Summarize basic principles of ligand/receptor interactions. Interpret the meaning of quantities such as the dissociation constant (Kd) and the maximum response (Vmax). Explain the experimental evidence that led to the equations (e.g., Hill Equation) that describe these principles
Audience: Both Grad & Undergrad

5. Name the major classes of ligand-gated ion channels that support fast synaptic transmission and differentiate their functions with respect to excitation versus inhibition. Identify the structural motifs in these proteins that permit their specific functions. Solve equations that describe the behavior of simple chemical and electrical systems as a function of time
Audience: Both Grad & Undergrad

6. Explain what second messengers and signaling cascades are and how they participate in regulating neuronal function. Describe the major processes leading from DNA to RNA to the production of proteins and explain how these processes are regulated with respect to the structure of chromatin and the action of transcriptional activators and repressors
Audience: Both Grad & Undergrad

7. Define the concept of sensory transduction. Describe the key components of transduction and their interactions in the following systems: vision, olfaction, touch and hearing. Explain how sensory cells can be "tuned" to respond to specific aspects of a stimulus (e.g., color, frequency, etc)
Audience: Both Grad & Undergrad

NTP/NEURODPT/PSYCH 611 – SYSTEMS NEUROSCIENCE
4 credits.

Introduction to the anatomy and physiology of the mammalian nervous system. Lectures will cover the neuroanatomy of the major subdivisions of the human brain, the major sensory and motor systems, and higher order functions. Lab/discussion sections will emphasize readings from the primary literature and hands-on dissections.
Requisites: NEURODPT/NTP 610 or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the organization and structure of mammalian nervous system, including the spinal cord, brainstem, thalamus, cerebral cortex, cerebellum, basal ganglia, limbic system, and their interconnections on a systems leve
Audience: Both Grad & Undergrad

2. Demonstrate a solid understanding of the functions of the sensory and motor systems that underlie perception and action
Audience: Both Grad & Undergrad

3. Demonstrate a solid understanding of higher brain functions and behavior, including learning and memory and executive function
Audience: Both Grad & Undergrad

4. Demonstrate knowledge about approaches of modern neuroscience research including neuroanatomy, neurophysiology, functional brain imaging, behavioral assays, and quantitative data analysis methods
Audience: Both Grad & Undergrad

5. Develop and apply critical thinking to evaluate original neuroscience research
Audience: Graduate

6. Develop ability to formulate hypotheses and to apply knowledge learned from the course to design experiments for hypothesis testing
Audience: Graduate

NTP/NEURODPT 640 – COMPUTATIONAL NEUROSCIENCE: FROM SINGLE CELLS TO WHOLE BRAIN MODELS
3 credits.

Theory and application of methods in computational neuroscience across various levels of organization from single cells to global brain dynamics and cognition. Computational neuroscience is an approach to understanding the development and function of nervous systems in mechanistic terms at many different structural scales. Topics include biophysical properties of neurons and synapses, neural plasticity, sensory systems, neural circuits, whole brain analysis and modeling, and different views on brain function. Includes primers on relevant computational techniques (ICA, information theoretical approaches, dynamical systems) and a computational problem set. Starts with an introduction to MATLAB (used for problem sets).
Requisites: PSYCH/ZOOLOGY 523, PSYCH 454, MATH 221, and (PHYSICS 104, 202, 208, or 248); or graduate/professional standing and NEURODPT/NTP 610 and PSYCH/NEURODPT/NTP 611
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain the basic functioning of a neuron in biophysical terms (including how action potentials are generated, the role of dendrites, and postsynaptic integration).
Audience: Both Grad & Undergrad

2. Summarize the computational properties of sensory neurons reacting to sensory stimuli (tuning curves, receptive fields, feature selectivity).
Audience: Both Grad & Undergrad

3. Demonstrate technical familiarity in evaluating the statistical and information theoretical properties of neuronal activity (basics of signal detection theory, spike train statistics, firing rate models, PCA/ICA analysis).
Audience: Both Grad & Undergrad

4. Name various types of neural circuit models and their areas of application.
Audience: Both Grad & Undergrad

5. List the main differences between artificial neural networks as developed in computer science and computational models of biological neural networks.
Audience: Both Grad & Undergrad

6. Demonstrate how to characterize the dynamical properties of neurons and neural networks.
Audience: Both Grad & Undergrad

7. Summarize the hierarchical organization of the brain in computational terms (canonical microcircuit, mini-columns, functional brain networks).
Audience: Both Grad & Undergrad

8. Distinguish between anatomical, functional, and effective cortical connectivity.
Audience: Both Grad & Undergrad

9. Summarize main theoretical approaches to understanding brain functioning (graph theory, dynamical systems, information processing, decoding, whole-brain computational models).
Audience: Both Grad & Undergrad

10. Run and adapt MATLAB scripts for building and simulating neural

NTP 660 – NEUROSCIENCE & PUBLIC POLICY SEMINAR
1-2 credits.

Covers various topics in neuroscience and in the related sciences that demonstrate the interaction between science and public policy.
Requisites: BIOCORE 485, ZOOLOGY/PSYCH 523, PSYCH/NEURODPT/NTP 611, or declared in Neuroscience graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Integrate knowledge from multiple sources and reflect on how science informs policies and society, and how policies impact the conduct of science
Audience: Both Grad & Undergrad

2. Demonstrate ability to consider multiple viewpoints on complex topics and engage in respectful and enriching discussion
Audience: Both Grad & Undergrad

3. Summarize content knowledge on current topics in policy, law, and neuroscience
Audience: Both Grad & Undergrad

4. Develop critical thinking skills to identify and dissect societal issues that are informed by science and reflect on potential solutions and next steps
Audience: Both Grad & Undergrad

5. Demonstrate knowledge of career paths at the intersection of science and policy (e.g. academic, non-profit, industry, government)
Audience: Both Grad & Undergrad

6. Demonstrate ability to lead an inclusive discussion on topics at the intersection of science and policy
Audience: Graduate

NTP 666 – NEUROSCIENCE OF CONSCIOUSNESS AND ITS DISORDERS
3 credits.

Outlines contemporary strategies to study consciousness and current knowledge of the neural correlates of consciousness and their alterations during sleep, parasomnia, anesthesia, coma, stroke, seizures, meditative and psychedelic states. Reviews recent work studying the neural correlates of conscious contents and their interactions with cognitive processes. Outlines contemporary theories of consciousness, illustrate how they can be empirically tested, and discuss their implications for the presence vs. absence of consciousness in artificial intelligent systems.
Requisites: (PSYCH 454 and ZOOLOGY/PSYCH 523) or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand approaches used to distinguish between consciousness and its pre-requisites or consequences, and the importance of arousal systems for enabling consciousness.
Audience: Both Grad & Undergrad

2. Describe current knowledge about cortical structures involved in specific conscious contents.
Audience: Both Grad & Undergrad

3. Understand the complementarity of animal vs. human models to study consciousness.
Audience: Both Grad & Undergrad

4. Describe the spectrum of alterations of consciousness present during sleep, parasomnia, anesthesia, coma, seizures, stroke, meditative and psychedelic states, and their neural correlates.
Audience: Both Grad & Undergrad

5. Understand possible interactions and dissociations between consciousness, attention and memory.
Audience: Both Grad & Undergrad

6. Describe the variety of current theoretical approaches to consciousness and their relevance to infer the presence of consciousness in artificial intelligent systems.
Audience: Both Grad & Undergrad

7. Discuss a selection of recent studies - identified shortly before class as providing significant advances and/or reflecting current directions in the consciousness research field – and learn to critically analyze the methodological strengths and limitations of these studies.
Audience: Graduate

8. Understand how to design an experiment probing the neural correlates of consciousness while accounting for its pre-requisites and consequences.
Audience: Graduate

NTP 675 – SPECIAL TOPICS
1-3 credits.

Requisites: None
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Apply, analyze, or evaluate advanced theories, concepts, or methods in neuroscience and neurobiology
Audience: Both Grad & Undergrad

2. Identify and describe key theories, concepts, and methods in neurobiology
Audience: Both Grad & Undergrad

3. Explore a new phenomenon or modality in the neuroscience area and apply the knowledge gained to research in the field
Audience: Graduate

NTP 677 – BASIC SLEEP MECHANISMS AND SLEEP DISORDERS: FROM NEUROBIOLOGY TO SLEEP MEDICINE
3 credits.

Sleep occupies a third of our life, is found in all animal species carefully studied so far, and loss of sleep has both acute and long- term negative consequences on the brain and the body. Still, why we sleep remains unclear, and hypotheses on the role of sleep for synaptic homeostasis, learning and memory are being tested. Focuses on the neurobiology of sleep, with detailed review of the brain structures involved in controlling wake and sleep, as well as the circadian and homeostatic regulation of sleep. Other topics include changes in sleep need with age, animal models to study sleep, sleep disorders, and genetics of sleep.
Requisites: PSYCH 454 and ZOOLOGY/PSYCH 523 or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Outline the physiology and definitions used to define sleep and wake
Audience: Both Grad & Undergrad

2. Detail the brain structures and systems involved in the control of sleep and wake
Audience: Both Grad & Undergrad

3. Describe circadian and homeostatic regulation of sleep and wakefulness
Audience: Both Grad & Undergrad

4. Describe recent evidence linking sleep, memory, and synaptic plasticity
Audience: Both Grad & Undergrad

5. Describe animal models used to study sleep
Audience: Both Grad & Undergrad

6. Describe molecular and genetic approaches to the study of sleep
Audience: Both Grad & Undergrad

7. Recognize how sleep changes across the lifespan
Audience: Both Grad & Undergrad

8. Explain how sleep affects endocrine, metabolic, and cognitive functions

Audience: Both Grad & Undergrad

9. Outline the importance of sleep for the individual and society, including negative consequences of sleep deprivation and sleep disorders
Audience: Both Grad & Undergrad

10. List the symptoms, pathological mechanisms, epidemiology, and treatments of sleep disorders (including insomnia, sleep apnea, central nervous system hypersomnias, circadian rhythm disorders, parasomnias, and sleep-related movement disorders)
Audience: Both Grad & Undergrad

11. Discuss additional very recent studies on sleep topics and learn how to recognize strengths and limitations of these studies relative to prior knowledge on sleep research
Audience: Graduate

12. Describe how to design a sleep experiment and recognize the many confounding factors often associated with sleep studies
Audience: Graduate

NTP 700 – PROFESSIONAL DEVELOPMENT FOR BIOMEDICAL GRADUATE STUDENTS
1 credit.

Provides graduate students with the skills and knowledge necessary to succeed in science. Topics which are covered include choosing a thesis advisor, grant writing, preparing a seminar presentation, etc.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define the concepts of mentorship, mentor-mentee relationships and choosing a thesis advisor, mentor, and thesis committee members
Audience: Graduate

2. Write compelling publications for peer-reviewed journals, authorship responsibilities
Audience: Graduate

3. Critically evaluate a peer-reviewed scientific article
Audience: Graduate

4. Demonstrate knowledge of the concepts of grant writing, specific aims, preparing a seminar presentation, etc.
Audience: Graduate

5. Participate in various types of research collaborations, team science
Audience: Graduate

6. Provide instruction in the responsible conduct of research (RCR) for students; animal and human subject research and ethics
Audience: Graduate

NTP 701 – EXPERIMENTAL DESIGN AND STATISTICAL METHODOLOGY
1 credit.

Application of the scientific method and experimental design, with a focus on experimental neuroscience. Topics include best practices that underlie robust and unbiased experimental approaches, methods, analyses, data interpretation and transparent reporting of results.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Identify appropriate experimental designs relevant to contemporary neuroscience research
Audience: Graduate

2. Recognize well-designed, well-controlled experiments
Audience: Graduate

3. Consider experimental design and analysis principles in their own research
Audience: Graduate

4. Describe appropriate quantitative approaches used in a variety of experimental systems
Audience: Graduate

5. Recognize (in)appropriate uses of statistics in neuroscience data analysis, interpreting results, and forming appropriate conclusions
Audience: Graduate

6. Select appropriate application of statistics to neuroscience data in different experimental paradigms
Audience: Graduate

NTP 900 – NEUROSCIENCE SEMINAR: CURRENT TOPICS IN NEUROBIOLOGY
1 credit.

Critical review of selected topics in neurobiology.
Requisites: Declared in Neuroscience graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the breadth of Neuroscience.
Audience: Graduate

2. Present neuroscience research in a seminar setting.
Audience: Graduate

3. Demonstrate ability to critically analyze specific aspects of the topic area.
Audience: Graduate

NTP 990 – RESEARCH AND THESIS
1-12 credits.

Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Exhibit a broad understanding of general Neuroscience principles
Audience: Graduate

2. Conduct independent research using a variety of approaches
Audience: Graduate

3. Demonstrate knowledge by critically addressing research challenges
Audience: Graduate

4. Exhibit and foster professional and ethical conduct in their research
Audience: Graduate

5. Collaborate with other investigators within or outside the thesis lab
Audience: Graduate

NUCLEAR ENGINEERING (N E)

N E 1 – COOPERATIVE EDUCATION PROGRAM
1 credit.

Work experience which combines classroom theory with practical knowledge of operations to provide students with a background upon which to base a professional career.
Requisites: Sophomore standing
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and respond appropriately to real-life engineering ethics cases relevant to co-op work
Audience: Undergraduate

2. Synthesize and apply appropriate technical education to real world technical work
Audience: Undergraduate

3. Communicate effectively in writing and speaking with a range of audiences in the workplace, including those without disciplinary expertise
Audience: Undergraduate

4. Develop professional and transferable habits like time management skills, collaborative problem-solving skills, and research skills for learning new information
Audience: Undergraduate

N E 231 – INTRODUCTION TO NUCLEAR ENGINEERING
3 credits.

Nuclear fission/fusion, medical applications of radiation, radiation safety. Socio-economic topics including environmental justice, community engagement, nuclear policy. Brief history of and controversies in nuclear engineering. Career paths and ethics in engineering, and introduction to professional communication.
Requisites: None
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe how nuclear science and technology are used in our world today
Audience: Undergraduate

2. Identify different career paths in nuclear engineering
Audience: Undergraduate

3. Distinguish the technological and socio-economic context and challenges of nuclear engineering
Audience: Undergraduate

4. Analyze problems in nuclear engineering ethics and arrive at defensible actions
Audience: Undergraduate

5. Produce a deliverable relevant to the class curriculum, designed by a team
Audience: Undergraduate

N E 234 – PRINCIPLES AND PRACTICE OF NUCLEAR REACTOR OPERATIONS
4 credits.

Presents the theoretical and practical information required to understand operation of nuclear reactors. Content includes all subjects which must be known by a person seeking an operating license for the university reactor. Instructors integrate information on similar operations and systems in a nuclear power plant.
Requisites: Declared in Nuclear Engineering
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Solve problems involving radioactive decay, radiation attenuation, neutron activation and the time dependent behavior of reactors
Audience: Undergraduate

2. Describe the units and methods of detecting ionizing radiation, the principles of radiation protection and applicable federal regulations
Audience: Undergraduate

3. Describe reactor components and systems and their relevance to reactor operations
Audience: Undergraduate

4. Manipulate the reactivity controls of a reactor
Audience: Undergraduate

N E 305 – FUNDAMENTALS OF NUCLEAR ENGINEERING
3 credits.

Properties of nuclei, nuclear structure, radioactivity, nuclear reactions, fission, resonance reactions, moderation of neutrons.
Requisites: PHYSICS 205, 241, 244, or 249, or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Solve steady wave mechanics problems beginning from the appropriate form of Schrodinger's equation
Audience: Undergraduate

2. Describe the Semi Empirical Mass Formula as well as the features of the "binding energy/nucleon" curve
Audience: Undergraduate

3. Explain why the "magic numbers" of nuclear physics differ from those of atomic physics
Audience: Undergraduate

4. Explain the correlation between the half-lives for alpha-decay and the Q-value
Audience: Undergraduate

5. Describe the energy spectrum of beta-decay
Audience: Undergraduate

6. List the different absorption mechanism of gamma-rays
Audience: Undergraduate

7. Compare the kinematics of elastic scattering with that of charged particle scattering
Audience: Undergraduate

N E 405 – NUCLEAR REACTOR THEORY
3 credits.

The neutronics behavior of fission reactors, primarily from a theoretical, one-speed perspective. Criticality, fission product poisoning, reactivity control, reactor stability and introductory concepts in fuel management, followed by slowing down and one-speed diffusion theory.
Requisites: N E 305 and (MATH 319, 320, 321, or 375), or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Write neutron balance conditions describing the temporal, spectral and spatial behavior of (neutron) multiplying systems
Audience: Undergraduate

2. Explain how stability issues manifest themselves in choices of reactor design and operation in light water reactors
Audience: Undergraduate

3. Assess whether or not a system containing fissile material is critical
Audience: Undergraduate

4. Estimate the lifetime of a core based on the initial excess reactivity; prescribe control materials for maintaining criticality over the core lifetime
Audience: Undergraduate

5. Solve simple temporal reactor kinetics problems and explain the shape of the reactor power curve
Audience: Undergraduate

6. Solve simple spectral problems and explain the shape of the neutron spectrum in a light water reactor
Audience: Undergraduate

7. Find the spatial neutron distribution and associated power distribution for a given combination of constituent materials using one-group and two-group diffusion theory
Audience: Undergraduate

N E 408 – IONIZING RADIATION
3 credits.

Sources, interactions, and detection of ionizing radiation. Biological effects, shielding, standards of radiation protection.
Requisites: N E 305, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain the modes by which uncharged radiation (photons and neutrons) interacts with matter
Audience: Undergraduate

2. Describe how heavy and light charged particles interact with matter
Audience: Undergraduate

3. Determine radiological quantities associated with radiation protection (e.g., exposure, absorbed dose, and dose equivalent) for external sources of radiation (unshielded and shielded)
Audience: Undergraduate

4. Determine committed doses for internal sources of radiation
Audience: Undergraduate

5. Design a shield to protect occupational workers from radiation exposure due to simple photon and neutron sources
Audience: Undergraduate

N E 411 – NUCLEAR REACTOR ENGINEERING
3 credits.

Reactor heat generation and removal; steady- and unsteady-state conduction in reactor elements; single phase, two-phase, and liquid metal cooling, core thermal design.
Requisites: N E 305, M E 361, and (M E 363 and M E 364 or CBE 320) or graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Solve steady-state, coupled conduction and convection heat transfer problems in geometric configurations relevant to nuclear reactors
Audience: Undergraduate

2. Describe the temperature excursion experienced by the fuel during an uncontrolled accident sequence using relevant approximations
Audience: Undergraduate

3. Perform mass, momentum, and energy balances on different reactor components
Audience: Undergraduate

4. Assess the safety margin of different reactor components during normal and off-normal conditions, with reference to the concept of "defense-in-depth"
Audience: Undergraduate

N E 412 – NUCLEAR REACTOR DESIGN
5 credits.

Reactor design projects, reactor hazards, economics.
Requisites: N E 405 and (E P 271 or COMP SCI 300, 302, or 310), or graduate/professional standing
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply nuclear engineering technical skills in the context of design
Audience: Undergraduate

2. Apply design thinking methodology within engineering design
Audience: Undergraduate

3. Practice quality assurance and documentation
Audience: Undergraduate

4. Build and work within a team, practicing leadership and project management
Audience: Undergraduate

5. Practice managing uncertainty in decision-making. "How do you take risks?"
Audience: Undergraduate

N E/M S & E 423 – NUCLEAR ENGINEERING MATERIALS
3 credits.

Fundamentals of fuel and cladding behavior in terms of thermal properties, chemical behavior and radiation damage.
Requisites: M S & E 350 or 351, graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply material science and engineering principles to analyze mass transport, heat transport, corrosion, and mechanical behavior in nuclear fuels and materials
Audience: Undergraduate

2. Assess irradiation induced microstructural change and mechanical property degradation in nuclear materials
Audience: Undergraduate

3. Apply material science and engineering principles to identify material challenges in current and advanced nuclear reactors
Audience: Undergraduate

4. Identify mechanisms and mitigation strategies for critical materials issues in current and advanced nuclear reactors
Audience: Undergraduate

N E 424 – NUCLEAR MATERIALS LABORATORY
1 credit.

Practical application of materials issues for nuclear systems including welding, non-destructive examination, optical microscopy, electron microscopy, to understand radiation damage and corrosion.
Requisites: M S & E 350 or 351, graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Conduct metallographic sample preparation and follow it up with optical and scanning electron microscopy for microstructural characterization and analysis
Audience: Undergraduate

2. Perform hardness and tensile and impact toughness testing of materials to assess their mechanical behavior
Audience: Undergraduate

3. Use the x-ray diffraction technique to determine the crystal structure of materials, identify the phases present, and measure residual stresses
Audience: Undergraduate

4. Perform simulations of ion-material interaction to determine the penetration depth of ions as a function of ion energy, type, and substrate material
Audience: Undergraduate

5. Comprehend the various components and work of the ion beam accelerator
Audience: Undergraduate

6. Describe the operational issues of a nuclear reactor and some of its inner workings
Audience: Undergraduate

7. Identify and address the challenges of radioactive sample handling and characterization
Audience: Undergraduate

N E 427 – NUCLEAR INSTRUMENTATION LABORATORY
2 credits.

Experiments on nuclear instrumentation, counting, data analysis.
Requisites: N E 305 or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the operational principles of nuclear radiation detectors in the context of how radiation interacts with matter
Audience: Undergraduate

2. Identify the best choice of detector for a given type of radiation and its limitations
Audience: Undergraduate

3. Operate basic nuclear counting instrumentation: gas-ionized and solid-state detectors, nuclear instrumentation module, power supplies, signal amplifiers, oscilloscopes, and single- and multi-channel analyzers
Audience: Undergraduate

4. Estimate experimental uncertainties in counting measurements and calculate errors associated with quantities derived from such measurements
Audience: Undergraduate

5. Take laboratory notes and prepare clearly written experimental reports
Audience: Undergraduate

N E 428 – NUCLEAR REACTOR LABORATORY
2 credits.

Experiments on reactor operation, flux measurement, measurements of reactor parameters, using pool type reactor.
Requisites: N E 405 and 427, or graduate/professional standing
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze, through experiment, the time-dependent behavior of reactors in the subcritical state, the critical state and the supercritical state
Audience: Undergraduate

2. Analyze, through experiment, the spatial shape and energy spectrum of neutron fluxes
Audience: Undergraduate

3. Measure neutron and reactor parameters
Audience: Undergraduate

4. Describe the extent to which theory and experiment agree, and what approximations or uncertainty result in deviations between the two
Audience: Undergraduate

N E/M S & E 433 – PRINCIPLES OF CORROSION
3 credits.

Thermodynamics and kinetics of metallic corrosion. The common forms of corrosion and corrosion susceptibility tests. Electrochemical measurement of corrosion rates. Corrosion prevention, economic considerations. High temperature oxidation and sulphidation. Corrosion case histories.
Requisites: M S & E 330, or graduate/professional standing, or member of Engineering Guest Students
Repeatable for Credit: No
Last Taught: Fall 2025

N E 489 – HONORS IN RESEARCH
1-3 credits.

Undergraduate research and senior honors thesis in nuclear engineering.
Requisites: Declared in Nuclear Engineering Honors in Undergraduate Research program
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2014

N E 505 – NUCLEAR REACTOR ANALYSIS
3 credits.

The neutronics behavior of fission reactors, both from a theoretical and computational multi-group perspective. Multi-group diffusion theory, finite-difference and nodal methods, core heterogeneous effects, pin power reconstruction, thermal neutron spectra, fine group whole spectrum calculations and coarse group constant generation.
Requisites: N E 405, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze the performance of a nuclear fuel assembly throughout its lifetime
Audience: Both Grad & Undergrad

2. Explain and demonstrate the changes in nuclear fuel assembly performance as operational parameters vary
Audience: Both Grad & Undergrad

3. Use an industry-relevant software package to perform lattice calculations for analysis and design of a nuclear fuel assembly
Audience: Both Grad & Undergrad

4. Explain and demonstrate the changes in nuclear fuel assembly performance as design parameters vary
Audience: Both Grad & Undergrad

5. Compare different forms of analysis for the same application
Audience: Graduate

N E/MED PHYS 506 – MONTE CARLO RADIATION TRANSPORT
3 credits.

Use of Monte Carlo technique for applications in nuclear engineering and medical physics. Major theory of Monte Carlo neutral particle transport is discussed. Standard Monte Carlo transport software is used for exercises and projects. Major emphasis is on analysis of real-world problems.
Requisites: N E 305 and (N E 405, N E 408, PHYSICS/B M E/H ONCOL/MED PHYS 501 or N E/MED PHYS 569) or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Use an industry-relevant software package to perform Monte Carlo radiation transport simulations for analysis of fixed source and/or multiplying systems
Audience: Both Grad & Undergrad

2. Explain how random processes are used to simulate a single particle transport history through an engineering system, including source, streaming and collisions
Audience: Both Grad & Undergrad

3. Explain how the paths of many particle transport histories are combined to provide estimates of engineering results
Audience: Both Grad & Undergrad

4. Analyze the statistical performance of a simulation and suggest ways to improve that performance
Audience: Both Grad & Undergrad

5. Apply Monte Carlo radiation transport to a problem related to your research
Audience: Graduate

N E/M E 520 – TWO-PHASE FLOW AND HEAT TRANSFER
3 credits.

Two-phase flow and heat transfer in engineering systems. Pool boiling and flow boiling. Phenomenological modeling.
Requisites: M E 361 and (M E 364 or CBE 320), or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

N E/E C E/PHYSICS 525 – INTRODUCTION TO PLASMAS
3 credits.

Basic description of plasmas: collective phenomena and sheaths, collisional processes, single particle motions, fluid models, equilibria, waves, electromagnetic properties, instabilities, and introduction to kinetic theory and nonlinear processes. Examples from fusion, astrophysical and materials processing processing plasmas.
Requisites: (E C E 320 or PHYSICS 322), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

N E 526 – LABORATORY COURSE IN PLASMAS
3 credits.

Provides a background in the techniques for creating, exciting, and measuring the properties of lab plasmas and using the associated apparatus.
Requisites: PHYSICS/E C E/N E 525 or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. List the necessary hardware to generate and measure ultra-high vacuum conditions
Audience: Both Grad & Undergrad

2. Describe the plasma formation process when using a biased electrode or wave-heating
Audience: Both Grad & Undergrad

3. Explain the working principle of Langmuir plasma diagnostics
Audience: Both Grad & Undergrad

4. Perform data analysis in the framework of self-driven and independent research
Audience: Both Grad & Undergrad

5. Prepare a clearly written experimental report
Audience: Both Grad & Undergrad

6. Interpret experimental data based on comparisons with theory and modelling results
Audience: Graduate

N E/E C E/PHYSICS 527 – PLASMA CONFINEMENT AND HEATING
3 credits.

Principles of magnetic confinement and heating of plasmas for controlled thermonuclear fusion: magnetic field structures, single particle orbits, equilibrium, stability, collisions, transport, heating, modeling and diagnostics. Discussion of current leading confinement concepts: tokamaks, tandem mirrors, stellarators, reversed field pinches, etc.
Requisites: E C E/N E/PHYSICS 525, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

N E/E C E 528 – PLASMA PROCESSING AND TECHNOLOGY
3 credits.

Introduction to basic understanding and techniques. Plasma processing of materials for semiconductors, polymers, plasma spray coatings, ion implantation, etching, arcs, extractive metallurgy and welding. Plasma and materials diagnostics.
Requisites: PHYSICS 322 or E C E 320, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021

N E 536 – FEASIBILITY OF FUSION POWER PLANTS BASED ON CONTROLLED NUCLEAR FUSION
3 credits.

Introduction to the main aspects of fusion power plants and the underlying plasma physics. Key design considerations will be summarized related to fusion fuels, resources, plasma physics, plasma-facing materials, magnets, neutronics, shielding, tritium breeding blankets, structural materials, activation, radiation damage, neutral beams, wave heating current drive, safety, and environmental concerns. Focus on magnetic confinement fusion and its near-term and longer-term prospects.
Requisites: N E 305, M S & E 331, E C E 330, M E 364, CBE 320, PHYSICS 322, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Evaluate and compare important characteristics of magnetic fusion energy systems under different configurations
Audience: Both Grad & Undergrad

2. Evaluate the technological performance challenges to the key components of a magnetic fusion energy system
Audience: Both Grad & Undergrad

3. Describe the challenges to the feasibility of magnetic fusion energy
Audience: Both Grad & Undergrad

4. Discuss the role of fusion energy as part of future energy systems, including its economic viability
Audience: Both Grad & Undergrad

5. Evaluate and compare the important characteristics of inertial fusion energy and aneutronic fusion
Audience: Graduate

N E 541 – RADIATION DAMAGE IN METALS
3 credits.

A survey of the nature of point defects, how these defects are produced, how the defects migrate and cluster, and what effects point defects and defect clusters have on the physical and mechanical properties of metals.
Requisites: M S & E 350 or 351, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

N E 545 – MATERIALS DEGRADATION IN ADVANCED NUCLEAR REACTOR ENVIRONMENTS
3 credits.

Overview of materials (cladding and structural materials) used in advanced reactor systems and the associated degradation. Interactions between the advanced nuclear reactor environment and materials. Surface degradation, corrosion, oxidation, dissolution, vaporization, mass transfer, diffusion, and hands-on examples related to advanced reactors.
Requisites: M S & E 350, 351, or 352, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Describe the effects of environmental degradation on structural integrity of material used in advanced nuclear reactors
Audience: Both Grad & Undergrad

2. Identify and describe the mitigation strategies to prevent such degradation
Audience: Both Grad & Undergrad

3. Solve complex problems related to materials degradation using analytical and numerical techniques
Audience: Graduate

N E 550 – ADVANCED NUCLEAR POWER ENGINEERING
3 credits.

Analysis of nuclear systems for the production of useful power. Emphasis: thermodynamic cycles, reactor types, coupling of reactor and power plant, design synthesis, and plant economics.
Requisites: N E 405 and (N E 411 or concurrent enrollment), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Identify the key features of a range of advanced reactor technologies
Audience: Undergraduate

2. Analyze advanced reactors using theory applicable to multiple technologies
Audience: Undergraduate

3. Describe the design philosophy of advanced reactor technologies and be able to discuss the extent to which each of the reactor design types embodies those principles
Audience: Undergraduate

4. Identify the drivers and goals for advanced reactors and assess critically whether they meet these goals
Audience: Undergraduate

5. Synthesize information from multiple sources to make informed judgements about the relative merits and challenges of the various advanced reactor technologies
Audience: Graduate

N E 555 – NUCLEAR REACTOR DYNAMICS
3 credits.

Basic equations and physical parameters of point reactor kinetics without feedback effects; the nuclear reactor as a total system; reactor excursions, Fuchs-Nordheim and Bethe-Tait models; space-time reactor dynamics; synthesis methods.
Requisites: N E 405, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2020
Learning Outcomes: 1. Determine the behavior of the reactor power due to control element movement in the PRKE 1 group and 6 group models
Audience: Both Grad & Undergrad

2. Examine the behavior of the reactor in the presence of reactivity feedback effects (Resonance behavior, Doppler Broadening, density effects)
Audience: Both Grad & Undergrad

3. Analyze the power and temperature level behaviors due to the rapid injection and sinusoidal inputs of reactivity using the Nordheim-Fuchs models
Audience: Both Grad & Undergrad

4. Analyze the stability of a reactor using the Routh and Nyquist stability criterion and the singe and two temperature models
Audience: Both Grad & Undergrad

5. Examine numerical methods for the solution of the PRKEs and the reactor dynamics equations with feedback
Audience: Both Grad & Undergrad

6. Apply the reactor dynamics equations with feedback to a reactor design
Audience: Graduate

N E/M E 565 – POWER PLANT TECHNOLOGY
3 credits.

Design and performance of power plants for the generation of electric power; fossil, solar, wind, hydro and nuclear fuels, cycle analysis, component design and performance, plant operation, control, economics and environmental impact.
Requisites: M E 361, CBE 310, 320, or CIV ENGR 324, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe how electricity is produced in a power plant
Audience: Both Grad & Undergrad

2. Apply physical principles to model power plants including power output and efficiency
Audience: Both Grad & Undergrad

3. Observe and collect data on current issues and designs associated to power generation
Audience: Both Grad & Undergrad

4. Describe codes and regulations associated with power production, and how power is sold on the market and transmitted to the customer
Audience: Both Grad & Undergrad

5. Critically review scientific literature pertaining to power plant design
Audience: Both Grad & Undergrad

6. Effectively present detailed information regarding operation and maintenance of power plant components
Audience: Graduate

N E/MED PHYS 569 – HEALTH PHYSICS AND BIOLOGICAL EFFECTS
3-4 credits.

Physical and biological aspects of the use of ionizing radiation in industrial and academic institutions; physical principles underlying shielding instrumentation, waste disposal; biological effects of low levels of ionizing radiation.
Requisites: MATH 234 and (PHYSICS 241 or 249), graduate/professional standing, or declared in Medical Physics VISP
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Investigate theoretical concepts that are used in radiation safety practice.
Audience: Both Grad & Undergrad

2. Evaluate the effectiveness of radiation safety practice considering theoretical, economic, political, and societal perspectives.
Audience: Both Grad & Undergrad

3. Consider the ethical consequences of radiation safety regulations.
Audience: Both Grad & Undergrad

4. Integrate knowledge into research and/or clinical work
Audience: Graduate

N E 571 – ECONOMIC AND ENVIRONMENTAL ASPECTS OF NUCLEAR ENERGY
3 credits.

Economics of the nuclear fuel cycle. Economic and environmental impact of the nuclear fuel cycle. Impact on design, plant siting and regulation.
Requisites: N E 405, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize and describe the relationships between different sectors of the nuclear energy industry and nuclear fuel cycle
Audience: Both Grad & Undergrad

2. Perform economic and/or environmental analysis of energy systems
Audience: Both Grad & Undergrad

3. Communicate the results of economic and/or environmental analyses to an audience of peers
Audience: Both Grad & Undergrad

4. Describe the social, economic, and environmental dimensions of nuclear energy
Audience: Both Grad & Undergrad

5. Analyze potential tradeoffs and interrelationships among the social, economic, and environmental dimensions of nuclear energy
Audience: Both Grad & Undergrad

6. Communicate the results of economic and/or environmental analyses to policy-makers
Audience: Graduate

N E/I SY E 574 – METHODS FOR PROBABILISTIC RISK ANALYSIS OF NUCLEAR POWER PLANTS
3 credits.

Methods for risk and reliability analysis of engineered systems, particularly as applied in the nuclear power industry. Fault trees and event trees, Bayesian data analysis, probabilistic risk management. Some familiarity with nuclear plant safety systems is helpful, but not required.
Requisites: (STAT/MATH 309, STAT 311, 224, 324, or STAT/MATH 431), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Correctly apply methods of fault tree, event-tree, data, and uncertainty analysis to evaluate potential risks of engineering systems
Audience: Both Grad & Undergrad

2. Recognize, formulate, and analyze risks of engineered systems
Audience: Both Grad & Undergrad

3. Explain the results of risk analysis to managers and other non-specialist decision-makers
Audience: Graduate

N E 602 – SPECIAL TOPICS IN REACTOR ENGINEERING
0-3 credits.

Special Topics in Reactor Engineering.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2021

N E 699 – ADVANCED INDEPENDENT STUDY
0-3 credits.

Directed study projects as arranged with instructor.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

N E 705 – ADVANCED REACTOR THEORY
3 credits.

The neutron transport equation and its application to the analysis of nuclear reactors. Numerical solution methods, including the multi-group model, one-group equations, energy-averaged constants, discrete ordinates, and Monte Carlo methods. Perturbation theory and variational techniques for practical problems. Knowledge of Nuclear Reactor Theory [such as N E 405] required.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Derive and examine the Neutral Particle Transport Equation in the one- group and multi-group approximations
Audience: Graduate

2. Apply the Spherical Harmonics expansion and explain how it leads to the Legendre Polynomial expansion in one-dimension. Examine the P1 approximation and it leads to Diffusion theory. Program the P1 and P3 approximations
Audience: Graduate

3. Derive the Discrete Ordinates numerical approximation in one-dimensional slab coordinates, incorporate the boundary conditions and program the S2 and S8 discrete ordinates approximations. Work through the curvilinear Coordinates
Audience: Graduate

4. Derive the Integral Neutral Particle Transport Equation. Examine the numerical methods for the solution of the discrete integral transport (IT) method and the collision probability (IT) method. Program an IT method
Audience: Graduate

5. Derive and interpret the Adjoint Equation to the Transport Equation
Audience: Graduate

6. Discuss and examine the direct integration method
Audience: Graduate

7. Present a numerical IT method or write a multi-dimensional code based on a method examined and discussed in the course
Audience: Graduate

N E/C&E SOC/I SY E/SOC 708 – SOCIETAL RISK MANAGEMENT OF TECHNOLOGICAL HAZARDS
3 credits.

Issues involved in decision-making regarding technological risks and risk management in areas such as nuclear power, hazardous waste disposal, and pollution control. Risk perception and cognitive biases; risk analysis and decision analysis; political issues in risk management; regulatory mechanisms; and risk communication. Selected case studies.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020

N E/E C E/PHYSICS 724 – WAVES AND INSTABILITIES IN PLASMAS
3 credits.

Waves in a cold plasma, wave-plasma interactions, waves in a hot plasma, Landau damping, cyclotron damping, magneto-hydrodynamic equilibria and instabilities, microinstabilities, introduction to nonlinear processes, and experimental applications. Basic knowledge of plasmas [such as PHYSICS/E C E/N E 525] and advanced electromagnetics [such as PHYSICS 721 or E C E 740] strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

N E/E C E/PHYSICS 725 – PLASMA KINETIC THEORY AND RADIATION PROCESSES
3 credits.

Coulomb Collisions, Boltzmann equation, Fokker-Planck methods, dynamical friction, neoclassical diffusion, collision operators radiation processes and experimental applications. Basic knowledge of plasmas [such as PHYSICS/E C E/N E 525] and advanced electromagnetics [such as PHYSICS 721 or E C E 740] strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

N E/E C E/PHYSICS 726 – PLASMA MAGNETOHYDRODYNAMICS
3 credits.

MHD equations and validity in hot plasmas; magnetic structure and magnetic flux coordinates; equilibrium in various configurations; stability formulation, energy principle, classification of instabilities; ideal and resistive instability in various configurations, evolution of nonlinear tearing modes; force-free equilibria, helicity, MHD dynamo; experimental applications. Basic knowledge of plasmas [such as PHYSICS/E C E/N E 525] and advanced electromagnetics [such as PHYSICS 721 or E C E 740] strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

N E/E C E/PHYSICS 749 – COHERENT GENERATION AND PARTICLE BEAMS
3 credits.

Fundamental theory and recent advances in coherent radiation charged particle beam sources (microwave to X-ray wavelengths) including free electron lasers, wiggler/wave-particle dynamics, Cerenkov masers, gyrotrons, coherent gain and efficiency, spontaneous emission, beam sources and quality, related accelerator concepts experimental results and applications.
Requisites: E C E 740
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

N E 790 – MASTER'S RESEARCH AND THESIS
1-9 credits.

Directed study projects as arranged with instructor.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

N E 890 – PRE-DISSERTATOR'S RESEARCH
1-9 credits.

Research by the Ph.D. students prior to becoming dissertators.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

N E 903 – SPECIAL TOPICS-PLASMA PHYSICS
0-3 credits.

Special Topics in Plasma Physics. Knowledge of Plasma Physics [such as PHYSICS/E C E/N E 525] required
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

N E/E C E/PHYSICS 922 – SEMINAR IN PLASMA PHYSICS
0-1 credits.

Current topics in plasma physics.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

N E 990 — RESEARCH AND THESIS
1-6 credits.

Directed study projects as arranged with instructor.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

N E 999 — ADVANCED INDEPENDENT STUDY
1-3 credits.

Directed study projects as arranged with instructor.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

NURSING (NURSING)

NURSING/S&A PHM/SOC WORK 105 — HEALTH CARE SYSTEMS: INTERDISCIPLINARY APPROACH
2 credits.

Introduction to health care systems. Factors affecting health and the value placed on health, the delivery of health care in different settings, the roles of various health workers, and the sociological and economic aspects of health care.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss selected contemporary problems, issues, and trends in health care services for individuals, groups, and populations from local, regional, and global perspectives.
Audience: Undergraduate

2. Describe and compare the impact of health and medical services, including environmental, behavioral, genetic, and biological factors, on personal and public health.
Audience: Undergraduate

3. Discuss the influences of technological, social, cultural, economic, and political forces on the organization of health care systems and delivery of health care services.
Audience: Undergraduate

4. Critically evaluate similarities and differences in health care systems and service conceptualization, organization, and delivery from national and international perspectives.
Audience: Undergraduate

NURSING 125 — INTRODUCTION TO NURSING
1 credit.

Develop academic and interpersonal skills for success. Introduction to the breadth of careers and educational pathways in the nursing profession.
Requisites: Classified as Pre-Nursing BSN
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and use academic, personal, and professional resources to transition to college
Audience: Undergraduate

2. Analyze the multiple dimensions of social identity and how those dimensions impact one's own and others' experience at UW-Madison and within systems
Audience: Undergraduate

3. Assess skills, interests, and values to make the most of the Pre-Nursing experience and further personal and career goals
Audience: Undergraduate

4. Understand the varied educational paths in nursing and the relationship of nursing to other on-campus majors
Audience: Undergraduate

5. Explore the breadth of nursing career options that may include clinical practice, research, teaching, leadership, and/or policy-making
Audience: Undergraduate

NURSING 299 — INDEPENDENT READING
1-3 credits.

Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

NURSING 313 – FOUNDATIONS OF NURSING PRACTICE
2-3 credits.

Focuses on foundational concepts necessary to provide person-centered, evidence-based nursing care, including the nursing process and health and illness concepts. Active learning is emphasized by gaining confidence with applying the nursing processes and begin to develop clinical judgment and assessment skills. Complements a companion experiential course [NURSING 316].
Requisites: Declared in Nursing (Accelerated or Traditional program) BSN
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain selected health and illness concepts emphasizing assessment and lifespan considerations.
Audience: Undergraduate

2. Apply components of developmentally and culturally appropriate holistic health assessments.
Audience: Undergraduate

3. Explain the nursing process as a framework to assess, plan, implement, and evaluate care in nursing practice situations.
Audience: Undergraduate

NURSING 314 – HEALTH PROMOTION AND DISEASE PREVENTION ACROSS THE LIFESPAN
3 credits.

Focuses on the role of the baccalaureate generalist nurse in health promotion and disease prevention across the lifespan. Learn about factors that impact health of individuals and families. Active learning is emphasized through applying the nursing process to concepts such as health determinants, health education, self- management, and innate psychological needs related to well-being.
Requisites: Declared in Nursing (Accelerated or Traditional program) BSN
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Apply theories of health promotion and disease prevention in the care of individuals and families in various settings.
Audience: Undergraduate

2. Describe the roles of the baccalaureate nurse in promoting self-management, health,and wellness in a culturally congruent manner that attends to innate psychological needs.
Audience: Undergraduate

3. Use the nursing process to promote health and prevent disease and injury in partnership with individuals and families.
Audience: Undergraduate

4. Explain how health determinants influence human health and wellness.
Audience: Undergraduate

5. Apply evidence-based practice guidelines to health promotion and disease prevention.
Audience: Undergraduate

NURSING 315 – PROFESSIONALISM IN NURSING PRACTICE
1-2 credits.

Focuses on professional nursing attributes and interactions essential to professional competence. Study concepts that allow for providing care unique to an individual, family, community, and systems, and to the context in which they live. Concepts related to the health care delivery system are included to provide a foundation for beginning nursing practice. Knowledge from sciences, social studies, and humanities education is integrated into nursing practice and builds foundational knowledge of the science of nursing.
Requisites: Declared in Nursing (Accelerated or Traditional program) BSN
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss foundational nursing concepts including professionalism, communication, scope of practice, ethics, clinical judgment, social justice, and collaboration.
Audience: Undergraduate

2. Develop the foundation for a professional self-concept and role socialization related to elements of leadership, advocacy, ethics, and the use of technology to advance nursing practice.
Audience: Undergraduate

3. Explain best practices when using technology for health informatics.
Audience: Undergraduate

4. Explain how nurses can foster collaborative relationships and care coordination with health care team members and work in partnership with individuals, families, and communities seeking care.
Audience: Undergraduate

5. Recognize the influence of health care policies, laws, and advocacy on nursing practice.
Audience: Undergraduate

6. Discuss quality improvement processes and the nurse's role as a user of evidence to improve health outcomes.
Audience: Undergraduate

NURSING 316 – FOUNDATIONS OF NURSING PRACTICE: EXPERIENTIAL LEARNING
4-5 credits.

Introduces psychomotor and assessment skills necessary to provide person-centered, evidence-based nursing care. Experience opportunities to promote wellness and respond to health problems by participating in direct client care in community and acute-care settings. Develop confidence with the application of skills and clinical judgment in a simulation lab and through concept-based learning experiences in care settings.
Requisites: Declared in Nursing (Accelerated or Traditional program) BSN
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate therapeutic communication and interviewing skills.
Audience: Undergraduate

2. Demonstrate developmentally and culturally appropriate holistic health assessments.
Audience: Undergraduate

3. Apply nursing concepts central to practice including person and family-centered care, culturally congruent care, health promotion, disease prevention, and health education.
Audience: Undergraduate

4. Practice basic nursing skills and assessments related to health and illness concepts.
Audience: Undergraduate

5. Apply the nursing process in various settings.
Audience: Undergraduate

6. Demonstrate strategies to promote safe therapeutic care across practice settings.
Audience: Undergraduate

7. Demonstrate the values of the nursing profession in experiential settings.
Audience: Undergraduate

NURSING 317 – PHARMACOLOGY ESSENTIALS FOR NURSING PRACTICE
2-3 credits.

Introduces the foundational concepts of pharmacology, drug therapy, actions and interactions, and their therapeutic and adverse effects. Major drug classes are paired with health and illness concepts while considering the appropriate client-centered nursing interventions for disease states as they relate to retaining, attaining, or maintaining patients' health status across the lifespan.
Requisites: Declared in Nursing (Accelerated or Traditional program) BSN
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify drug nomenclature, drug classification and their relationship to drug administration and patient safety.
Audience: Undergraduate

2. Demonstrate understanding of the pharmacodynamics, and pharmacokinetics of the of drug classifications used to treat health and illness across the lifespan.
Audience: Undergraduate

3. Identify the legal and ethical guidelines associated with administration of medications in relation to Standards of Nursing Professional Practice.
Audience: Undergraduate

4. Identify relevant assessment data, appropriate goals and plans, and outcome data related to drug therapy for individuals across the lifespan.
Audience: Undergraduate

5. Demonstrate competency in drug dosage calculation and measurement.
Audience: Undergraduate

6. Formulate a teaching plan related to drug administration and desired patient outcomes based on the holistic learning needs of patients, in selected situations.
Audience: Undergraduate

NURSING 318 – PATHOPHYSIOLOGY ESSENTIALS FOR NURSING PRACTICE
3 credits.

Promotes the understanding of altered physiological processes underlying illness and disease. General concepts including etiology, pathogenesis, morphologic changes, and clinical significance are explored from the genetic, molecular, cellular, organ, and systems-levels. Connections between patient symptoms, clinical signs, diagnostics, prognosis, and therapeutic considerations will form the basis for early exposure to clinical reasoning for common acute and chronic diseases across the lifespan.
Requisites: Declared in Nursing (Accelerated or Traditional program) BSN
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define and apply a vocabulary of medical terms that are important to the language of health and illness.
Audience: Undergraduate

2. Explain the etiology, pathogenesis, morphology, and clinical significance of selected diseases/ disorders by system across the lifespan.
Audience: Undergraduate

3. Develop a foundation of clinical reasoning for illness and disease management by integrating pathophysiology concepts, physical examination findings and pharmacology principles across the lifespan.
Audience: Undergraduate

4. Identify individual choices and environmental exposures that influence disease.
Audience: Undergraduate

NURSING 323 – HEALTH AND ILLNESS CONCEPTS WITH INDIVIDUALS AND FAMILIES
4 credits.

Focuses on health and illness concepts emphasizing care to individuals and families across the lifespan. Gain a fundamental understanding of allostasis, oxygenation and hemostasis, and protection and movement. Gain knowledge of these concepts through exemplars that illustrate common health processes and/or alterations. Frames learning activities that foster understanding of the nursing role in providing care to individuals and families experiencing related health and illness concerns.
Requisites: NURSING 313
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze the concepts of allostasis including fluid and electrolyte balance, thermoregulation, glucose regulation, nutrition and elimination.
Audience: Undergraduate

2. Examine the concepts of oxygenation and hemostasis including perfusion, gas exchange and clotting.
Audience: Undergraduate

3. Analyze the concepts of protection and movement including immunity, inflammation, infection, tissue integrity, sensory perception and pain.
Audience: Undergraduate

4. Apply the nursing process to provide effective, evidence-based care to individuals across the lifespan and to families.
Audience: Undergraduate

NURSING 324 – MEETING THE PSYCHOSOCIAL HEALTH NEEDS OF INDIVIDUALS, FAMILIES, AND COMMUNITIES
3 credits.

Prepares to meet the psychosocial health needs of individuals, families, and communities across the lifespan. Explore psychosocial concepts of stress, coping, mood, cognition, and behavior across the health-illness continuum and across practice settings. The human experience of psychosocial health needs is explored in the context of personal attributes, such as genetics, and interpersonal dynamics, such as family and community. Acquire the knowledge, attitudes, and skills needed to collaborate in the treatment and care of client psychosocial health needs.
Requisites: NURSING 314
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Assess individual, family and community psychosocial health needs across the lifespan or developmental stage.
Audience: Undergraduate

2. Assess the impact of stress and coping strategies used by individuals and families across the lifespan in complex care environments and situations.
Audience: Undergraduate

3. Explain how emotional states can influence behaviors, health and illness conditions across the lifespan.
Audience: Undergraduate

4. Prioritize care for individuals and families with mental health conditions and cognitive alterations.
Audience: Undergraduate

5. Analyze maladaptive behavior and its impact on the individual, family and community.
Audience: Undergraduate

6. Formulate the nurse's role in collaboration with members of the health care team to promote optimal psychosocial health and to prevent diseases in individuals, families and communities.
Audience: Undergraduate

NURSING 325 – PROFESSIONALISM IN HEALTH CARE SETTINGS
2 credits.

Focuses on advancing knowledge of professional attributes and core competencies in the role of a nurse and how they are used in complex care settings. Gain an understanding of concepts of leadership, ethics, and advocacy. Broaden your understanding of nursing's role in the health care delivery system regarding quality improvement, care coordination, and palliation.
Requisites: NURSING 315
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Distinguish professional attributes of a nurse including elements of leadership, advocacy, ethics, and use of technology to advance nursing practice.
Audience: Undergraduate

2. Define ethical principles of professional nursing.
Audience: Undergraduate

3. Explain best practices when using technology for health informatics.
Audience: Undergraduate

4. Discuss quality improvement processes to improve health outcomes.
Audience: Undergraduate

5. Understand the nurse's role in care coordination.
Audience: Undergraduate

6. Explain the nurse's role in palliation in complex care settings.
Audience: Undergraduate

7. Discuss how cultural factors influence attitudes and practices of death and dying.
Audience: Undergraduate

NURSING 326 – FOUNDATIONS OF NURSING PRACTICE: EXPERIENTIAL LEARNING II
4 credits.

Builds on psychomotor and assessment skills necessary to provide direct care to individuals and families across the lifespan. Develop clinical judgment, knowledge, communication skills, and professional behavior while providing nursing care that is safe, evidence-based, and patient centered. Experiential learning takes place in simulated and clinical settings.
Requisites: NURSING 316, and NURSING 323 or concurrent enrollment
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate effective communication and professionalism within the healthcare team.
Audience: Undergraduate

2. Reflect on and evaluate the care provided in clinical settings and identify areas of personal growth and development
Audience: Undergraduate

3. Apply the clinical judgment model and the nursing process to promote health equity and deliver culturally sensitive care in alignment with the needs, goals, and preferences of individuals and families.
Audience: Undergraduate

4. Demonstrate strategies to promote safe, therapeutic care across practice settings while maintaining ethical and professional standards.
Audience: Undergraduate

5. Recognize nursing's distinct role and interconnection with other disciplines while utilizing the best available evidence to improve care outcomes.
Audience: Undergraduate

6. Demonstrate effective use of technology in various practice settings.
Audience: Undergraduate

NURSING 400 – STUDY ABROAD IN NURSING
1-6 credits.

A study abroad equivalency. Enrollment in a UW-Madison resident study abroad program.
Requisites: None
Repeatable for Credit: Yes, for 2 number of completions
Learning Outcomes: 1. Increase independence, adaptability, and flexibility
Audience: Undergraduate

2. Understand and navigate cultural and geographic differences
Audience: Undergraduate

3. Cultivate and reflect on personal values and assumptions
Audience: Undergraduate

4. Learn about and from the community in which you live and study
Audience: Undergraduate

5. Apply all you've learned abroad to your life at UW-Madison and beyond
Audience: Undergraduate

6. Serve as a cultural and academic ambassador of UW-Madison
Audience: Undergraduate

7. Prepare for success in a globalized, interconnected world
Audience: Undergraduate

8. Articulate how your experience abroad enriches your life and help you meet your goals
Audience: Undergraduate

NURSING 430 – PERINATAL NURSING
2 credits.

Perinatal period: reproductive health, preconception, pregnancy (antepartum), labor and birth (intrapartum), the first 6 weeks after birth (postpartum), and the newborn. Nursing care will focus on health promotion and management for low and high-risk (those with complications) populations. Emphasis on the application of the nursing process, the clinical judgment model, and related core competencies associated with perinatal nursing.
Requisites: NURSING 323 and 326
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Incorporate clinical judgment to identify altered health patterns that could affect reproductive health to determine prioritized nursing care.
Audience: Undergraduate

2. Distinguish between normal and abnormal health findings throughout the perinatal period as well as healthy and high-risk newborns.
Audience: Undergraduate

3. Identify actual or potential health problems during antepartum, intrapartum, postpartum and newborn periods.
Audience: Undergraduate

4. Utilize principles of family-centered care, health promotion, illness and injury prevention, health education, and anticipatory guidance with diverse patients throughout the perinatal phase.
Audience: Undergraduate

5. Explore cultural humility through values and beliefs, concept of time, religious beliefs and practices, family and gender roles and relationships, and beliefs and practices regarding health and illness, including those related to pregnancy and childbirth.
Audience: Undergraduate

6. Utilize evidence-based practice to implement practice changes that will improve perinatal nursing care.
Audience: Undergraduate

7. Examine basic safety design principles used by the interdisciplinary team to reduce the risk of harm to pregnant/birthing persons and newborn patients.
Audience: Undergraduate

8. Recognize the impact of health disparities and social determinants of health on care outcomes for pregnant/birthing persons and newborn patients.
Audience: Undergraduate

NURSING 431 – NURSING CARE OF CHILDREN & THEIR FAMILIES
2 credits.

Foundational knowledge needed to provide equitable, evidence-based nursing care for diverse children and their families. For each developmental level, holistically integrate health promotion, illness and injury prevention, health education, and anticipatory guidance and examines potential disparities, as key components of the nursing role. Emphasis on the application of the nursing process, the clinical judgment model, and related core competencies associated with understanding the pathophysiology of altered health patterns affecting children and the related management of nursing care.
Requisites: NURSING 323 and 326
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Incorporate developmental theories in the nursing care of children.
Audience: Undergraduate

2. Describe modifications to nursing care for different developmental levels for infants through adolescents, including communication, approaches to the history and physical examination, and pharmacotherapy safety.
Audience: Undergraduate

3. Utilize principles of health promotion, illness and injury prevention, health education, and anticipatory guidance and person-centered care with diverse pediatric populations and their families.
Audience: Undergraduate

4. Incorporate clinical judgment and knowledge of the pathophysiology of altered health patterns affecting children to determine prioritized nursing care.
Audience: Undergraduate

5. Integrate best evidence and principles of person- and family-centered care into the delivery of pediatric nursing care in primary, acute/ in-patient, emergency and community settings.
Audience: Undergraduate

6. Describe the roles of the inter#professional healthcare team that contribute to high quality pediatric outcomes.
Audience: Undergraduate

NURSING 432 – POPULATION HEALTH NURSING
2 credits.

Exploration of population health nursing principles and practices, public health partnerships, population health advocacy, community health assessment, and identification of health patterns in populations in local, national, and global settings.
Requisites: (NURSING 323 or concurrent enrollment) and (NURSING 326 or concurrent enrollment)
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Describe principles and practices used by nurses to manage population health.
Audience: Undergraduate

2. Compare and contrast local, regional, national, and global benchmarks to identify health patterns across populations.
Audience: Undergraduate

3. Define a target population and assess its well-being priorities using population health data.
Audience: Undergraduate

4. Develop an action plan to meet a specific community's population health need.
Audience: Undergraduate

5. Identify socio-culturally responsive interventions that reflect and model relevant ethical principles.
Audience: Undergraduate

6. Develop a population health advocacy strategy that applies the clinical judgment model.
Audience: Undergraduate

NURSING 433 – NURSING CARE OF THE OLDER ADULT
2 credits.

Learn to provide high quality, person-centered nursing care to older adults, using current research, evidenced-based guidelines, and foundational content to assess, form nursing diagnoses, and manage the complex health needs of older adults by being able to differentiate between healthy and unhealthy aging, explore social determinants of health, provide for safety and well-being, and consider ethical clinical-decision making in geriatrics.
Requisites: Declared in Nursing or Nursing (Accelerated Program), NURSING 323 or concurrent enrollment, NURSING 326 or concurrent enrollment, and NURSING 327 or concurrent enrollment
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Employ the nursing process to recognize and respond to the complexity of the aging process and its impact on individuals from a biopsychosocial perspective.
Audience: Undergraduate

2. Identify social determinants of health for older adults and resources available to support the health and well-being of special populations that integrate cultural awareness and integrity.
Audience: Undergraduate

3. Synthesize assessment data to recognize and respond to complex geriatric health problems using evidence-based strategies.
Audience: Undergraduate

4. Apply principles of professional nursing ethics and human rights to facilitate shared decision-making based on patient values and goals of care.
Audience: Undergraduate

5. Use current guidelines and valid and reliable assessment tools to prevent problems common in older adults and promote health and well-being.
Audience: Undergraduate

6. Utilize evidence-based strategies to reduce risk and promote safety in the nursing care of older adults.
Audience: Undergraduate

7. Employ best-practices for clear, accurate, and inclusive communication to provide for safe and effective transitions of care across care settings.
Audience: Undergraduate

NURSING 434 – HEALTH AND ILLNESS CONCEPTS WITH INDIVIDUALS, FAMILIES, AND COMMUNITIES
4-5 credits.

Builds on health and illness concepts by focusing on individuals, families, and communities recognizing their unique attributes. Concepts included: acid-base balance, cellular regulation, intracranial regulation, genomics, sexuality and reproduction, and an introduction to the organization of the community/public health system. Other core nursing concepts are revisited as they apply to the community as client or in complex care situations. The nursing process frames learning activities that foster understanding the nursing role in providing evidence-based care to individuals, families across the lifespan, and to communities experiencing related health and illness concerns in collaboration with an interprofessional team.
Requisites: Declared in Nursing or Nursing (Accelerated Program), NURSING 323 or concurrent enrollment, NURSING 326 or concurrent enrollment, and NURSING 327 or concurrent enrollment
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Apply the nursing process to care of the client in community and to the client as a community.
Audience: Undergraduate

2. Understand the foundational features of the public and community health systems.
Audience: Undergraduate

3. Understand normal reproductive health across the lifespan.
Audience: Undergraduate

4. Examine the role of the nurse in caring for clients experiencing common complications of pregnancy and barriers to fertility.
Audience: Undergraduate

5. Evaluate the management of complex health alterations in individuals, families and the community for the concepts of allostasis such as acid base balance, cellular regulation, intracranial regulation, and nutrition.
Audience: Undergraduate

6. Examine the management of complex alterations related to oxygenation and hemostasis and protection and movement, integrating distinct client attributes of individuals, families and the community.
Audience: Undergraduate

NURSING 435 – EVIDENCE-BASED PRACTICE
1 credit.

Designed to develop skills in using evidence to improve nursing practice. Learn strategies to evaluate the quality of evidence and effectively integrate evidence into nursing practice. Learn how practice guidelines are developed, interpreted, and implemented in complex care settings. Learn the significance of engaging partners in evidence-based practice and identify processes to partner with others.
Requisites: NURSING 315 and 325
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Understand how practice guidelines are developed from various sources.
Audience: Undergraduate

2. Critique evidence-based practice guidelines by analyzing their development and applicability for clinical practice.
Audience: Undergraduate

3. Discuss effective approaches for fostering adoption of an evidence-based practice change in healthcare settings including engaging partners in the process.
Audience: Undergraduate

4. Describe how the strength and relevance of available evidence (a) influence the choice of interventions in the provision of patient-centered care and (b) challenge the rationale for routine approaches to care that result in less-than-desired outcomes or adverse events.
Audience: Undergraduate

NURSING 436 – HEALTH AND ILLNESS CONCEPTS WITH INDIVIDUALS, FAMILIES, AND COMMUNITIES: EXPERIENTIAL LEARNING
1-4 credits.

Spend concentrated time in two settings focusing on care to individuals across the lifespan, families, and communities. The concept-based learning activities are aligned with those taught in the companion didactic courses and build on previous learning and experiences. Provide direct care from an evidenced-based perspective, at an increasingly independent level. The learning activities are guided by nursing preceptors in practice settings and by School of Nursing faculty in simulation and seminar settings.
Requisites: NURSING 323, 324, and 327
Repeatable for Credit: Yes, for 2 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Take part in providing care to individuals, families and communities, planning, prioritizing and evaluating nursing care that is consistent with clients' needs, goals, preferences and social identities.
Audience: Undergraduate

2. Utilize strategies to promote social justice in health, and culturally congruent care while developing a global perspective to care-giving.
Audience: Undergraduate

3. Determine collaborative approach to effectively work within nursing and inter-professional teams, fostering open communication, mutual respect and shared decision-making to achieve quality individual, family, community and system care.
Audience: Undergraduate

4. Develop partnerships with individuals, family, community and systems in decision-making about care and planning for care.
Audience: Undergraduate

5. Utilize concepts related to health promotion and disease prevention based on genetics, family history, social ecological factors, and environmental exposure.
Audience: Undergraduate

6. Apply learning related to health and illness concepts, and their interrelationships among individuals, families and communities as encountered in experiential practice setting.
Audience: Undergraduate

NURSING 437 – SOCIAL JUSTICE IN LOCAL AND GLOBAL SETTINGS

2-3 credits.

Learn principles and practices of social justice related to nursing and health in local and global settings. Concepts include health determinants, diverse populations in complex care settings, health outcomes, and interventions for racial and other underrepresented minorities. Expand the understanding of global health by examining global health systems, health and illness concepts on a global level, partnerships enacted in global settings, and the scope of nursing practice in global health. Provides a facilitated forum to critically reflect on their socially constructed identities and the impact these identities have on health care systems. Designed to develop perspective related to global health and nurses as global health actors invested in improving health of the global population as a whole.
Requisites: NURSING 323
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Identify their socially constructed identities and how those identities affect their interactions and relationships with individuals, families, and communities across diverse populations.
Audience: Undergraduate

2. Describe and discuss concepts relevant to providing culturally competent and congruent care including health beliefs, social justice, power and privilege, cultural sensitivity, respect, safety, racism and discrimination, cultural conflict, health literacy, worldview, holding knowledge, subculture and vulnerable populations.
Audience: Undergraduate

3. Describe and critique the major constructs of nursing practice models/theories relative to social justice, global health, culturally congruent care, and intersectionality.
Audience: Undergraduate

4. Evaluate the impact of family, cultural, social, educational, economic, environmental, global and determinants on population health using a social ecological model.
Audience: Undergraduate

5. Analyze contemporary local, national, and global health trends and their impact on population health.
Audience: Undergraduate

6. Value principles of partnership when working toward social justice in health in local and global settings.
Audience: Undergraduate

NURSING 438 – INFORMATICS AND HEALTH TECHNOLOGIES FOR NURSING PRACTICE

1 credit.

Broad overview of how digital health, information, and communication technologies and informatics processes are used to provide care, gather data, form information for decision making, and support the expansion of knowledge for professional practice, with an emphasis on key considerations to ensure equitable, safe, high quality and efficient care across the care continuum.
Requisites: Declared in Nursing (Accelerated or Traditional program) BSN
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the variety of information and communication technologies used in the care of patients, communities, and populations
Audience: Undergraduate

2. Discuss how nurses can assess literacy and assist individuals and families to effectively use digital health technologies
Audience: Undergraduate

3. Explain how digital health technologies are used to gather data, create information, and generate knowledge for quality and safe nursing care
Audience: Undergraduate

4. Analyze the use of information, communication, and healthcare technologies in accordance with ethical, legal, professional, regulatory, and workplace policies in the delivery of care in an evolving healthcare landscape
Audience: Undergraduate

5. Explain the importance of nursing engagement in the planning, selection, and adoption of healthcare technologies
Audience: Undergraduate

NURSING 442 – HEALTH SYSTEMS, POLICY, AND ECONOMICS
2 credits.

Learning is centered on health systems, policy, and economics. Expand understanding of core nursing competencies such as safe therapeutic care, and health informatics by examining how these concepts operate at a systems-level to influence care and outcomes. Focus is given to emergency preparedness as enacted in a variety of systems. Key conceptual elements of the healthcare system, organization, policy, financing and law and quality improvement and their impact on care and outcomes are examined.
Requisites: NURSING 434, 435, 436, and 437
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Explain the structure and function of the health system at the local, state, national, and global level.
Audience: Undergraduate

2. Understand organizational theories, structures, and processes, and their applicability in the analysis of clinical care services within the healthcare delivery system.
Audience: Undergraduate

3. Explain principles and practices of emergency-preparedness in selected health systems.
Audience: Undergraduate

4. Outline the role of policy in regard to nurses' role and health outcomes and how nurses can affect policy.
Audience: Undergraduate

5. Identify key trends in the financing of healthcare at national and local levels.
Audience: Undergraduate

6. Explain principles and processes of quality improvement.
Audience: Undergraduate

NURSING 443 – ADVANCED CONCEPTS IN COMPLEX NURSING PRACTICE
4 credits.

Learn about complex health or health alterations and their management in regard to sexuality, reproduction, protection and movement, cognitive function, and maladaptive behavior. Emphasizes the nurse's role in management of complex health alterations within the health system, the community, and for transitions to home. The nursing process will frame learning activities that foster understanding the nursing role in providing evidence-based care to individuals, families, and communities experiencing related health and illness concerns in collaboration with an interprofessional team.
Requisites: NURSING 436 or concurrent enrollment
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Examine common and collaborative interventions for the complex health experiences related to alterations in sexuality, reproduction, and protection and movement.
Audience: Undergraduate

2. Explain how to use data from clients' cognitive assessment to develop and evaluate the nursing and interprofessional plan of care.
Audience: Undergraduate

3. Evaluate treatment measures and understand the resource needs for those experiencing physical, social, and legal consequences from addiction.
Audience: Undergraduate

4. Apply knowledge to plan and evaluate care related to the dynamics that contribute to interpersonal violence and health consequences related to interpersonal violence, and experienced violence.
Audience: Undergraduate

5. Adapt care planning and evaluation to address alterations in body regulation mechanisms including: fluid and electrolyte, acid base, thermoregulation, cellular, glucose, intracranial, nutrition intake, and elimination.
Audience: Undergraduate

6. Prioritize independent and collaborative interventions for clients with complex health alterations in oxygenation and hemostasis including: perfusion, gas exchange, and clotting.
Audience: Undergraduate

NURSING 444 – HEALTH SYSTEMS, POLICY, ECONOMICS, AND RESEARCH
3 credits.

Expand understanding of core nursing competencies such as safe therapeutic care and health informatics by examining how these concepts operate at a systems-level to influence care and outcomes. Focus is given to emergency preparedness as enacted in a variety of systems. Key conceptual elements of the healthcare system, organization, policy, financing and law, and quality improvement and their impact on care and outcomes are examined. Expand your understanding of scholarship and evidence-based practice by delving into the process of nursing research.
Requisites: NURSING 434, 435, 436, and 437
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Explain the structure and function of the health system at the local, state, national, and global level.
Audience: Undergraduate

2. Understand organizational theories, structures, and processes, and their applicability in the analysis of clinical care services within the healthcare delivery system.
Audience: Undergraduate

3. Explain principles and practices of emergency-preparedness in selected health systems.
Audience: Undergraduate

4. Outline the role of policy in regard to nurses' role and health outcomes and how nurses can affect policy.
Audience: Undergraduate

5. Identify key trends in the financing of healthcare at national and local levels.
Audience: Undergraduate

6. Explain principles and processes of quality improvement.
Audience: Undergraduate

7. Demonstrate knowledge of protection of human subjects in research, including issues related to subject rights, institutional, state, and federal regulations.
Audience: Undergraduate

8. Demonstrate understanding of the nursing research process.
Audience: Undergraduate

9. Demonstrate an understanding of dissemination and use of research for practice improvement.
Audience: Undergraduate

NURSING 445 – TRANSFORMATIVE NURSING CAPSTONE
1 credit.

Integration of learning acquired throughout the nursing program. Learning outcomes integrate concepts associated with five nursing program meta concepts (professionalism; person, family, community, and systems-centered care; health and illness; health care context; and scholarship for evidence-based practice). Using processes of analysis, synthesis, reflection, and application, advance in your transition to becoming a professional nurse. Includes mentoring through co- facilitation by faculty, academic staff, and practice professionals.
Requisites: NURSING 434, 435, 436, and 437
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Construct a personal philosophy of care.
Audience: Undergraduate

2. Within one's scope of practice, analyze one's own leadership style and contribution as a member of the healthcare team.
Audience: Undergraduate

3. Critically examine inter-professional collaboration in regard to complex ethical issues.
Audience: Undergraduate

4. Elaborate skills related to communication such as self-awareness, conflict management, and negotiation.
Audience: Undergraduate

5. Imagine possibilities for your career as a nursing leader that improve health outcomes for all in a complex world with enduring social issues.
Audience: Undergraduate

NURSING 446 – ADVANCED CONCEPTS IN COMPLEX NURSING PRACTICE: EXPERIENTIAL LEARNING
2-5 credits.

Spend concentrated time in two settings focusing on the complex care of individuals across the lifespan, families, and communities. Demonstrate advanced ability to integrate professional nursing related theory and concepts as they develop and implement the plan of care. Mentoring by clinical nursing preceptors in the clinical setting and by School of Nursing faculty in simulation and seminar settings.
Requisites: NURSING 436
Repeatable for Credit: Yes, for 2 number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Integrate understanding of health care systems and organizational structure in order to provide optimal care to individuals, families, and communities.
Audience: Undergraduate

2. Apply acquired knowledge of informatics and patient care technology to promote safe therapeutic care.
Audience: Undergraduate

3. Apply understanding of healthcare law, health policy, and economic constraints to complex patient-care situations in order to achieve positive patient outcomes.
Audience: Undergraduate

4. Apply principles of effective leadership to situations of an ethical or legal dilemma.
Audience: Undergraduate

5. Demonstrate advanced ability to apply the nursing process, clinical judgment, and health and illness concepts to providing care in the complex healthcare setting in order to achieve individualized, safe, and therapeutic care.
Audience: Undergraduate

6. Demonstrates professionalism with individuals, families, communities, and systems while modeling collaborative practice with preceptor and inter-professional colleagues.
Audience: Undergraduate

NURSING 447 – SCHOLARSHIP FOR EVIDENCE-BASED PRACTICE
2 credits.

Develop skills in using evidence to improve nursing practice. Learn strategies to evaluate the quality of evidence and effectively integrate evidence into nursing practice. Provides knowledge in how practice guidelines are developed, interpreted, and implemented in complex care settings. Understand the significance of engaging partners in evidence-based practice and identify processes to partner with others in order to have an impact on client care outcomes.
Requisites: Declared in Nursing (Accelerated Program), NURSING 314, 323, 324, 326, 327, and 434
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand how practice guidelines are developed from various sources.
Audience: Undergraduate

2. Demonstrate knowledge of protection of human subjects in research, including issues related to subject rights, institutional, state, and federal regulations.
Audience: Undergraduate

3. Discuss effective approaches for fostering adoption of an evidence-based practice change in healthcare settings, including engaging partners in the process.
Audience: Undergraduate

4. Evaluate how the strength and relevance of available evidence (a) influence the choice of interventions in the provision of patient-centered care, and (b) challenge the rationale for routine approaches to care that result in less-than-desired outcomes or adverse events.
Audience: Undergraduate

5. Demonstrate understanding the nursing research process.
Audience: Undergraduate

6. Demonstrate an understanding of dissemination and use of research for practice improvement.
Audience: Undergraduate

7. Understand the nurses' role in conducting and collaborating on research.
Audience: Undergraduate

NURSING 448 – LEADERSHIP IN THE PROFESSION OF NURSING
2 credits.

Learning is centered on advancing knowledge of professional attributes necessary in healthcare settings. Expand the understanding of core concepts related to ethics, advocacy, safe therapeutic care, technology, and health informatics at a systems-level to influence care and outcomes. Broaden the understanding of nursing's role in the healthcare delivery system regarding quality improvement, emergency preparedness, care coordination, and palliation.
Requisites: Declared in Nursing (Accelerated Program), NURSING 314, 323, 324, 326, 327, and 434
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Distinguish professional attributes of a nurse including elements of leadership, advocacy, ethics, and use of technology to advance nursing practice.
Audience: Undergraduate

2. Examine the influence of organization-level mission and vision statements on developing a professional nursing practice.
Audience: Undergraduate

3. Appraise ethical principles of professional nursing.
Audience: Undergraduate

4. Discuss principles and processes of quality improvement to improve health outcomes.
Audience: Undergraduate

5. Examine the nurses' role in care coordination and patient self-management.
Audience: Undergraduate

6. Explain principles and practices of emergency-preparedness in selected health systems.
Audience: Undergraduate

7. Explain the nurses' role in palliation in complex care settings.
Audience: Undergraduate

8. Appraise the structure and function of the health system at the local, state, national, and global level.
Audience: Undergraduate

9. Outline the role of policy in regard to nurses' role and health outcomes and how nurses can affect policy.
Audience: Undergraduate

NURSING/MEDICINE/PHM PRAC/SOC WORK 467 – INTERPROFESSIONAL COLLABORATIVE PRACTICE IN HIV CARE
1 credit.

Gain foundational knowledge and skills in interprofessional collaborative practice and HIV care. Explore the roles of medicine, nursing, pharmacy, and social work in the HIV care continuum. Discuss quality team-based care as a member of an interprofessional student team.
Requisites: Declared in Nursing BSN (Traditional, Collaborative, Accelerated), Social Work BSW, Medicine MD, Pharmacy PharmD, or Social Work MSW.
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the history and epidemiology of the HIV epidemic.
Audience: Both Grad & Undergrad

2. Define Interprofessional Collaborative Practice (ICP) and describe the characteristics of effective ICP.
Audience: Both Grad & Undergrad

3. Describe the natural history of HIV disease with and without antiretroviral therapy (ART).
Audience: Both Grad & Undergrad

4. Discuss US Dept of Health and Human Services guidelines and recommendations for prevention, screening, diagnosis, treatment, and management of HIV infection and HIV-related diseases in the United States.
Audience: Both Grad & Undergrad

5. Describe the HIV care continuum including testing, entry and retention in care, and treatment including associated stigma and discrimination as barriers.
Audience: Both Grad & Undergrad

6. Discuss dimensions of wellness (emotional, environmental, financial, intellectual, occupational, physical, social and spiritual).
Audience: Both Grad & Undergrad

7. Identify potential co-morbid conditions in the HIV infected population.
Audience: Both Grad & Undergrad

8. Discuss stigma and discrimination as barriers to prevention, care, and treatment.
Audience: Both Grad & Undergrad

9. Discuss the history of the Ryan White Care Act and other federal and state policies and their current importance in HIV prevention and HIV care.
Audience: Both Grad & Undergrad

10. Identify HIV care needs and common health issues among high risk and vulnerable populations.
Audience: Both Grad & Undergrad

11. Develop a plan of care for an HIV positive individual as part of an interprofessional team.
Audience: Both Grad & Undergrad

12. Develop skills working with mixed teams including undergraduate students
Audience: Graduate

13. Demonstrate higher level skills in identifying and resolving barriers to

NURSING 470 – SCHOOL NURSING IN THE CONTEXT OF COMMUNITY HEALTH PRACTICE
2-3 credits.

Theoretical foundation for community health nursing (CHN) applied to school nurse settings. Acquire the theoretical and practical foundations for establishing and maintaining school health nursing services. Content is drawn from nursing and public health sciences and includes topics of health promotion, disease prevention, epidemiology, evidence based practice, ethics, and the role of the CHN. The nursing process is applied with a focus of providing care at the individual through the population level. The ecological model is used to analyze the influence of socioeconomic, environmental, political, and cultural health determinants.
Requisites: Declared in Nursing BSN
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Examine nursing models, roles and responsibilities for community health nurses with school nursing as an exemplar.
Audience: Undergraduate

2. Apply epidemiological principles to describe and analyze population health issues as they occur in school communities.
Audience: Undergraduate

3. Explore models of community and aggregate assessment.
Audience: Undergraduate

4. Describe community health nursing interventions used at systems, community and individual, levels,focusing on individual health and emergency plans for the management of students' health problems in school settings.
Audience: Undergraduate

5. Analyze evidence-based practice guidelines for community health nursing and school settings.
Audience: Undergraduate

6. Articulate the impact of social, cultural, political, and environmental determinants on individual and population health in school settings.
Audience: Undergraduate

7. Describe the organization, financing, and policies affecting the delivery of community health nursing services as they occur in schools.
Audience: Undergraduate

NURSING 510 – CULTURALLY CONGRUENT PRACTICE
3 credits.

Builds self-awareness, increasing knowledge, and advancing clinical skills needed to provide culturally congruent, person-centered care to patients with diverse backgrounds.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify their socially constructed identities and how those identities affect their interactions and relationships with patients.
Audience: Undergraduate

2. Describe and discuss concepts relevant to providing culturally competent and congruent care including health beliefs, social justice, power and privilege, cultural sensitivity, respect, safety, racism and discrimination, cultural conflict, health literacy, worldview, holding knowledge, subculture and vulnerable populations.
Audience: Undergraduate

3. Describe and critique the major constructs of nursing practice models/ theories relative to culturally congruent care.
Audience: Undergraduate

4. Apply constructs of culturally congruent care to clinical practice.
Audience: Undergraduate

NURSING 511 – COMMUNITY SUPPORTS FOR PEOPLE WITH DEMENTIA
2-3 credits.

Provides an introduction to Alzheimer's disease and other dementias, with a focus on community supports for people living with dementia. Work across disciplines to learn how different areas of society can become dementia friendly and how to integrate relevant approaches in their future careers. Participate in a service-learning opportunity where you will work with local dementia-friendly community groups to strengthen supports for people with dementia and their caregivers.
Requisites: None
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Summarize normal neurobiological aging and neurobiological changes related to cognitive impairment and dementia.
Audience: Undergraduate

2. Apply appropriate skills for interacting with persons affected by dementia and their families/supports.
Audience: Undergraduate

3. Explain the importance of combatting the stigma surrounding dementia and the isolation often experienced by people with dementia and their family.
Audience: Undergraduate

4. Recommend community approaches to increase supports for persons living with dementia and their families/supports.
Audience: Undergraduate

NURSING 512 – FUNCTIONAL HEALTH AND LIFESTYLE PRACTICE
2 credits.

Introduction to the science behind and strategies for wellness based on a functional health approach. Viewing the body as a complex and integrated system and address the root cause of illness or disease rather than treating only presenting symptoms. Disease manifestation stemming from many factors such as genetics, lifestyle and environment. Lifestyle health practices and health coaching strategies for working with clients or patients. View health through a functional health lens, using several strategies to manage and prevent illness.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Describe what it means to view health through a "functional" lens and how this model of care differs from or compliments a more conventional approach to health care.
Audience: Both Grad & Undergrad

2. Evaluate how chronic disease and pain can be addressed using a functional approach to care using diet and lifestyle practices.
Audience: Both Grad & Undergrad

3. Identify and address lifestyle factors that impact health outcomes.
Audience: Both Grad & Undergrad

4. Integrate functional health principles and lifestyle practices into one's overall approach to health and wellness.
Audience: Both Grad & Undergrad

5. Explore health coaching strategies and tools used by practitioners to gather health information and create positive behavior change related to lifestyle practices.
Audience: Both Grad & Undergrad

6. Demonstrate the ability to apply knowledge of functional health principles, lifestyle practices, and health coaching strategies during a health coaching session.
Audience: Graduate

NURSING 513 – INTRODUCTION TO RELAXATION: MIND, BODY, & SPIRIT
2 credits.

Introduction to holistic relaxation concepts related to the body, mind spirit. Examination of the physiology of stress and relaxation, strategies for facilitating wellness and evidence for the same. Experience and reflect upon selected strategies for wellness.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Compare concepts of health promotion, self management, allostasis, and stress.
Audience: Both Grad & Undergrad

2. Describe and recognize common sources for stress, anxiety and anger as well as effective strategies to promote health and maximal function, manage responses to stress, and foster wellbeing: mind, body and spirit.
Audience: Both Grad & Undergrad

3. Implement selected strategies for ones' own wellbeing in body, mind, and spirit.
Audience: Both Grad & Undergrad

4. Appraise whether a change in health status has occurred.
Audience: Graduate

NURSING/L I S 517 – DIGITAL HEALTH: INFORMATION AND TECHNOLOGIES SUPPORTING CONSUMERS AND PATIENTS
3 credits.

Increases student understanding of appropriate and accurate materials for consumer health and family education; the ethical and organizational policy issues that arise when providing consumer and family health information in different settings; the role of the public media in disseminating health information; the health-related information needs and preferences of racial/ethnic minority populations. It also provides an introduction to health information technologies, from search engines to websites to apps, that put people in charge of managing their own health information.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

NURSING 564 – NURSING AND HEALTH INFORMATICS
3 credits.

Identification of computer and information technologies to support nursing in the diagnosis and treatment of human responses to health, illness, and development challenges. Examination of information systems used in clinical practice, information processing challenges and nurses' roles in the evaluation of informatics solutions. Ethical, legal and social issues related to informatics in patient care.
Requisites: None
Repeatable for Credit: No
Last Taught: Summer 2022
Learning Outcomes: 1. Recognize, analyze, and pose solutions for information processing challenges as faced by nurses and other health professionals managing select patients, populations, or groups.
Audience: Undergraduate

2. Identify the current state of development of major areas within nursing and health informatics.
Audience: Undergraduate

3. Demonstrate the conceptual ability and technical skills to develop and execute an evaluation plan involving data extraction from practice information systems and databases.
Audience: Undergraduate

4. Consistent with ethical, legal, and social considerations, devise and evaluate biomedical informatics solutions to the information processing challenges identified.
Audience: Undergraduate

NURSING 590 – CONTEMPORARY PRACTICES IN NURSING
1-4 credits.

Health problems and their nursing management, e.g., critical care nursing, health promotion and prevention of disease, nursing of developmental disabilities.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

NURSING 601 – ADVANCED HEALTH ASSESSMENT
3 credits.

Focuses on developing advanced practice competencies in health assessment as relevant to a selected specialty and practice setting. Become grounded in the theoretical perspectives, empirical documentation, and practice skills necessary for advanced biopsychosocial and physical assessment, critical diagnostic reasoning, clinical decision-making, and communication. Interactions of developmental, biopsychosocial, and cultural contexts resulting in health effects. Demonstrate capacity to provide a full spectrum of healthcare services including health promotion, disease prevention, health protection, anticipatory guidance, counseling, and disease management. Provides a foundation for the advanced practice nurse to evaluate and address the health of individuals.
Requisites: NURSING 704
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Elicit an accurate focused and/or comprehensive health history with attention to the patient's unique perspective and experience.
Audience: Graduate

2. Perform a comprehensive, evidence-based assessment, incorporating all necessary components of physical evaluation. Assessments should be comprehensive but concise, culturally sensitive, and developmentally guided, while demonstrating compassion and accountability.
Audience: Graduate

3. Select basic laboratory and diagnostic testing options and interpret data to augment evidence-based assessment.
Audience: Graduate

4. Formulate a differential diagnosis, based on advanced clinical judgement and analysis of data collected from the health history and physical exam.
Audience: Graduate

5. Identify a probable primary diagnosis and create a patient-centered, evidence-based plan of care that may include diagnostic testing, collaboration, or referral.
Audience: Graduate

6. Document an accurate account of history, physical examination, differential diagnoses, integrative summary, and evidence-based plan of care using effective communication techniques specific to accepted terminology, format, and technology that adheres to the current standards of medical documentation.
Audience: Graduate

7. Develop an appropriate plan of care consistent with the advanced nurse role in the management of common symptoms seen across care settings. The plan of care for the client should incorporate physical, cultural, ethnic, developmental, and population-appropriate variations.
Audience: Graduate

8. Demonstrate professionalism in the advanced practice nursing role, including accountability, teamwork, initiative, self- appraisal, and integrity.
Audience: Graduate

9. Explore the image and role of advanced practice nursing as it integrates advanced assessment, diagnostic reasoning, primary care, rural healthcare, health promotion, and patient education.
Audience: Graduate

NURSING/PHM PRAC 605 – PHARMACOTHERAPEUTICS FOR ADVANCED PRACTICE NURSES
3 credits.

Pharmacotherapeutics content and application for advanced practice nursing. Emphasis on selection of appropriate therapeutics, development of clinical decision-making skills, and examination of legal, ethical, and safety issues in prescribing medications.
Requisites: Declared in a School of Nursing graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Select appropriate therapeutics for specific acute and chronic health conditions using an evidenced based approach.
Audience: Graduate

2. Develop the clinical decision making skills necessary to individualize prescribing to meet patient's needs and resources.
Audience: Graduate

3. Examine the appropriate rules for issuing safe prescriptions and minimize errors.
Audience: Graduate

4. Describe the legal and ethical ramifications of prescribing medications.
Audience: Graduate

NURSING 657 – CLINICAL PSYCHOPHARMACOLOGY
3 credits.

Examines the history, rationale and mechanism of action of drugs used in the treatment of mental health and behavioral disorders. Emphasis is placed on neurobiological processes underlying psychopathology and clinical application of evidence-based pharmacological interventions across the lifespan. In addition, focus on pharmacokinetics, pharmacodynamics, side-effects, drug interactions, therapeutic monitoring and variations in special populations. Finally, review prescriptive authority, the potential impact of the current mental health care service system and ethical decision making for health care professionals.
Requisites: Declared in Doctor of Nursing Practice or Capstone Certificate in Post-Graduate Psychiatric Nursing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Demonstrate knowledge and apply principles of pharmacokinetics and pharmacodynamics, including mechanism of action, absorption, distribution, metabolism, and excretion across special populations in a cultural context.
Audience: Graduate

2. Analyze knowledge of basic neurobiology, neurotransmission, and targets of psychopharmacology drug action.
Audience: Graduate

3. Demonstrate knowledge in management of side-effects, drug-interactions, and therapeutic monitoring.
Audience: Graduate

4. Evaluate current research in psychopharmacology relevant to strategies for therapeutic intervention.
Audience: Graduate

5. Apply and appreciate complexity of legal and ethical decision making in application of prescribing practices.
Audience: Graduate

6. Discuss the importance of collaboration and psychoeducation between health care professionals, the patient, families, and community support in the management of pharmacological treatment.
Audience: Graduate

NURSING/PHM PRAC 674 – SEMINARS IN INTERPROFESSIONAL MENTAL HEALTH CARE
2 credits.

Addresses the team-based and patient-centered care of persons with mental health conditions. A special focus will be put on the management of psychotropic medication regimens. A combination of lecture, discussion, and small group work will be utilized.
Requisites: PHM PRAC 555
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Assess an individual person and his/her psychotropic medication regimen to identify potential and actual drug related problems
Audience: Undergraduate

2. Develop and recommend an appropriate therapeutic regimen consisting of both non-drug and drug therapy recommendations to facilitate optimal care and outcomes for an individual person
Audience: Undergraduate

3. Design an appropriate monitoring plan in collaboration with the person you are serving in order to appropriately evaluate the individual person's treatment plan
Audience: Undergraduate

4. Apply evidence-based care to practice by critically reviewing current published clinical research and guidelines
Audience: Undergraduate

5. Support persons in successfully navigating the wider mental health care system
Audience: Undergraduate

6. Apply ethical and legal concepts and processes in the analysis of clinical situations
Audience: Undergraduate

NURSING 679 – NURSING HONORS RESEARCH SEMINAR
2 credits.

Provides the opportunity to learn more about the generation of nursing knowledge and about School of Nursing faculty members' research projects. An introduction to the principles, methods, and ethics of nursing research, strategies to evaluate the quality of research, and the importance of research for improving clinical practice.
Requisites: Declared in the Nursing Honors program
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate knowledge of protection of human subjects in research, including issues related to subject rights, institutional, state and federal regulations.
Audience: Undergraduate

2. Understand the implications of diversity of research participants/ samples.
Audience: Undergraduate

3. Demonstrate a basic understanding of the processes of conducting nursing research.
Audience: Undergraduate

4. Describe the methodologies used in qualitative and quantitative research.
Audience: Undergraduate

5. Demonstrate knowledge of nursing's role in collaborating and conducting research.
Audience: Undergraduate

6. Demonstrate an understanding of dissemination and use of research for practice improvement.
Audience: Undergraduate

7. Formulate a research question for mentored research project
Audience: Undergraduate

NURSING 681 – SENIOR HONORS THESIS
1-2 credits.

The senior honors thesis is directed experience with selected aspects of the research process. Declared in the Nursing Honors Program
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025

NURSING 682 – SENIOR HONORS THESIS
1-2 credits.

The senior honors thesis is a directed experience with selected aspects of the research process. Declared in the Nursing Honors Program
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2025

NURSING 698 – DIRECTED STUDY IN NURSING
1-6 credits.

Directed study offers the student an opportunity to work with a faculty member on an individual study program.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023

NURSING 699 – DIRECTED STUDY IN NURSING
1-4 credits.

Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

NURSING 702 – HEALTH PROMOTION AND DISEASE PREVENTION IN DIVERSE COMMUNITIES
3 credits.

Best practice approaches to health promotion and disease prevention are explored from their theoretical foundations to clinical applications in diverse populations. Content focuses on the study and synthesis of epidemiologic evidence with emerging social, psychological, and biological science to critically examine and propose evidence-based strategies to improve health outcomes, mitigate risk, and reduce disparities at the population level. Epidemiological principles, levels of prevention, population health theory, infectious disease control, and considerations specific to health equity and ethical health promotion practice in populations will be addressed.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe current responsibilities and practice recommendations for advanced practice nurses and other providers as they relate to disease and injury prevention and health promotion.
Audience: Graduate

2. Interpret epidemiological data as foundational to the assessment of population health, design of interventions, and evaluation of outcomes, services, and care quality.
Audience: Graduate

3. Describe the complex mechanisms by which specific social, cultural, economic, political, and environmental determinants contribute to health outcomes, health-related behaviors, inequities, and disparate outcomes in vulnerable populations.
Audience: Graduate

4. Summarize the theoretical models that inform current understandings of health-related behaviors and health-promotion practice.
Audience: Graduate

5. Critically evaluate health communication for accessibility, accuracy, and cultural relevance.
Audience: Graduate

6. Critically evaluate health promotion and prevention strategies as applied to specific populations for potential effectiveness, unintentional harms or inequities, cultural congruence, and ethical implications.
Audience: Graduate

7. Propose culturally congruent, equitable, and evidence-based strategies to promote or protect the health of specific populations.
Audience: Graduate

NURSING 703 – HEALTH CARE AND PUBLIC POLICY
3 credits.

Provides a comprehensive overview of the U.S. healthcare system and policy-making process at the local, state, and federal levels, as well as an analysis of global health policies in other countries. Key policy issues covered include Medicare, Medicaid, the uninsured, public health, and healthcare reform. Addresses the role of key stakeholders, including policy-makers, interest groups, and the media on the development of health policy, as well as key forces involved in policy-making, including economics, innovation, social, ethical, and political factors. Examine the role and responsibility of nurse leaders and the impact of health policy on nursing practice at the individual, community, and population level.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Compare and contrast the U.S. health policy-making process and outcomes to other developed countries.
Audience: Graduate

2. Critically analyze health policies and related issues from the perspective of consumers, nursing, other health professions, and other stakeholders in policy and public forums.
Audience: Graduate

3. Understand how public policies influence healthcare delivery, including the practice of nursing at the individual, community, and population level.
Audience: Graduate

4. Understand how data and research influence policy decisions.
Audience: Graduate

5. Create advocacy materials and tools in order to promote social justice, equity, and ethical health policies.
Audience: Graduate

NURSING 704 – LEADERSHIP IN ADVANCED PRACTICE NURSING I
3 credits.

Transition and expansion of leadership role for advanced practice. Emphasis on the development of effective, ethical leadership styles; interpretation of legal and professional requirements and regulations; examination of the ethics, values, beliefs, and norms of decision-making in interdisciplinary, collaborative practice.
Requisites: Declared in a Nursing graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Examine the history of Advanced Practice Nursing within the context of the evolution of the United States health care delivery system, and from the perspective of both nursing and non-nursing professions.
Audience: Graduate

2. Compare and contrast current APRN roles and responsibilities.
Audience: Graduate

3. Explore barriers and opportunities associated with enacting present and future APRN roles, including definitions of scope of practice and legal and financial issues.
Audience: Graduate

4. Understand the major elements of moral philosophy and demonstrate skill in applying these lines of reason to professional situations.
Audience: Graduate

5. Articulate the leadership dimensions of vision, collaboration, advocacy, and activism within the APRN role.
Audience: Graduate

6. Explore and present an area of interest that may be explored as a potential Scholarly Project.
Audience: Graduate

NURSING/MEDICINE/POP HLTH 705 – SEMINAR IN INTERDISCIPLINARY CLINICAL RESEARCH EVIDENCE
2-3 credits.

Exploration of interdisciplinary clinical research questions including strategies for assessing the evidence and methodology for conducting various types of literature reviews. Emphasizes an interdisciplinary perspective.
Requisites: SOC/POP HLTH 797 and STAT/B M I 542
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop an answerable clinical research question.
Audience: Graduate

2. Search relevant scientific literature using several electronic databases and other sources of evidence (published and unpublished) across disciplines.
Audience: Graduate

3. Manage sources of evidence with reference management software.
Audience: Graduate

4. Critically review published clinical research on a chosen topic.
Audience: Graduate

5. Develop a search strategy and conduct a systematic review or other form of evidence review.
Audience: Graduate

6. Present a planned or actual evidence review to interdisciplinary peers.
Audience: Graduate

7. Describe the implications for translation of the proposed evidence review from an interdisciplinary perspective.
Audience: Graduate

NURSING 706 – NURSING RESEARCH
3 credits.

Examines a variety of research methods available to address health care problems and issues in general, and nursing in particular.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Compare and contrast quantitative and qualitative research methods and their utility in answering particular research questions.
Audience: Graduate

2. Demonstrate understanding of the interrelationships among theory, research, and practice in nursing and health science.
Audience: Graduate

3. Understand the research process as developed in both quantitative and qualitative research traditions including: problem identification and definition, review of literature, research methods and design, principles or data collection, issues in sampling, and analysis and interpretation of findings.
Audience: Graduate

4. Critically evaluate research findings from quantitative and qualitative studies in the health sciences.
Audience: Graduate

5. Apply ethical criteria for the protection of human subjects in research.
Audience: Graduate

NURSING 708 – ETHICS FOR ADVANCED PRACTICE IN HEALTH CARE
2 credits.

Emphasis on the exploration of ethical knowledge development with a focus on clarification, analysis and justification relevant to advanced nursing practice; examination and development of learners' moral understanding; and distinguishing between moral and other professional responsibilities.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Critically examine key ethical theories.
Audience: Graduate

2. Compare key assumptions, and engage in reflective thinking about advantages and disadvantages, as well as implications of alternative ethical theories.
Audience: Graduate

3. Apply ethical principles and systematic, sound reasoning to address ethical dilemmas in advanced nursing practice, complex settings, and varied populations.
Audience: Graduate

NURSING 709 – LEADERSHIP FOUNDATIONS: THE DISCIPLINE OF NURSING
2 credits.

Examination of the substantive foundations of the discipline of nursing from a broad range of perspectives and domains of knowledge. The emphasis is on the identification and analysis of phenomena of concern to nursing, scientific and theoretical underpinnings of the discipline, the centrality of health and environment, hallmarks of scholarliness, and nursing leadership and collaboration to actualize the goals of nursing. Provides a foundational knowledge, skills, and attitudes needed for nursing leadership and population health.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Compare and contrast the conceptual/philosophical, scientific, and ethical foundations of the discipline.
Audience: Graduate

2. Identify nursing phenomena of concern relevant to scholarship in advanced nursing practice in systems innovation and leadership or population health.
Audience: Graduate

3. Analyze theoretical foundations of nursing care.
Audience: Graduate

4. Evaluate definitions of scholarship, characteristics of scholars, and strategies for scholarliness in nursing.
Audience: Graduate

5. Identify the relevance of reflection, experience, and nursing leadership in collaboration with other health professions to meet the goals of nursing.
Audience: Graduate

6. Identify opportunities for DNP-educated advanced practice nurses prepared in systems innovations and leadership and population health to develop theoretically-informed practice approaches based on nursing's values and foundations.
Audience: Graduate

NURSING 711 – BUSINESS CONCEPTS IN HEALTHCARE
3 credits.

Designed to prepare nurse leaders to recognize, analyze, and respond to current business concepts (e.g., human resources, legal, regulatory, and accreditation), economic, and financial management topics in healthcare systems. Applies key financial and business concepts to healthcare and examines current issues and trends in healthcare finance, including accounting, budgeting, cost analysis, human resource management, and the regulatory environment. Opportunities to analyze and evaluate the revenue and costs associated with a specific healthcare delivery system at the program- or organizational-level. Utilizes case studies including financial and clinical data to effectively balance the administrative and clinical needs of today's healthcare environment.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand current and emerging concepts and trends in business, including basic accounting, human resource management (HRM), and legal and regulatory standards within healthcare organizations.
Audience: Graduate

2. Articulate the impact of state and federal laws on healthcare systems.
Audience: Graduate

3. Analyze current legal issues in healthcare.
Audience: Graduate

4. Assess the infrastructure and process to achieve regulatory and accreditation standards for a program, service, or healthcare system in area of students focus.
Audience: Graduate

5. Utilize an ethical framework to balance the administrative (economic) and clinical needs within an organization or program.
Audience: Graduate

NURSING 712 – HEALTH SYSTEMS LEADERSHIP AND INNOVATION PRACTICUM I
3 credits.

An opportunity to explore and analyze healthcare systems including practical skills in leading teams. An individualized planned practicum provides an opportunity to explore the leader roles (multiple settings) within the context of an administrative issues. Emphasis is on clinical engagement in management projects requiring critical assessment, design, planning, intervention, and evaluation activities using theoretical models and management tools. The focus is on the advanced systems analysis and design of programs and services within an organization/community setting.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Assess the culture and infrastructure of complex healthcare systems.
Audience: Graduate

2. Evaluate care delivery approaches that meet current and future needs of patient populations.
Audience: Graduate

3. Participate in an interdisciplinary team improving individual, team, and/or organizational outcomes.
Audience: Graduate

4. Apply knowledge of selected concepts, models, and theories from nursing and management sciences to the management of health care resources.
Audience: Graduate

5. Enhance understanding of healthcare systems and leader roles.
Audience: Graduate

6. Describe the standards of care, staffing and performance, and consumer satisfaction influence on leadership and management practices within an organization.
Audience: Graduate

NURSING 713 – HEALTH SYSTEMS LEADERSHIP AND INNOVATION PRACTICUM II
3 credits.

Continue the application of leadership and management skills and role development with a focus on leadership and innovation within complex health settings and across multisector partnerships. Emphasis on clinical engagement in management projects requiring critical assessment, design, planning, intervention, and evaluation activities using theoretical models and management tools to leverage technology and innovation. Focuses on leadership and innovation of programs and services within an organization/community-setting.
Requisites: NURSING 712
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply knowledge of selected concepts, models, and theories from nursing and management sciences to the management of healthcare resources.
Audience: Graduate

2. Critically analyze contemporary challenges and trends within a practice setting, healthcare organization, community, and/or target population.
Audience: Graduate

3. Apply evidence-based research findings from nursing, behavioral, public health, information, and the natural sciences to the management of health care resources for a selected problem or project.
Audience: Graduate

4. Analyze methods and practices of planning, organizing, and evaluating used by health system leaders.
Audience: Graduate

5. Co-lead an interdisciplinary improvement team.
Audience: Graduate

6. Provide leadership in the evaluation and resolution of ethical and legal issues within healthcare systems relating to the use of information, information technology, communication networks, and patient care technology.
Audience: Graduate

7. Apply financial skills in the management of human resource capital.
Audience: Graduate

NURSING 714 – ADVANCED HEALTH SYSTEMS LEADERSHIP AND INNOVATION
3 credits.

Focuses on health innovation and leadership, integrating systems thinking and relevant theories to advance innovation and achieve sustainable change in contemporary health settings. Leaders apply and synthesize theories of leadership, innovation, informatics, and business concepts to complex healthcare issues to improve outcomes. Utilizes current and emerging issues, theories, and case studies to explore attributes of innovative leaders, emerging models of care, innovation models, design and adoption, mergers and affiliations in healthcare, and entrepreneurship.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand the importance of evidence-based innovation in healthcare.
Audience: Graduate

2. Compare and contrast leadership theories and models of innovation.
Audience: Graduate

3. Describe characteristics and skills of innovative leaders.
Audience: Graduate

4. Analyze an emerging innovation in healthcare.
Audience: Graduate

5. Analyze the culture and organizational design (infrastructure) of a healthcare system or department to support innovation and quality improvement.
Audience: Graduate

6. Identify strategies to increase the adoption of evidence-based healthcare innovations.
Audience: Graduate

7. Apply the principles of leadership, business, and healthcare economics in the development of a new innovative product, program, or service that will improve the quality of care delivery for a specific population, program, or system.
Audience: Graduate

NURSING 715 – EVALUATION OF HEALTH INFORMATICS SOLUTIONS
3 credits.

Evaluate and appraise health informatics and information technology in order to develop integrative approaches to the design, implementation and evaluation of health informatics solutions and problems. Application of standards, document architecture, decision support systems and heuristic rules and system life-cycle are key areas of focus. People and organization issues for system implementation and evaluation are applied to real data issues to examine privacy, data protection, and institutional responsibilities.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop integrative approaches to design, implementation, and evaluation of health informatics solutions consistent with legal, ethical, and privacy standards.
Audience: Graduate

2. Apply health informatics thinking and problem-solving to analysis, interpretation, and visualization of data.
Audience: Graduate

3. Demonstrate an understanding of how the platform, architecture, and system lifecycle are supported in heath informatics and information technology systems.
Audience: Graduate

4. Evaluate decision support systems and tools to improve clinical and organizational outcomes.
Audience: Graduate

5. Assess how data is processed and transformed to usable information and knowledge for informed decision-making to support clinical health care and systems involved in health care.
Audience: Graduate

NURSING 719 – INDEPENDENT FIELD STUDY IN CLINICAL NURSING
1-6 credits.

Concentrated study and field work in a selected area of clinical nursing.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

NURSING 720 – POPULATION HEALTH PRACTICUM I: WORKING IN THE AGGREGATE
3 credits.

Experiential learning focused on the application of foundational skills and perspectives of advanced population health nursing practice. Provides an opportunity to synthesize, integrate, and apply new knowledge and skills and gain professional experience in population health. Emphasis is on aggregate assessment and evidence-based planning, including critical appraisal of existent data, generation of primary data, community engagement, participatory solution-finding, and the identification of evidence-based strategies to promote and protect health and well-being.
Requisites: NURSING 702 or concurrent enrollment
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define and describe a population, community, or aggregate as related to a specific health issue.
Audience: Graduate

2. Select appropriate conceptual models, theories, and sources of data to better understand select population health issues or assess the health and well-being of aggregate populations.
Audience: Graduate

3. Select appropriate theoretical models and epidemiological, biostatistical, environmental, and socioeconomic data to assess the health and well-being of specific aggregate populations or to more fully understand select population health issues.
Audience: Graduate

4. Conduct a focused health assessment of a community or complex systems-level health issue, incorporating considerations of equity, ethics, history, and culture. Assessments should include upstream determinants and socioecological contexts, including cultural and political dimensions, inequities, historical trends, and other theoretical concepts as applicable.
Audience: Graduate

5. Engage key stakeholders, prioritize issues, and propose solutions to promote health or address gaps in care through employing collaborative processes, assessment findings, and current evidence.
Audience: Graduate

6. Articulate the value and challenges of community engagement and participatory problem-solving in effective health promotion.
Audience: Graduate

7. Use aggregate assessment findings, collaborative processes, theory, and best practice resources to share findings, prioritize issues, and propose solutions that aim to promote health, prevent illness or injury, improve health behaviors, or address gaps in care.
Audience: Graduate

8. Consistently demonstrate professionalism, insight, clear and effective communication skills, curiosity, and respect for different values, beliefs and practices.
Audience: Graduate

NURSING 721 – POPULATION HEALTH PRACTICUM II: COMMUNITY ACTION AND COLLECTIVE IMPACT
3 credits.

Fosters advanced practice competencies and deeper understandings of collaborative practice in population health. Employ structured systems thinking, stakeholder engagement, and interdisciplinary leadership to investigate and address complex issues in population health. Advanced practice competencies to be developed include: structured approaches to systems thinking, community engagement, collaborative leadership, responsive communication, teamwork, multidisciplinary program planning, cross-sector collaboration, and collective impact.
Requisites: NURSING 720 and 723
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply structured systems thinking processes to complex population health issues and collaborative approaches to practice.
Audience: Graduate

2. Examine current models, frameworks, and principles of interprofessional and crosssector collaboration in population health practice.
Audience: Graduate

3. Employ principles of collaborative leadership, collective goal-setting, teamwork, and responsive communication in interdisciplinary and cross-sector efforts to promote population health.
Audience: Graduate

4. Use participatory planning strategies to prioritize the needs and experience of clients and respect the mission and resources of collaborative partners.
Audience: Graduate

5. Integrate ethical reasoning, empathic perspective-taking, and sensitivity to culture, historical context, and power in all aspects of population health practice.
Audience: Graduate

6. Consistently demonstrate professionalism, insight, clear and effective communication skills, curiosity, and respect for different values, beliefs and practices.
Audience: Graduate

NURSING 722 – ADVANCED PRACTICE NURSING THEORY: ADULTS AND OLDER ADULTS
3 credits.

Examine theoretical perspectives and evidence-based approaches to human responses to health and illness during adulthood and old age. Concepts and research from multiple disciplines will be examined as a framework for reflective practice with adults.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Examine diverse theoretical perspectives on health and illness in adulthood and old age.
Audience: Graduate

2. Analyze empirical evidence for selected theoretical perspectives related to health and illness in adults and examine age, gender, and cultural differences.
Audience: Graduate

3. Evaluate the theoretical and empirical underpinnings of nursing assessments and interventions with adults.
Audience: Graduate

4. Determine best evidence for advanced nursing practice in a selected area.
Audience: Graduate

NURSING 723 – POPULATION HEALTH THEORY AND METHODS SEMINAR I: CONTEMPORARY ISSUES & POPULATION HEALTH ETHICS
2 credits.

Introduction to the foundational concepts, core functions, and professional values of advanced population health nursing. Contemporary issues in population health will be used to explore and integrate the epidemiological science, theoretical constructs, ethical considerations, and best practice strategies that underlie sound practice.
Requisites: NURSING 702
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the unique perspectives, priorities, and conceptual frameworks and theories that guide advanced population health practice.
Audience: Graduate

2. Contrast ethical deliberations within biomedical research or individual healthcare practice with ethical decision-making in population health.
Audience: Graduate

3. Appraise the potential impacts, shortcomings, and ethical implications of typical approaches to population-level health promotion (health education, social marketing, clinical intervention, environmental or infrastructure changes, policy development and enforcement).
Audience: Graduate

4. Examine the social, historical, economic, environmental, and political forces, as well as the biological and cognitive processes, that shape individual behaviors and health outcomes, as well as the health and well-being of populations.
Audience: Graduate

5. Apply socioecological, physiological, behavioral, and developmental perspectives to select population health issues.
Audience: Graduate

6. Critically consider individual characteristics, upstream determinants, and other drivers of select population health issues to identify areas of opportunity and propose ethical strategies to mitigate risk, address inequities, and promote health and well-being.
Audience: Graduate

7. Discern common challenges to evidence-based practice and decision-making in population health.
Audience: Graduate

NURSING 724 – POP HEALTH THEORY & METHODS SEMINAR II: INTERDIS PRACTICE, COLLECTIVE IMPACT & COALITION BUILDING
2 credits.

Builds on existing practice knowledge and skills with concepts from systems thinking, complex problem-solving, interdisciplinary collaboration, community engagement, coalition-building, and collective impact. Explorations of "wicked" problems in population health will challenge you to consider novel partnerships, shared decision-making, and innovative, multifaceted approaches to practice.
Requisites: NURSING 721 or concurrent enrollment
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Appraise the advantages, shortcomings, and ethical implications of targeted, top-down, or bottom-up approaches to address complex problems in population health practice.
Audience: Graduate

2. Evaluate structured systems-thinking methods as strategies to better understand complex population health problems, as well as the diverse perspectives, priorities, and needs of impacted community members and interprofessional stakeholders.
Audience: Graduate

3. Engage in design-thinking with key stakeholders to learn from their perspective and propose community-centered solutions to complex challenges in population health.
Audience: Graduate

4. Identify basic concepts of effective teamwork, interprofessional ethics, and professionalism as an underpinning of collaborative population health practice.
Audience: Graduate

5. Anticipate potential ethical implications and unintended consequences of decision-making, policy-development, or resource allocation in addressing complex population health problems.
Audience: Graduate

6. Differentiate between collaboration, coalition-building, and collective impact as strategies to address complex population health challenges.
Audience: Graduate

NURSING 725 – POPULATION HEALTH THEORY AND METHODS SEMINAR III: EMERGING ISSUES AND SPECIALIZED ROLES
2 credits.

Explore specialized roles, emerging issues, and current priorities in advanced population health nursing. Analyze novel and emergent population health challenges within context, and consider the unique knowledge, skills, and philosophies that prepared nurses can bring to solution-seeking and interdisciplinary efforts to promote or safeguard population health.
Requisites: NURSING 724
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Investigate professional opportunities and organizations for nurses with advanced population health knowledge and skills.
Audience: Graduate

2. Examine socioecological, political, behavioral, environmental, structural, or biological trends that underlie emerging issues in population health and inform potential solutions.
Audience: Graduate

3. Apply an evidence-based and evaluative approach to examine current public health problems and formulate solutions.
Audience: Graduate

4. Explore emerging priorities and novel issues in population health and discuss the unique potential of advanced practice nurses in seeking solutions and promoting health.
Audience: Graduate

5. Appraise the relevance and value of advanced nursing knowledge, experience, and skills in interdisciplinary efforts to promote or safeguard the health of select populations.
Audience: Graduate

6. Propose innovative opportunities for advanced practice nurses to work independently or with others to promote population health across sectors and the health care continuum.
Audience: Graduate

NURSING 726 – FOUNDATIONS FOR APN CLINICAL PRACTICE I
3 credits.

Designed to advance knowledge for clinical decision making. Health promotion, illness prevention and common health conditions are emphasized.
Requisites: NURSING 601, 605, 811, and concurrent enrollment in NURSING 728
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply advanced assessment skills, risk analysis and reduction, screening, and disease detection strategies into the health management plan.
Audience: Graduate

2. Incorporate primary, secondary and tertiary prevention strategies in the clinical management of a patient's wellness and health care needs.
Audience: Graduate

3. Integrate and evaluate evidence-based interventions and clinical guidelines into patient health promotion, disease prevention, and illness management plans.
Audience: Graduate

4. Identify and use appropriate counseling and education strategies to promote positive lifestyle and behavior changes.
Audience: Graduate

5. Incorporate advanced physiological, pathophysiological, pharmacologic and psychosocial concepts and principles into the clinical management plan of common and complex health problems.
Audience: Graduate

6. Develop clinical management plans that are culturally congruent and reflect patients and family beliefs and value systems across the lifespan.
Audience: Graduate

NURSING 727 – FOUNDATIONS FOR APN CLINICAL PRACTICE II
3 credits.

Designed to advance knowledge for clinical decision-making. Complex and chronic health conditions are emphasized while continuing to promote health maintenance within the context of existing health problems.
Requisites: NURSING 726, 728, and concurrent enrollment in NURSING 729
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Evaluate strategies of risk analysis and reduction, screening and disease detection.
Audience: Graduate

2. Refine primary, secondary and tertiary prevention strategies into the clinical management of a patient's wellness and health care needs.
Audience: Graduate

3. Analyze and integrate evidence-based interventions and clinical guidelines in patient health promotion, disease prevention, and illness management plans.
Audience: Graduate

4. Initiate and evaluate appropriate counseling and patient education strategies to assist patients to make positive lifestyle and behavioral changes.
Audience: Graduate

5. Apply advanced physiological, pathophysiological, pharmacologic and psychosocial concepts and principles into the clinical management of common and complex health problems across a variety of settings.
Audience: Graduate

6. Collaborate with individuals and families to implement clinical management plans that are culturally congruent and reflect patient and family beliefs and value systems across the lifespan.
Audience: Graduate

7. Analyze patient data and develop individualized management plans based on current evidence and appropriate resources.
Audience: Graduate

NURSING 728 – ADVANCED PRACTICE CLINICAL APPLICATION AND ROLE DEVELOPMENT I
1-4 credits.

Supervised clinical practicum focuses on the continued development and application of advanced health promotion, assessment and clinical management skills within the context of chronic illness and complex health issues.
Requisites: Concurrent enrollment in NURSING 726
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Formulate initial conceptualization of the APN role within the context of clinical practice.
Audience: Graduate

2. Employ a comprehensive and systematic health assessment for common clinical situations, incorporating diverse and culturally congruent approaches.
Audience: Graduate

3. Utilize clinical decision making process to identify and prioritize client health issues.
Audience: Graduate

4. Demonstrate application of health promotion, disease prevention and health behavior change principles to provide education and health counseling to clients.
Audience: Graduate

5. Develop therapeutic relationships with clients and families and formulate inter-professional partnerships to facilitate optimal care and patient outcomes.
Audience: Graduate

6. Select and implement therapeutic interventions based on current evidence and appropriate practice guidelines.
Audience: Graduate

7. Demonstrate accurate documentation of client encounters.
Audience: Graduate

NURSING 729 – ADVANCED PRACTICE CLINICAL APPLICATION AND ROLE DEVELOPMENT II
1-4 credits.

Supervised clinical practicum focuses on the continued development and application of advanced health promotion, assessment and clinical management skills within the context of chronic illness and complex health issues.
Requisites: Concurrent enrollment in NURSING 727
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate developing Advanced Practice Nursing role within the context of health care systems.
Audience: Graduate

2. Employ a comprehensive and systematic health assessment for complex or chronic health conditions, incorporating diverse/culturally congruent approaches.
Audience: Graduate

3. Utilize clinical decision making process and clinical judgment to identify and prioritize client and population health issues.
Audience: Graduate

4. Tailor application of principles of health promotion, disease prevention, and health behavior change to provide education and health counseling to clients.
Audience: Graduate

5. Develop therapeutic relationships with clients and their families and utilize inter-professional partnerships to facilitate optimal care and patient outcomes.
Audience: Graduate

6. Initiate, evaluate, and modify evidence-based therapeutic interventions based on current evidence, appropriate practice guidelines, and client goals, lifestyle and cultural beliefs.
Audience: Graduate

7. Utilize advanced communication and documentation skills to enhance care delivery.
Audience: Graduate

NURSING 730 – CRITICAL SOCIAL THEORIES IN POPULATION HEALTH

2 credits.

Examines the application of critical social theories in population health promotion when intersectionality, bias, and social inequities are social determinants of population health disparities. Intended to provide an opportunity to apply critical social theories to long-standing population health disparities and contemporary social health problems such as despair, homelessness, and loneliness. Emphasis on the appraisal of intersectionality, bias, and inequities in previous, present, or potential population health promotion strategies to eliminate health disparities.
Requisites: NURSING 723 or concurrent enrollment
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply definitions and descriptions of population, community, and aggregate to specific social health determinants.
Audience: Graduate

2. Explain the value, limitations, and applicability of critical social theories in population health.
Audience: Graduate

3. Select and apply appropriate critical social theories to a specific population, population health promotion program, or population health promotion policy.
Audience: Graduate

4. Write a focused population health assessment of a community that includes the community's social ecology.
Audience: Graduate

5. Apply critical social theory in a policy or program proposal to eliminate a specific population health disparity.
Audience: Graduate

6. Consistently demonstrates professionalism, insight, clear and effective communication skills, curiosity, and respect for different values, beliefs, and practices.
Audience: Graduate

NURSING 736 – PEDIATRIC ASSESSMENT FOR MENTAL HEALTH ADVANCED PRACTICE NURSES

1 credit.

Advance students' knowledge of pediatric development to enhance clinical decision-making with emphasis on applying advanced assessment skills to the child and adolescent population.
Requisites: Declared Post-Graduate Psychiatric Mental Health Nursing Capstone Certificate or (NURSING 601, NURSING/PHM PRAC 605, and NURSING 811)
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2023
Learning Outcomes: 1. Apply advanced health assessment skills to the child and adolescent population
Audience: Graduate

2. Evaluate varied child development theories
Audience: Graduate

3. Identify how various types of trauma impact normative developmental processes in children and adolescents
Audience: Graduate

NURSING 741 – ADVANCED PRACTICE NURSING THEORY: FAMILY PROCESS & CHILD DEVELOPMENT
3 credits.

Analyzes selected family and child development theories and research that inform advanced practice nursing. Applies these concepts to assess child and family needs, enhance the parent-child relationship, and develop family-centered, culturally responsive interventions in health and illness.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the nature of a family-centered, culturally responsive approach to health care.
Audience: Graduate

2. Identify changing trends in family structure, parenting practices, and health-illness patterns as well as their implications for practice and research.
Audience: Graduate

3. Gain insights about family dynamics, the bidirectional influence of relationshipswithin families, and the impact of developmental transitions, culture and illness on these relationships.
Audience: Graduate

4. Analyze and apply family theories to practice and inform interventions that enhance the quality of parent-child relationships.
Audience: Graduate

5. Analyze theories of child development and related research, and the relevance ofthese to providing developmental guidance in the advanced practice of nursing with children/parents.
Audience: Graduate

6. Describe the contribution of individual differences, such as temperament and coping style, to family interactions and functioning.
Audience: Graduate

7. Evaluate specific child development and family research studies.
Audience: Graduate

8. Formulate a framework for child and family assessment for a specific family or population of families managing a normative or situational transition or a health/illness situation.
Audience: Graduate

NURSING/PHM PRAC/SOC WORK 746 – INTERDISCIPLINARY CARE OF CHILDREN WITH SPECIAL HEALTH CARE NEEDS
3 credits.

Interdisciplinary team care of children with special health care needs across the trajectory of illness presented within the context of family, culture, social determinants of health, community, and healthcare policy. Students introduced to interdisciplinary, collaborative, family-centered team care.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the interdisciplinary team approach to the care of the child with a chronic illness from the perspective of a child with a chronic illness and their family, community care providers, and each of the disciplines involved, including the student's own.
Audience: Graduate

2. Demonstrate an understanding of issues relating to larger social and cultural context for the care of children with chronic illness.
Audience: Graduate

3. Identify and assess healthcare delivery systems and financing for children with chronic illness.
Audience: Graduate

4. Describe ways to advocate for pediatric patients with chronic disease and their families at an individual level and a policy level.
Audience: Graduate

NURSING 751 – ADVANCED PRACTICE NURSING THEORY: PSYCHIATRIC MENTAL HEALTH
3 credits.

Analysis and integration of selected theories and models in psychotherapy, neuroscience, mental health, psychiatric disorders, and advanced psychiatric mental health nursing in complex care settings with diverse patients, communities, and populations.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Effectively analyze and integrate into practice major theories/models of psychotherapy, neuroscience, mental health care, psychiatric disorders, and advanced practice psychiatric mental health nursing.
Audience: Graduate

2. Analyze the implications of how implementation of various theoretical frameworks impact policies, programs, and practices on various populations (e.g. children/adolescents, women, survivors) living with psychiatric mental health disorders and/or psychosocial stress.
Audience: Graduate

3. Apply theory-based frameworks to guide advanced practice psychiatric mental health nursing practice.
Audience: Graduate

NURSING/PHARMACY/PHY ASST/PHY THER/PUBLHLTH 758 – INTERPROFESSIONAL PUBLIC HEALTH LEADERSHIP
1 credit.

Build skills in collaboration, problem solving, and reflection to approach complex community-based public health problems contribute to becoming a public leader. Explore the six levels of public health leadership through the practices of current and past public health leaders, case studies, and personal experience.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019
Learning Outcomes: 1. Describe the roles and responsibilities of their profession with all participating health professional students, while examining the roles and responsibilities of all other health professions.
Audience: Graduate

2. Compare and contrast the diversity of expertise among participating health professions.
Audience: Graduate

3. Apply their profession's roles and responsibilities to case studies that address complex public health issues.
Audience: Graduate

4. Describe what it means to be part of an interprofessional team and illustrate how the different professions and systems can complement and facilitate one another in addressing public health issues.
Audience: Graduate

5. Apply the principles of public health leadership via reflective exercises, case studies and facilitated discussion.
Audience: Graduate

6. Promote a public health cause or principle through legislative advocacy.

Audience: Graduate

7. Elucidate the importance of reflection as a life-long learning and leadership tool.
Audience: Graduate

NURSING 761 – HEALTH PROGRAM PLANNING, EVALUATION, AND QUALITY IMPROVEMENT
3 credits.

Provides content in theory, concepts, and methods of program planning and evaluation in the context of health care and community health organizations. Provides basic concept related to designing and implementing health services quality improvement projects.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Examine the critical elements of quality process improvement history, methods, and practice.
Audience: Graduate

2. Apply basic quality improvement methodologies to a process in a health care or community health organization.
Audience: Graduate

3. Examine the critical elements of health program planning and evaluation models.
Audience: Graduate

4. Analyze strengths and weaknesses of proposed health programs.
Audience: Graduate

5. Construct a program plan that demonstrates ability to conduct needs assessment, create measurable objectives, design interventions, develop a budget, and conduct process and outcomes evaluation.
Audience: Graduate

6. Develop and apply strategies to work collaboratively in small groups.
Audience: Graduate

NURSING 764 – NURSING AND HEALTH INFORMATICS
3 credits.

Application of computer and information technologies to support nursing in the diagnosis and treatment of human responses to health, illness, and developmental challenges. Identification of information processing challenges and evaluation of informatics solutions. Ethical, legal and social issues related to informatics in patient care.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Recognize, analyze, and pose solutions for information processing challenges as faced by nurses and other health professionals managing select patients, populations, or groups.
Audience: Graduate

2. Identify the current state of development of major areas within nursing and health informatics.
Audience: Graduate

3. Demonstrate the conceptual ability and technical skills to develop and execute an evaluation plan involving data extraction from practice information systems and databases.
Audience: Graduate

4. Consistent with ethical, legal, and social considerations, devise and evaluate biomedical informatics solutions to the information processing challenges identified.
Audience: Graduate

NURSING/LAW 768 – HEALTH JUSTICE CLINIC
1-7 credits.

Interdisciplinary health advocacy clinic providing broad individual and system advocacy for patients facing life changing health events. Advocacy topics include: medical decision-making, insurance, medical debt, disability and related policies and laws.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and describe personal values and beliefs related to patient advocacy.
Audience: Graduate

2. Identify how racism, sexism, homophobia, transphobia, ablism and other forms of oppression impact clients and the delivery of health care in the US.
Audience: Graduate

3. Communicate effectively in writing and in conversation to a range of audiences including patients.
Audience: Graduate

4. Recognize opportunities for advocacy in individual client situations.
Audience: Graduate

5. Design effective advocacy plans to address client needs.
Audience: Graduate

6. Recognize ethical dilemmas and develop informed plans for ethical practice.
Audience: Graduate

NURSING 772 – LEADERSHIP AND ORGANIZATIONAL DECISION-MAKING IN HEALTH CARE
3 credits.

Provides healthcare leaders with the knowledge, skills, and competencies to improve patient, organization and health system outcomes. Effective organizational and systems leadership will help to eliminate health disparities and promote patient safety and excellence in practice. Includes the analysis, integration, and application of principles of leadership and management to healthcare organizations and to population-based efforts across the healthcare delivery system including a basic introduction to finance. Emphasis is placed on the practical skills needed to succeed as leaders in today's complex environments.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Able to formulate and communicate a vision as a leader.
Audience: Graduate

2. Apply leadership and organizational theories to healthcare systems.
Audience: Graduate

3. Assess organizational culture and infrastructure of a healthcare organization or department.
Audience: Graduate

4. Utilize knowledge of organizational culture in planning and delivery of healthcare programs and services.
Audience: Graduate

5. Evaluate healthcare delivery systems to meet current and future needs of specified populations with a focus on process and outcomes.
Audience: Graduate

6. Discuss the principles of team science and team dynamics in healthcare.
Audience: Graduate

7. Demonstrate effective leadership communication incorporating interprofessional communication practices.
Audience: Graduate

8. Employ principles of accounting, finance, and strategic planning in the development of a business plan for a new program or service.
Audience: Graduate

NURSING 784 – TEACHING AND LEARNING STRATEGIES FOR CLINICAL AND SIMULATION ENVIRONMENTS IN HEALTHCARE PROFESSIONS
3 credits.

Integrates teaching and learning theories and evidence-based strategies for educating undergraduate and graduate health professions students in clinical and simulation environments. Provides principles, models, and processes to plan, implement and evaluate teaching and learning experiences through curated readings, activities, and self-reflection. Applies strategies such as the integration of personal attributes and teaching style, use of technology, and a student-centered approach to develop optimal teaching practices.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate understanding of selected teaching and learning theories and their applications to a diverse student body.
Audience: Graduate

2. Integrate technology, innovative active learning strategies, and interprofessional education to create student-centered learning activities in the clinical and simulation environment.
Audience: Graduate

3. Construct a plan for assessment of individual student learning outcomes related to clinical and simulation environments.
Audience: Graduate

4. Develop a plan for evaluation of aggregate student and course outcomes related to clinical and simulation-related experiences.
Audience: Graduate

5. Summarize best practices for creating an inclusive and supportive learning environment.
Audience: Graduate

6. Apply strategies to manage the learning environment and support individual student needs.
Audience: Graduate

NURSING 785 – FOUNDATIONS OF CURRICULUM DEVELOPMENT AND EVALUATION FOR HEALTHCARE PROFESSIONS
3 credits.

Develop an understanding of higher education curriculum rooted in the healthcare professions. Undergraduate and graduate level program structures are examined, including traditional and innovative designs. Processes of curriculum development, including needs assessment, implementation, evaluation, and outcomes assessment that provide the foundation for course scope and content inclusion. Guiding conceptual frameworks and underlying philosophical, political, and professional issues that impact curriculum development and change are examined. Current issues relevant to curriculum.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Examine the processes of curriculum development.
Audience: Graduate

2. Analyze the components of a curriculum.
Audience: Graduate

3. Assess the impact of current trends and themes in healthcare professions education, including professional and societal issues, and the impact on curriculum development and delivery.
Audience: Graduate

4. Compare and contrast undergraduate and graduate level program structures, both traditional and innovative, in healthcare professions and their implications for practice.
Audience: Graduate

5. Design key elements of a curriculum, including framework and outcomes.
Audience: Graduate

NURSING 786 – TEACHING AND LEARNING STRATEGIES FOR THE CLASSROOM AND ONLINE ENVIRONMENTS IN HEALTHCARE PROFESSIONS
3 credits.

Integrates teaching and learning theories and evidence-based strategies for educating undergraduate and graduate health professions students in classroom and online environments. This course provides students with principles, models, and processes to plan, implement and evaluate teaching and learning experiences through curated readings, activities, and self- reflection. Students will apply strategies such as the integration of personal attributes and teaching style, use of technology, and a student- centered approach to develop optimal teaching practices.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate understanding of selected teaching and learning theories and their applications to a diverse student body.
Audience: Graduate

2. Integrate technology, innovative active learning strategies, and interprofessional education to create student-centered learning activities in the clinical and simulation environment.
Audience: Graduate

3. Construct a plan for assessment of individual student learning outcomes related to clinical and simulation environments.
Audience: Graduate

4. Develop a plan for evaluation of aggregate student and course outcomes related to clinical and simulation-related experiences.
Audience: Graduate

5. Summarize best practices for creating an inclusive and supportive learning environment.
Audience: Graduate

6. Apply strategies to manage the learning environment and support individual student needs
Audience: Graduate

NURSING 787 – TEACHING AND LEARNING IN HEALTHCARE PROFESSIONS PRACTICUM
3 credits.

Immersive and comprehensive experience designed to prepare healthcare professional students for roles as effective educators. Dynamic blend of theoretical coursework, experiential hands-on teaching, and educational experiences to grow expertise in curriculum development, inclusive instructional design, and assessment strategies. Through collaboration with experienced preceptors, refine pedagogical skills, fostering an understanding of diverse learning styles and effective communication in the healthcare education context. Emphasis will be placed on evidence-based teaching methods, utilization of the latest technologies and innovative approaches to enhance student engagement.
Requisites: NURSING 784, 785, or 786
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate innovative teaching strategies based on educational theory to enhance student engagement, motivation, and achieve learning outcomes.
Audience: Graduate

2. Utilize educational technologies and tools to support student learning.
Audience: Graduate

3. Apply evidence-based practices to design engaging learning activities that support various learning styles and student needs.
Audience: Graduate

4. Demonstrate the ability to create and maintain an inclusive and welcoming learning environment.
Audience: Graduate

5. Engage in ongoing professional role development by seeking feedback, participating in reflective practices, and staying informed about current trends and research in higher education teaching.
Audience: Graduate

NURSING 798 – MASTER'S RESEARCH PRACTICUM
3 credits.

Promotes learning of the research process in nursing through direct experience. Work closely with faculty to determine the nature, scope and design of the research experience. NURSING 700 or 701
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2014

NURSING 799 – INDEPENDENT STUDY
1-6 credits.

Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

NURSING 800 – HEALTH EQUITY IN NURSING AND HEALTH RESEARCH
2 credits.

Examination of key concepts in health disparities and health equity as they apply to nursing and related health research. Identification of structural and social determinants of equity that shape health at multiple levels, across the health and wellness continuum, in all health domains and throughout the life course. Emphasis on implications for the design, conduct, interpretation, and dissemination of nursing and health research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Evaluate concepts of health, health disparities, and health equity
Audience: Graduate

2. Discuss structural (e.g., laws, policies, systems, institutions), social (e.g., racism, ethnocentrism, sexism, socioeconomic deprivation, geography), and individual and community factors (e.g., resilience) that contribute to health equities / inequities and related implications for health research
Audience: Graduate

3. Appraise relevant theory and methodological approaches used in health equity research
Audience: Graduate

4. Critically analyze published research for social bias
Audience: Graduate

5. Design research that integrates structural and social determinants of health
Audience: Graduate

NURSING 801 – THEORY IN NURSING RESEARCH
2 credits.

Examination of middle-range theory, micro-theory, and conceptual frameworks and their application in nursing science, with emphasis on critique and selection of a theory and/or framework to guide the student's research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Discuss foundations of nursing theory, their structure and scope, and the importance of theory in nursing science
Audience: Graduate

2. Evaluate methods of theory development including positivistic and inductive approaches, and examples of extending and refining theory over time
Audience: Graduate

3. Critically analyze the utility of various theories, including the application and operationalizability of theory in research
Audience: Graduate

4. Appraise theory from nursing, biological, behavioral, and other sciences
Audience: Graduate

5. Select or adapt an existing theory or create a beginning conceptual framework to guide the student’s early research efforts
Audience: Graduate

NURSING 802 – ETHICS AND THE RESPONSIBLE CONDUCT OF RESEARCH
1 credit.

Ethical issues in the design, conduct and reporting of research are examined in the context of the nature of the scientific endeavor, the structure of the research community, and professional and federal guidelines for supporting scientific integrity and controlling misconduct.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Understand ethical issues in the conduct of research.
Audience: Graduate

2. Recognize one's own ethical/moral biases in ethical decisions.
Audience: Graduate

3. Develop the conceptual tools to recognize ethical dilemmas.
Audience: Graduate

4. Identify and analyze options for action, and make appropriate decisions.

Audience: Graduate

NURSING 803 – QUANTITATIVE DESIGN AND METHODS
4 credits.

Focuses on the conduct of research primarily from empirical, analytical traditions. Address the integration of research paradigms, questions, designs, and methods for such research. Compare details, characteristics, strengths and limitations of alternative research designs and methods. Discuss issues and standards for preparing research proposals for different purposes (e.g., institutional review boards for human subjects, NIH) to advance the nursing discipline.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Gain understanding and skills in selected quantitative research designs and methods.
Audience: Graduate

2. Analyze advantages and limitations of different quantitative methods for studying phenomena relevant to nursing and/or health care broadly defined.
Audience: Graduate

3. Substantively critique published quantitative research and funding proposals on multiple dimensions (e.g., conceptual, theoretical, methodological, ethical, analytical, historical, practical).
Audience: Graduate

4. Demonstrate skills in integrating knowledge from empirical literature, logical arguments, theory, and research methods for writing quantitative research proposals to advance knowledge relevant to nursing and/or health care.
Audience: Graduate

NURSING 804 – QUALITATIVE DESIGN AND METHODS
3 credits.

Focuses on how to conduct qualitative research. Content addresses the philosophical underpinnings of various interpretive qualitative methodologies to assist in matching the best method to particular research questions. Engage in research procedures associated with various qualitative traditions.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Gain an understanding and skills in a range of qualitative research designs and methods.
Audience: Graduate

2. Analyze the relationship between underlying philosophies and assumptions and the different qualitative approaches to nursing research.
Audience: Graduate

3. Critically examine the advantages, and limitations of different qualitative research methods in the context of clinical nursing phenomena.
Audience: Graduate

4. Demonstrate an ability to select the most appropriate qualitative approach for a specific research question.
Audience: Graduate

5. Critique published qualitative research and grant proposals, integrating the above knowledge.
Audience: Graduate

NURSING 805 – MEASUREMENT IN HEALTH RESEARCH
3 credits.

Major issues in developing, testing, and using research instruments, including links between concepts, variables, and measures; theories of measurement and scaling, including reliability and validity testing; and using measures in research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explore theories of measurement and scaling and their application to instrument development.
Audience: Graduate

2. Identify and define the various properties of measurement tools in science and critique their application.
Audience: Graduate

3. Demonstrate skill in testing various forms of reliability of health research instruments.
Audience: Graduate

4. Demonstrate skill in testing various forms of validity of health research instruments.
Audience: Graduate

5. Demonstrate skill in evaluating health research instruments for practical feasibility, appropriateness for intended populations, generalizability, and sensitivity in detecting differences among groups or change over time.
Audience: Graduate

NURSING 806 – EVALUATION AND APPLICATION OF EVIDENCE-BASED PRACTICE
3 credits.

Evaluate collective evidence and apply it, as appropriate, as a basis for improving nursing practice, health care, and healthcare outcomes.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Use principles of evidence-based practice (EBP) in understanding research, analyzing practice, and evaluating practice change.
Audience: Graduate

2. Describe how the hierarchy of evidence varies depending upon the type of clinical questions posed or areas of practice for which evidence is being sought.
Audience: Graduate

3. Evaluate the quality of evidence using established criteria, as indicated by the categories of recommendations.
Audience: Graduate

4. Synthesize collective evidence in their area of interest.
Audience: Graduate

5. Address issues related to applying EBP to their area of interest.
Audience: Graduate

6. Apply concepts of risk in evaluating patient outcomes.
Audience: Graduate

NURSING 807 – GROUNDED THEORY RESEARCH
3 credits.

A comprehensive understanding of the intellectual traditions that informed the development of grounded theory, variations of grounded theory (second generation), and to provide an opportunity for active participation in grounded theory research. Requires hands-on participation in a field-research project of the student's choice, engaging in data-collection and analysis, and in-depth readings in symbolic interaction and grounded theory method.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2024
Learning Outcomes: 1. Describe the conceptual underpinning of grounded theory.
Audience: Graduate

2. Identify the cannon and procedures for conducting a grounded theory study.
Audience: Graduate

3. Participate in data collection and analysis using grounded theory methodology.
Audience: Graduate

4. Describe approach and methods for publishing qualitative research.
Audience: Graduate

5. Describe various 2nd generation grounded theory approaches.
Audience: Graduate

NURSING 811 – ADVANCED PATHOPHYSIOLOGY
3 credits.

In-depth study of selected physiological and pathophysiological concepts with application to advanced clinical practice across the lifespan.
Requisites: Declared in a Nursing graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Examine selected comprehensive physiological phenomena.
Audience: Graduate

2. Apply pathophysiological and physiological principles to selected clinical problems.
Audience: Graduate

3. Critique recent literature relevant to selected clinical problems.
Audience: Graduate

NURSING 815 – KNOWLEDGE DEVELOPMENT IN NURSING
3 credits.

Examination of the history of the discipline of nursing, with emphasis on the evolution of debates regarding what is known and how it is known.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze critically the development of scientific thinking.
Audience: Graduate

2. Debate about the nature, sources, and development of knowledge in nursing.
Audience: Graduate

3. Ability to analyze critically debates about the syntax (methodology) of the discipline.
Audience: Graduate

4. Conduct a systematic, written concept analysis relevant to nursing or healthcare.
Audience: Graduate

NURSING 816 – PROSEMINAR IN NURSING RESEARCH
1 credit.

Focus on professional development and socialization to the role of nurse scientist. Discussion emphasizes career development planning including traditional and alternative roles for PhD-prepared nurses, and current and emerging topics of importance to nursing science. The planned and ongoing research of graduate students and faculty in nursing will be featured as relevant.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Engage in individual development planning and socialization to the role of doctoral student and evolving role as nurse scholar / scientist.
Audience: Graduate

2. Analyze current and emerging topics of importance to nursing science, including relevance to the student's own program of research.
Audience: Graduate

3. Examine professional development issues including pre- and post-doc training goals, professional mentorship, funding, academic and alternative career paths, models of leadership in nursing, and nursing education.
Audience: Graduate

NURSING 818 – PATIENT-CENTERED RESEARCH
3 credits.

Addresses conceptual and methodological perspectives in how patient-centered research and family-centered care research is conducted, from the development through the testing and implementation of interventions. Attention is given to various conceptualizations of patient-centeredness, to the behavioral and physiological origins of patient-centered interventions, family-centered care interventions, and to the trajectory of testing such interventions, from descriptive studies to experimental trials.
Requisites: NURSING 815
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Discuss the differences between patient-centered research and terms with similar concepts such as patient-centered care, patient-focused care, motivational interviewing.
Audience: Graduate

2. Discuss family-centered care research, and difference between similar concepts including family- centered research.
Audience: Graduate

3. Analyze one program of patient-centered research and one program of family-centered care research.
Audience: Graduate

4. Synthesize the issues involved in tailoring an intervention and research methodology to test feasibility, acceptability, and effectiveness of the tailored intervention.
Audience: Graduate

NURSING 819 – CLINICAL FIELD PRACTICUM - RESEARCH IN HEALTH CARE SETTINGS
3 credits.

A field experience in preparation for conducting clinical research in the health care setting that corresponds to the a chosen health problem, phenomenon, or population of interest. Engage as participants and observers in the care setting to deepen your knowledge of the selected health problem and to examine the application of theory and research in the care setting. Negotiate a field experience with a selected agency or institution. Includes discussion of instructional experiences and issues.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Synthesize the state of the science regarding the selected health problem or phenomenon as experienced in the care setting, including practice issues and research questions that could improve the health or patients/clients.
Audience: Graduate

2. Critically evaluate the application of relevant theories or physiologic models to the health problem as experienced in the selected care setting.
Audience: Graduate

3. Identify and analyze patient, provider, and system factors present in the care setting that may influence the formulation of research questions, study design and conduct, interpretation of findings and translation into practice.
Audience: Graduate

4. Describe operational procedures and issues for conducting research in the selected care setting.
Audience: Graduate

5. Demonstrate the ability to synthesize and communicate relevant research findings to practitioners and potential research collaborators in the care setting.
Audience: Graduate

NURSING 826 – FOUNDATIONS FOR APN CLINICAL PRACTICE III
3 credits.

Advance knowledge for clinical decision-making. Coordination of complex care across systems and settings will be emphasized.
Requisites: NURSING 727 and 729
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Refine clinical decision-making skills related to the care of patients with complex and co-existing health care needs.
Audience: Graduate

2. Coordinate care for patients or populations across settings.
Audience: Graduate

3. Collaborate with other healthcare professionals to improve the care of patients with complex or co-existing health problems.
Audience: Graduate

4. Utilize technology to facilitate care across systems and settings.
Audience: Graduate

5. Utilize integrative strategies to assist individuals and families in achieving optimal health and wellness.
Audience: Graduate

6. Evaluate models of care designed to reduce health disparities across systems and settings.
Audience: Graduate

7. Analyze and evaluate the links between clinical practice, organizational goals, and fiscal and policy issues.
Audience: Graduate

NURSING 828 – CLINICAL LEADERSHIP III
1-4 credits.

A supervised clinical practice to enhance clinical leadership skills within the role of an Advanced Practice Nurse. Collaborate with a faculty course professor and clinical preceptor to meet individualized learning objectives.
Requisites: NURSING 729
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate and maintain an advanced level of independent clinical judgment and systems thinking.
Audience: Graduate

2. Engage in the evaluation and translation of research into evidence-based care that improves patient/population outcomes.
Audience: Graduate

3. Support an active role in the mentorship and guidance of nurses in the clinical setting to promote excellence in nursing practice.
Audience: Graduate

4. Employ effective inter-professional communication and collaborative leadership skills in the application and evaluation of practice models.
Audience: Graduate

5. Assess the use of evidence-based practice guidelines and standards of care in the organizational setting and formulate recommendations for improvements.
Audience: Graduate

NURSING 829 – CLINICAL LEADERSHIP IV
1-4 credits.

A supervised clinical practice to enhance clinical leadership skills within the role of an Advanced Practice Nurse. Collaborate with a faculty course professor and clinical preceptor to meet individualized learning objectives.
Requisites: NURSING 828
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate increased independence in and integration of advanced levels of clinical judgment, systems thinking, and engagement in the evaluation and translation of research into evidence-based care that improves patient/population outcomes.
Audience: Graduate

2. Expand their leadership role to mentor and support members of the inter-professional patient care team to achieve excellence in and accountability for quality in care of patients or populations.
Audience: Graduate

3. Demonstrate the ability to implement, revise or improve inter-professional practice models in the clinical setting.
Audience: Graduate

4. Critically appraise the use of evidence-based practice guidelines and standards of care in the clinical setting, recommend improvements, and evaluate the outcome of recommended improvements.
Audience: Graduate

NURSING 830 – LEADERSHIP, ROLE DEVELOPMENT, AND RESOURCE STEWARDSHIP PRACTICUM
3 credits.

Expand and strengthen leadership skills, enhance understanding of specialized advanced practice role including strategic planning and resource stewardship. Collaborate with course faculty and designated preceptors to establish and achieve individualized learning goals that directly pertain to specialty roles in advanced nursing practice.
Requisites: NURSING 712, 713, and 847
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate advanced leadership skills, systems thinking, and strategic engagement.
Audience: Graduate

2. Mentor members of the interprofessional team to achieve excellence and accountability for quality management of populations and/or programs.
Audience: Graduate

3. Engage in strategic planning, partnership, resource development and stewardship.
Audience: Graduate

4. Analyze ethical and legal issues associated with health systems management practice.
Audience: Graduate

5. Engage in the structural, political and economic issues integral in the leadership role and system wide implications of decision making.
Audience: Graduate

6. Create a professional development plan for future role.
Audience: Graduate

NURSING 847 – HEALTH POLICY PRACTICUM
3 credits.

Provides a policy field experience that corresponds to a targeted focus area, phenomenon, or population of interest. Negotiate a policy experience with a selected agency or institution. Analyze relevant policies to your population of interest and actively influence the design, development, and implementation of a policy. Examine strategies to accelerate policy adoption and implementation.
Requisites: Declared in a Nursing graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Examine the role and translation of research and other types of evidence in developing and revising policies in the selected agency or institution.
Audience: Graduate

2. Critically appraise research and identify gaps related to the policies influencing the health problem, phenomenon, or population of interest.
Audience: Graduate

3. Demonstrate the ability to synthesize and communicate relevant research findings to individuals involved in policy-making, including key stakeholders.
Audience: Graduate

4. Effectively Influence policy-makers through active participation at the program level on committees, boards, and/or task forces, and at the institutional, local, state, regional, national, and/or international levels to improve healthcare delivery and outcomes.
Audience: Graduate

5. Demonstrate leadership in the design, development, implementation, and/or evaluation of program, institutional, local, state, federal, and/or international health policy as demonstrated in student practicum activities and deliverables.
Audience: Graduate

NURSING/ED PSYCH/HDFS/SOC WORK 880 – PREVENTION SCIENCE
3 credits.

Theoretical, empirical and practical foundation for prevention science as it relates to the prevention of human social problems. Research and evaluation methods, program design strategies, best practices and policy as they relate to the field of prevention are also examined.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

NURSING/ED PSYCH/HDFS/SOC WORK 881 – CAPSTONE SEMINAR IN PREVENTION SCIENCE
1 credit.

An opportunity to meet with prevention professionals and scholars from across campus and the community to explore current and emerging issues of prevention research and professional practice. Students must complete HDFS/ED PSYCH/NURSING/SOC WORK 880 before taking this course.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

NURSING 906 – SCHOLARLY PROJECT
1-4 credits.

Independent scholarly project involves a systematic, evidence-based approach to enhance health-related outcomes.
Requisites: NURSING 706 and 806
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 3 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate the state of the science in identified area of inquiry.
Audience: Graduate

2. Apply methods of scholarly inquiry consistent with identified area of interest.
Audience: Graduate

3. Synthesize and disseminate results of inquiry in an oral presentation as well as a peer reviewed journal, book, government report, or other written venue.
Audience: Graduate

NURSING 990 – THESIS RESEARCH
1-9 credits.

Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

NURSING 999 – ADVANCED INDEPENDENT STUDY
1-9 credits.

Directed study as arranged with instructor.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Engage in directed study based on the student's research needs as arranged with the instructor.
Audience: Graduate

NUTRITIONAL SCIENCES (NUTR SCI)

NUTR SCI 100 – FUELING YOUR FUTURE WITH CAREERS IN NUTRITION
1 credit.

Overview of career paths related to human nutrition, a multidisciplinary domain that explores the complex relationship between dietary intake and health, encompassing diverse areas from scientific research, healthcare, education, product development, to policy and intervention.
Requisites: None
Repeatable for Credit: No
Learning Outcomes: 1. Identify and describe various career paths within the field of nutrition
Audience: Undergraduate

2. Explain the educational and professional requirements for different nutrition-related careers
Audience: Undergraduate

3. Discuss nutrition science literature
Audience: Undergraduate

4. Identify professional organizations, resources, and networking opportunities within the field of nutrition
Audience: Undergraduate

5. Locate resources available to students pursuing a degree in Nutritional Sciences at the UW – Madison
Audience: Undergraduate

NUTR SCI 132 — NUTRITION TODAY
3 credits.

Nutrition and its relationship to humans and their biological, social, and physical environment; current issues and concerns that affect the nutritional status of various population groups.
Requisites: Not open to students with credit for NUTR SCI 332
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss the development of nutritional sciences knowledge and critically assess research findings.
Audience: Undergraduate

2. Describe the scientific method as it applies to nutritional sciences and analyze research methods in the field.
Audience: Undergraduate

3. Evaluate scientific research reports and apply findings to personal dietary choices, considering equity and inclusion in accessing and acquiring food.
Audience: Undergraduate

4. Investigate changes in human eating patterns over time and their impact on health, sustainability, diversity, and cultural traditions.
Audience: Undergraduate

5. Apply tools for assessing balanced eating patterns to personal food choices, specific populations or case studies while considering traditional and cultural dietary practices.
Audience: Undergraduate

6. Explain the mechanisms of digestive physiology and how they pertain to nutrient absorption and the generation and utilization of energy.
Audience: Undergraduate

7. Demonstrate a comprehensive understanding of basic nutritional concepts, including macronutrients, micronutrients, energy, and their sources, as well as their effects on health, while emphasizing diversity and an "all foods fit" approach.
Audience: Undergraduate

NUTR SCI 200 — PROFESSIONAL SKILLS IN DIETETICS
1 credit.

An overview of the nutrition and dietetics professions: career options; professional development; professional references and resources; credentialing; professional issues.
Requisites: Declared in Nutritional Sciences BS or BS-Nutrition and Dietetics and (NUTR SCI 631 or concurrent enrollment)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify career options available to individuals with a degree in nutrition and dietetics.
Audience: Undergraduate

2. Summarize the requirements and skills for becoming a Registered Dietitian.
Audience: Undergraduate

3. Describe individual skills, strengths, knowledge, and experience relevant to career goals.
Audience: Undergraduate

4. Discuss the importance and expectations of a professional in the workplace.
Audience: Undergraduate

5. Evaluate effective professional oral and written communication pertaining to the field of dietetics.
Audience: Undergraduate

NUTR SCI/ENTOM 203 – INTRODUCTION TO GLOBAL HEALTH
3 credits.

Introduces students to global health concepts through multidisciplinary speakers dedicated to improving health through their unique training. It targets students with an interest in public health and those who wish to learn how their field impacts their global issues.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define global health and identify major global health trends and metrics
Audience: Undergraduate

2. Recognize the "determinants of health" that contribute to health disparities/inequities
Audience: Undergraduate

3. Examine global health through the lens of agriculture, food, and nutrition
Audience: Undergraduate

4. Describe the role of ecology and the changing environment in global health
Audience: Undergraduate

5. Explain the importance of collaborative and interdisciplinary approaches in global health
Audience: Undergraduate

6. Discuss a variety of global health careers and areas of specialty through guest speakers and connections with their area of interest
Audience: Undergraduate

NUTR SCI 289 – HONORS INDEPENDENT STUDY
1-2 credits.

Research work under direct guidance of a Nutritional Sciences faculty or instructional academic staff member. Students are responsible for arranging the work and credits with the supervising instructor. Intended for students in the CALS Honors Program.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2006
Learning Outcomes: 1. Develop critical, analytical and independent thinking skills through a scientific research project
Audience: Undergraduate

2. Apply the scientific method and engage in constructive problem solving in a scientific research project
Audience: Undergraduate

3. Demonstrate application of research skills and methodologies through a research project
Audience: Undergraduate

4. Effectively communicate scientific findings in an oral and/or written format
Audience: Undergraduate

NUTR SCI 299 – INDEPENDENT STUDY
1-3 credits.

Research work under direct guidance of a Nutritional Sciences faculty or instructional academic staff member. Students are responsible for arranging the work and credits with the supervising instructor.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate a clear research question or problem and formulate a hypothesis
Audience: Undergraduate

2. Identify appropriate research methodologies and collect sound scientific data
Audience: Undergraduate

3. Apply critical thinking skills to interpret laboratory data and apply problem solving skills to constructively address research setbacks
Audience: Undergraduate

4. Practice research ethics and responsible conduct in research
Audience: Undergraduate

5. Communicate scientific ideas and results verbally and in written form effectively
Audience: Undergraduate

NUTR SCI/AN SCI/DY SCI 311 – COMPARATIVE ANIMAL NUTRITION
3 credits.

Nutrients and their assimilation, function, and interactions that affect metabolism in mammals. Differences among species will be used to emphasize unique digestive and physiological functions and how these differences affect metabolism of nutrients. Humans will be used in some comparisons. Follows physiological progression of nutrients, starting with an overview of the digestive tract followed by water and builds on specific roles of nutrients and substrates needed to provide basic processes required for maintenance, tissue accretion, and homeostatic regulation of nutrients.
Requisites: CHEM 341, 343, (BIOCHEM 301 or concurrent enrollment), or (BIOCHEM 501 or concurrent enrollment)
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recall and summarize the cellular, tissue, and whole-body metabolism and function of nutrients
Audience: Undergraduate

2. Identify key elements of digestive anatomy that enable digestion and absorption of consumed nutrients
Audience: Undergraduate

3. Explain the physiological processes required for assimilation of consumed macro- and micro-nutrients
Audience: Undergraduate

4. Compare the similarities and differences in nutritional and metabolic strategies across species
Audience: Undergraduate

5. Evaluate the interactions between nutrients, animals, environment, physiological status, and functions and integrate these interactions to understand whole-animal nutrition
Audience: Undergraduate

NUTR SCI 332 – HUMAN NUTRITIONAL NEEDS
3 credits.

Biochemical and physiological basis of the nutritional requirements of humans.
Requisites: (CHEM 103, 109, or 115) and (ZOOLOGY/BIOLOGY/BOTANY 151, ZOOLOGY/BIOLOGY 101, or BIOCORE 381)
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define and apply major principles and concepts of nutritional sciences.
Audience: Undergraduate

2. Compare and contrast common approaches used in biomedical research.
Audience: Undergraduate

3. Demonstrate knowledge of essential nutrients on their absorption, metabolism, functions/mechanisms of actions, and physiological manifestations of nutritional status.
Audience: Undergraduate

4. Describe key biochemical and physiological pathways that integrate the metabolism of energy-yielding nutrients.
Audience: Undergraduate

5. Demonstrate quantitative literacy relevant to nutritional sciences and dietetics.
Audience: Undergraduate

NUTR SCI/A A E 350 — WORLD HUNGER AND MALNUTRITION
3 credits.

Hunger and poverty in developing countries and the United States. Topics include: nutrition and health, population, food production and availability, and income distribution and employment.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Demonstrate a basic understanding of the complex links between nutrition and malnutrition.
Audience: Undergraduate

2. Learn and apply the economic tools of supply and demand to solving/analyzing issues including income and population growth, income and population policies, and agricultural supply topics.
Audience: Undergraduate

3. Synthesize knowledge about the economics and nutritional aspects of world hunger to better understand solutions.
Audience: Undergraduate

4. Communicate effectively through written reports and online discussions.
Audience: Undergraduate

5. Apply sustainability principles and/or frameworks to addressing the challenge of addressing issues of population growth, hunger and poverty.
Audience: Undergraduate

6. Describe the social, economic, and environmental dimensions of food, hunger and malnutrition. Identify potential tradeoffs and interrelationships among these dimensions at a level appropriate to the course.
Audience: Undergraduate

NUTR SCI 375 — SPECIAL TOPICS
1-4 credits.

Special topics on contemporary issues relevant to undergraduate students studying health and nutrition.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2020

NUTR SCI 377 — CULTURAL ASPECTS OF FOOD AND NUTRITION
3 credits.

Exploration of cultural competency and humility as a factor in reducing nutrition-related health disparities, and an opportunity to foster community resilience within the United States. Analysis of how personal cultural perspectives can shape biases and stereotypes that can widen the health disparity gap. Principles of food and culture utilized to compare cultural perspectives of health and well-being, including influences of spirituality and religiosity on food choice and dietary patterns. Includes content collaborators and guest speakers from a variety of communities, and identities.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Describe the concept and significance of cultural competency and cultural humility in the context of food, health and well-being.
Audience: Undergraduate

2. Identify worldview and traditional and contemporary foodways common across ethnic communities in the U.S. disproportionately burdened by nutrition-related chronic disease.
Audience: Undergraduate

3. Interpret dietary laws and customs in the context of the U.S. health care delivery system.
Audience: Undergraduate

4. Critically examine how U.S. food policies can influence dietary choices at multiple levels, and how those dietary choices may influence the culture around food.
Audience: Undergraduate

NUTR SCI 379 – INTRODUCTION TO EPIDEMIOLOGY
3 credits.

Provides undergraduate students of all disciplines with an introduction to the field of epidemiology. As the "detectives of public health," epidemiologists investigate the causes of disease, track outbreaks, screen and monitor the health of populations, and design studies to track health over time. Epidemiological research is used to identify groups at-risk for disease, guide public health programs and policies and generate hypotheses about the causes of diseases which can inform further research. Also examines association and causality, study design, and limitations to epidemiological evidence, drawing from real examples, both current and historical.
Requisites: Satisfied Quantitative Reasoning (QR) A requirement
Course Designation: Breadth - Either Social Science or Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Describe principles of epidemiology and its tools and methods
Audience: Undergraduate

2. Calculate and interpret basic epidemiological measures
Audience: Undergraduate

3. Understand major exposures, related health outcomes and the burden of disease
Audience: Undergraduate

4. Identify types of epidemiological studies and assess strengths and weaknesses of different study designs
Audience: Undergraduate

5. Interpret epidemiological evidence and identify threats to validity of epidemiology studies
Audience: Undergraduate

6. Connect epidemiology with its use in public and global health
Audience: Undergraduate

7. Explore how epidemiology is related to their field of interest or career path
Audience: Undergraduate

NUTR SCI 399 – COORDINATIVE INTERNSHIP/COOPERATIVE EDUCATION
1-8 credits.

Internship under guidance of a Nutritional Sciences faculty or instructional academic staff member and internship site supervisor. Students are responsible for arranging the work and credits with the Nutritional Sciences faculty or instructional academic staff member and the internship site supervisor.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply concepts learned in coursework to authentic professional situations
Audience: Undergraduate

2. Demonstrate professional skills appropriate for the industry
Audience: Undergraduate

3. Identify and reflect on how concepts learned in coursework apply to specific work settings and situations
Audience: Undergraduate

NUTR SCI 400 – STUDY ABROAD IN NUTRITIONAL SCIENCES
1-6 credits.

Provides an area equivalency for courses taken on Madison Study Abroad Programs that do not equate to existing UW courses. Enrollment in a UW-Madison resident study abroad program.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions

NUTR SCI/INTER-AG 421 – GLOBAL HEALTH FIELD EXPERIENCE
1-4 credits.

Specialized educational experiences that address a broad range of global health topics through interdisciplinary approaches to health and include participation in applied public health activities or service learning projects with communities and partner organizations.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Collaborate and communicate effectively with diverse colleagues and local partners.
Audience: Undergraduate

2. Respectfully engage with different cultures or populations.
Audience: Undergraduate

3. Articulate the importance of interdisciplinary approaches to global health and/or sustainable development.
Audience: Undergraduate

4. Demonstrate knowledge on a specific global health issue, community, and location.
Audience: Undergraduate

NUTR SCI 431 — NUTRITION IN THE LIFE SPAN
3 credits.

Influence of nutrition on growth and development; physiological basis of nutritional requirements throughout the life span, including the relationship of food habits and nutrition to selected chronic diseases; principles of nutritional intervention in community programs.
Requisites: Junior standing, grade of C in ANAT&PHY 335 and grade of C in NUTR SCI 332
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Utilize nutrient requirements and dietary standards in dietary assessment and planning
Audience: Undergraduate

2. Describe the physiological basis of nutritional requirements throughout the life cycle
Audience: Undergraduate

3. Describe eating patterns, nutritional problems, and their relationships to health conditions throughout the life cycle
Audience: Undergraduate

4. Apply appropriate nutrient and food recommendations to individuals based on the stage of the life cycle
Audience: Undergraduate

5. Explain the delivery of nutrition care in community programs
Audience: Undergraduate

NUTR SCI 500 — UNDERGRADUATE CAPSTONE SEMINAR LABORATORY
1 credit.

Current topics in Nutritional Sciences and undergraduate research presentations.
Requisites: NUTR SCI 431 or concurrent enrollment and NUTR SCI/ BIOCHEM 510 or concurrent enrollment
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use database search techniques to identify research articles
Audience: Undergraduate

2. Describe requirements of rigorous and ethical research and publication
Audience: Undergraduate

3. Critically evaluate components of nutritional science research publications
Audience: Undergraduate

4. Prepare and submit an abstract for oral research presentations
Audience: Undergraduate

5. Prepare and present oral research presentations
Audience: Undergraduate

NUTR SCI/BIOCHEM 510 – NUTRITIONAL BIOCHEMISTRY AND METABOLISM
3 credits.

Lectures in nutrition with a substantial background in biochemistry. Emphasis on biochemical and physiological fundamentals of nutrition. Discussion of protein, fat, carbohydrate, energy, minerals and vitamins and their roles and interrelationships in nutrition and metabolism.
Requisites: BIOCHEM 301, 501, 507, BMOLCHEM 503, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand nutrient metabolism in normal and disease states
Audience: Both Grad & Undergrad

2. Integrate the regulation of metabolism of nutrients under normal and disease state conditions.
Audience: Both Grad & Undergrad

3. Understand the biochemical and molecular functions of nutrients we consume
Audience: Both Grad & Undergrad

4. Apply how nutrients affect pathogenesis and health
Audience: Graduate

5. Think critically about nutrient claims and fads using your knowledge of nutritional biochemistry.
Audience: Both Grad & Undergrad

6. Integrate current research in the area of metabolism and micronutrient function into existing knowledge and formulate new hypotheses to guide future research
Audience: Graduate

NUTR SCI/KINES 525 – NUTRITION IN PHYSICAL ACTIVITY AND HEALTH
3 credits.

Provides both scientific knowledge and application of nutrition related to exercise, health, and sports.
Requisites: ANAT&PHY 335
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify how nutritional and hydration demands vary by physical activity frequency, intensity, type, and time
Audience: Undergraduate

2. Outline dietary assessment techniques and common dietary strategies for both the healthy population and populations with additional dietary needs
Audience: Undergraduate

3. Apply the potential benefits of nutrient timing strategies to optimize performance and to promote tissue growth, recovery, and repair
Audience: Undergraduate

4. Synthesize and discuss nutrition research related physical activity and health
Audience: Undergraduate

5. Evaluate the safety and efficacy of common nutritional strategies, supplements, and ergogenic aids
Audience: Undergraduate

NUTR SCI 540 – COMMUNITY NUTRITION AND HEALTH EQUITY
3 credits.

The foundations and practice of community nutrition and health equity. Factors and resources affecting community nutrition programs and delivery of nutrition and education programs to diverse communities and vulnerable populations.
Requisites: NUTR SCI 431 or concurrent enrollment
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Discuss the impact of health care policy and different health care delivery systems on food and nutrition services.
Audience: Undergraduate

2. Demonstrate cultural humility, an awareness of personal bias, social inequities, health disparities and discrimination.
Audience: Undergraduate

3. Describe contributing factors to health equity in nutrition and dietetics including structural bias, social inequities, health disparities and discrimination.
Audience: Undergraduate

4. Develop an education session or program/educational strategy for a target population.
Audience: Undergraduate

5. Demonstrate counseling and education methods to facilitate behavior change and enhance wellness for diverse individuals and groups.
Audience: Undergraduate

NUTR SCI 550 – NUTRITION AND COUNSELING FOR ATHLETIC PERFORMANCE
2 credits.

Presents foundational principles and evidenced based recommendations for fueling active bodies and how proper nutrition relates to weight management, muscle development, recovery and performance. Integrates counseling methods and techniques used for working with active populations through readings, learning activities and expert guest lecturers. Features reading and interpreting scientific studies related to sports nutrition and interdisciplinary guest speakers representing sport performance and wellness programs.
Requisites: NUTR SCI 332
Repeatable for Credit: No
Last Taught: Fall 2022
Learning Outcomes: 1. Discuss what sports nutrition is in the field of nutrition and dietetics.
Audience: Undergraduate

2. Understand nutrient requirements during the various types of exercise and sport, along with rationale for those requirements.
Audience: Undergraduate

3. Develop the ability to communicate information to athletes/active individuals or groups.
Audience: Undergraduate

4. Develop and apply counseling skills when communicating nutrition with athletes/active individuals to promote behavior change.
Audience: Undergraduate

5. Apply learned concepts to actual athletic situations and varied conditions and special populations.
Audience: Undergraduate

NUTR SCI/BIOCHEM 560 – PRINCIPLES OF HUMAN DISEASE AND BIOTECHNOLOGY
2 credits.

Covers basic and applied biochemical principles related to human disease. Topics such as: cancer, including cell cycle regulation, oncogenes and tumor suppressors, and cellular metabolism; metabolic disorders, including cardiovascular disease, metabolic syndrome, and diabetes; biotechnology, including metabolomics, CRISPR-based genetic screens, and experimental models of human disease.
Requisites: BIOCHEM 501, 507, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Critically evaluate, and accurately describe findings from primary research publications
Audience: Both Grad & Undergrad

2. Analyze how genetic and cell cycle perturbations contribute to cancer progression
Audience: Both Grad & Undergrad

3. Identify how genetic and environmental factors impact altered cellular metabolism in cancer
Audience: Both Grad & Undergrad

4. Describe biochemical mechanisms that contribute to cardiovascular disease, metabolic syndrome, and diabetes
Audience: Both Grad & Undergrad

5. Explain biochemical techniques, engineering strategies, and state-of-the-art technologies used in biomedical research
Audience: Both Grad & Undergrad

6. Collaborate with peers in a small group
Audience: Both Grad & Undergrad

7. Apply knowledge of biochemical principles and biotechnology to solve research and disease treatment related problems
Audience: Both Grad & Undergrad

8. Execute written critical evaluation of primary research literature related to the molecular basis of human diseases and advances in biotechnology.
Audience: Graduate

NUTR SCI 600 – INTRODUCTORY SEMINAR IN NUTRITION
1 credit.

Presentation of reports from current journals of nutritional sciences.
Requisites: Graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

NUTR SCI 618 – RESEARCH APPROACHES IN THE ERA OF PRECISION NUTRITION
3 credits.

Exploration of current challenges and research approaches related to the progress of nutritional sciences in the era of precision nutrition. Topics include limitations of population-based approaches to establishing dietary guidelines, hurdles to developing biomarkers for determining individual nutritional status, the impact of genetics, epigenetics, the microbiome, diet interactions, and other factors on nutritional and metabolic variability among people, and the ways in which precision nutrition can revolutionize how nutrition recommendations are devised and delivered to the public.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Critically evaluate current primary research literature in nutrition and metabolism
Audience: Graduate

2. Identify the limitations of population-based nutrition recommendations and the challenges facing development of biomarkers of individual status
Audience: Graduate

3. Distinguish the multitude of factors that create different nutritional needs among individuals and their metabolic heterogeneity
Audience: Graduate

4. Analyze how nutritional guidance is communicated to the public now and predict how it will be communicated in the future
Audience: Graduate

5. Explain state-of-the-art approaches to nutrition research and devise experiments, in the form of specific aims, for future research
Audience: Graduate

NUTR SCI/BIOCHEM 619 – ADVANCED NUTRITION: INTERMEDIARY METABOLISM OF MACRONUTRIENTS
3 credits.

Principles underlying the control of metabolism as it applies to macronutrients. Discusses advanced aspects of metabolic control. Metabolism of protein and amino acids, fat, and carbohydrate. Discusses fuel sensing and metabolism in disease.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe regulatory mechanisms at the organ, cellular and biochemical level controlling intermediary metabolism of carbohydrates, lipids and proteins
Audience: Graduate

2. Identify regulatory points in metabolic pathways and explain how they may change with metabolic state
Audience: Graduate

3. Detail the changes and mechanisms underlying such changes in protein, carbohydrate and fat metabolism in changing physiological state and also in health vs disease state
Audience: Graduate

4. Evaluate modern experimental approaches for studying metabolism
Audience: Graduate

NUTR SCI/POP HLTH 621 – INTRODUCTION TO NUTRITIONAL EPIDEMIOLOGY
1 credit.

Techniques used to evaluate relationships of diet to health and disease in human populations; integration of knowledge gained with results of animal and clinical studies toward understanding dietary risk or protective factors for disease. Includes advanced diet assessment and basic epidemiologic approaches.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

NUTR SCI 623 – ADVANCED NUTRITION: MINERALS
1 credit.

Topics discussed in regard to minerals are: metabolic roles; absorption, excretion, transport and cellular metabolism; nutritional and toxicological standards for humans and animal models; bioavailability; genetic interactions; and research methodologies.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022

NUTR SCI 625 – ADVANCED NUTRITION: OBESITY AND DIABETES
1 credit.

Physiology, biochemistry and genetics of human obesity and diabetes. Critical review of current research on their etiology and treatment.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023

NUTR SCI/AN SCI 626 – EXPERIMENTAL DIET DESIGN
1 credit.

Discuss nutrient requirements, composition of ingredients used to meet requirements and the mathematical steps involved in diet formulation with emphasis on research animals and human subjects.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Develop an understanding of nutrient requirements, ingredients used to meet requirements, and the mathematical steps involved in diet formulation, with emphasis on research animals.
Audience: Both Grad & Undergrad

2. Develop skills required to formulate and prepare research diets
Audience: Both Grad & Undergrad

3. Develop an appreciation of nutrient requirements and the nutrient content of foods in development of healthy human diets.
Audience: Graduate

NUTR SCI 627 – ADVANCED NUTRITION: VITAMINS
1 credit.

Scientific knowledge of the metabolic functions, metabolism and nutritional requirements for some of the water soluble vitamins and all of the fat soluble vitamins.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023

NUTR SCI 631 – CLINICAL NUTRITION I
3 credits.

Introduction to the nutrition care process, including pathology, medical nutrition therapy, and nutrition support in relation to alterations in nutrition and metabolism that accompany disease states. Research related to therapeutic nutrition.
Requisites: NUTR SCI 332, 431, and (BIOCHEM 301 or 501)
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize aspects of professional practice as a registered dietitian nutritionist
Audience: Undergraduate

2. Demonstrate understanding of the pathophysiology, as it relates to nutrition, for selected disease states/conditions
Audience: Undergraduate

3. Describe the medical nutrition therapy for selected disease states/conditions
Audience: Undergraduate

4. Translate nutrient recommendations into food recommendations
Audience: Undergraduate

5. Utilize the nutrition care process when providing medical nutrition therapy
Audience: Undergraduate

NUTR SCI 632 – CLINICAL NUTRITION II
3 credits.

Advanced topics surrounding pathology, medical nutrition therapy, and nutrition support in relation to alterations in nutrition and metabolism that accompany disease stated. Research related to therapeutic nutrition.
Requisites: NUTR SCI 631
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize aspects of professional practice as a registered dietitian nutritionist
Audience: Undergraduate

2. Demonstrate understanding of the pathophysiology, as it relates to nutrition, for selected disease states/conditions
Audience: Undergraduate

3. Describe the medical nutrition therapy for selected disease states/conditions
Audience: Undergraduate

4. Translate nutrient recommendations into food recommendations
Audience: Undergraduate

5. Utilize the nutrition care process when providing medical nutrition therapy
Audience: Undergraduate

NUTR SCI 641 – APPLICATIONS IN CLINICAL NUTRITION I
1 credit.

Clinical problem solving, assessing medical record data, evaluating food intake, planning modified diets, and reviewing medical and research literature related to certain diseases/conditions. Develops critical thinking, teamwork and communication skills needed by the dietetic intern and dietitian.
Requisites: Declared in Nutritional Science BS or BS-Dietetics and Nutrition and NUTR SCI 631 or concurrent enrollment
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Solve clinical case problems and case studies as part of a team using evidenced-based practice
Audience: Undergraduate

2. Summarize clinical cases for medical record using established documentation methods
Audience: Undergraduate

3. Use current information technologies to locate and apply evidence-based guidelines and protocols (KRDN 1.2)
Audience: Undergraduate

4. Demonstrate effective and professional oral and written communication and documentation (KRDN 2.1)
Audience: Undergraduate

5. Describe the regulation system related to billing and coding, what services are reimbursed by third party payers and how reimbursement may be obtained (KRDN 4.3)
Audience: Undergraduate

NUTR SCI 642 – APPLICATIONS IN CLINICAL NUTRITION II
1 credit.

Clinical problem solving, assessing medical record data, evaluating food intake, planning modified diets, and reviewing medical and research literature related to certain disease states/conditions. Develops critical thinking, teamwork and communication skills needed by the dietetic intern and dietitian.
Requisites: Declared in Nutritional Science BS or BS-Dietetics and Nutrition and NUTR SCI 631 or concurrent enrollment
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Solve clinical case problems and case studies as part of a team using evidenced-based practice
Audience: Undergraduate

2. Summarize clinical cases for medical record using established documentation methods
Audience: Undergraduate

3. Develop an educational session or program/educational strategy for a target population (KRDN 3.2)
Audience: Undergraduate

4. Demonstrate counseling and education methods to facilitate behavior change for and enhance wellness for diverse individuals and groups (KRDN 3.3)
Audience: Undergraduate

5. Analyze data for assessment and evaluate data to be used in decision-making for continuous quality improvement (KRDN 4.6)
Audience: Undergraduate

NUTR SCI/BIOCHEM 645 – MOLECULAR CONTROL OF METABOLISM AND METABOLIC DISEASE
3 credits.

Examination of various physiological states and how they affect metabolic pathways. Discussion of a number of special topics related to the unique roles of various tissues and to metabolic pathways in disease states, including adipocyte biology, beta-cell biology, epigenetics, inflammation, and aging related diseases.
Requisites: BIOCHEM 501, 508 or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the mechanisms by which tissues maintain metabolic flexibility.
Audience: Undergraduate

2. Differentiate between how lipid metabolism regulates carbohydrate metabolism and vice versa.
Audience: Undergraduate

3. Describe the regulation of lipogenesis.
Audience: Undergraduate

4. Discuss how hormone secreting endocrine cells in the pancreas sense nutrients to regulate blood glucose.
Audience: Undergraduate

5. Explain the importance of intracellular lipid cycling for body temperature regulation.
Audience: Undergraduate

6. Discuss the manner in which mitochondrial metabolism is assessed.
Audience: Undergraduate

7. Examine hormonal regulation of circadian rhythms.
Audience: Undergraduate

8. Describe the basis for thermogenesis.
Audience: Undergraduate

9. Explain the pathways leading to inflammation.
Audience: Undergraduate

NUTR SCI 650 – ADVANCED CLINICAL NUTRITION: CRITICAL CARE AND NUTRITION SUPPORT
3 credits.

Advanced study of the metabolic demands of critical illness and how these alterations influence the nutritional needs of critical care patients in various disease states. Using an evidence-based medical approach, students will assess nutrient requirements and determine best methods of nutrient delivery in various disease states. Anthropometric measures and hematological indices will be incorporated to assess nutritional status and monitor response to nutritional therapies.
Requisites: Declared in Clinical Nutrition MS or the Capstone Certificate in Clinical Nutrition
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

NUTR SCI 651 – ADVANCED CLINICAL NUTRITION - PEDIATRICS
3 credits.

Pediatric nutritional requirements with emphasis on issues related to evidence-based medical nutrition therapy.
Requisites: Declared in Clinical Nutrition MS or the Capstone Certificate in Clinical Nutrition
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

NUTR SCI 652 – ADVANCED NUTRITION COUNSELING AND EDUCATION
3 credits.

Application of current theories and techniques of counseling and education to the field of nutrition and dietetics. Practical application of communication techniques, client-centered counseling methods, motivational interviewing, learning theories and behavior change techniques, and factors affecting eating patterns. Nutrition psychology and the psychoanalytic approach to nutrition counseling will be emphasized in the class. Principles of group counseling/facilitation and instructional material/media design.
Requisites: Declared in Clinical Nutrition MS or the Capstone Certificate in Clinical Nutrition
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

NUTR SCI 653 – CLINICAL NUTRITION RESEARCH
3 credits.

Research use and development as it applies to clinical nutrition practice: effective use of the literature in evidence based practice and research development, problem development, methodology, analysis and reporting of results and conclusions.
Requisites: Declared in Clinical Nutrition MS or the Capstone Certificate in Clinical Nutrition
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

NUTR SCI 655 – NUTRITION IN AGING
3 credits.

Interpret research relating to nutrition during the aging process. Gain an understanding of acute and chronic conditions in older persons, both in hospital and the community. Examine the impact of aging on organ systems and address the relationship among physiologic aging, nutrition, and disease.
Requisites: Declared in Clinical Nutrition MS or the Capstone Certificate in Clinical Nutrition
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Articulate how the physiologic changes of aging impact nutrition, distinguishing between natural physiologic changes of aging and those occurring from disease.
Audience: Graduate

2. List characteristics representative of the aging population.
Audience: Graduate

3. Describe how dietary recommendations for older adults differ from younger adults.
Audience: Graduate

4. Identify physiologic changes of aging that impact exercise capacity and describe the benefits of exercise for older adults.
Audience: Graduate

5. Examine, investigate, and summarize the essential components of a nutritional assessment for an older adult, including anthropometric, biochemical, clinical, and dietary factors.
Audience: Graduate

6. Describe the nutritional impact of diseases and conditions common in older adults.
Audience: Graduate

7. Explain the significance of nutrition in prevention and management of diseases frequently impacting older adults.
Audience: Graduate

8. Implement appropriate dietary and lifestyle interventions for the prevention of disease and conditions common among older adults.
Audience: Graduate

NUTR SCI 657 – MANAGEMENT IN DIETETICS
3 credits.

Evaluate research and apply management principles in dietetics practice. Enhance leadership and management skills for settings such as hospitals, long-term care facilities, schools, universities, prisons, and other locations where food and nutrition services are administered.
Requisites: Declared in Clinical Nutrition MS or the Capstone Certificate in Clinical Nutrition
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Apply professionalism and related topics to career development.
Audience: Graduate

2. Enhance critical thinking and decision-making skills.
Audience: Graduate

3. Apply leadership and management theories, especially useful for managing a professional staff.
Audience: Graduate

4. Develop a business plan for an area of advanced practice, including a logic model, marketing plan, implementation plan, budgeting system, and outcomes measurement.
Audience: Graduate

5. Apply a framework to assess, develop, implement and evaluate products, programs and services.
Audience: Graduate

6. Demonstrate leadership skills to guide practice
Audience: Graduate

7. Apply principles of organization management
Audience: Graduate

8. Apply project management principles to achieve project goals and objectives.
Audience: Graduate

9. Lead quality and performance improvement activities to measure, evaluate and improve a program's services, products and initiatives.
Audience: Graduate

10. Develop and lead implementation of risk management strategies and programs.
Audience: Graduate

NUTR SCI 670 – NUTRITION AND DIETETICS PRACTICUM I
3 credits.

The first of two supervised practice experiences in nutrition and dietetics at University of Wisconsin Hospital and Clinics and affiliated sites. Dietetic interns apply their academic training, furthering their competency in: clinical nutrition, food systems management, research, and community experiences.
Requisites: Declared in Clinical Nutrition MS or the Capstone Certificate in Clinical Nutrition
Repeatable for Credit: No
Last Taught: Fall 2025

NUTR SCI 671 – NUTRITION AND DIETETICS PRACTICUM II
3 credits.

The second of two supervised practice experiences in nutrition and dietetics at University of Wisconsin Hospital and Clinics and affiliated sites. Dietetic interns apply their academic training, furthering their competency in: clinical nutrition, food systems management, research, and community experiences.
Requisites: Declared in Clinical Nutrition MS or the Capstone Certificate in Clinical Nutrition
Repeatable for Credit: No
Last Taught: Summer 2025

NUTR SCI 675 – NUTRACEUTICALS FOR HEALTHCARE PROFESSIONALS
1 credit.

Overview of the principles and processes necessary to evaluate and utilize bioactive food components and dietary supplements in practice, including federal regulations. Current scientific evidence supporting or refuting the biochemical and physiological efficacy of select bioactive food components and dietary supplements will be addressed.
Requisites: ANAT&PHY 335 and (BIOCHEM 301 or 501) or declared in the Capstone Certificate in Clinical Nutrition or Clinical Nutrition MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Discuss current regulation of bioactive food components and dietary supplements
Audience: Both Grad & Undergrad

2. Assess quality, purity and identity of dietary supplements
Audience: Both Grad & Undergrad

3. Explain basic principles of functional nutrition and how bioactive food components and dietary supplements relate
Audience: Both Grad & Undergrad

4. Utilize appropriate resources to obtain current information on bioactive food components and dietary supplements
Audience: Both Grad & Undergrad

5. Critically evaluate the research to support or refute the use of selected bioactive food components and dietary supplements
Audience: Both Grad & Undergrad

6. Summarize current knowledge on popular bioactive food components and dietary supplements used in various health conditions
Audience: Both Grad & Undergrad

7. Apply knowledge of bioactive food components and dietary supplements to working with patients/clients
Audience: Both Grad & Undergrad

8. Apply an understanding of environmental, molecular factors (e.g. genes, proteins, metabolites) and food in the development and management of disease (ACEND Competency [1.1])
Audience: Both Grad & Undergrad

9. Apply an understanding of anatomy, physiology, and biochemistry (ACEND Competency [1.2])
Audience: Both Grad & Undergrad

10. Integrate knowledge of chemistry and food science as it pertains to food and nutrition product development and when making modifications to food (ACEND Competency [1.4])
Audience: Both Grad & Undergrad

11. Apply knowledge of pathophysiology and nutritional biochemistry to physiology, health and disease (ACEND Competency [1.5])
Audience: Both Grad & Undergrad

12. Apply knowledge of social, psychological and environmental aspects of eating and food (ACEND Competency [1.6])
Audience: Both Grad & Undergrad

13. Integrate the principles of cultural competence within own practice and when directing services (ACEND Competency [1.7])

NUTR SCI 681 – SENIOR HONORS THESIS
2-4 credits.

Individual study and research for students completing theses under direct guidance of a Nutritional Science faculty or instructional academic staff member.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2016
Learning Outcomes: 1. Review and analyze scientific literature.
Audience: Undergraduate

2. Identify and use appropriate research methodologies to address a research question.
Audience: Undergraduate

3. Begin structuring and writing a thesis based on original research.
Audience: Undergraduate

4. Effectively communicate scientific findings in an oral and/or written format.
Audience: Undergraduate

NUTR SCI 682 – SENIOR HONORS THESIS
2-4 credits.

Individual study and research for students completing theses under direct guidance of a Nutritional Science faculty or instructional academic staff member.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2017
Learning Outcomes: 1. Review and analyze scientific literature.
Audience: Undergraduate

2. Identify and use appropriate research methodologies to address a research question.
Audience: Undergraduate

3. Write a thesis based on original research.
Audience: Undergraduate

4. Effectively communicate scientific findings in an oral and/or written format.
Audience: Undergraduate

NUTR SCI 691 – SENIOR THESIS-NUTRITION
1-4 credits.

Individual study and research for students completing theses under direct guidance of a Nutritional Science faculty or instructional academic staff member.
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Review and analyze scientific literature.
Audience: Undergraduate

2. Identify and use appropriate research methodologies to address a research question.
Audience: Undergraduate

3. Begin structuring and writing a thesis based on original research.
Audience: Undergraduate

4. Effectively communicate scientific findings in an oral and/or written format.
Audience: Undergraduate

NUTR SCI 692 – SENIOR THESIS
1-4 credits.

Individual study and research for students completing theses under direct guidance of a Nutritional Science faculty or instructional academic staff member.
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Review and analyze scientific literature.
Audience: Undergraduate

2. Identify and use appropriate research methodologies to address a research question.
Audience: Undergraduate

3. Write a thesis based on original research
Audience: Undergraduate

4. Effectively communicate scientific findings in an oral and/or written format.
Audience: Undergraduate

NUTR SCI 699 – SPECIAL PROBLEMS
1-3 credits.

Directed study under direct guidance of a Nutritional Science faculty member or instructional academic staff member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate a clear research question or problem and formulate a hypothesis.
Audience: Undergraduate

2. Identify appropriate research methodologies and collect sound scientific data.
Audience: Undergraduate

3. Apply critical thinking skills to interpret laboratory data and apply problem solving skills to constructively address research setbacks.
Audience: Undergraduate

4. Practice research ethics and responsible conduct in research.
Audience: Undergraduate

5. Communicate scientific ideas and results verbally and in written form effectively
Audience: Undergraduate

NUTR SCI 710 – HUMAN ENERGY METABOLISM
2 credits.

Fundamentals in human macronutrient metabolism and its role in health and disease. Biochemistry and physiology of macronutrient digestion, anabolism, and catabolism. Disorders of energy metabolism (obesity, type 1 and type 2 diabetes, starvation). Metabolic effects of fiber and the microbiota. Body composition and energy assessment. Taught in an online format using lectures, guided readings, and projects.
Requisites: Declared in Clinical Nutrition MS or the Capstone Certificate in Clinical Nutrition
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

NUTR SCI 711 – PERSONALIZED NUTRITION: GENETICS, GENOMICS, AND METAGENOMICS
1 credit.

Genetic factors that modulate the relationships between diet, health, and disease risks, including the effects of differences in our genetic makeup (Nutrigenetics), the regulation of gene expression by nutrients and dietary patterns (Nutrigenomics), and the interactions between diet, gut microbiome, and human hosts (Metagenomics).
Requisites: Declared in Clinical Nutrition MS or the Capstone Certificate in Clinical Nutrition
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

NUTR SCI 715 – MICRONUTRIENTS: HUMAN PHYSIOLOGY AND DISEASE
3 credits.

Micronutrients explores the function of vitamins and essential mineral nutrients from the biochemical and nutritional perspective with emphasis on issues essential for clinical nutrition.
Requisites: Declared in Clinical Nutrition MS or the Capstone Certificate in Clinical Nutrition
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

NUTR SCI 720 – ADVANCED NUTRITION ASSESSMENT
1 credit.

Advanced skills and evolving methods of nutritional assessment. Measurement and interpretation of physical examination and laboratory parameters. Diagnosing malnutrition and nutrient deficiencies, including clinical characteristics used to identify and label the degree of malnutrition.
Requisites: Declared in Clinical Nutrition MS or the Capstone Certificate in Clinical Nutrition
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

NUTR SCI 721 – NUTRITION INFORMATICS
1 credit.

The emerging role of the electronic storage, retrieval and dissemination of food and nutrition related data and the effective use of information for problem solving and decision-making for the dietetics professional.
Requisites: Declared in Clinical Nutrition MS or the Capstone Certificate in Clinical Nutrition
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

NUTR SCI 725 – ADVANCED COMMUNITY NUTRITION
1 credit.

Community nutrition as it applies to clinical nutrition practice: programs, resources and issues supporting clinical nutrition practice in the community.
Requisites: Declared in Clinical Nutrition MS or the Capstone Certificate in Clinical Nutrition
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

NUTR SCI 726 – NUTRITIONAL MANAGEMENT OF GASTROINTESTINAL DISORDERS
3 credits.

Highlights the important interaction between nutrition and the human gastrointestinal tract (GI). Includes exploration of various gastrointestinal related disorders and diseases, and covers contemporary issues, current research, and real-life examples applicable to the field of nutrition, and nutrition providers. Includes instruction from content collaborators and GI nutrition experts. Apply the pathophysiology of GI disorders and disease, deconstruct differential diagnoses; and describe current medical management and dietary requirements of an individual and translate this into appropriate medical nutritional therapy.
Requisites: Declared in Clinical Nutrition MS or the Capstone Certificate in Clinical Nutrition
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate the importance of the interaction between nutrition and the human gastrointestinal tract.
Audience: Graduate

2. Examine, investigate, and summarize the role, current trends and research of the gut microbiome, functional medicine, popular/fad diets and efficacy for treatment of common GI disorders and diseases.
Audience: Graduate

3. Apply the pathophysiology of GI disorders/diseases, deconstruct differential diagnosis', describe current medical management and dietary requirements of an individual-and translate this into appropriate medical nutritional therapy.
Audience: Graduate

4. Reflect on external and internal environment forces that can impact your nutritional recommendations to an individual or family, assess the effectiveness of recommendations, and be able to modify or adjust accordingly.
Audience: Graduate

NUTR SCI 731 – NUTRITION AND METABOLISM RESEARCH IN PROGRESS SEMINAR
1 credit.

Seminars on topics in metabolism and nutritional sciences of interest to bioscience PhD students and reports on graduate student research.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the attributes of an effective research presentation.
Audience: Graduate

2. Evaluate and provide constructive feedback and criticism of their peers' seminar presentations.
Audience: Graduate

3. Interact constructively with peers and other researchers in the field.
Audience: Graduate

4. Relate personal research interests to topics in the larger field of nutrition and metabolism.
Audience: Graduate

NUTR SCI 745 – GRANT WRITING FOR NUTRITIONAL SCIENCES RESEARCH
2 credits.

Interactively address the knowledge, approach, and professional skills (conceptual, technical, and writing) required to create a successful grant proposal and initiate a career in research. Format is focused on the planning and completion of NIH-style grant proposals. Lectures and workshops will address the development of long term goals, hypotheses, and specific aims, as well as research design and methodology. Basic guidelines and approaches to proposal review and scoring are also covered. Several key components of a grant proposal will be generated using an iterative and peer-supported process.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify the components of an NIH grant and the content expected within each section during the review process.
Audience: Graduate

2. Succinctly analyze the current literature on a significant topic and identify gaps in knowledge that are worthy of further investigation.
Audience: Graduate

3. Generate overall objectives, hypotheses, and specific aims for projects that fill knowledge gaps.
Audience: Graduate

4. Construct a compelling research plan that describes the significance of completing a project's objectives, the methods to be used in the research, and potential problems and alternative strategies.
Audience: Graduate

5. Give and receive critical constructive feedback and revise research ideas in response.
Audience: Graduate

NUTR SCI 750 – ADVANCED SPORTS NUTRITION
2 credits.

Integration of foundational nutrition and exercise physiology principles with sports nutrition concepts from a clinical perspective. Evaluation of the unique nutritional requirements for athletes/active individuals on body composition, performance, and timing of nutrients and hydration related to pre-activity, during activity, and post-activity recovery. Application of these concepts with clinical conditions requiring specialized sports nutrition approaches such as diabetes, gastrointestinal disorders, eating disorders, micronutrients deficiencies and life cycle populations (youth/adolescent, pregnant and masters' athletes). Analysis of sports nutrition research to utilize evidenced-based practice and recommendations around ergogenic aids/supplements and other sports nutrition topics.
Requisites: Declared in Clinical Nutrition MS or the Capstone Certificate in Clinical Nutrition
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Expand and adapt foundational knowledge of macronutrient, micronutrient and fluid needs for exercise and activity along with rationale for requirements.
Audience: Graduate

2. Evaluate sports nutrition research on ergogenic aids/supplementation and translate research to practice.
Audience: Graduate

3. Integrate current knowledge of sports nutrition into individual's goals for performance.
Audience: Graduate

4. Apply sports nutrition and medical nutrition therapy concepts to unique athletic situations and varied conditions and special populations.
Audience: Graduate

NUTR SCI 799 – PRACTICUM IN NUTRITIONAL SCIENCES TEACHING
1-3 credits.

Instructional orientation to teaching at the higher education level in the agricultural and life sciences, direct teaching experience under faculty supervision, experience in testing and evaluation of students, and the analysis of teaching performance.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

NUTR SCI 875 – SPECIAL TOPICS
1-4 credits.

Special topics on contemporary issues relevant to graduate students studying health and nutrition.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

NUTR SCI 881 – SEMINAR-TOPICS IN HUMAN AND CLINICAL NUTRITION
1 credit.

Varied topics in clinical and human nutrition.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

NUTR SCI/BIOCHEM 901 – SEMINAR-NUTRITION AND METABOLISM (ADVANCED)
1 credit.

Presentation of original research results; discussion of recent articles in animal metabolism and nutrition.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss state-of-the-art research in nutrients and genetic regulation of metabolism
Audience: Graduate

2. Communicate scientific research and critically evaluate experimental results
Audience: Graduate

NUTR SCI 931 – SEMINAR-NUTRITION
1 credit.

Seminar features expert presentations of current research and issue-based applications that represent the breadth of nutritional sciences; topics investigate problems "from molecules to communities".
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

NUTR SCI 991 – RESEARCH NUTRITION
1-12 credits.

Independent research with assigned instructor. Research projects determined by agreement between instructor and student.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

OBSTETRICS AND GYNECOLOGY (OBS&GYN)

OBS&GYN 699 – DIRECTED STUDY
1-5 credits.

Directed study projects as arranged with faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply concepts learned in coursework to real life situations
Audience: Undergraduate

2. Read and effectively search scientific literature
Audience: Undergraduate

3. Develop critical, analytical, and independent thinking skills
Audience: Undergraduate

OBS&GYN 710 – REPRODUCTIVE ENDOCRINE PHYSIOLOGY
3 credits.

A broad grounding in reproductive endocrine physiology at the graduate level, with an emphasis on human and human reproductive health wherever possible. Encompasses an overview of fundamental concepts in endocrinology, the hypothalamic-pituitary axis, steroidogenesis, early embryonic development, pregnancy and maternal-fetal adaptations, and pathologies associated with endocrine disruption and dysregulation. Provides more focus on pathologic pregnancies because such pregnancies lead to a higher risk of adult onset diseases including hypertension, obesity, and metabolic syndrome. Covers pregnancy and pathologic pregnancy in detail.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall and summarize fundamental concepts in reproductive endocrinology and physiology, with an emphasis on human and human reproductive health.
Audience: Graduate

2. Gain insights into clinical perspectives of pathologies associated with reproductive endocrinology and physiology. Integrate fundamental concepts with clinical perspectives and apply to case studies.
Audience: Graduate

3. Evaluate primary research articles and demonstrate critical reasoning with regards to methods and conclusions.
Audience: Graduate

4. Demonstrate critical thinking with regards to course material through in-class interactive discussion with peers and faculty.
Audience: Graduate

5. Integrate instruction material and personally-researched scientific texts to formulate individual thoughts on topics not directly covered in lecture.
Audience: Graduate

OBS&GYN 711 – ADVANCED REPRODUCTIVE ENDOCRINE PHYSIOLOGY
2 credits.

Advanced learning opportunities in Endocrinology and Reproductive Physiology (ERP) areas, particularly reproduction, with an emphasis on human health whenever possible. Explore scientific questions core to the ERP graduate training program at research level with further in-depth instruction and a focus on cutting-edge knowledge and developments. Topics include pregnancy (ovulation through parturition); embryonic growth and development; lactation biology; and neuroendocrinology. Continuation of OBS&GYN 710. Intended for second- or third-year graduate students.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop deep understanding of a reproduction topic.
Audience: Graduate

2. Evaluate primary research articles and demonstrate critical reasoning with regard to methods and conclusions.
Audience: Graduate

3. Demonstrate critical thinking with regard to course material through in-class interactive discussion with peers and faculty.
Audience: Graduate

4. Integrate instruction material and personally-researched scientific texts to formulate individual thoughts on topics not directly covered in lecture.
Audience: Graduate

OBS&GYN 712 – CRITICAL THINKING IN REPRODUCTIVE ENDOCRINE PHYSIOLOGY
2 credits.

Provides advanced learning opportunities in Endocrinology and Reproductive Physiology areas, particularly reproduction, emphasizing human health whenever possible. Explores scientific questions core to the ERP graduate training program and teaches how to communicate research findings as presentations. Skills developed include information discovery; organization of papers and identification of argument(s); and creation of documents/reports. Students are the driving force behind achievement of the learning objectives by undertaking learning activities, actively engaging in their peers' activities, and providing constructive feedback to their peers. Prior completion of OBS&GYN 710 recommended but not required.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Incorporate knowledge of cutting-edge research in and related to one's research area to a specific research question.
Audience: Graduate

2. Effectively communicate scientific information to course participants through learning activities.
Audience: Graduate

3. Evaluate peer presentations and provide constructive feedback.
Audience: Graduate

4. Distill research knowledge and activities into a variety of scientific outputs.
Audience: Graduate

5. Develop and deliver effective scientific conference-style presentations.

Audience: Graduate

OBS&GYN 800 – CONCEPTS IN ENDOCRINOLOGY AND REPRODUCTIVE PHYSIOLOGY
1-3 credits.

Special topics in endocrinology and/or reproductive physiology. Topics may vary.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and describe key theories, concepts, or methods in endocrinology and/or reproductive physiology.
Audience: Graduate

2. Apply, analyze, or evaluate key theories, concepts, or methods in endocrinology and/or reproductive physiology.
Audience: Graduate

OBS&GYN 909 – OBSTETRICS & GYNECOLOGY INTERNSHIP PREP COURSE
1 credit.

Designed to highlight, review, and allow practice of key concepts in Obstetrics Gynecology. Practice with case simulation, case discussion, didactics, panel discussions, and procedural skills to prepare for success in the first few weeks of an Ob/Gyn residency. Participate in simulations and explore critical interplay between medical care and communication. Discuss common challenges encountered early in residency and throughout an Obstetrics Gynecology career. Taught by a team of faculty, inter-professional staff, residents, fellows, and course directors.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Diagnose and manage common and critical medical conditions
Audience: Graduate

2. Practice initial orders for acute medical/surgical situations
Audience: Graduate

3. Perform duties as first responder to urgent or emergent patient care situations
Audience: Graduate

4. Accurately interpret and apply laboratory information to clinical scenarios
Audience: Graduate

5. Demonstrate performing informed consent procedures
Audience: Graduate

6. Communicate effectively with patients, families and all members of the healthcare team
Audience: Graduate

7. Describe effective transitions of care and demonstrate in simulated environment
Audience: Graduate

8. Describe the essential role of each member of the healthcare team and strategies for maximizing teamwork
Audience: Graduate

9. Demonstrate self-awareness and recognize the importance of adaptability
Audience: Graduate

10. Identify strategies to address stress inherent in transitioning to internship, during residency, and throughout medical career
Audience: Graduate

OBS&GYN 910 – INDEPENDENT READING AND RESEARCH IN OB/GYN
2-8 credits.

Independent research under the direct supervision of Obstetric/Gynecology faculty. Each student's research project is individualized to meet student research goals within context of faculty research needs.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Formulate a hypothesis or specific objective if study does not involve hypothesis generating research.
Audience: Graduate

2. Conduct a thorough literature review of the specific research question.
Audience: Graduate

3. Select and apply statistical methodologies appropriate for the proposed analyses.
Audience: Graduate

4. Interpret results correctly and in context of previous findings from literature review.
Audience: Graduate

OBS&GYN 916 – ABORTION IN WISCONSIN AND BEYOND: EXPLORING MEDICAL, PUBLIC HEALTH, AND SOCIAL SCIENCE PERSPECTIVES
2 credits.

Contemporary issues surrounding abortion in the United States with an emphasis on the state of Wisconsin. Abortion-related terminology and clinical practice. Legal and structural barriers that shape inequities in access to abortion care. The relationships between access to abortion care and health and wellbeing, using multidisciplinary approaches. The evolution of pro-choice and reproductive justice movements in the United States and Wisconsin.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Summarize contemporary abortion-related terminology and medical practice.
Audience: Graduate

2. Describe the evolution of abortion care in the United States and Wisconsin from the 19th-21st centuries.
Audience: Graduate

3. Identify legal and structural barriers to abortion care both before and after the Dobbs v. Jackson Women's Health U.S. Supreme Court decision.
Audience: Graduate

4. Describe racial/ethnic-, SES, nativity-, disability, and sexual/gender identity-based inequities in access to abortion care.
Audience: Graduate

5. Identify how population health and social scientists establish linkages between barriers to abortion care access and population health and wellbeing.
Audience: Graduate

6. Analyze the contemporary landscape of pro-choice and reproductive justice movements.
Audience: Graduate

OBS&GYN 917 – RACE IN AMERICAN OBSTETRICS & GYNECOLOGY
2 credits.

Survey the history of race in American obstetrics and gynecology. Gain understanding of how race and theories of racial difference informed the development of the field and justified the treatment of Black, indigenous and immigrant patients. Understand the vital contributions of Black enslaved women, other women of color, and Irish immigrants to obstetrics and gynecology. Make connections between racialized historical practices and contemporary norms in reproductive healthcare.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate understanding of how race informed the evolution of obstetrics and gynecology as a discipline
Audience: Graduate

2. Describe the symbiotic relationship between slavery and obstetrics and gynecology and the contributions of enslaved women to key advances in the discipline
Audience: Graduate

3. Discuss the contradictions between physicians' beliefs in racial inferiority of Black and Irish women and the use of their bodies as medical exemplars
Audience: Graduate

4. Describe how structural racism impacted disparities in reproductive health during the antebellum area and late 19th century
Audience: Graduate

5. Demonstrate understanding of how historical stereotyping and treatment of Black women has led to institutionalized stereotyping in present-day obstetrics and gynecology
Audience: Graduate

6. Describe the progression of racial/ethnic disparities in reproductive health from the antebellum era to the present day
Audience: Graduate

OBS&GYN 919 – INDIVIDUALIZED OBSTETRICS & GYNECOLOGY ELECTIVE
2-4 credits.

In-depth exposure to ambulatory gynecology, operative gynecology, normal and high-risk obstetrics and subspecialty clinics, working under the direct supervision of Obstetric/Gynecology faculty, residents, fellows, certified midwives, and advanced practice practitioneers. Individualized to meet each location's capacity and student preference.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a hypothesis driven history and complete a targeted exam
Audience: Graduate

2. Develop and present a weighted differential diagnosis for medical and surgical conditions
Audience: Graduate

3. Using clinical evidence, adapt and justify the working diagnosis
Audience: Graduate

4. Present a diagnostic plan including laboratory and imaging modalities
Audience: Graduate

5. Correctly interpret imaging and laboratory findings and communicate results to patients and team members
Audience: Graduate

6. Develop and implement effective patient management plans
Audience: Graduate

7. Complete written documentation in a comprehensive, concise, accurate and timely manner
Audience: Graduate

8. Review, interpret, and present current literature to support patient care
Audience: Graduate

9. Communicate effectively with patients, families, physicians and non-physician team members
Audience: Graduate

10. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care
Audience: Graduate

11. Engage patients in shared decision-making regarding tests, orders, and procedures
Audience: Graduate

12. Avoid medical jargon when communicating with patients and families
Audience: Graduate

13. Recognize limitations and seek assistance as appropriate
Audience: Graduate

14. Understand the process of obtaining informed consent prior to surgical intervention
Audience: Graduate

15. Recognize perioperative conditions that determine patient level of care and interpret physiologic changes that require changing that level of care

OBS&GYN 921 – GYNECOLOGIC ONCOLOGY
2-4 credits.

In-depth exposure to outpatient care of the patient with gynecologic cancer. Occasional opportunities to provide inpatient care to patients students have examined or consulted with in clinic. Work under the direct supervision of the gynecologic oncology faculty, fellows, residents, and APPs. Function at the intern level and play an active role in the care of gynecologic oncology patients.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a hypothesis driven history and complete a targeted exam.
Audience: Graduate

2. Develop and present a weighted differential diagnosis for medical and surgical conditions
Audience: Graduate

3. Using clinical evidence, adapt and justify the working diagnosis.
Audience: Graduate

4. Present a diagnostic plan including laboratory and imaging modalities.
Audience: Graduate

5. Correctly interpret imaging and laboratory findings and communicate results to patients and team members.
Audience: Graduate

6. Develop and implement effective patient management plans.
Audience: Graduate

7. Complete written documentation in a comprehensive, concise, accurate and timely manner.
Audience: Graduate

8. Review, interpret, and present current literature to support patient care.

Audience: Graduate

9. Communicate effectively with patients, families, physicians and non-physician team members.
Audience: Graduate

10. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care.
Audience: Graduate

11. Engage patients in shared decision-making regarding tests, orders, and procedures.
Audience: Graduate

12. Avoid medical jargon when communicating with patients and families.
Audience: Graduate

13. Recognize limitations and seek assistance as appropriate.
Audience: Graduate

14. Understand the process of obtaining informed consent prior to surgical intervention.
Audience: Graduate

15. Recognize perioperative conditions that determine patient level of care

OBS&GYN 934 – OBSTETRIC HOSPITALIST
4 credits.

In-depth exposure to inpatient care of patients on Labor and Delivery. Work under the direct supervision of the Obstetrics Hospitalist whose primary role is the general medical care of hospitalized patients. Help manage laboring patients, see patients in labor and delivery, triage, and assist with cesarean sections. Round on all patients for whom you are involved in care once patients are post-partum. Function as the residents do at night and assist with cross coverage of inpatient gynecology patients as well as see patients who arrive in the emergency department with obstetric or gynecologic concerns. You may assist in the operating room if the patients who present to the emergency room require immediate surgery.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Perform a hypothesis driven history and complete a targeted exam
Audience: Graduate

2. Develop and present a weighted differential diagnosis for medical and surgical conditions
Audience: Graduate

3. Using clinical evidence, adapt and justify the working diagnosis
Audience: Graduate

4. Present a diagnostic plan including laboratory and imaging modalities
Audience: Graduate

5. Correctly interpret imaging and laboratory findings and communicate results to patients and team members
Audience: Graduate

6. Develop and implement effective patient management plans
Audience: Graduate

7. Complete written documentation in a comprehensive, concise, accurate and timely manner
Audience: Graduate

8. Review, interpret, and present current literature to support patient care
Audience: Graduate

9. Communicate effectively with patients, families, physicians and non-physician team members
Audience: Graduate

10. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care
Audience: Graduate

11. Engage patients in shared decision-making regarding tests, orders, and procedures
Audience: Graduate

12. Avoid medical jargon when communicating with patients and families
Audience: Graduate

13. Recognize limitations and seek assistance as appropriate
Audience: Graduate

14. Understand the process of obtaining informed consent prior to surgical

OBS&GYN 935 – TEACHING IN THE CLINICAL SETTING
2 credits.

As Phase 3 students, apply teaching theories to the pursuit of improving the clinical learning environment for Phase 2 students. Unique opportunity for Phase 3 medical students to gain experience with clinical teaching in a capacity similar to how they will function as an intern without the demands and responsibilities of residency, with a focus on establishing good teaching practices. Spend time in the clinical setting advising and mentoring Phase 2 students. No direct participation in patient care. Prepare and deliver short teaching sessions for Phase 2 students from a standard curriculum of learning topics to help Phase 2 students achieve success on Labor Delivery. Develop innovative ways to guide Phase 2 students to effectively utilize clinical resources, navigate the basics of patient assessment, and engage with the patient care team.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the basic tenets of adult learning theory and how this applies to teaching medical students.
Audience: Graduate

2. Describe the difference between formative and summative feedback and be able to provide this feedback to Phase 2 students for both their written clinical documentation and their oral clinical presentations.
Audience: Graduate

3. Compare/contrast the different types of instructional methods available and be able to apply these in the clinical setting.
Audience: Graduate

4. Demonstrate how to give an effectivepresentationon at least 1 topic per week, chosen from a list of central concepts about labor and delivery.
Audience: Graduate

5. Utilize strategies to create a positive learning environment on labor and delivery.
Audience: Graduate

OBS&GYN 938 – OBSTETRICS & GYNECOLOGY INPATIENT ACTING INTERNSHIP
4 credits.

Provides an in-depth exposure to inpatient and operative management of complicated obstetric and gynecologic patients. Work under the direct supervision of a senior resident, fellows and the obstetrician-gynecology faculty. Provides an opportunity to function at the intern level and play an active role in inpatient management of obstetric and gynecologic patients.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain the physiology of the female pelvic anatomy including arterial blood supply, venous and lymphatic drainage, neurologic innervation and anatomic relationship between the reproductive organs and the non-gynecologic abdominal viscera.
Audience: Graduate

2. Develop an evidenced-based understanding of the pathophysiology and appropriate management options for common gynecological disorders
Audience: Graduate

3. Explain the indications for and limitations of commonly used gynecological screening tests.
Audience: Graduate

4. Demonstrate basic knowledge regarding common post-operative complications (e.g. wound infection, urinary tract infection, thromboembolism, bleeding) and the appropriate management of each.
Audience: Graduate

5. Demonstrates an understanding of common non-reproductive medical disorders.
Audience: Graduate

6. Identify and explain common gynecological surgical procedures in terms of patient selection and the risks and benefits for each procedure .
Audience: Graduate

7. Describe indications and list the appropriate preoperative evaluations including lab tests, radiographic imaging, and ECG.
Audience: Graduate

8. Identify and describe use of common instruments used in gynecologic surgery.
Audience: Graduate

9. Discuss common intraoperative complications associated with common gynecologic procedures and the appropriate management of each.
Audience: Graduate

10. Discuss the surgical anatomy, common procedural indications, comorbidities, and prophylactic strategies to reduce post-operative complications with common gynecological surgeries.
Audience: Graduate

OBS&GYN/AN SCI/ZOOLOGY 954 – SEMINAR IN ENDOCRINOLOGY-REPRODUCTIVE PHYSIOLOGY
0-1 credits.

Promotes scientific and professional development. Presenters develop and deliver research presentations to a scientific audience, field questions, and receive critiques about their presentation style and scientific approach. Additional presentations include professional development, career advancement opportunities, and topics of interest to the endocrinology and reproduction community at large.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge of cutting-edge research in and related to one's research area through the development and delivery of research presentations
Audience: Graduate

2. Communicate complex ideas in research presentations and questions in a clear and understandable manner
Audience: Graduate

3. Evaluate presentations and providing effective feedback
Audience: Graduate

OBS&GYN 955 – RESPONSIBLE CONDUCT OF RESEARCH FOR BIOMEDICAL GRADUATE STUDENTS
2 credits.

Meets the NIH Institutional Training Grant requirements of repeat/further instruction in the nine recommended areas (1) conflict of interest - personal, professional, and financial; (2) policies regarding human subjects, live vertebrate animal subjects in research, and safe laboratory practices; (3) mentor/mentee responsibilities and relationships; (4) collaborative research including collaborations with industry; (5) peer review; (6) data acquisition and laboratory tools, and management, sharing and ownership; (7) research misconduct and policies for handling misconduct; (8) responsible authorship and publication; (9) the scientist as a responsible member of society, contemporary ethical issues in biomedical research, and the environmental and societal impacts of scientific research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Be knowledgeable of the ethics and philosophies that shape our understandings of the responsible conduct of biomedical research
Audience: Graduate

2. Recognize and apply principles of ethical and professional conduct
Audience: Graduate

3. Be aware of mechanisms and processes available to UW-Madison graduate students to help ensure the practice of the responsible conduct of biomedical research
Audience: Graduate

OBS&GYN 956 – ADVANCED RESPONSIBLE CONDUCT OF RESEARCH FOR BIOMEDICAL STUDENTS
1 credit.

Meets the NIH Institutional Training Grant requirements of repeat/further instruction in the nine recommended areas (1) conflict of interest - personal, professional, and financial; (2) policies regarding human subjects, live vertebrate animal subjects in research, and safe laboratory practices; (3) mentor/mentee responsibilities and relationships; (4) collaborative research including collaborations with industry; (5) peer review; (6) data acquisition and laboratory tools, and management, sharing and ownership; (7) research misconduct and policies for handling misconduct; (8) responsible authorship and publication; (9) the scientist as a responsible member of society, contemporary ethical issues in biomedical research, and the environmental and societal impacts of scientific research. Provides advanced consideration of these topics and illustrates how to implement these responsible conduct and ethical considerations into actual grant- and career-related documents.
Requisites: OBS&GYN 955, PHARMACY 800, NURSING 802, MICROBIO 901, or COMP BIO/PATH-BIO 812 (or SURG SCI 812 prior to Spring 2025)
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Be knowledgeable of the ethics and philosophies that shape our understandings of the responsible conduct of biomedical research
Audience: Graduate

2. Understand and utilize some best practices in the responsible conduct of biomedical research
Audience: Graduate

3. Be aware of mechanisms and processes available to UW-Madison graduate students to help ensure the practice of the responsible conduct of biomedical research
Audience: Graduate

4. Obtain a more comprehensive understanding of the responsibilities, requirements, monitoring, and reassurances involved in successful contemporary biomedical scientific research and how they are used in planning for or applying for grant support, as well as in reporting the progress made in grant-funded studies
Audience: Graduate

OBS&GYN 990 – RESEARCH
1-10 credits.

Research supervised by individual faculty members.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Exhibit a broad understanding of endocrinology and reproduction
Audience: Graduate

2. Conduct thesis-related research projects using a variety of approaches under the guidance of the primary faculty advisor
Audience: Graduate

3. Think critically to address research challenges
Audience: Graduate

4. Exhibit and foster professional and ethical conduct in their research
Audience: Graduate

OCCUPATIONAL THERAPY (DEPARTMENT OF KINESIOLOGY) (OCC THER)

OCC THER 100 – ORIENTATION TO OCCUPATIONAL THERAPY
1 credit.

An opportunity to explore occupational therapy as a potential career; introduction to the general concepts of human occupation and adaptation; survey of OT practice settings and clinical groups.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the philosophical base of the profession of Occupational Therapy
Audience: Undergraduate

2. Define Occupational Therapy
Audience: Undergraduate

3. Identify the unique non-clinical and clinical roles of an occupational therapist
Audience: Undergraduate

4. Interpret meaning of occupation and its value to health and well-being
Audience: Undergraduate

5. Identify the domain and process of occupational therapy
Audience: Undergraduate

6. Identify professional behaviors essential to the practice of occupational therapy
Audience: Undergraduate

7. Describe the educational requirements and applicable national and state credentialing involved in becoming an occupational therapist
Audience: Undergraduate

8. Identify how evidence based research impacts occupational therapy
Audience: Undergraduate

9. Evaluate whether your personal goals and values align with the core tenets of occupational therapy and evaluate occupational therapy as a personal career choice
Audience: Undergraduate

OCC THER 630 – CLINICAL AND FUNCTIONAL ANATOMY FOR OCCUPATIONAL THERAPISTS
6 credits.

Highlights anatomical structures and biomechanical principles most relevant to the practice of occupational therapy. Areas of the body deemed most significant to the practice of Occupational Therapy (OT) will be given greater time and explored with greater depth. As critical thinking is an essential component of clinical practice, focus learning on function and thinking through how anatomy influences clinical care, daily occupations, and pathology.
Requisites: Declared in Occupational Therapy OTD: Entry Level
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Find and name anatomical structures, regions, and systems critical in clinical practice.
Audience: Graduate

2. Integrate anatomical and biomechanical principles to explain occupational function and dysfunction.
Audience: Graduate

3. Predict symptomatic presentation given atypical anatomy.
Audience: Graduate

4. Assess signs and symptoms related to clinical presentations commonly observed by occupational therapists.
Audience: Graduate

5. Critically appraise clinical cases with the goal of forming and defending your opinion about function, pathology and occupational performance.
Audience: Graduate

6. Create a representation of anatomical structures, functions and networks that further the understanding of lay individuals
Audience: Graduate

OCC THER 640 – APPLIED NEUROANATOMY FOR ALLIED HEALTH PROFESSIONALS
3 credits.

Overview of neuroanatomical structures relevant for students in allied health professional training who work with clinical populations. The anatomical regions deemed most significant to practice, given current understandings of the brain and its function, will be explored. The primary focus is on the anatomical regions, neurophysiology, and resultant observable phenomenology related to human function as well as practical clinical application and current research findings.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

OCC THER 650 – ENABLING OCCUPATIONS: INTRODUCTION
2 credits.

Provides an introduction to theory development in occupational therapy, activity analysis, functional mobility and one model of occupational therapy practice. Application of knowledge of gross human anatomy to assess movement in the context of occupation.
Requisites: Declared in Occupational Therapy
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Explain the process of theory development in occupational therapy and its desired impact and influence on society
Audience: Graduate

2. Provide recommendations and training in techniques to enhance functional mobility, including physical transfers, wheelchair management, and mobility devices
Audience: Graduate

3. Recall primary characteristics of the Person-Environment-Occupation (PEO) model of occupational therapy
Audience: Graduate

4. Discuss activity analysis in the context of personal occupations.
Audience: Graduate

5. Identify how various functional movements relate to occupational performance.
Audience: Graduate

6. Recall various anatomical structures and medical terminology.
Audience: Graduate

7. Demonstrate introductory assessment, including palpatory skills, related to anatomical movements and structures.
Audience: Graduate

8. Appreciate the physical body as a diverse, self-healing mechanism and value the power of physical contact as a tool for healing
Audience: Graduate

OCC THER 651 – CLINICAL CONDITIONS I
1 credit.

An in-depth look at the most common clinical diagnoses relevant to occupational therapy practice with an adolescent and adult population. Covers diagnoses particularly found in physical disability contexts.
Requisites: Declared in Occupational Therapy OTD: Entry Level
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize primary characteristics of various medical and surgical conditions relative to occupational therapy practice.
Audience: Graduate

2. Identify how different medical conditions impact occupational performance.
Audience: Graduate

3. Demonstrate sound judgment in regard to safety of self and others and adhere to safety regulations throughout the occupational therapy process as appropriate to the setting and scope of practice. This must include the ability to assess and monitor vital signs (e.g., blood pressure, heart rate, respiratory status, and temperature) to ensure that the client is stable for intervention.
Audience: Graduate

OCC THER 652 – CLINICAL CONDITIONS II
1 credit.

An in-depth look at the most common clinical diagnoses relevant to occupational therapy practice with a focus on pediatric and mental health practice settings.
Requisites: OCC THER 651
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Recognize primary characteristics of various clinical and surgical conditions relative to occupational therapy practice in mental health and pediatric practice settings.
Audience: Graduate

2. Identify how different pediatric and mental health clinical conditions impact occupational performance.
Audience: Graduate

3. Demonstrate sound judgment in regard to safety of self and others and adhere to safety regulations throughout the occupational therapy process as appropriate to the setting and scope of practice. This must include the ability to assess and monitor vital signs (e.g., blood pressure, heart rate, respiratory status, and temperature) to ensure that the client is stable for intervention.
Audience: Graduate

OCC THER 662 – LEVEL II FIELDWORK A
6 credits.

Conduct evaluations and provide treatment under supervision for an assigned caseload in an approved practice setting to meet minimal competencies for independent practice.
Requisites: Declared in Occupational Therapy MS or Occupational Therapy OTD: Entry Level
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate entry-level clinical reasoning, provide service that reflects the values and ethical beliefs of the profession, and perform professionally, safely and competently for general occupational therapy practice as evidenced by passing the AOTA Fieldwork Performance Evaluation for the Occupational Therapy Student (AOTA FWPE) by final
Audience: Graduate

2. Understand the influence of psychosocial factors on participation in occupation and therefore integrate client-centered, meaningful, occupation-based activities that provide optimal outcomes.
Audience: Graduate

3. Demonstrate understanding of health literacy while engaging with clients and stakeholders.
Audience: Graduate

4. Demonstrate ability to plan for discharge, in collaboration with the client, by reviewing the needs of the client, caregiver, family, and significant others; available resources, and discharge environment.
Audience: Graduate

5. Prepare, administer, and terminate appropriate evaluations and occupation-based treatment using appropriate safety regulations while providing appropriate documentation (progress note, evaluation, etc.) according to specific facility standards
Audience: Graduate

OCC THER 664 – LEVEL II FIELDWORK B
6 credits.

Conduct evaluations and provide treatment under supervision for an assigned caseload in an approved practice setting to meet minimal competencies for independent practice.
Requisites: Declared in Occupational Therapy MS or Occupational Therapy OTD: Entry Level
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Demonstrate entry-level clinical reasoning, provide service that reflects the values and ethical beliefs of the profession, and perform professionally, safely and competently for general occupational therapy practice.
Audience: Graduate

2. Understand the influence of psychosocial factors on participation in occupation and therefore integrate client-centered, meaningful, occupation-based activities that provide optimal outcomes.
Audience: Graduate

3. Demonstrate understanding of health literacy while engaging with clients and stakeholders.
Audience: Graduate

4. Demonstrate ability to plan for discharge, in collaboration with the client, by reviewing the needs of the client, caregiver, family, and significant others; available resources, and discharge environment.
Audience: Graduate

5. Prepare, administer, and terminate appropriate evaluations and occupation-based treatment using appropriate safety regulations while providing appropriate documentation (progress note, evaluation, etc.) according to specific facility standards.
Audience: Graduate

OCC THER 710 – PROFESSIONAL AND LEADERSHIP SKILLS 1: FOUNDATIONS
2 credits.

Addresses the foundations and basic tenets of occupational therapy; and explores the process, domain and parameters of practice. Topics include the history and development of the profession; occupational therapy organizations; certification and licensing; behaviors and responsibilities of occupational therapists; professional ethics; liability; and guidelines and laws governing practice. The Occupational Therapy Practice Framework and selected models, approaches and theoretical frames of reference are explored.
Requisites: Declared in Occupational Therapy OTD: Entry Level
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the process of theory development in occupational therapy and its desired impact and influence on society.
Audience: Graduate

2. Apply, analyze, and evaluate the interaction of occupation and activity, including areas of occupation, performance skills, performance patterns, context(s) and environments, and client factors.
Audience: Graduate

3. Demonstrate activity analysis in areas of occupation, performance skills, performance patterns, context(s) and environments, and client factors to formulate the intervention plan.
Audience: Graduate

4. Demonstrate knowledge of the use of technology in practice, which must include, electronic documentation systems, virtual environments, and Telehealth technology.
Audience: Graduate

5. Demonstrate knowledge of the American Occupational Therapy Association (AOTA) Occupational Therapy Code of Ethics and AOTA Standards of Practice and use them as a guide for ethical decision making in professional interactions, client interventions, employment settings, and when confronted with personal and organizational ethical conflicts.
Audience: Graduate

6. Promote occupational therapy by educating other professionals, service providers, consumers, third-party payers, regulatory bodies, and the public.
Audience: Graduate

7. Apply, analyze, and evaluate scientific evidence, theories, models of practice, and frames of reference that underlie the practice of occupational therapy to guide and inform interventions for persons, groups, and populations in a variety of practice contexts and environments.
Audience: Graduate

8. Demonstrate clinical reasoning to evaluate, analyze, diagnose, and provide occupation- based interventions to address client factors, performance patterns, and performance skills.
Audience: Graduate

9. Analyze and evaluate occupational therapy history, philosophical base, theory, and sociopolitical climate and their importance in meeting society's current and future occupational needs as well as how these factors influence and are influenced by practice.
Audience: Graduate

OCC THER 711 – PROFESSIONAL AND LEADERSHIP SKILLS 2: EFFECTIVE INTERPROFESSIONAL RELATIONSHIPS
2 credits.

Covers respectful and effective communication with all stakeholders for occupational therapy service provision, including clients, caregivers, colleagues, community members and third party payers. Introduces team and group dynamics
Requisites: OCC THER 710
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate knowledge of various reimbursement systems and funding mechanisms (e.g., federal, state, third party, private payer), appeals mechanisms, treatment/diagnosis codes (e.g., CPT®, ICD, DSM® codes), and coding and documentation requirements that affect consumers and the practice of occupational therapy. Documentation must effectively communicate the need and rationale for occupational therapy services.
Audience: Graduate

2. Demonstrate therapeutic use of self, including one's personality, insights, perceptions, and judgments, as part of the therapeutic process in both individual and group interaction.
Audience: Graduate

3. Identify occupational needs through effective communication with patients, families, communities, and members of the interprofessional team in a responsive and responsible manner that supports a team approach to the promotion of health and wellness.
Audience: Graduate

4. Demonstrate, evaluate, and utilize the principles of the teaching–learning process using educational methods and health literacy education approaches; to design activities and clinical training for persons, groups, and populations and to instruct and train the client, caregiver, family, significant others, and communities at the level of the audience.
Audience: Graduate

5. Demonstrate knowledge of the principles of interprofessional team dynamics to perform effectively in different team roles to plan, deliver, and evaluate patient- and population- centered care as well as population health programs and policies that are safe, timely, efficient, effective, and equitable.
Audience: Graduate

6. Demonstrate effective intraprofessional OT/OTA collaboration to identify the role of the occupational therapist and occupational therapy assistant in the screening and evaluation process and to demonstrate and identify techniques in skills of supervision and collaboration with occupational therapy assistants.
Audience: Graduate

7. Develop strategies for effective, competency-based legal and ethical supervision of occupational therapy and non–occupational therapy personnel. Analyze staff development and professional abilities and competencies of supervised staff as they relate to job responsibilities.
Audience: Graduate

OCC THER 712 – PROFESSIONAL AND LEADERSHIP SKILLS 3: MANAGEMENT
2 credits.

Covers business and management aspects of occupational therapy practice, including leadership skills needed for administrative roles and interprofessional leadership in a variety of settings.
Requisites: OCC THER 711
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge of and evaluate the business aspects of practice including, but not limited to, the development of business plans, financial management, program evaluation models, and strategic planning.
Audience: Graduate

2. Demonstrate leadership skills in the ability to plan, develop, organize, and market the delivery of services to include the determination of programmatic needs and service delivery options, and formulation and management of staffing for effective service provision.
Audience: Graduate

3. Demonstrate leadership skills in the ability to design ongoing processes for quality management and improvement (e.g., outcome studies analysis and client engagement surveys) and develop program changes as needed to demonstrate quality of services and direct administrative changes.
Audience: Graduate

4. Demonstrate knowledge of personal and professional responsibilities related to liability issues under current models of service provision and varied roles of the occupational therapist providing service on a contractual basis.
Audience: Graduate

OCC THER 722 – ENABLING OCCUPATIONS 1: ADULT FOCUS
4 credits.

Introduce clinical assessment and therapeutic intervention strategies to promote occupational participation and health among adult clients with a focus on orthopedics and medical considerations. Application of skills learned in real-world settings.
Requisites: Declared in Occupational Therapy OTD: Entry Level
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the unique nature of adult occupations and the physical, mental, temporal and sociocultural factors that influence occupational participation for the person across settings.
Audience: Graduate

2. Assess clients' occupational performance and analyze results to create meaningful, measurable, occupation-based goals, evidence-based treatment strategies, and discharge plans.
Audience: Graduate

3. Demonstrate safe, relevant occupation-based treatment techniques and ability to grade or modify those techniques to accommodate changes in client functional performance as necessary to progress client toward goals.
Audience: Graduate

4. Demonstrate entry-level skill in oral and written communication necessary for effective occupational therapy practice in medical, educational or community-based settings.
Audience: Graduate

5. Develop resilience as a clinician and come to see oneself as a competent member of an interdisciplinary team supporting holistic wellness in the community.
Audience: Graduate

6. Utilize effective interpersonal communication to promote inclusivity of diverse perspectives and provision of culturally-relevant treatment
Audience: Graduate

OCC THER 723 – ENABLING OCCUPATIONS 2: ADULT FOCUS
4 credits.

Advance practice skills across the continuum of care among adult clients. Focus on clinical assessment, therapeutic intervention, and discharge planning to promote occupational participation and health. Application of skills learned in real-world settings.
Requisites: OCC THER 722
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the unique nature of adult occupations and the physical, mental, temporal and sociocultural factors that influence occupational participation for the person across settings
Audience: Graduate

2. Assess clients' occupational performance and analyze results to create meaningful, measurable, occupation-based goals, evidence-based treatment strategies, and discharge plans.
Audience: Graduate

3. Assess environmental and contextual factors for capacity to promote or restrict client participation, and advocate for relevant accessibility options
Audience: Graduate

4. Demonstrate safe, relevant occupation-based treatment techniques and ability to grade or modify those techniques to accommodate changes in client functional performance as necessary to progress client toward goals.
Audience: Graduate

5. Demonstrate entry-level skill in oral and written communication necessary for effective occupational therapy practice in medical, educational or community-based settings
Audience: Graduate

6. Develop resilience as a clinician and come to see oneself as a competent member of an interdisciplinary team supporting holistic wellness in the community
Audience: Graduate

7. Utilize effective interpersonal communication to promote inclusivity of diverse perspectives and provision of culturally-relevant treatment.
Audience: Graduate

OCC THER 724 – ENABLING OCCUPATIONS 3: MENTAL HEALTH ACROSS THE LIFE SPAN
3 credits.

Learn foundational skills necessary to promote, prevent and treat the mental health and psychosocial needs of clients, groups and populations. Topics include: Recovery, mental health and psychosocial assessments and treatments of common mental health disorders and health and wellness promotion.
Requisites: OCC THER 723
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Analyze and evaluate the effects of disease processes including heritable diseases, genetic conditions, mental illness, disability, trauma, and injury on occupational performance.
Audience: Graduate

2. Utilize clinical reasoning to facilitate occupation-based interventions that address client factors. This must include interventions focused on promotion, compensation, adaptation, and prevention.
Audience: Graduate

3. Evaluate client(s)' occupational performance, including occupational profile, by analyzing and selecting standardized and non-standardized screenings and assessment tools to determine the need for occupational therapy intervention(s). Assessment methods must take into consideration cultural and contextual factors of the client. Interpret evaluation findings of occupational performance and participation deficits to develop occupation-based intervention plans and strategies. Intervention plans and strategies must be client centered, culturally relevant, reflective of current occupational therapy practice, and based on available evidence.
Audience: Graduate

4. Demonstrate, evaluate, and plan the consultative process with persons, groups, programs, organizations, or communities in collaboration with inter- and intra-professional colleagues
Audience: Graduate

5. Evaluate and discuss mechanisms for referring clients to specialists both internal and external to the profession, including community agencies

Audience: Graduate

6. Demonstrate activity analysis in areas of occupation, performance skills, performance patterns, context(s) and environments, and client factors to formulate the intervention plan.
Audience: Graduate

7. Demonstrate clinical reasoning to evaluate, analyze, diagnose, and provide occupation-based interventions to address client factors, performance patterns, and performance skills.
Audience: Graduate

8. Select and apply assessment tools, considering client needs, and cultural and contextual factors. Administer selected standardized and non-standardized assessments using appropriate procedures and protocols. Interpret the results based on psychometric properties of tests considering factors that might bias assessment results (e.g., culture and disability status related to the person and context).
Audience: Graduate

9. Recommend and provide direct interventions and procedures to persons, groups, and populations to enhance safety, health and wellness, and performance in occupations. This must include the ability to select

OCC THER 725 – ENABLING OCCUPATIONS 4: PEDIATRICS
5 credits.

Foundations of pediatric occupational therapy practice including theory and core concepts; models of practice and service delivery; the assessment and treatment process; and alterations in performance components, skills, and participation for children and adolescents with various conditions will be discussed
Requisites: OCC THER 724
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze and evaluate the effects of disease processes including heritable diseases, genetic conditions, mental illness, disability, trauma, and injury on occupational performance.
Audience: Graduate

2. Evaluate client(s)' occupational performance, including occupational profile, by analyzing and selecting standardized and non-standardized screenings and assessment tools to determine the need for occupational therapy intervention(s). Assessment methods must take into consideration cultural and contextual factors of the client. Interpret evaluation findings of occupational performance and participation deficits to develop occupation-based intervention plans and strategies. Intervention plans and strategies must be client centered, culturally relevant, reflective of current occupational therapy practice, and based on available evidence
Audience: Graduate

3. Select and apply assessment tools, considering client needs, and cultural and contextual factors. Administer selected standardized and non-standardized assessments using appropriate procedures and protocols. Interpret the results based on psychometric properties of tests considering factors that might bias assessment results (e.g., culture and disability status related to the person and context)
Audience: Graduate

4. Evaluate and provide interventions for dysphagia and disorders of feeding and eating to enable performance, and train others in precautions and techniques while considering client and contextual factors
Audience: Graduate

5. Demonstrate, evaluate, and plan care coordination, case management, and transition services in traditional and emerging practice environments.
Audience: Graduate

6. Demonstrate activity analysis in areas of occupation, performance skills, performance patterns, context(s) and environments, and client factors to formulate the intervention plan.
Audience: Graduate

7. Demonstrate clinical reasoning to evaluate, analyze, diagnose, and provide occupation-based interventions to address client factors, performance patterns, and performance skills
Audience: Graduate

8. Utilize clinical reasoning to facilitate occupation-based interventions that address client factors. This must include interventions focused on promotion, compensation, adaptation, and prevention
Audience: Graduate

9. Recommend and provide direct interventions and procedures to persons, groups, and populations to enhance safety, health and wellness, and performance in occupations. This must include the ability to select and deliver occupations and activities, preparatory methods and tasks (including therapeutic exercise), education and training, and advocacy

OCC THER 726 – LEVEL 1 FIELDWORK A: ADULT PHYSICAL DISABILITIES
1 credit.

Exposure to clinical occupational therapy practice through observation, participation in guided evaluation and treatment procedures, data collection and organization, and communication with clients and other professionals while working in clinical setting under supervision of licensed occupational therapist.
Requisites: Concurrent enrollment in OCC THER 723 is required
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Interpret the evaluation data in relation to accepted terminology of the profession and explain the findings to the interprofessional team.
Audience: Graduate

2. Demonstrate activity analysis in areas of occupation, performance skills, performance patterns, context(s) and environments, and client factors to formulate the intervention plan.
Audience: Graduate

3. Monitor and reassess, in collaboration with the client, caregiver, family, and significant others, the effect of occupational therapy intervention and the need for continued or modified intervention.
Audience: Graduate

OCC THER 727 – LEVEL 1 FIELDWORK B: COMMUNITY-BASED MENTAL HEALTH
1 credit.

Exposure to community-based mental health OT practice through observation, participation in guided evaluation and treatment procedures, data collection and organization, and communication with clients and other professionals.
Requisites: OCC THER 726 and concurrent enrollment in OCC THER 724
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Provide care and programs that demonstrate knowledge of applicable national requirements for credentialing and requirements for licensure, certification, or registration consistent with federal and state laws.
Audience: Graduate

2. Demonstrate activity analysis in areas of occupation, performance skills, performance patterns, context(s) and environments, and client factors to formulate the intervention plan.
Audience: Graduate

3. Evaluate access to community resources, and design community or primary care programs to support occupational performance for persons, groups, and populations.
Audience: Graduate

OCC THER 728 – LEVEL 1 FIELDWORK C: PEDIATRICS
1 credit.

Exposure to pediatric OT practice through observation, participation in guided evaluation and treatment procedures, data collection and organization, and communication with clients and other professionals.
Requisites: OCC THER 727 and concurrent enrollment in OCC THER 725
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate professional work habits as indicated by receiving passing rating on the AOTA Level I FW Competency Evaluation.
Audience: Graduate

2. Demonstrate ability to establish therapeutic relationships with clients.
Audience: Graduate

3. Establish positive working relationships with individuals from other disciplines and develop an increased awareness of OT's role on an interprofessional team.
Audience: Graduate

4. Demonstrate mature judgment in seeking assistance and responding to feedback in an ethical and courteous manner with both clients and professions.
Audience: Graduate

5. Prepare and administer an evaluation or treatment intervention, formulate therapeutic goals, and develop proposed occupation-based treatment plan.
Audience: Graduate

6. Assist in the therapeutic process safely and effectively, if and when appropriate.
Audience: Graduate

7. Demonstrate activity analysis in areas of occupation, performance skills, performance patterns, context(s) and environments, and client factors to formulate the intervention plan.
Audience: Graduate

8. Demonstrate knowledge of various reimbursement systems and funding mechanisms (e.g., federal, state, third party, private payer), appeals mechanisms, treatment/diagnosis codes (e.g., CPT®, ICD, DSM® codes), and coding and documentation requirements that affect consumers and the practice of occupational therapy. Documentation must effectively communicate the need and rationale for occupational therapy services.
Audience: Graduate

OCC THER 731 – LIVING WELL: WELLNESS PROMOTION FOR GRADUATE STUDENTS
1 credit.

Promote students' wellness as they manage graduate school and its demands. Examines health and well-being related to students' time-use patterns; balance among daily activities; daily routines and habits; circadian rhythms; meaningful moments; sleep; and social connections.
Requisites: Declared in Occupational Therapy OTD: Entry Level
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Describe wellness strategies for health and well being in student life
Audience: Graduate

2. Apply wellness concepts to a particular situation of graduate school
Audience: Graduate

3. Discuss the role of occupational therapy in health and wellness promotion.
Audience: Graduate

4. Identify and explain the role of outcome measures in assuring quality of OT services and efficacy of OT interventions across settings, populations and programs.
Audience: Graduate

OCC THER 732 – LIVING WELL: DESIGNING OCCUPATION-BASED WELLNESS PROMOTION
2 credits.

Gain a complex understanding of the form, function and meaning of daily occupations and the role they play in lifestyle change for wellness promotion. Learn the architecture of daily life including its biological and sociocultural foundations for patterning occupational rounds in order to promote and sustain motivation to change.
Requisites: Declared in Occupational Therapy OTD: Entry Level
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the four occupation-based threshold concepts for lifestyle change.
Audience: Graduate

2. Articulate how the framework and core concepts of the Do/Live/Well framework apply as a theoretical foundation for wellness promotion
Audience: Graduate

3. Critically assess current theory and research examining occupational complexity
Audience: Graduate

4. Identify and explain the effectiveness of strategies for fostering and sustaining lifestyle change for wellness promotion.
Audience: Graduate

5. Apply motivational interviewing skills to coach a peer in lifestyle change.

Audience: Graduate

OCC THER 733 – PROMOTING HEALTH AND WELLNESS FOR POPULATIONS
3 credits.

Explores population-based intervention for occupational justice, health and wellness. Provides a basic set of competencies in the domains central to the field of public health including systems thinking, social determinants of health, and health care reform policy.
Requisites: Declared in Occupational Therapy OTD: Entry Level
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Describe a systems thinking approach to guide occupational therapy's contribution to public health
Audience: Graduate

2. Explain the relationship between social determinants of health and health equity/inequity
Audience: Graduate

3. Identify public health concerns relevant to occupational therapy practice
Audience: Graduate

4. Investigate how your own health has been shaped by social determinants of health across the lifespan
Audience: Graduate

5. Synthesize evidence-based information using a systems thinking approach to support policy and program development and/or evaluation
Audience: Graduate

OCC THER 734 – LIVING WELL: OCCUPATION-BASED INTERVENTIONS PROMOTING HEALTH AND WELLNESS
2 credits.

Critically analyze the rigor and evidence supporting current occupation-based interventions for populations served by occupational therapists, create a professional presentation based on this research, and create materials to translate this information for consumer use. Understand key issues and current occupational science trends in fostering access to and equitable participation in occupations.
Requisites: Declared in Occupational Therapy: Entry-Level, OTD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe and critically analyze the research supporting current cutting-edge occupation-based interventions for clients/populations served by occupational therapy.
Audience: Graduate

2. Create professional presentations, and client-friendly materials describing these occupation-based interventions and the evidence supporting their use.
Audience: Graduate

3. Describe and critically analyze how our client's access to occupations and equitable participation in occupations are shaped, limited, and/or supported cultural, social and ecological factors
Audience: Graduate

4. Recognize and critically analyze key characteristics of collaborative relationship-focused practice in Lifestyle Change Interventions.
Audience: Graduate

5. Achieve competency in motivational interviewing skills for independent use with clients and partners in capstone projects
Audience: Graduate

OCC THER 770 – EVIDENCE BASED PRACTICE LAB PRACTICUM
2 credits.

Designed to provide an overview of the research happening within the OT program at UW-Madison and to provide hands-on, mentored experience with generating evidence for practice.
Requisites: OCC THER 771 or concurrent enrollment
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 3 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Understand the research programs of UW OT faculty and how these relate to occupation and occupational therapy
Audience: Graduate

2. Gain hands-on research lab experience in one UW OT faculty's lab
Audience: Graduate

3. Critique quantitative and qualitative research in order to analyze and evaluate scholarly activities, which contribute to the development of a body of knowledge including level of evidence, validity of research studies, strength of the methodology, relevance to the profession of occupational therapy.
Audience: Graduate

4. Locate, select, analyze, and evaluate scholarly literature to make evidence-based decisions.
Audience: Graduate

5. Design and implement a scholarly study that aligns with current research priorities and advances knowledge translation, professional practice, service delivery, or professional issues (e.g., Scholarship of Integration, Scholarship of Application, Scholarship of Teaching and Learning).
Audience: Graduate

OCC THER 771 – EVIDENCE BASED PRACTICE 1: BASICS
3 credits.

Provides the opportunity to establish or advance understanding of evidence-based practice through critical exploration of research ethics and approaches. Critically review literature relevant to occupational therapy and determine how research findings can inform practice. First in the evidence-based practice sequence leading to the development of a proposal and completion of a scholarly study.
Requisites: Declared in Occupational Therapy OTD: Entry Level
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate an understanding of how to design a scholarly proposal in regards to ethical policies and procedures necessary to conduct human-subject research, educational research, or research related to population health.
Audience: Graduate

2. Demonstrate the ability to use quantitative statistics and qualitative analysis to interpret tests and measurements for the purpose of establishing and delivering evidence-based practice.
Audience: Graduate

3. Collect, analyze, and report data in a systematic manner for evaluation of client and practice outcomes. Report evaluation results and modify practice as needed.
Audience: Graduate

4. Interpret criterion-referenced and norm-referenced standardized test scores on the basis of an understanding of sampling, normative data, standard and criterion scores, reliability, and validity.
Audience: Graduate

5. Critique quantitative and qualitative research in order to analyze and evaluate scholarly activities, which contribute to the development of a body of knowledge. This includes, level of evidence, validity of research studies, strength of the methodology, and relevance to the profession of occupational therapy
Audience: Graduate

6. Locate, select, analyze, and evaluate scholarly literature to make evidence based decisions.
Audience: Graduate

7. Design and implement a scholarly study that aligns with current research priorities and advances knowledge translation, professional practice, service delivery, or professional issues (e.g., Scholarship of Integration, Scholarship of Application, Scholarship of Teaching and Learning).
Audience: Graduate

OCC THER 772 – EVIDENCE BASED PRACTICE 2: RESEARCH DESIGN, METHODS, AND ANALYSIS
3 credits.

Supports the development of a research proposal and the skills needed to implement a research project. Develop a research proposal and analyze data to inform practice in occupational therapy. Second in the evidence-based practice sequence leading to the development of a proposal and completion of a scholarly study.
Requisites: OCC THER 771
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Select, apply, and interpret quantitative and qualitative methods for data analysis to include basic descriptive, correlational, and inferential quantitative statistics and analysis and synthesis of qualitative data.
Audience: Graduate

2. Critique quantitative and qualitative research in order to analyze and evaluate scholarly activities, which contribute to the development of a body of knowledge including level of evidence, validity of research studies, strength of the methodology, and relevance to the profession of occupational therapy.
Audience: Graduate

3. Locate, select, analyze, and evaluate scholarly literature to make evidence-based decisions.
Audience: Graduate

4. Design and implement a scholarly study that aligns with current research priorities and advances knowledge translation, professional practice, service delivery, or professional issues (e.g., Scholarship of Integration, Scholarship of Application, Scholarship of Teaching and Learning).
Audience: Graduate

5. Create scholarly reports appropriate for presentation or for publication in a peer reviewed journal that support skills of clinical practice. The reports must be made available to professional or public audiences.
Audience: Graduate

OCC THER 773 – EVIDENCE BASED PRACTICE 3: RESEARCH TRANSLATION
3 credits.

Supports the completion of a scholarly study and the skills needed to translate research to practice. Through a series of lectures, statistics/ writing consultations, and mentored research, students complete and publicly present their scholarly work.
Requisites: OCC THER 772
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Critique quantitative and qualitative research in order to analyze and evaluate scholarly activities, which contribute to the development of a body of knowledge including the level of evidence, validity of research studies, strength of the methodology, relevance to the profession of occupational therapy.
Audience: Graduate

2. Locate, select, analyze, and evaluate scholarly literature to make evidence-based decisions.
Audience: Graduate

3. Design and implement a scholarly study that aligns with current research priorities and advances knowledge translation, professional practice, service delivery, or professional issues (e.g., Scholarship of Integration, Scholarship of Application, Scholarship of Teaching and Learning).
Audience: Graduate

4. Create scholarly reports appropriate for presentation or for publication in a peer reviewed journal that support skills of clinical practice. The reports must be made available to professional or public audiences.
Audience: Graduate

5. Select, apply, and interpret quantitative and qualitative methods for data analysis to include basic descriptive, correlational, and inferential quantitative statistics and analysis and synthesis of qualitative data.
Audience: Graduate

6. Demonstrate an understanding of the process of locating and securing grants and how grants can serve as a fiscal resource for scholarly activities and program development. Create grant proposals to support scholarly activities and program development
Audience: Graduate

OCC THER 811 – APPLIED LEADERSHIP AND MANAGEMENT IN OT
3 credits.

Overview of the historical, theoretical and current practices of leadership, management and advocacy in health care, education and social service settings. Includes a reflective analysis of the student's own leadership and management style. Apply key principles of effective networking, collaboration and interdisciplinary practice to further develop leadership competencies.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

OCC THER 812 – CURRENT TRENDS SHAPING OCCUPATIONAL THERAPY PRACTICE
3 credits.

Occupational therapy's role in the history and continuing evolution of health care, education, and social welfare. Discussion of the theoretical, evidence, and policy trends influencing occupational therapy practice across settings. Emphasizes development of leadership skills for shaping, advocating and guiding occupational therapy through a continually evolving practice landscape.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

OCC THER 813 – ADVANCED PRACTICE IN INTERPROFESSIONAL CONTEXTS
3 credits.

Differentiate and define the role of occupational therapy, other professions, and the client in inter-professional practice (IP). Describe models of IP collaborative practice, evaluate evidence supporting effective IP interventions, generate and implement strategies for an IP team to improve quality of services.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021

OCC THER 814 – COMMUNICATING OT TO INTERPROFESSIONAL AUDIENCES
2 credits.

Learn the necessary skills for effectively designing and implementing professional presentations in a variety of interprofessional contexts including educational settings, professional conferences, practice workshops, and scholarly contributions. Review and critique communication from various media.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Compare and contrast adult learning theories and their application in various interprofessional learning situations.
Audience: Graduate

2. State and apply key principles of effective communication to the presentation of information through oral, written, and interactive media.
Audience: Graduate

3. Choose effective communication tools and techniques, including information systems and communication technologies, to facilitate discussions and interactions that enhance effective communication in interprofessional settings.
Audience: Graduate

4. Prepare a professional manuscript for a relevant professional publication of academic journal on a topic related to current practice or capstone project using professional language and writing style to communicate information incorporating the specific publication format.
Audience: Graduate

5. Prepare and present a presentation using appropriate technology and style for targeted audience and demonstrate modifications necessary to the presentation for a different interprofessional audience.
Audience: Graduate

6. Critique the work of peers, providing constructive feedback on their interprofessional presentations and writing.
Audience: Graduate

OCC THER 821 – CASE SYNTHESIS 1
1 credit.

Synthesize learning from previous coursework and apply to cases in a comprehensive way using problem-based learning strategies with an assigned learning group.
Requisites: Declared in Occupational Therapy OTD: Entry Level
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply, analyze, and evaluate scientific evidence, theories, models of practice, and frames of reference that underlie the practice of occupational therapy to guide and inform interventions for persons, groups, and populations in a variety of practice contexts and environments.
Audience: Graduate

2. Demonstrate clinical reasoning to evaluate, analyze, diagnose, and provide occupation-based interventions to address client factors, performance patterns, and performance skills
Audience: Graduate

3. Utilize clinical reasoning to facilitate occupation-based interventions that address client factors. This must include interventions focused on promotion, compensation, adaptation, and prevention.
Audience: Graduate

4. Monitor and reassess, in collaboration with the client, caregiver, family, and significant others, the effect of occupational therapy intervention and the need for continued or modified intervention.
Audience: Graduate

5. Design and implement intervention strategies to remediate and/or compensate for functional cognitive deficits, visual deficits, and psychosocial and behavioral health deficits that affect occupational performance.
Audience: Graduate

6. Develop a plan for discharge from occupational therapy services in collaboration with the client and members of the interprofessional team by reviewing the needs of the client, caregiver, family, and significant others; available resources; and discharge environment.
Audience: Graduate

OCC THER 822 – CASE SYNTHESIS 2
2 credits.

Facilitate learning for peers around cases. Develop a learning case based on fieldwork experience. Synthesize learning from previous coursework with an emphasis on advocacy and population health and apply to cases in a comprehensive way using problem-based learning strategies with an assigned learning group.
Requisites: OCC THER 821
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply, analyze, and evaluate scientific evidence, theories, models of practice, and frames of reference that underlie the practice of occupational therapy to guide and inform interventions for persons, groups, and populations in a variety of practice contexts and environments.
Audience: Graduate

2. Demonstrate clinical reasoning to evaluate, analyze, diagnose, and provide occupation-based interventions to address client factors, performance patterns, and performance skills
Audience: Graduate

3. Utilize clinical reasoning to facilitate occupation-based interventions that address client factors. This must include interventions focused on promotion, compensation, adaptation, and prevention.
Audience: Graduate

4. Monitor and reassess, in collaboration with the client, caregiver, family, and significant others, the effect of occupational therapy intervention and the need for continued or modified intervention.
Audience: Graduate

5. Design and implement intervention strategies to remediate and/or compensate for functional cognitive deficits, visual deficits, and psychosocial and behavioral health deficits that affect occupational performance
Audience: Graduate

6. Develop a plan for discharge from occupational therapy services in collaboration with the client and members of the interprofessional team by reviewing the needs of the client, caregiver, family, and significant others; available resources; and discharge environment.
Audience: Graduate

7. Apply teaching methods to facilitation of group case-based learning process
Audience: Graduate

8. Identify opportunities for advocacy and population health interventions based on individual level cases.
Audience: Graduate

OCC THER 871 – APPLICATION OF OCCUPATIONAL THERAPY EVIDENCE IN THE PRACTICE ENVIRONMENT
2 credits.

Examine and apply to a specific intervention or topic that is relevant to professional development goals and/or capstone project. Leverage appropriate methodologies, analytic tools and procedural reasoning in support of recommendations regarding the application of the intervention or approach in the practice environment.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021

OCC THER 872 – USING INFORMATION TO OPTIMIZE PRACTICE
3 credits.

An introduction to application of informatics in practice including appropriate design, data management procedures and statistical analysis tools. Pursue a practice-relevant question which can be answered using available data.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022

OCC THER 873 – ADVANCED OUTCOME MEASUREMENT IN OCCUPATIONAL THERAPY
3 credits.

Explore quality assurance in OT service delivery (including consumer satisfaction) and objective and subjective functional and occupational performance measures of OT interventions. Includes review of principles of measurement (reliability, validity and clinical utility). Examines general themes and trends in healthcare outcomes measurement and research as well as issues germane to specific areas of OT practice. Learn strategies and skills for assessing the psychometric properties and clinical utility of a variety of outcomes measures.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2022
Learning Outcomes: 1. Identify and explain the role of outcome measures in assuring quality of OT services and efficacy of OT interventions across settings, populations and programs.
Audience: Graduate

2. Identify the domains of the World Health Organization ICF (International Classification of Function) most relevant for evaluating Occupational Therapy practice in context.
Audience: Graduate

3. Describe the conceptual similarities and differences in efficiency, effectiveness and efficacy.
Audience: Graduate

4. Describe the measurement properties of objective and subjective measures of learning outcomes, service provision, function, occupational performance and quality of life.
Audience: Graduate

5. Evaluate the reliability, validity and utility of objective and subjective measures of service provision, learning outcomes, function, occupational performance and quality of life.
Audience: Graduate

6. Develop an outcome measurement plan for a specific area of practice.
Audience: Graduate

7. Apply appropriate outcome measures for evaluating service quality and effectiveness of interventions in a specific area of practice.
Audience: Graduate

OCC THER 880 – INTRODUCTION TO CAPSTONE
1 credit.

Introduces capstone experience and project including providing a step-by-step guide for the development, planning, implementation and dissemination of the entry-level and post-professional occupational therapy doctoral capstone experience and project.
Requisites: Declared in Occupational Therapy
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Differentiate between various scholarly projects including capstone project, thesis, and dissertation.
Audience: Graduate

2. Identify a relevant clinical problem, gap in practice or specific need in the student's area of occupational therapy practice or desired professional development
Audience: Graduate

3. Develop a timeline for completion of the doctoral capstone project.
Audience: Graduate

4. Identify and initiate with potential sites to support a capstone project.
Audience: Graduate

OCC THER 881 – CAPSTONE PROJECT 1
3 credits.

Prepares for Capstone Project Proposal and learning plan for experiential setting connected to proposed project. Complete a problem statement, needs assessment, literature review and plans and implementation methods.
Requisites: OCC THER 880
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify a relevant clinical problem, gap in practice or specific need in the student's area of occupational therapy practice or desired professional development
Audience: Graduate

2. Complete a SWOT analysis and draft a preliminary conceptual model
Audience: Graduate

3. Conduct and summarize a comprehensive needs assessment, including literature review and collection of information from stakeholders
Audience: Graduate

4. Draft and defend a written proposal for an innovative project, program, intervention or approach to the identified problem
Audience: Graduate

5. Develop an evaluation plan for assessing outcomes
Audience: Graduate

OCC THER 882 – CAPSTONE PROJECT II
3 credits.

Complete implementation of individual Capstone Project, analyze the findings and prepare a written and oral presentation of the Capstone Project, as described and approved by the Primary Mentoring Committee.
Requisites: OCC THER 881
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Formulate systems to gather, analyze and interpret data from a practice setting.
Audience: Graduate

2. Translate evidence into best practice for the continued development of the profession.
Audience: Graduate

3. Demonstrate an understanding of the process for locating and securing grants and how grants can serve as a fiscal resource for scholarly and programmatic activities.
Audience: Graduate

4. Develop and implement an inter-professional, scholarly capstone project that addresses an identified service system, intervention or programmatic problem, relates theory to practice and demonstrates synthesis of advanced knowledge in a practice area.
Audience: Graduate

5. Evaluate the outcomes of the capstone project and communicate findings to an inter-professional audience in a clear, understandable manner through a peer-reviewed report or presentation.
Audience: Graduate

6. Empirically monitor client progress and treatment efficacy in practice.
Audience: Graduate

7. Identify and apply appropriate tools for measuring practice outcomes at the individual and systems level.
Audience: Graduate

8. Synthesize current knowledge, available evidence and responses to interventions to inform new approaches to practice problems.
Audience: Graduate

9. Demonstrate the skills necessary to lead and manage an inter-professional team.
Audience: Graduate

OCC THER 883 – DOCTORAL EXPERIENTIAL COMPONENT
6 credits.

An advanced placement that provides an opportunity for applied experiences within their concentration area.
Requisites: OCC THER 664
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Demonstrate advanced synthesis of knowledge gained in a chosen area including research, policy, leadership, administration, entrepreneurshp, program development or advocacy through successful achieving of individually customized learning goals.
Audience: Graduate

2. Model professional and leadership skills needed to work with multiple stakeholders successfully
Audience: Graduate

3. Communicate effectively with others in a professional setting: a. Interact effectively with clients, colleagues, other professionals, and community members from diverse cultural and ethnic backgrounds on a one-on-one basis and within the context of groups and b. Communicate effectively with varied audiences for varied purposes
Audience: Graduate

4. Complete a Capstone Project connected to the DEC site which meets both the site needs as well as the student learning goals
Audience: Graduate

ONCOLOGY (ONCOLOGY)

ONCOLOGY 401 – INTRODUCTION TO EXPERIMENTAL ONCOLOGY
2 credits.

Biological processes associated with and characteristic of neoplasia.
Requisites: ZOOLOGY/BIOLOGY 101, BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY/BOTANY 151, BIOCORE 383, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate fundamental knowledge and understanding of foundational concepts in the areas of cancer etiology, cancer biology, and cancer prevention and cancer treatment.
Audience: Undergraduate

2. Read and critically evaluate scientific literature.
Audience: Undergraduate

3. Synthesize scientific ideas based upon knowledge gained in the course
Audience: Undergraduate

4. Demonstrate breadth within their learning experiences.
Audience: Undergraduate

5. Communicate complex ideas in a clear and understandable manner.
Audience: Undergraduate

ONCOLOGY/MICROBIO 545 – TOPICS IN BIOTECHNOLOGY
1 credit.

Seminars on current topics in agricultural, medical, and industrial biotechnology such as: microbiological production of food, drink, biopharmaceuticals; production methods, genetic engineering (vectors, recombination cloning), continuous fermentation; bioconversion processes and production of chemicals from biomass; plant biotechnology; transgenic animals.
Requisites: (ZOOLOGY/BIOLOGY 101, ZOOLOGY/BIOLOGY/BOTANY 151, BIOCORE 383, or BIOLOGY/BOTANY 130) and (CHEM 104 or 109) or graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Attend all lectures on a diverse range of speakers from the Biotechnology sector and related topics.
Audience: Undergraduate

2. Demonstrate an understanding of lectures though lecture evaluation sheets.
Audience: Undergraduate

3. Choose a current topic in Biotechnology and formulate an opinion paper on the challenges and potential utility.
Audience: Undergraduate

ONCOLOGY/M&ENVTOX/PHM SCI/PHMCOL-M/POP HLTH 625 – TOXICOLOGY I
3 credits.

Basic principles of toxicology and biochemical mechanisms of toxicity in mammalian species and man. Correlation between morphological and functional changes caused by toxicants in different organs of the body.
Requisites: (BIOCHEM 501 or 508) and (ANAT&PHY 335, 435, or (BIOCORE 485 and 486)) and PATH 404; or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss the physiology and pathology of toxicology, understanding the basicfundamentals of toxicology and toxic agents
Audience: Both Grad & Undergrad

2. Demonstrate metabolism and breakdown of toxicants using a given dataset
Audience: Both Grad & Undergrad

3. Recognize various experimental models to obtain scientific results
Audience: Both Grad & Undergrad

4. Implement knowledge to design experiments applicable to one's own research
Audience: Both Grad & Undergrad

5. Critique an example of toxicology in media and develop a presentation of this example
Audience: Both Grad & Undergrad

6. Explore new areas to assist in career development via journal club
Audience: Graduate

ONCOLOGY/M M & I/PL PATH 640 – GENERAL VIROLOGY-MULTIPLICATION OF VIRUSES
3 credits.

The structure, multiplication, genetics, pathology and control of animal and plant viruses.
Requisites: (GENETICS 466 or 467) and (BIOCHEM 501 or 508) or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the major classes of viruses infecting animals and plants, and summarize their basic replication strategies.
Audience: Both Grad & Undergrad

2. Identify the major innate and adaptive antiviral immunity mechanisms of animals and plants, and examples of viral countermeasures against these.
Audience: Both Grad & Undergrad

3. Summarize the burdens and threats of viruses to public health, agriculture, etc.
Audience: Both Grad & Undergrad

4. Identify the major approaches and challenges to virus control at the single organism and host population levels, including why viruses are generally harder to control than bacteria, and major steps in developing new antiviral agents.
Audience: Both Grad & Undergrad

5. Illustrate beneficial uses of viruses and their genes in research, biotechnology and medicine.
Audience: Both Grad & Undergrad

6. Design and evaluate basic experiments to address specific questions in virology.
Audience: Both Grad & Undergrad

7. Read and evaluate primary literature papers in virology.
Audience: Graduate

ONCOLOGY 673 – PURIFICATION AND CHARACTERIZATION OF PROTEIN AND PROTEIN COMPLEXES
2 credits.

The theory and practice of protein purification. Topics covered include conventional and recent protein fractionation techniques; enzyme assays, handling, and characterization; purification strategy; and overproduction of cloned gene products. The emphasis is on micro and laboratory scale purifications.
Requisites: BIOCHEM 508, CHEM 511 or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Demonstrate fundamental knowledge and understanding foundational concepts in the areas of protein purification, purification of recombinant proteins, and protein characterization and use.
Audience: Both Grad & Undergrad

2. Read and effectively evaluate current literature.
Audience: Both Grad & Undergrad

3. Actively engage in the latest scholarly research discussions.
Audience: Graduate

ONCOLOGY 675 – ADVANCED OR SPECIAL TOPICS IN CANCER RESEARCH
1-3 credits.

Examines special topics in cancer research. Topics and content will vary each semester and by section of the course.
Requisites: Consent of instructor
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply, analyze, or evaluate advanced theories, concepts, or methods in Cancer Biology.
Audience: Both Grad & Undergrad

2. Identify and describe key theories, concepts, and methods in Cancer Biology.
Audience: Both Grad & Undergrad

3. Explore a new phenomenon or modality in the Cancer Biology area and apply the knowledge gained to research in the field (graduate student).
Audience: Graduate

ONCOLOGY 699 – SPECIAL RESEARCH PROBLEMS
1-3 credits.

Directed study projects as arranged with instructor.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply concepts learned in coursework to real life situations.
Audience: Undergraduate

2. Read and effectively search scientific literature.
Audience: Undergraduate

3. Develop critical, analytical, and independent thinking skills.
Audience: Undergraduate

ONCOLOGY 703 – CARCINOGENESIS AND TUMOR CELL BIOLOGY
3 credits.

Viral, chemical, and physical factors involved in tumor formation in humans and experimental animals; biology and biochemistry of neoplasia, both in vivo and in vitro.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explore new conceptional and technological advancements in Cancer Biology and apply the knowledge gained to research in the field.
Audience: Graduate

2. Demonstrate fundamental knowledge and understanding of foundational concepts in Carcinogenesis and Tumor Cell Biology.
Audience: Graduate

3. Articulate research problems, potentials, and limits with respect to theory, knowledge, or practice within the field of Carcinogenesis and Tumor Cell Biology.
Audience: Graduate

4. Communicate complex ideas in a clear and understandable manner.
Audience: Graduate

5. Read and effectively search scientific literature.
Audience: Graduate

ONCOLOGY 715 – ETHICS IN SCIENCE
1 credit.

A review and discussion of the fundamentals of ethical issues in science.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Articulate research problems, potentials, and limits with respect to theory, knowledge, or practice within the field of Cancer Biology.
Audience: Graduate

2. Formulate ideas, concepts, designs, and/or techniques beyond the current boundaries of knowledge within the field of Cancer Biology.
Audience: Graduate

3. Demonstrate breadth within their learning experiences.
Audience: Graduate

4. Communicate complex ideas in a clear and understandable manner.
Audience: Graduate

5. Foster ethical and professional conduct.
Audience: Graduate

ONCOLOGY 725 – READINGS IN CANCER BIOLOGY
2 credits.

A review and discussion of the current literature on topics related to cancer biology. The emphasis is on the development of skills in data analysis, critical interpretation, and clear writing.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Articulate research problems, potentials, and limits with respect to theory, knowledge, or practice within the field of Cancer Biology.
Audience: Graduate

2. Formulate ideas, concepts, designs, and/or techniques beyond the current boundaries of knowledge within the field of Cancer Biology.
Audience: Graduate

3. Demonstrate breadth within their learning experiences.
Audience: Graduate

4. Communicate complex ideas in a clear and understandable manner.
Audience: Graduate

5. Foster ethical and professional conduct.
Audience: Graduate

ONCOLOGY 735 – GRANT WRITING IN CANCER BIOLOGY
2 credits.

Scientific writing. Evaluation of exemplar fellowship applications. Creation of a research proposal with iterative, constructive feedback. Constructive, articulate feedback on classmates' writing.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the process of grant writing and review.
Audience: Graduate

2. Evaluate and articulate strengths and weaknesses of funding applications.
Audience: Graduate

3. Create a cogent and convincing written rationale for proposed experiments that provides the basis for the preliminary exam and an extramural funding proposal.
Audience: Graduate

4. Build resilience by responding to feedback on writing assignments.
Audience: Graduate

ONCOLOGY 745 – MODELING HUMAN DISEASE IN ANIMALS
1 credit.

Provides a background in the use of animals in the study of human disease and hands-on exposure to common techniques such as tissue collection and processing, surgeries, imaging, and other manipulations. Lectures by basic scientists and clinicians will provide background about each of the organ systems or diseases and the ethics of animal research. Prior to start of course, completion of online animal safety training. Instructions will be provided after enrollment.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Describe the rationale for choosing a model system for their research
Audience: Graduate

2. Perform procedures or dissections to collect tissues or organs for further investigation
Audience: Graduate

ONCOLOGY 778 – BIOINFORMATICS FOR BIOLOGISTS
3 credits.

Become familiar with bioinformatics theory and principles. Provides real-world experience that can be applied to your own work. Provides a foundation of knowledge that can be used to critically evaluate existing bioinformatics tools that can be used in your work, and in the absence of an appropriate tool, identify the analyses that demand the development of novel tools.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify the appropriate analysis tools for common bioinformatics problems, format data, execute the analysis, and adjust necessary parameters.
Audience: Graduate

2. Interpret results of common bioinformatic analysis including their own results as well as the published works of others.
Audience: Graduate

3. Demonstrate competence in bioinformatic analysis by conducting an original analysis of primary data from their own lab or publicly available databases.
Audience: Graduate

4. Understand the assumptions and principles of bioinformatic pipelines and their implications for validity and statistical significance.
Audience: Graduate

ONCOLOGY 901 – SEMINAR
1 credit.

Critical review of selected topics in cancer research.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Organize and present a research presentation, which includes background information, data slides, conclusions, and future directions.
Audience: Graduate

2. Offer constructive feedback to peers on research presentation style and information delivery.
Audience: Graduate

ONCOLOGY 990 – RESEARCH
1-12 credits.

Independent research and writing for graduate students under the supervision of a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Conduct independent research using a variety of approaches.
Audience: Graduate

2. Think critically and independently to address research challenges.
Audience: Graduate

3. Exhibit and foster professional and ethical conduct in their research.
Audience: Graduate

4. Collaborate with other investigators within or outside the thesis lab.
Audience: Graduate

OPERATIONS AND TECHNOLOGY MANAGEMENT (OTM)

OTM 300 – OPERATIONS AND SUPPLY CHAIN MANAGEMENT
3 credits.

Managing operations and supply chains is about people, information, equipment, and materials and how these are combined to produce and/or deliver goods and services to customers. Emphasis is on how systems and processes can be designed, managed, and improved to achieve operations excellence and competitive advantage.
Requisites: Not open to graduate/professional students
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the basics of firm strategy and determine how to align operational and strategic decisions.
Audience: Undergraduate

2. Analyze a manufacturing or service process quantitatively and generate opportunities for improvement.
Audience: Undergraduate

3. Manage quality statistically and describe strategies for maintaining and improving quality.
Audience: Undergraduate

4. Determine effective inventory policies for various product and customer demand characteristics.
Audience: Undergraduate

5. Develop sourcing and design strategies to mitigate risk in supply chains.

Audience: Undergraduate

OTM 351 – BUSINESS PROCESS IMPROVEMENT
3 credits.

Introduction to the terminology, concepts, principles, and techniques for managing and improving business processes.
Requisites: OTM 300
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain how to use root cause analysis to deconstruct a complex problem.
Audience: Undergraduate

2. Identify and apply continuous improvement tools and techniques to production, administrative, distribution, and service-related functions.
Audience: Undergraduate

3. Demonstrate strategic thinking and project management methodologies to establish and measure multi-year improvement strategies to reach a desired future state.
Audience: Undergraduate

4. Create improvement loops to maximize value, eliminate waste and reach an ideal future state for cross-functional organizational activities.
Audience: Undergraduate

5. Analyze large and complex data sets to find patterns, identify key improvements, and substantiate improvement choices in process improvement projects.
Audience: Undergraduate

OTM 365 – CONTEMPORARY TOPICS
1-3 credits.

An exploration of subject areas possibly to be introduced into the business curriculum.
Requisites: Sophomore standing and OTM 300
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

OTM 370 – SUSTAINABLE APPROACHES TO SYSTEM IMPROVEMENT
3 credits.

Organizations employ a variety of improvement approaches to develop sustainable practices. Sustainability concerns such as natural capital, emission buildup, and base of the pyramid are directly addressed by examining innovative system-improvement concepts, while simultaneously strengthening mission-central concerns such as cost, quality, customer, market, revenue, profit, brand, reputation sourcing, and quality of work life.
Requisites: None
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Identify the forces in an organization's ecosystem that drive sustainability
Audience: Undergraduate

2. Determine the capabilities needed to utilize forces that drive sustainability
Audience: Undergraduate

3. Recommend sustainability improvements that strengthen the organization's core mission
Audience: Undergraduate

4. Apply sustainability principles and/or frameworks to address the challenge of improving an organization's core mission
Audience: Undergraduate

5. Analyze sustainability issues and/or practices using a systems-based approach to support organizational or societal sustainability strategies
Audience: Undergraduate

OTM 399 – READING AND RESEARCH-OPERATIONS AND INFORMATION MANAGEMENT
1-6 credits.

Individual work suited to the needs of undergraduate students may be arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2022

OTM/MARKETNG 421 – FUNDAMENTALS OF SUPPLY CHAIN MANAGEMENT
3 credits.

Supply chain management (SCM) is a dynamic, cross-functional discipline that encompasses the areas of strategy, product development/innovation, marketing, finance, sourcing, production, logistics, and technology in both product and service industries. The supply chain is responsible for the sustainable and efficient movement of products, services, funds, and data along the value chain. Companies must effectively coordinate these functions not only within the firm, but with business partners and customers around the world. SCM is a critical, strategic component of any business or organization, from high-tech to healthcare, and it is a fundamental knowledge base for any student of business.
Requisites: Sophomore standing and (MARKETNG 300 or OTM 300) or declared in undergraduate Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the business purpose and primary functions of supply chain management and their cross-functional linkages/interdependencies across an organization
Audience: Undergraduate

2. Apply supply chain management in strategic and tactical frameworks to optimize financial, operational, and customer objectives
Audience: Undergraduate

3. Analyze the influence of supply chain management on business performance and its role in delivering competitive advantage to an organization
Audience: Undergraduate

4. Identify and apply the economic, political, and business issues that impact how companies develop and execute supply chain strategy including globalization, sustainability, risk management, and ethics/society

Audience: Undergraduate

OTM/MARKETNG 422 – LOGISTICS MANAGEMENT
3 credits.

Provides a management perspective on the fundamental activities, concepts, and current practices in logistics. Transportation management, order fulfillment, warehousing, global logistics, key performance indicators, outsourcing, and introduction to radio frequency identification and barcoding. Use of case studies and industry speakers.
Requisites: MARKETNG 300, OTM 300, and sophomore standing, or declared in undergraduate Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate understanding of fundamental logistics principles and fluency in the language of logistics.
Audience: Undergraduate

2. Articulate key activities performed by the logistics function including distribution, transportation, global logistics and inventory control.
Audience: Undergraduate

3. Demonstrate understanding of order fulfillment processes and best practices utilized in supply chain operations.
Audience: Undergraduate

4. Analyze and utilize supply chain data to make business decisions and expand applied data analysis skills.
Audience: Undergraduate

OTM/MARKETNG 423 – PROCUREMENT AND SUPPLY MANAGEMENT
3 credits.

Procurement and supply management is the business function concerned with an organization's acquisition of required materials, services, and equipment. Explores the key aspects of modern supply management including the purchasing process, cost management, negotiation, sourcing strategies, supplier management, category management, acquisition methods for materials and services, and outsourcing.
Requisites: Sophomore standing and (MARKETNG 300 or OTM 300) or declared in undergraduate Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the importance of supply management, its functions and impact within firms, and the managerial strategies and operational tactics required of entry-level professionals in supply change management.
Audience: Undergraduate

2. Analyze a scenario to determine the appropriate sourcing strategy, [and] propose the most effective supplier management processes.
Audience: Undergraduate

3. Apply, at a foundational level, the necessary legal and ethical considerations to the examination and implementation of supply management.
Audience: Undergraduate

4. Apply a proper process in evaluating a decision to outsource and utilize a rigorous approach to the development of service contracts.
Audience: Undergraduate

5. Assess which of the generic purchasing and P2P process steps add value, explain the basis for that assessment, and suggest possible improvement methods.
Audience: Undergraduate

6. Demonstrate how to operationalize cost management and use it to make decisions.
Audience: Undergraduate

7. Prepare a risk assessment utilizing the knowledge and tools acquired in class.
Audience: Undergraduate

OTM/MARKETNG 427 – INFORMATION TECHNOLOGY IN SUPPLY CHAINS
3 credits.

Explores the concepts and practices of using information technology to effectively manage and operate supply chains of businesses and other organizations. Topics include supply chain processes, enterprise resource planning (ERP) system implementation, and supply chain simulations using SAP software.
Requisites: MARKETNG 300, OTM 300, and sophomore standing, or declared in undergraduate Business Exchange program
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe key business processes related to supply chain management
Audience: Undergraduate

2. Effectively utilize an ERP system to execute key business processes related to supply chain management and have an intermediate level of ability to navigate within an ERP system
Audience: Undergraduate

3. Identify and analyze appropriate data and information from an ERP system as a means to making measurable improvements in the performance of a business
Audience: Undergraduate

4. Understand and recognize principles and best practices of implementing enterprise systems and have the ability to articulate common implementation mistakes
Audience: Undergraduate

OTM/MARKETNG 428 – SUPPLY CHAIN CAPITAL MANAGEMENT
3 credits.

Introduce the set of activities and solutions available to finance an organization's supply chain infrastructure. Define and study the related influencers. Investigate risks and mitigation techniques relative to associated metrics and strategies. Analyze multiple cases in group study work. Identify and recommend improvement opportunities.
Requisites: Junior standing and (MARKETNG 300 or OTM 300), or declared in the Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze multiple aspects of a supply chain network and provide recommendations on how to improve operations and efficiency of a business.
Audience: Undergraduate

2. Recognize and compose appropriate business contract language.
Audience: Undergraduate

3. Recognize and interpret financial statements to understand the current financial state of the organization; identify improvement opportunities and develop solutions to improve the entity's performance.
Audience: Undergraduate

4. Construct specific actions to take to improve working capital efficiency and release.
Audience: Undergraduate

5. Articulate the impact of geopolitical and international issues on supply chains.
Audience: Undergraduate

OTM/MARKETNG 429 – GLOBAL EXPERIENCE: SUPPLY CHAIN MANAGEMENT
1-2 credits.

Companies and organizations operate globally - sourcing, producing, and distributing to/from markets around the world. For business leaders in this environment, political, economic, historical, and cultural frameworks are critical to understand and navigate. Learn and explore these themes via classroom and applied experiences in global supply chain management.
Requisites: Consent of instructor
Repeatable for Credit: Yes, for 2 number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Apply supply chain management theory and practice in a global and industry-specific context
Audience: Undergraduate

2. Analyze how cultural, political, economic, and historical factors impact global business generally and industry-specific
Audience: Undergraduate

3. Develop cultural awareness and appreciation through interactions with students, faculty, and business professionals in the host country
Audience: Undergraduate

OTM 451 – SERVICE OPERATIONS MANAGEMENT
3 credits.

Application of operations management principles to the analysis of service-delivery systems in profit and nonprofit organizations. Topics include designing service-delivery systems, location and layout, operations planning and control, yield management, technology and information systems, and service quality management.
Requisites: OTM 300
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Utilize qualitative frameworks and quantitative tools to explain the tradeoffs involved in achieving a timely, high-quality, profitable service operations.
Audience: Undergraduate

2. Describe the function and importance of each element in the design of a service utilizing the Service Design Framework: Service Act, Strategic Priorities, Delivery System, Funding Mechanism.
Audience: Undergraduate

3. Evaluate service strategies and delivery systems in real companies utilizing the Service Design Framework, including identification of the service strategy being applied and explaining how facets of the service delivery system support or weaken this strategy.
Audience: Undergraduate

4. Recognize how to manage variability and uncertainty in delivery systems through appropriate capacity planning, queue design, and revenue management.
Audience: Undergraduate

OTM 452 – PROJECT MANAGEMENT
3 credits.

During their careers, managers spend a significant amount of time either participating in or leading projects. While every project is unique, some concepts and tools in project management apply to a wide range of projects. The aim of this course is to equip students with these concepts and tools, and to develop them into successful project managers (and team members). With that aim in mind, the course will emphasize quantitative aspects of project management while also discussing more qualitative aspects. Key topics include Project Initiation, Scheduling, Resource Management, Monitoring, Valuation, Rework, Agile Project Management, Project Management Analytics and Contracting.
Requisites: Sophomore standing
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Evaluate a project's benefits utilizing net present value and other analysis tools.
Audience: Undergraduate

2. Initiate a project including task breakdown and estimation, stakeholder analysis, resource allocation, and creating a project schedule.
Audience: Undergraduate

3. Monitor and track projects utilizing Earned Value Analysis and other project management tracking tools.
Audience: Undergraduate

4. Utilize and compare Agile and Waterfall project management methodologies.
Audience: Undergraduate

5. Demonstrate use of collaborative project management tools such as GANTT charts and related software tools (i.e. SmartSheet), and others for project tracking and resource planning.
Audience: Undergraduate

6. Collaborate in a team environment while applying various project management techniques to a real-world project.
Audience: Undergraduate

OTM 453 – OPERATIONS ANALYTICS
3 credits.

Focuses on the application of analytical methodologies to problems that arise in the context of a company's operations and supply chains. Touches on all three dimensions of analytics (descriptive, predictive, and prescriptive). Emphasis on data and real industry data collected from the university, alumni, and executive board members when possible. Explore, analyze, and utilize such data in a hands-on way, using a variety of software tools. Significantly driven by a set of case problems as opposed to systematic coverage of methodologies.
Requisites: OTM 300 and (GEN BUS 306, ECON 310, MATH 331, STAT/MATH 309, or 431), or declared in undergraduate Business Exchange program
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize patterns and relationships that provide insights into business problems.
Audience: Undergraduate

2. Choose and apply data-based forecasting methods, and evaluate the performance of such methods to inform operations decisions.
Audience: Undergraduate

3. Engineer spreadsheet models for decision-support leveraging optimization and simulation tools.
Audience: Undergraduate

4. Apply critical thinking to complex real-world problems by formulating appropriate questions, making implementable assumptions, and interpreting results of analyses.
Audience: Undergraduate

5. Work effectively in teams on analytics projects.
Audience: Undergraduate

6. Communicate analytics and insights through presentations and written reports.
Audience: Undergraduate

7. Develop basic skills using Tableau visualization software and the statistical software R.
Audience: Undergraduate

8. Develop intermediate skills using Excel.
Audience: Undergraduate

OTM/I SY E/MATH/STAT 632 – INTRODUCTION TO STOCHASTIC PROCESSES
3 credits.

Topics include discrete-time Markov chains, Poisson point processes, continuous-time Markov chains, and renewal processes. Applications to queueing, branching, and other models in science, engineering and business.
Requisites: (STAT/MATH 431, 309, STAT 311 or MATH 531) and (MATH 320, 340, 341, 375, 421 or 531) or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall and state the formal definitions of the mathematical objects and their properties for stochastic processes (e.g., discrete space Markov chains, Poisson processes, renewal processes, branching processes, etc.).
Audience: Both Grad & Undergrad

2. Use such definitions to argue that a mathematical object does or does not have the condition of being a particular type or having a particular property (e.g., irreducibility, aperiodicity, recurrence, transience, the Markov property, etc.).
Audience: Both Grad & Undergrad

3. Recall and state the standard theorems of stochastic processes. (e.g., laws of large numbers for Markov chains, existence of limiting/stationary distributions, law of large numbers for renewal processes, etc.) and recall the arguments for these theorems and the underlying logic of their proofs.

Audience: Both Grad & Undergrad

4. Construct mathematical arguments related to the above definitions, properties, and theorems, including the construction of examples and counterexamples.
Audience: Both Grad & Undergrad

5. Convey arguments in oral and written forms using English and appropriate mathematical terminology, notation and grammar.
Audience: Both Grad & Undergrad

6. Model simple real life situations by means of discrete-space stochastic processes and calculate probabilities associated with those processes.
Audience: Both Grad & Undergrad

7. Identify applications of course content in current areas of research.
Audience: Graduate

OTM 654 – PRODUCTION PLANNING AND CONTROL
2-3 credits.

The role of materials and capacity planning and control in business operations. Manufacturing Resource Planning Systems: aggregate planning, material requirements planning, capacity planning, operations scheduling. Procedures for cellular manufacturing systems. Costing issues in modern planning and control systems.
Requisites: Sophomore standing and OTM 300
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Recognize how inventory planning and replenishment, materials requirements planning, sales & operations planning, master scheduling, capacity resource planning and management, and scheduling execution activities work within a Supply Chain Management framework.
Audience: Undergraduate

2. Apply world class ERP software (SAP) to conduct Supply Chain Management.
Audience: Undergraduate

3. Identify the dynamics of Enterprise Resource Planning (ERP) systems that interface within a Supply Chain Management (SCM) framework.
Audience: Undergraduate

4. Explain MA5 ERP implementation methodology (visioning, planning, design, construction and delivery).
Audience: Undergraduate

5. Explain how to integrate various methodologies for replenishment planning.
Audience: Undergraduate

6. Analyze complex operations projects as a means to understand the strategic thinking framework for Supply Chain Management (SCM).
Audience: Undergraduate

7. Demonstrate how real Supply Chain Management is variable.
Audience: Undergraduate

OTM 700 – OPERATIONS AND SUPPLY CHAIN MANAGEMENT
2-3 credits.

Management of operations throughout an organization or supply chain. Emphasizes the coordination of resources to improve cost, quality, and customer service. Topics include capacity and materials management, operations strategy, and process improvement.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Assess the alignment of operational capabilities with firm strategy and decisions made in other parts of the organization, and articulate how operations can deliver value to customers and the firm.
Audience: Graduate

2. Understand key operations principles and tools, and how they can be used to support process improvement.
Audience: Graduate

3. Evaluate an organization's work processes to assess system capacity and responsiveness.
Audience: Graduate

4. Understand the impact that variability has on process performance, and choose appropriate capacity levels to manage this impact.
Audience: Graduate

5. Utilize appropriate models to identify good inventory ordering policies, and identify forces that drive inventory management decisions.
Audience: Graduate

6. Work effectively in a team to solve complex operational problems.
Audience: Graduate

OTM 701 – PRODUCT MANAGEMENT
2-3 credits.

Introduction to both the technical and interpersonal sides of developing and managing a product, from ideation to application and revision and launch. Key tools and frameworks including agile software development, product road mapping and design thinking are included.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the roles and responsibilities of product managers in high-tech businesses
Audience: Graduate

2. Apply key skills for managing all aspects of the product management life cycle
Audience: Graduate

3. Articulate key principles and concepts for comparative analysis of different product management strategies
Audience: Graduate

4. Apply concepts in decision-theoretic frameworks to enhance business efficacy
Audience: Graduate

5. Demonstrate how to effectively communicate product management strategies and plans to various stakeholders across a business enterprise
Audience: Graduate

OTM 702 – DIGITAL STRATEGY
2 credits.

Helps develop the critical thinking skills necessary to assess how digitization shapes business strategy, innovation, and operations in firms. Prepares students to analyze and evaluate business challenges for maximizing the impact of digitization on products, processes, and services in different settings.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define the digital economy and identify current and emerging technologies
Audience: Graduate

2. Summarize digitization and illustrate its influence on innovation, transformation, and disruption
Audience: Graduate

3. Describe the emerging models of competition and entrepreneurship in the digital economy
Audience: Graduate

4. Analyze digital investments and integrate them with other business processes and activities
Audience: Graduate

5. Apply managerial practices to leverage digital platforms effectively in organizations
Audience: Graduate

OTM 703 – COMPETING THROUGH ANALYTICS
2 credits.

Introduction to business analytics, machine learning and artificial intelligence from a managerial perspective. Covers identifying opportunities to capture data, learning about the current trends in and possibilities with data mining, converting analytics insights into action and evaluating your organization's readiness to compete with analytics.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe different types of analytics and their uses in relation to their industries: descriptive, predictive and prescriptive.
Audience: Graduate

2. Articulate the value of different types of structured and unstructured data from varying sources such as social media, CRM systems, IoT sensors, etc.
Audience: Graduate

3. Identify the strategic opportunities for improving efficiency, growth, and innovation using data and analytics.
Audience: Graduate

4. Explain the new-found challenges related to Ethical AI and Algorithmic Bias.
Audience: Graduate

OTM 714 – SUPPLY CHAIN ANALYTICS
2-3 credits.

The ability to extract information from data has become essential for companies that want to remain competitive - and therefore essential for students aspiring to become successful managers. Provides an understanding of various analytics methodologies and concepts, and the ability to apply these to business problems related to supply chain management and operations management. Key topics include Data Visualization, Time Series Forecasting, Linear Regression, Classification Methods, Association Rules, Cluster Analysis and Text Mining.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Examine data sets to recognize patterns and relationships in the data that provide insights into business problems
Audience: Graduate

2. Apply principles of data visualization and presentation to real business problems
Audience: Graduate

3. Develop basic skills using Tableau visualization software
Audience: Graduate

4. Apply methods of forecasting product demand and measure the performance of such methods
Audience: Graduate

5. Apply a variety of machine learning techniques (such as logistic regression, K nearest neighbors classification, association rules, cluster analysis, text mining) to perform analysis and/or make predictions and help solve business problems
Audience: Graduate

6. Develop basic skills using the statistical analysis language R
Audience: Graduate

OTM/MARKETNG 722 – LOGISTICS MANAGEMENT
2-3 credits.

A foundation in transportation, order fulfillment, warehousing, materials planning including MRP, demand planning, import/export fundamentals, ERP systems, supply chain metrics, and leading supply chain technologies such as RFID.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate an understanding of fundamental logistics principles and fluency in the language of logistics.
Audience: Graduate

2. Recognize the key activities performed by the logistics function including distribution, transportation, global logistics, and inventory control.
Audience: Graduate

3. Demonstrate an introductory level of understanding of information technology used in logistics operations.
Audience: Graduate

4. Analyze and use supply chain data to make business decisions in order to expand their applied data analysis skills.
Audience: Graduate

OTM/MARKETNG 724 – STRATEGIC GLOBAL SOURCING
2-3 credits.

Supply management (procurement) is widely recognized as one of the most critical elements in global supply chain management. The function plays a major role in maximizing the value and the integration of supply chain operations. Explores the key aspects of modern supply management including functional responsibilities and exemplary practices for major industry sectors.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify the functions, strategies, tactics, and analytical tools utilized in the sourcing function.
Audience: Graduate

2. Analyze scenarios to determine appropriate sourcing strategies and the most effective supplier management processes.
Audience: Graduate

3. Explain and apply components of sourcing strategy including supplier collaboration, risk assessment, ethics, make or buy considerations, and cost-plus modeling.
Audience: Graduate

4. Evaluate outsourcing decisions and utilize a rigorous approach to the development of service contracts.
Audience: Graduate

5. Demonstrate how to operationalize cost management for sourcing decisions.
Audience: Graduate

OTM/MARKETNG 726 – SUPPLY CHAIN STRATEGY
3 credits.

Focuses on strategic issues and current theory and practice in supply chain management. Effective design and management of supply chain resources is a key source of competitive advantage for organizations. Supply chain management is a cross-functional discipline that concentrates on the management of goods, services, and information among all links in the value chain.
Requisites: (MARKETNG 300 and OTM 300) or (MARKETNG 700 and OTM 700) and graduate/professional standing, or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Summarize the current theory and practice of supply chain management (SCM)
Audience: Graduate

2. Describe the emergence of SCM as a management function and academic discipline in a global economy
Audience: Graduate

3. Recognize the role of supply chain management in emerging business models
Audience: Graduate

4. Identify supply chain networks and the drivers of supply chain design
Audience: Graduate

5. Describe the impact of product design and innovation on supply chain design and costs
Audience: Graduate

6. Apply the importance of internal coordination and external collaboration to firm performance
Audience: Graduate

7. Demonstrate understanding of the critical and integrative role of supply chain management in business and society
Audience: Graduate

OTM/MARKETNG 727 – INFORMATION TECHNOLOGY IN SUPPLY CHAINS
3 credits.

Explores the concepts and practices of using information technology to effectively manage and operate supply chains of businesses and other organizations. Topics include supply chain processes, enterprise resource planning (ERP) system implementation, and supply chain simulations using SAP software.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe key business processes related to supply chain management.
Audience: Graduate

2. Effectively utilize an ERP system to execute key business processes related to supply chain management and have an intermediate level of ability to navigate within an ERP system
Audience: Graduate

3. Identify and analyze appropriate data and information from an ERP system as a means to making measurable improvements in the performance of a business
Audience: Graduate

4. Understand and recognize principles and best practices of implementing enterprise systems and have the ability to articulate common implementation mistakes
Audience: Graduate

OTM/MARKETNG 728 – SUPPLY CHAIN CAPITAL MANAGEMENT
2-3 credits.

Supply chain capital management refers to the set of activities and solutions available to finance an organization's supply chain infrastructure. As supply chains become more extended and complicated a need has developed to both manage and fund the supply network. Define and study the various influencers on the supply chain capital structure. Investigate risks, mitigation techniques, metrics and themes relating to the topic.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze multiple aspects of a supply chain network and provide recommendations on how to improve operations and efficiency of a business.
Audience: Graduate

2. Recognize and compose appropriate business contract language.
Audience: Graduate

3. Recognize and interpret financial statements to understand the current financial state of the organization; identify improvement opportunities and develop solutions to improve the entity's performance.
Audience: Graduate

4. Construct specific actions to take to improve working capital efficiency and release.
Audience: Graduate

5. Articulate the impact of geopolitical and international issues on supply chains.
Audience: Graduate

OTM 737 – GLOBAL SUPPLY CHAIN
2 credits.

Strategies, techniques, and best practices of global supply chain management through the lens of recent supply chain disruptions. Topics include global logistics strategy, supply chain risk management, international transportation methods, international terms of commerce, outsourcing strategy, and supply chain IT systems.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Demonstrate understanding of fundamental global supply chain principles and fluency in the language of supply chain management.
Audience: Graduate

2. Articulate business challenges related to recent supply chain disruptions and relate strategies and frameworks from the course to address these challenges.
Audience: Graduate

3. Describe key management functions performed by supply chain practitioners including establishing a global logistics strategy, setting supply chain metrics, assessing and building supplier resilience, managing global transportation systems, and establishing outsourcing relationships.
Audience: Graduate

4. Utilize an enterprise resource planning (ERP) system to execute global supply chain business processes while analyzing appropriate data and information as a means to make measurable improvements in the performance of a business.
Audience: Graduate

5. Identify country-specific aspects of this country’s supply chain infrastructure and logistics service providers.
Audience: Graduate

OTM 751 – SERVICE OPERATIONS MANAGEMENT
3 credits.

Application of operations management principles to the analysis of service-delivery systems in profit and nonprofit organizations. Topics include designing service-delivery systems, location and layout, operations planning and control, yield management, technology and information systems, and service quality management.
Requisites: OTM 700 and GEN BUS 704
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Utilize qualitative frameworks and quantitative tools to explain the tradeoffs involved in achieving a timely, high-quality, profitable service operations.
Audience: Graduate

2. Describe the function and importance of each element in the design of a service utilizing the Service Design Framework: Service Act, Strategic Priorities, Delivery System, Funding Mechanism.
Audience: Graduate

3. Evaluate service strategies and delivery systems in real companies utilizing the Service Design Framework, including identification of the service strategy being applied and explaining how facets of the service delivery system support or weaken this strategy.
Audience: Graduate

4. Recognize how to manage variability and uncertainty in delivery systems through appropriate capacity planning, queue design, and revenue management.
Audience: Graduate

OTM 752 – PROJECT MANAGEMENT
1-3 credits.

During their careers, managers spend a significant amount of time either participating in or leading projects. While every project is unique, some concepts and tools in project management apply to a wide range of projects. Equips students with these concepts and tools, and to develop them into successful project managers (and team members). Focuses on broadly applicable concepts and methods and will cover both qualitative and quantitative aspects of project management. Key topics include Project Initiation, Scheduling, Resource Management, Monitoring, Valuation, Risk Management, Agile Project Management, Project Portfolio Management and Contracting.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. How to manage time and resources in a project.
Audience: Graduate

2. How to develop a project charter.
Audience: Graduate

3. How to deal with risk and uncertainty in a project.
Audience: Graduate

4. How to monitor and control a schedule and budget.
Audience: Graduate

5. Differentiate between traditional and agile project management approaches.
Audience: Graduate

6. Understand the complexity and strategic nature of project portfolio decisions.
Audience: Graduate

7. Understand details of contracting in a project.
Audience: Graduate

OTM 753 – HEALTHCARE OPERATIONS MANAGEMENT
2-3 credits.

Healthcare delivery systems around the world struggle with three fundamental issues: patient access to care, quality and safety in the care process (including patient and staff satisfaction), and cost of care. These issues will be examined along with selected analysis and improvement approaches that the discipline of Operations Management can offer. Different types of both clinical and non-clinical processes in hospital settings are illustrated.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply common terminology and concepts as used in various healthcare delivery environments.
Audience: Graduate

2. Describe commonly recognized operational and financial problems with healthcare delivery systems.
Audience: Graduate

3. Explain different ways to design, organize, and manage healthcare delivery systems.
Audience: Graduate

4. Identify various key measures used to assess healthcare system performance.
Audience: Graduate

5. Explain various process types in healthcare delivery systems.
Audience: Graduate

6. Understand how to improve the success of sustaining and spreading healthcare system performance and practices.
Audience: Graduate

7. Map patient and information flows, analyze system capacity, and apply operational performance metrics.
Audience: Graduate

8. Analyze problems in healthcare delivery systems and apply A3 Thinking and selected operations management/Lean Tools in developing proposals for solution.
Audience: Graduate

9. Analyze delivery systems from an operational perspective, while also considering patient experience and staff satisfaction.
Audience: Graduate

10. Recognize managerial issues surrounding attempts to resolve problems in healthcare delivery and adapt solution implementations accordingly.
Audience: Graduate

OTM 758 – MANAGING TECHNOLOGICAL AND ORGANIZATIONAL CHANGE
3 credits.

Issues surrounding stretegic decisions to adopt new technologies and modern improvement philosophies, the impact these will have on the organization and its members, obstacles preventing successful implementations, and the effective management of change processes. Change triggered by process technologies, and models of change management, form the core of the course.
Requisites: OTM 700
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023

OTM 760 – MANAGING BY DESIGN
2-3 credits.

Exploration of design as a new practice in management that serves the need for identifying innovation opportunities in all types of organizations. Includes readings and cases in design/management and a set of creative projects that advance design skills in the context of management.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the relevance of design ideas to management practice – how to do more with less, to align and lead teams through a lean, efficient and vetted process for creative innovation.
Audience: Graduate

2. Describe the role and potential of digital technologies in delivering novel experiences.
Audience: Graduate

3. Describe how synthetic thinking complements analytic thinking.
Audience: Graduate

4. Practice considering the human experience of products, services, and systems.
Audience: Graduate

5. Explain how design can operate at all levels in an organization and is not limited to obvious domains, such as product development or communications department.
Audience: Graduate

6. Apply creative ideas and methods of design that develop management skills and techniques, i.e., make small bets fast, evaluate failure intelligently and harness breakthroughs to propel company growth or social good.
Audience: Graduate

7. Develop skills and perspectives on in-market experiments that save time and resources while revealing smarter outcomes.
Audience: Graduate

8. Reflect on how you can become a more innovative thinker and leader.
Audience: Graduate

OTM 765 – CONTEMPORARY TOPICS
1-4 credits.

Exploration of advanced subject areas possibly to be introduced into the business curriculum.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

OTM 770 – SUSTAINABLE APPROACHES TO SYSTEM IMPROVEMENT
4 credits.

Innovative system-improvement concepts and approaches that sustainably strengthen mission-central concerns such as quality, cost, customers, markets, revenue, profit, brand, reputation, sourcing, quality of work life, natural capital, buildup of concentrations and base of the pyramid.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021

OTM 777 – TECHNOLOGY STRATEGY AND PRODUCT MANAGEMENT APPLIED LEARNING
1 credit.

Exposure to emerging and current topics in Technology Strategy and Product Management (TSPM) through applied learning experiences that may include case studies, guest speakers, industry meetings, and career and leadership development exercises and workshops.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 2 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Expand professional network and reflect on interactions with industry professionals
Audience: Graduate

2. Identify career pathways and roles within TSPM (Technology Strategy and Product Management)
Audience: Graduate

3. Demonstrate professional skills, both written and verbal
Audience: Graduate

OTM/E P D/GEN BUS 784 — PROJECT MANAGEMENT ESSENTIALS
1 credit.

Techniques that will help to plan, execute, and deliver projects with desired scope on time and on budget. Learn to document clear project objectives and goals, accurately estimate project time and costs, schedule and allocate time-critical resources, and establish feedback systems for optimal project control.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2023
Learning Outcomes: 1. Plan and manage successful engineering projects using appropriate methods, tools, and techniques
Audience: Graduate

2. Estimate project costs, resources, and schedules
Audience: Graduate

3. Immediately apply project management principles regarding the five major project stages: initiate, plan, execute, control, and close
Audience: Graduate

4. Apply or customize the project management framework to engineering organizational needs
Audience: Graduate

5. Assess and improve the current project management system
Audience: Graduate

OTM 799 — READING AND RESEARCH-OPERATIONS AND INFORMATION MANAGEMENT
1-6 credits.

Individual work suited to the needs of graduate students.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

OTM 990 — OPERATIONS AND INFORMATION MANAGEMENT-INDEPENDENT RESEARCH PH.D. THESIS
1-12 credits.

Individual work to complete dissertation requirement of Ph.D. program.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

OTM 999 — READING AND RESEARCH-OPERATIONS AND INFORMATION MANAGEMENT PHD
1-6 credits.

Individual work suited to the needs of Ph.D. students may be arranged both during regular sessions and during the intersession periods.
Requisites: Declared in Business PHD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

OPHTHALMOLOGY AND VISUAL SCIENCES (OPHTHALM)

OPHTHALM 699 — DIRECTED STUDY
1-5 credits.

Directed study projects as arranged with faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply concepts learned in coursework to real life situations
Audience: Undergraduate

2. Read and effectively search scientific literature
Audience: Undergraduate

3. Develop critical, analytical, and independent thinking skills
Audience: Undergraduate

4. Gain research experience in an area of interest
Audience: Undergraduate

5. Develop/improve scientific writing skills.
Audience: Undergraduate

OPHTHALM 750 – OCULAR DISEASES OF THE MAMMALIAN VISION SYSTEM
3 credits.

An integrated approach to basic aspects of the mammalian visual system from anatomy and molecular/cellular biology to current and future therapeutic treatments of common ocular disorders. Seven general areas being covered include development and anatomy of the eye, physiology of the visual system, immunology and ocular surface diseases, retinal diseases, glaucoma, and translational approaches to vision research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand the basic elements of ocular development, anatomy, and visual processing in mammals
Audience: Graduate

2. Apply basic knowledge of the visual system to understand pathologic mechanisms of common ocular diseases
Audience: Graduate

3. Understand how modern therapeutic interventions work
Audience: Graduate

4. Use the foundational knowledge in the first 3 outcomes to analyze and evaluate new therapeutic strategies
Audience: Graduate

OPHTHALM 910 – INDEPENDENT READING AND RESEARCH FOR FOURTH YEAR MEDICAL STUDENTS
2-8 credits.

Independent research under the direct supervision of Ophthalmology faculty. Each student's research project is individualized to meet student research goals within context of faculty research needs.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Formulate a hypothesis or specific objective if study does not involve hypothesis generating research
Audience: Graduate

2. Conduct a thorough literature review of the specific research question
Audience: Graduate

3. Select and apply statistical methodologies appropriate for the proposed research plan
Audience: Graduate

4. Interpret results correctly and in context of previous findings from literature review
Audience: Graduate

OPHTHALM 911 – INTRODUCTION TO THE VISUAL SYSTEM
4 credits.

Become familiar with the basic science within ophthalmology. Comprehensive analysis of four common ophthalmic diseases, including ocular surface infections and immunology, glaucoma, diabetic retinopathy, and age-related macular degeneration.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe fundamental principles of diabetic retinopathy.
Audience: Graduate

2. Demonstrate knowledge of fundamental principles of glaucoma.
Audience: Graduate

3. Demonstrate knowledge of fundamental principles age related macular degeneration.
Audience: Graduate

4. Demonstrate knowledge of ocular surface disease including corneal disease and uveitis.
Audience: Graduate

5. Be able to critically analyze and discuss research papers.
Audience: Graduate

6. Be able to complete one research project per week with a research mentor.
Audience: Graduate

OPHTHALM 919 – INDIVIDUALIZED PHASE 3 CLINICAL ELECTIVE IN OPHTHALMOLOGY
2-4 credits.

In-depth exposure to ambulatory ophthalmology, operative ophthalmology, subspecialty clinics, working under the direct supervision of Ophthalmology faculty, residents, fellows. Complete other patient care related learning activities as assigned by instructors (e.g., literature reviews, presentations on specific topics); these are dependent on the individual student, attending physician, and clinical site. Each student's schedule individualized to meet each location's capacity and student preference.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a hypothesis driven history and complete a targeted exam.
Audience: Graduate

2. Develop and present a weighted differential diagnosis, diagnostic and treatment plans.
Audience: Graduate

3. Complete written documentation in a comprehensive, concise, accurate and timely manner.
Audience: Graduate

4. Review, interpret and present current literature to support patient care.
Audience: Graduate

5. Develop clinically relevant questions to advance learning.
Audience: Graduate

6. Communicate effectively with patients, families, physicians and non-physician team members.
Audience: Graduate

7. Engage patients in shared decision making regarding tests, orders and procedures.
Audience: Graduate

PATHO-BIOLOGICAL SCIENCES (PATH-BIO)

PATH-BIO 150 – CONTEMPORARY TOPICS AND CAREERS IN THE VETERINARY SCIENCES
1 credit.

Topics of importance to the animal health field.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate multiple career paths that a person can take if interested in a career in animal health and veterinary medicine.
Audience: Undergraduate

2. Describe the requirements and process for applying to veterinary medical school.
Audience: Undergraduate

3. Understand how to engage in career exploration.
Audience: Undergraduate

PATH-BIO/PATH 210 — HIV: SEX, SOCIETY AND SCIENCE
3 credits.

HIV kills three million people per year, more than any other infectious disease. We will learn about the transmission, immunology, virology, vaccinology and societal impact of this virus. Six of the world's leading HIV scientists will give guest lectures.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use science as a tool for understanding the world and solving problems.
Audience: Undergraduate

2. Understand how scientific data, social context, and political decisions impact prevention and treatment of infectious diseases in different community contexts.
Audience: Undergraduate

3. Identify obstacles to implementing effective disease interventions and understand ways to evaluate those interventions.
Audience: Undergraduate

4. Describe the steps of the HIV viral life cycle.
Audience: Undergraduate

5. Discuss how HIV's replication process leads to immune deficiency and AIDS.
Audience: Undergraduate

6. Describe immune responses against viral infection and list reasons why these responses fail to clear HIV infection.
Audience: Undergraduate

7. List reasons why it is challenging to cure HIV infection.
Audience: Undergraduate

8. Discuss approaches for making vaccines against other pathogens and list reasons why it is challenging to apply these approaches to HIV.
Audience: Undergraduate

9. Discuss and evaluate approaches for slowing the spread of HIV in the United States and other countries.
Audience: Undergraduate

10. Describe the processes by which HIV emerged to become a human pathogen.
Audience: Undergraduate

11. Discuss the sources of funding for the global response to HIV/AIDS and evaluate the efficacy of each in achieving its goals.
Audience: Undergraduate

12. Apply the concepts learned in relation to HIV to other emerging and re-emerging pathogens, such as Ebola virus, Zika virus, and/or SARS-CoV-2.
Audience: Undergraduate

PATH-BIO 299 — INDEPENDENT STUDY
1-3 credits.

Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Summarize intellectual growth associated with independent study work through mentor discussion
Audience: Undergraduate

2. Identify diversity of viewpoints through critical thinking
Audience: Undergraduate

3. Illustrate growth in reading, writing, and communication skills
Audience: Undergraduate

PATH-BIO 307 — SUPERBUGS, SEX, & DRUGS: WHY MODERN MEDICINE NEEDS EVOLUTIONARY BIOLOGY
2 credits.

Explore the new frontier of evolutionary and ecological solutions to public health challenges through analyses and discussions. Evolution is often viewed as a purely historical topic disconnected from modern practical concerns. This view is incomplete: evolution plays a key role in many areas of modern life and underlies many public health challenges like drug resistance in bacteria and cancer, vaccine development, circadian medicine, and the 'spill-over' of pathogens from wildlife to humans (and vice versa). These issues, however, are intricately connected to social drivers like the use of antibiotics to treat viruses or as growth promoters in livestock. More evolutionary-guided solutions to understanding and addressing these challenges are critical for a sustainable and healthy future.
Requisites: (ZOOLOGY/BIOLOGY/BOTANY 151, BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY 101, 102, or BIOCORE 381) and sophomore standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Investigate the myriad ways in which a new (evolution-informed) way of looking at the world of veterinary and human medicine and public health is beneficial and necessary for modern medicine.
Audience: Undergraduate

2. Compare how goals of personal medicine and public health are similar and dissimilar.
Audience: Undergraduate

3. Evaluate case studies to compare how evolutionary principles can be used to improve standard approaches to treating cancer and drug resistant sexually transmitted infections, STIs.
Audience: Undergraduate

4. Articulate the consequences of pathogen evolution for disease outbreaks and control.
Audience: Undergraduate

5. Describe the genetic and behavioral reasons why there are increasing numbers of antibiotic resistant infections.
Audience: Undergraduate

6. Read and analyze data on the health status of populations.
Audience: Undergraduate

7. Critically evaluate and effectively use textbooks, current research literature, online information, as well as information related to scientific and biological issues in the popular press.
Audience: Undergraduate

PATH-BIO/ENTOM/M M & I/ZOOLOGY 350 — PARASITOLOGY
3 credits.

The biology of water-borne, food-borne, soil-borne and vector-borne parasites of animals including humans. Parasites are explored in the context of transmission, associated disease, diagnosis and treatment options, and environmental, cultural and socioeconomic drivers of disease epidemiology.
Requisites: ZOOLOGY/BIOLOGY 101 and 102, or ZOOLOGY/BIOLOGY/BOTANY 152 or ZOOLOGY 153, or BIOCORE 381
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Be conversant in terminology used in the field of Parasitology.
Audience: Undergraduate

2. Recall scientific and common names for parasites and hosts, and the name of the resulting disease in humans or animals.
Audience: Undergraduate

3. Attribute parasite behavior and characteristics to specific disease features in the host.
Audience: Undergraduate

4. Identify appropriate means to diagnose infections with parasites.
Audience: Undergraduate

5. Describe and identify factors that determine when, where, and why parasitic diseases exist.
Audience: Undergraduate

6. Integrate terminology, scientific nomenclature, diagnostic features and demographics to solve case studies where the parasitic culprit is unknown.
Audience: Undergraduate

7. Compare and contrast commonalities in parasite life cycles to demonstrate how flexibility in those life cycles has resulted in many different potential means of transmission.
Audience: Undergraduate

8. Deconstruct the impact of parasitic diseases on human and animal health, from disease symptoms and pathology in an individual, to socioeconomics in communities and countries.
Audience: Undergraduate

9. Identify reliable resources (primarily internet-based) available for researching the biology and epidemiology parasitic diseases.
Audience: Undergraduate

PATH-BIO/MED HIST 370 – ADDRESSING CONTROVERSY: THE SCIENCE, ETHICS, AND PUBLIC DISCUSSION OF ANIMAL RESEARCH
3 credits.

Addresses the science, ethics, history, and communication strategies associated with the use of animals in research. Seeks to identify and employ common ground among those with different perspectives to enable students to make good decisions about this contentious topic.
Requisites: Satisfied Communications A requirement
Course Designation: Gen Ed - Communication Part B
Breadth - Either Humanities or Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Identify and employ communication practices that encourage tolerant and non-threatening discussion of controversial topics.
Audience: Undergraduate

2. Explain how scientific knowledge is acquired, with special reference to research with animals.
Audience: Undergraduate

3. Explain and compare ethical principles associated with animal use in research.
Audience: Undergraduate

4. Explore and apply principles of effective communication of complex and value-laden science.
Audience: Undergraduate

5. Describe the history and evaluate the present status of the animal research controversy.
Audience: Undergraduate

6. Construct and critique written and verbal presentations about animal research.
Audience: Undergraduate

7. Refine and defend your own position on animal research in a respectful and non-judgmental way that encourages additional dialog.
Audience: Undergraduate

8. Identify common ground among differing perspectives on animal research, and develop best practices for communicating this subject to diverse audiences.
Audience: Undergraduate

9. Practice critical reading, logical thinking, and the use of evidence.
Audience: Undergraduate

10. Employ appropriate style and disciplinary conventions in writing and speaking.
Audience: Undergraduate

11. Learn to use core library resources specific to the discipline.
Audience: Undergraduate

PATH-BIO 510 – VETERINARY IMMUNOLOGY
3 credits.

Current concepts in basic and clinical immunology with special emphasis on domesticated species and aspects of immunology.
Requisites: Declared in Doctor of Veterinary Medicine with second year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss and apply how the immune system in a healthy animal protects its host from infection and neoplasia.
Audience: Graduate

2. Discuss and apply the mechanisms underlying the failure of the body's defenses to protect against infections and neoplasia.
Audience: Graduate

3. Discuss and apply the mechanisms and consequences of over-reactions of the immune system.
Audience: Graduate

4. Discuss and apply how immune system can be manipulated by vaccination to protect against infections and other strategies to combat transplant rejection and treat cancer.
Audience: Graduate

5. Discuss and apply the immunological principles of diagnostic tests and how to interpret the results
Audience: Graduate

PATH-BIO 512 – INTRODUCTION TO VETERINARY EPIDEMIOLOGY
2 credits.

Learn basic concepts and approaches to population problems in veterinary medicine. Methods appropriate to investigation of disease outbreaks, surveillance of animal disease and production and the design of epidemiological studies of the determinants of disease are presented.
Requisites: Declared in Doctor of Veterinary Medicine with second year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply the principles of causal inference to health-related outcomes
Audience: Graduate

2. Recognize the effects of bias, confounding and interaction on medical research
Audience: Graduate

3. Assess and evaluate health-related risk
Audience: Graduate

4. Measure and analyze patterns of health-related outcomes in populations
Audience: Graduate

5. Interpret diagnostic test results
Audience: Graduate

6. Evaluate the validity of medical information
Audience: Graduate

7. Communicate medical and scientific information to clients and the public.
Audience: Graduate

PATH-BIO 513 – VETERINARY VIROLOGY
2 credits.

Introduction to basic concepts in virology and covers biology and pathogenesis of viral diseases of animals with an emphasis on viruses important to veterinary medicine.
Requisites: Declared in Doctor of Veterinary Medicine with second year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply basic concepts of virology, including structure, replication strategies, pathogenesis, evolution, and antiviral therapy, to viral diseases
Audience: Graduate

2. Recall viral diseases and prion diseases of animals that are important in veterinary medicine and as zoonoses, describing clinical disease, prevention and control
Audience: Graduate

3. Integrate knowledge of pathogenesis to describe pathophysiology of viral diseases
Audience: Graduate

4. Apply concepts of diagnostic testing to diagnose viral diseases
Audience: Graduate

5. Analyze primary veterinary literature in the context of viral diseases
Audience: Graduate

6. Communicate concepts of viral diseases to a defined audience, such as clients, public health, or veterinary professionals
Audience: Graduate

7. Identify viral diseases that are considered foreign animal diseases
Audience: Graduate

PATH-BIO 514 – VETERINARY PARASITOLOGY
3 credits.

Basic veterinary parasitology with emphasis on biology, diagnosis, pathophysiology, treatment and management of parasitic infections of veterinary importance.
Requisites: Declared in Doctor of Veterinary Medicine with first year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Name and classify important veterinary parasite species by their scientific and/or common names, as appropriate.
Audience: Graduate

2. Recognize parasites based on the morphological features of different stages. Recognize the general size, shape, and diagnostic features of adults, larvae, eggs, cysts, etc.
Audience: Graduate

3. Identify how parasites of veterinary importance are transmitted. Describe salient features of the life cycles of these parasites, including as definitive hosts, intermediate hosts, paratenic hosts, infective parasite stages, prepatent and patent periods, etc.; other factors influencing transmission such as host environment, diet, season, etc.
Audience: Graduate

4. Discuss the effects of parasites on their hosts. Describe the conditions under which disease is produced, the clinical signs and characteristics of disease, the role of host immunity, pathogenic mechanisms, and parasite stages responsible for pathology.
Audience: Graduate

5. Explain how parasite infections are diagnosed, treated and controlled. Describe techniques of diagnosis, availability and efficacy of treatment, and the respective roles of different methods of control (e.g., vector control, management practices, chemotherapy).
Audience: Graduate

PATH-BIO 515 – REGULATORY VETERINARY MEDICINE AND PUBLIC HEALTH
2 credits.

Role and regulatory obligations of the veterinary profession in preventing zoonoses, understanding the need for judicious use of antibiotics, and promoting the safety of food of animal origin.
Requisites: Declared in Doctor of Veterinary Medicine with third year standing
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Summarize and compare the clinical presentations of selected zoonotic diseases in both animals and humans.
Audience: Undergraduate

2. Explain at a technical level, and in a language appropriate for educating clients, the role(s) that animals play in disease transmission and the relative risks for human infections posed by contact with animals.
Audience: Undergraduate

3. Uphold the premise that “One Health” is an important framework for addressing important public health challenges and describe the ways that veterinarians are involved.
Audience: Undergraduate

4. Outline the roles and responsibilities of veterinarians and government agencies in animal importation, response to disasters, animal abuse, and the control of zoonotic and animal diseases.
Audience: Undergraduate

5. Outline the roles played by veterinarians in the safety of food of animal origin and how carcasses are processed and inspected.
Audience: Undergraduate

6. Explain ways that veterinarians work to decrease antibiotic and other drug residues in food products and stem the emergence of antibiotic resistance through careful stewardship of antibiotics.
Audience: Undergraduate

PATH-BIO 517 – VETERINARY BACTERIOLOGY AND MYCOLOGY
4 credits.

Emphasis on the pathogenesis of bacterial and fungal diseases of animals. Become familiar with the methods used to identify representative bacterial and fungal pathogens.
Requisites: Declared in Doctor of Veterinary Medicine with second year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Construct a valid differential diagnosis list of bacterial or fungal organisms contributing to disease, given a patient signalment, presenting complaint, physical examination, and pertinent laboratory data.
Audience: Graduate

2. Describe methods for proper collection and transport of samples for bacterial or fungal culture and identification.
Audience: Graduate

3. Perform basic laboratory tests for identification of bacterial and fungal species (e.g. streak a bacterial culture plate, Gram stain, microscopic identification of bacterial and fungal organisms).
Audience: Graduate

4. Prepare an appropriate diagnostic plan and interpret diagnostic test results for bacterial and fungal organisms.
Audience: Graduate

5. Describe important features of treatment for bacterial and fungal diseases of veterinary species.
Audience: Graduate

6. Discuss the importance of proper disinfection techniques for prevention of bacterial and fungal diseases.
Audience: Graduate

PATH-BIO 525 – ACTIVE, INTEGRATED LEARNING I
1 credit.

Active Learning experience highlighting problem solving and critical thinking that horizontally and vertically integrates material from other veterinary medicine courses by using exercises constructed in the context of clinical cases or scenaria.
Requisites: Declared in Doctor of Veterinary Medicine with second year standing
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Create medical problem lists for individual animals and groups of animals using information collected from the signalment, history, physical examination, laboratory tests, diagnostic imaging, and additional ancillary tests and investigations.
Audience: Undergraduate

2. Develop a comprehensive differential diagnosis based on the presenting complaint, that is organized by body system or mechanisms of disease, and select relevant disorders for a ranked differential diagnosis based on collected evidence.
Audience: Undergraduate

3. Develop a diagnostic plan based on the ranked differential diagnosis.
Audience: Undergraduate

4. Prepare rounds presentations (short summaries), in an organized and succinct manner using medical terminology, that can be used for clinical presentations or with submissions for ancillary testing.
Audience: Undergraduate

5. Replicate these analytical problem-solving skills for diverse animal species that present with various complaints.
Audience: Undergraduate

6. Capitalize on the strengths of teams that are diverse in experience, interest, and problem-solving preference to explain and communicate complex clinical problems in a respectful and responsible manner.
Audience: Undergraduate

PATH-BIO 526 – ACTIVE, INTEGRATED LEARNING II
1 credit.

Active Learning experience highlighting problem solving and critical thinking that horizontally and vertically integrates material from other veterinary medicine courses by using exercises constructed in the context of clinical cases or scenaria.
Requisites: Declared in Doctor of Veterinary Medicine with second year standing
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Create medical problem lists for individual animals and groups of animals using information collected from the signalment, history, physical examination, laboratory tests, diagnostic imaging, and additional ancillary tests and investigations.
Audience: Undergraduate

2. Develop a comprehensive differential diagnosis based on the presenting complaint, that is organized by body system or mechanisms of disease, and select relevant disorders for a ranked differential diagnosis based on collected evidence.
Audience: Undergraduate

3. Develop a diagnostic plan based on the ranked differential diagnosis.
Audience: Undergraduate

4. Prepare rounds presentations (short summaries), in an organized and succinct manner using medical terminology, that can be used for clinical presentations or with submissions for ancillary testing.
Audience: Undergraduate

5. Replicate these analytical problem-solving skills for diverse animal species that present with various complaints.
Audience: Undergraduate

6. Capitalize on the strengths of teams that are diverse in experience, interest, and problem-solving preference to explain and communicate complex clinical problems in a respectful and responsible manner.
Audience: Undergraduate

PATH-BIO/M M & I 528 – IMMUNOLOGY
3 credits.

Development and functions of immune response in animals; a comprehensive study of experimental humoral and cellular immunity.
Requisites: (CHEM 104 or CHEM 109) and (ZOOLOGY/BIOLOGY 101, ZOOLOGY/BIOLOGY/BOTANY 151 or BIOCORE 383), or graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify lymphatic tissues and describe their functions
Audience: Undergraduate

2. Differentiate between innate and adaptive immune responses
Audience: Undergraduate

3. State the products of B and T cell activation in adaptive immunity
Audience: Undergraduate

4. Describe the steps in B and T cell activation and the immune mechanisms regulating their activity
Audience: Undergraduate

5. Explain how the adaptive immune system recognizes diverse antigens
Audience: Undergraduate

6. Summarize coordination of innate and adaptive immune responses in host defense against cancer and infectious diseases
Audience: Undergraduate

7. List examples of when the immune system goes awry (hypersensitivity, autoimmunity)
Audience: Undergraduate

8. Apply course concepts to design new therapies for cancer, infectious disease, or organ transplant
Audience: Undergraduate

PATH-BIO 559 – VETERINARY GENERAL PATHOLOGY
2 credits.

General mechanisms of disease at the cellular, tissue, organ, and organismal levels. Cell injury and cell death, neoplasia, inflammation, circulation, and genetics.
Requisites: Declared in Doctor of Veterinary Medicine with second year standing
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe gross and microscopic changes seen in tissues and organs and understand the underlying processes making them appear the way they do
Audience: Undergraduate

2. Identify tissues and organs and summarize the abnormalities present
Audience: Undergraduate

3. Interpret the gross and microscopic changes utilizing the language of pathology by formulating a morphologic diagnosis
Audience: Undergraduate

4. Apply important pathologic concepts and principles to draw conclusions about the pathogenesis of the changes they see
Audience: Undergraduate

5. Integrate clinical, historical, clinicopathologic, imaging results, and pathologic findings and draw conclusions relevant to the disease or process affecting the animal
Audience: Undergraduate

PATH-BIO 560 – VETERINARY SYSTEMIC PATHOLOGY I
2 credits.

Morphological manifestations of disease in animals. Diseases and disease processes will be discussed by organ system, stressing important diseases in domestic animals.
Requisites: Declared in Doctor of Veterinary Medicine with second year standing
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe gross and microscopic changes seen in tissues and organs and understand the underlying processes making them appear the way they do
Audience: Undergraduate

2. Identify tissues and organs and summarize the abnormalities present
Audience: Undergraduate

3. Interpret the gross and microscopic changes utilizing the language of pathology by formulating a morphologic diagnosis
Audience: Undergraduate

4. Apply important pathologic concepts and principles to draw conclusions about the pathogenesis of the changes they see
Audience: Undergraduate

5. Integrate clinical, historical, clinicopathologic, imaging results, and pathologic findings and draw conclusions relevant to the disease or process affecting the animal
Audience: Undergraduate

6. Identify what are common, usual, and typical aspects of pathology within each organ system
Audience: Undergraduate

7. Discuss common or important diseases and where appropriate identify specific etiologies associated with them
Audience: Undergraduate

PATH-BIO 561 – VETERINARY SYSTEMIC PATHOLOGY II
4 credits.

Morphological manifestations of disease in animals. Diseases and disease processes will be discussed by organ system, stressing important diseases in domestic animals.
Requisites: Declared in Doctor of Veterinary Medicine with second year standing
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe gross and microscopic changes seen in tissues and organs and understand the underlying processes making them appear the way they do
Audience: Undergraduate

2. Identify tissues and organs and summarize the abnormalities present
Audience: Undergraduate

3. Interpret the gross and microscopic changes utilizing the language of pathology by formulating a morphologic diagnosis
Audience: Undergraduate

4. Apply important pathologic concepts and principles to draw conclusions about the pathogenesis of the changes they see
Audience: Undergraduate

5. Integrate clinical, historical, clinicopathologic, imaging results, and pathologic findings and draw conclusions relevant to the disease or process affecting the animal
Audience: Undergraduate

6. Identify what are common, usual, and typical aspects of pathology within each organ system
Audience: Undergraduate

7. Discuss common or important diseases and where appropriate identify specific etiologies associated with them
Audience: Undergraduate

PATH-BIO 562 – VETERINARY CLINICAL PATHOLOGY
4 credits.

Concepts and techniques of clinical pathology with emphasis on those procedures that are important in the diagnosis of animal diseases.
Requisites: Declared in Doctor of Veterinary Medicine with second year standing
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the principles for routine laboratory tests in hematology, hemostasis, urinalysis, clinical chemistry, endocrinology, and cytology, including the principles of quality control and preanalytical, analytical, and post-analytical variables that may affect test results.
Audience: Undergraduate

2. Demonstrate technical skills in preparing a diagnostic blood smear, performing a complete urinalysis and microhematocrit centrifugation for the measurement of packed cell volume and total protein by refractometry, and microscopically evaluating peripheral blood smears, urine sediments, and cytologic specimens.
Audience: Undergraduate

3. Interpret test results, including microscopic findings, by integrating information from the signalment, history, and physical examination, and organize a complete, but succinct, problem list using correct medical terminology for animal patients.
Audience: Undergraduate

4. Based on the established problem list, identify relevant differential diagnosis(es) or conclusion(s) and suggest appropriate ancillary testing to gather evidence toward a final diagnosis.
Audience: Undergraduate

5. List the essential/supporting evidence for your diagnosis/conclusion and explain the relevant pathophysiologic mechanism(s) using appropriate medical terminology.
Audience: Undergraduate

6. Support the learning of your peers while clarifying and solidifying your own knowledge by working in teams within the laboratory and on course exercises.
Audience: Undergraduate

PATH-BIO 660 – VETERINARY NECROPSY ROTATION
2 credits.

Provides experience with necropsy procedures in all animal species and in developing interpretive skills by participating in the School of Veterinary Medicine/Veterinary Medical Teaching Hospital diagnostic anatomic pathology service under the guidance of the faculty.
Requisites: Declared in Doctor of Veterinary Medicine with fourth year standing
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Perform accurate and complete routine gross necropsy procedures, methods, and techniques.
Audience: Undergraduate

2. Describe and interpret gross morphologic lesions and clearly, concisely, and accurately record these in a written report.
Audience: Undergraduate

3. Select and sample tissues for histopathological examination using proper technique.
Audience: Undergraduate

4. Select and sample specimens for ancillary procedures (e.g., cytology, bacteriology, virology, etc.).
Audience: Undergraduate

5. Correlate pathologic changes with clinical, clinicopathological, imaging, and other findings, to better understand and explain disease pathogenesis.
Audience: Undergraduate

6. Differentiate between normal anatomy and anatomic differences (between individuals and between species), and postmortem autolysis, artifactual changes, and true pathological lesions.
Audience: Undergraduate

PATH-BIO 675 – SPECIAL TOPICS
1-5 credits.

Topics vary.
Requisites: Declared in Doctor of Veterinary Medicine
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Develop competence and professional skills in veterinary medicine
Audience: Undergraduate

2. Explore current topics and trends in veterinary medicine
Audience: Undergraduate

3. Developing breadths of experiences related to veterinary medicine
Audience: Undergraduate

PATH-BIO 681 – SENIOR HONORS THESIS I
2-4 credits.

Individual research and study in pathobiological sciences for completing an honors thesis as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Articulate a clear research question or problem and formulate a hypothesis
Audience: Undergraduate

2. Demonstrate technical mastery of a research methodology
Audience: Undergraduate

3. Define and use terminology and concepts specific to their research topic
Audience: Undergraduate

4. Demonstrate competence and confidence in searching for existing research relevant to their project
Audience: Undergraduate

5. Explain how their project adds to knowledge gaps in the field
Audience: Undergraduate

6. Apply problem solving skills to address research hurdles
Audience: Undergraduate

7. Work collaboratively with other researchers in the laboratory (including other trainees, staff and the PI)
Audience: Undergraduate

8. Demonstrate growth in working autonomously over the course of the 681/682 enrollment period
Audience: Undergraduate

9. Explain their research to others in the field and to broader audiences in research presentations
Audience: Undergraduate

10. Articulate the relevance of their research to their professional future and speak to project-specific learning outcomes established with their research instructor and mentor
Audience: Undergraduate

PATH-BIO 682 — SENIOR HONORS THESIS II
2-4 credits.

Individual research and study in pathobiological sciences for completing an honors thesis as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Learning Outcomes: 1. Articulate a clear research question or problem and formulate a hypothesis
Audience: Undergraduate

2. Demonstrate technical mastery of a research methodology
Audience: Undergraduate

3. Define and use terminology and concepts specific to their research topic
Audience: Undergraduate

4. Demonstrate competence and confidence in searching for existing research relevant to their project
Audience: Undergraduate

5. Explain how their project adds to knowledge gaps in the field
Audience: Undergraduate

6. Apply problem solving skills to address research hurdles
Audience: Undergraduate

7. Work collaboratively with other researchers in the laboratory (including other trainees, staff and the PI)
Audience: Undergraduate

8. Demonstrate growth in working autonomously over the course of the 681/682 enrollment period
Audience: Undergraduate

9. Explain their research to others in the field and to broader audiences in research presentations
Audience: Undergraduate

10. Articulate the relevance of their research to their professional future and speak to project-specific learning outcomes established with their research instructor and mentor
Audience: Undergraduate

PATH-BIO 699 — DIRECTED STUDY
1-5 credits.

Projects in the laboratory and/or through library work in specific subject area under the direct guidance of faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply foundational veterinary knowledge and critical thinking to identify problems in veterinary medicine
Audience: Undergraduate

2. Develop professional veterinary medicine skills of interest by performing select techniques and procedures
Audience: Undergraduate

3. Communicate in written and/or verbal reports to veterinary colleagues and supervisors
Audience: Undergraduate

PATH-BIO/M M & I 750 — HOST-PARASITE RELATIONSHIPS IN VERTEBRATE VIRAL DISEASE
3 credits.

Detailed study of the pathogenesis of vertebrate viral disease, stressing viral invasion, dissemination, mechanisms of disease production, immune pathology, persistence, resistance, and transmission.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate understanding of mechanisms involved in pathogenesis of viral infections
Audience: Graduate

2. Obtain experience in critically reading scientific research
Audience: Graduate

3. Enhance scientific presentation skills
Audience: Graduate

4. Design and prepare funding applications for research projects in viral pathogenesis
Audience: Graduate

PATH-BIO 775 – EXTERNSHIP
1-24 credits.

Offers opportunities for faculty coordinated experience in the veterinary medical profession outside School of Veterinary Medicine.
Requisites: Declared in Doctor of Veterinary Medicine with fourth year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023
Learning Outcomes: 1. Understand real-world applications of foundational veterinary medical knowledge and skills
Audience: Graduate

2. Apply foundational veterinary knowledge and critical thinking to solve real-world problems
Audience: Graduate

3. Perform select techniques and procedures to develop various skills professional in veterinary medicine
Audience: Graduate

PATH-BIO/COMP BIO 812 – RESEARCH ETHICS AND CAREER DEVELOPMENT
2 credits.

Provides instruction in principles and concepts of research ethics through presentations and discussion of case studies. Topics pertinent to development of a successful career in research are also included.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze the complexities of ethical issues in research and the factors that can influence perceptions of ethical behavior.

Audience: Graduate

2. Develop a framework for making ethical decisions in research.
Audience: Graduate

3. Identify areas to apply best practices in responsible conduct of research to guide decision-making.
Audience: Graduate

4. Explain where to seek guidance for improving scientific communication skills.
Audience: Graduate

5. Develop the ability to effectively convey research results and findings.
Audience: Graduate

6. Recognize the importance of ethical conduct in research.
Audience: Graduate

7. Discuss the potential consequences of unethical behavior in research.
Audience: Graduate

8. Develop a sense of personal responsibility for maintaining ethical standards in research.
Audience: Graduate

9. Recognize the importance of safe research environments.
Audience: Graduate

PATH-BIO 930 — ADVANCED SEMINAR
1 credit.

Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Use mind mapping to create a hierarchal structure to contextualize the projects/aims in your thesis research and design an effective scientific presentation.
Audience: Graduate

2. Apply concepts for effective data display and presentation to create and give a clear and well-organized research seminar presentation.
Audience: Graduate

3. Prepare a graphical abstract that effectively communicates the significance, design, and take-home message of your study or proposed work.
Audience: Graduate

4. List 3 best practices for delivering an effective scientific presentation based on your peer evaluations of presentations delivered by classmates this semester.
Audience: Graduate

5. State 3 things that you do not want to do when giving a talk, based on your experience giving a presentation and your observations of the presentations by others.
Audience: Graduate

PATH-BIO 990 — RESEARCH
1-12 credits.

Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Exhibit a broad understanding of general pathobiological science principles
Audience: Graduate

2. Conduct independent research using a variety of approaches
Audience: Graduate

3. Think critically to address research challenges
Audience: Graduate

4. Exhibit and foster professional and ethical conduct in their research
Audience: Graduate

5. Collaborate with other investigators within or outside the thesis lab
Audience: Graduate

PATHOLOGY AND LABORATORY MEDICINE (PATH)

PATH/PATH-BIO 210 — HIV: SEX, SOCIETY AND SCIENCE
3 credits.

HIV kills three million people per year, more than any other infectious disease. We will learn about the transmission, immunology, virology, vaccinology and societal impact of this virus. Six of the world's leading HIV scientists will give guest lectures.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use science as a tool for understanding the world and solving problems.
Audience: Undergraduate

2. Understand how scientific data, social context, and political decisions impact prevention and treatment of infectious diseases in different community contexts.
Audience: Undergraduate

3. Identify obstacles to implementing effective disease interventions and understand ways to evaluate those interventions.
Audience: Undergraduate

4. Describe the steps of the HIV viral life cycle.
Audience: Undergraduate

5. Discuss how HIV's replication process leads to immune deficiency and AIDS.
Audience: Undergraduate

6. Describe immune responses against viral infection and list reasons why these responses fail to clear HIV infection.
Audience: Undergraduate

7. List reasons why it is challenging to cure HIV infection.
Audience: Undergraduate

8. Discuss approaches for making vaccines against other pathogens and list reasons why it is challenging to apply these approaches to HIV.
Audience: Undergraduate

9. Discuss and evaluate approaches for slowing the spread of HIV in the United States and other countries.
Audience: Undergraduate

10. Describe the processes by which HIV emerged to become a human pathogen.
Audience: Undergraduate

11. Discuss the sources of funding for the global response to HIV/AIDS and evaluate the efficacy of each in achieving its goals.
Audience: Undergraduate

12. Apply the concepts learned in relation to HIV to other emerging and re-emerging pathogens, such as Ebola virus, Zika virus, and/or SARS-CoV-2.

PATH 399 – INDEPENDENT STUDY
1-4 credits.

Directed study projects for freshmen and sophomores.
Requisites: Consent of instructor
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify concepts learned in coursework begin to apply to real life situations
Audience: Undergraduate

2. Read and learn to effectively search scientific literature
Audience: Undergraduate

3. Begin to develop critical, analytical, and independent thinking skills
Audience: Undergraduate

PATH 404 – PATHOPHYSIOLOGIC PRINCIPLES OF HUMAN DISEASES
3 credits.

Provides a basic understanding of the causes, pathophysiology, pathology and clinical manifestations of disease states from a medical perspective.
Requisites: ZOOLOGY/BIOLOGY 101, ZOOLOGY/BIOLOGY/BOTANY 151, ZOOLOGY 153, or BIOCORE 381
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the pathophysiologic processes highlighted in the course.
Audience: Undergraduate

2. Explain how clinical manifestations, diagnosis, and prognosis of some common conditions are related to underlying pathophysiologic principles.
Audience: Undergraduate

3. Describe how treatments of some common conditions are based on these same pathophysiologic principles.
Audience: Undergraduate

4. Consider how severe consequences of diseases may be prevented by screening, early diagnosis, modification of risk factors, and mitigation of environmental/occupational exposures.
Audience: Undergraduate

5. Establish a vocabulary of medical terms used by healthcare professionals
Audience: Undergraduate

PATH 501 – TOPICS IN ENVIRONMENTAL VIRAL PATHOGEN SURVEILLANCE
3 credits.

Explore the methods for environmental pathogen surveillance used in research and public health. Includes an advanced discussion of molecular genetics, genomics, and sequencing technologies. Explores the implications for public health and pandemic preparedness.
Requisites: (BOTANY 101 and 102) or BIOLOGY/BOTANY/ZOOLOGY 152 and (GENETICS 466 or 468), BIOCORE 383, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Describe how viral pathogen surveillance has been performed historically and propose how that will evolve as technologies improve
Audience: Undergraduate

2. Describe different ways molecularly characterize the presence of DNA and RNA from different sample sources
Audience: Undergraduate

3. Describe the molecular details of different DNA sequencing techniques

Audience: Undergraduate

4. Process metagenomic sequence data to characterize viruses present in a sample
Audience: Undergraduate

5. Compare and contrast the use of different types of environmental samples for viral pathogen surveillance
Audience: Undergraduate

6. Propose ways that viral pathogen surveillance data could be used by public health agencies to encourage behavioral changes
Audience: Undergraduate

7. Identify how viral pathogen surveillance data can provide information to local, national, and global communities
Audience: Undergraduate

PATH/M&ENVTOX/PHM SCI/PHMCOL-M/POP HLTH 626 – TOXICOLOGY II
3 credits.

Survey of the basic methods and fundamental biochemical mechanisms of toxicity. Toxicity in mammalian organ systems, techniques for evaluating toxicity, as well as mechanisms of species specificity, and environmental interactions (with toxicant examples) are presented.
Requisites: POP HLTH/M&ENVTOX/ONCOLOGY/PHM SCI/PHMCOL-M 625
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain and identify the effects of toxicants on specific organs within the human body
Audience: Both Grad & Undergrad

2. Demonstrate metabolism and reactions of toxicants within organ systems using a given dataset
Audience: Both Grad & Undergrad

3. Classify different means of risk assessment and the conceptual rationale behind these methods
Audience: Both Grad & Undergrad

4. Implement knowledge to design experiments applicable to one's own research
Audience: Both Grad & Undergrad

5. Relate specific organ concepts with conceptual examples from M&ENVTOX 625 to enhance scientific understanding
Audience: Undergraduate

6. Appraise concepts to research to identify future research concepts.
Audience: Graduate

PATH 699 – INDEPENDENT STUDY
1-4 credits.

Directed study projects for juniors and seniors.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply concepts learned in coursework to real life situations
Audience: Undergraduate

2. Read and effectively search scientific literature
Audience: Undergraduate

3. Develop critical, analytical, and independent thinking skill
Audience: Undergraduate

PATH 750 – CELLULAR AND MOLECULAR BIOLOGY/PATHOLOGY
2 credits.

Emphasizes current understanding of molecular and cellular mechanisms. Wherever possible, human diseases are used to illustrate the outcome at the organismal level of defects in these mechanisms. Focuses on different cell types and how cells function. We also discuss how cells talk to themselves and each other. Topics include mechanisms of cell survival and division. Provides an overview of a broad set of cell biology topics to demonstrate the breadth and diversity of cellular functions.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain basic mechanisms of cell signaling
Audience: Graduate

2. Describe how vesicles traffic inside of cells
Audience: Graduate

3. Explain the parts of the cell cycle
Audience: Graduate

4. Explain how and why a cell dies by apoptosis
Audience: Graduate

5. Define cell adhesion receptors, lipid rafts, and phosphatases and explain their role in cellular mobility
Audience: Graduate

6. Explain the role of stem cells in cancer biology
Audience: Graduate

7. Describe B and T cell development pathways and the functions of these cells
Audience: Graduate

8. Describe the roles of B and T cells in defending a host from pathogens
Audience: Graduate

PATH 751 – BIOLOGY OF AGING
2 credits.

Examines the molecular, cellular, physiological, and clinical aspects of aging beyond basic biology in a biomedical/clinical research setting. Aging and age-related diseases are examined via the combined expertise of basic scientists and clinicians covering a range of topics directly relevant to biology of aging research, including the clinical perspective, the research perspective, and the integration of the two.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Understand the scope of aging research and become familiar with the numerous conditions and disorders for which age is a risk factor.
Audience: Graduate

2. Synthesize the biological and clinical aspects of diseases and disorders of aging.
Audience: Graduate

3. Integrate biology across aging diseases and conditions to identify common factors.
Audience: Graduate

4. Appreciate the novel techniques and approaches at the cutting edge of aging research.
Audience: Graduate

PATH 752 – CELLULAR AND MOLECULAR BIOLOGY/PATHOLOGY SEMINAR
1 credit.

The emphasis is on our current understanding of molecular and cellular mechanisms. Wherever possible, human diseases are used to illustrate the outcome at the organismal level of defects in these mechanisms. Discussions focus on immunology and cancer biology. Topics include mechanisms of cell survival, cell division, signal transduction, gene expression, vesicular transport, autophagy and cell death. Explore a broad set of cell biology topics, in greater detail such that they will have a better understanding of the breadth and diversity of cellular functions by the end of the semester. Learn how to critically evaluate the literature and the rigor of research.
Requisites: Concurrent enrollment in PATH 750
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain basic mechanisms of cell signaling
Audience: Graduate

2. Describe how vesicles traffic inside of cells
Audience: Graduate

3. Explain the parts of the cell cycle
Audience: Graduate

4. Explain how and why a cell dies by apoptosis
Audience: Graduate

5. Define cell adhesion receptors, lipid rafts, and phosphatases and explain their role in cellular mobility
Audience: Graduate

6. Explain the role of stem cells in cancer biology
Audience: Graduate

7. Describe B and T cell development pathways and the functions of these cells
Audience: Graduate

8. Describe the roles of B and T cells in defending a host from pathogens
Audience: Graduate

9. Learn how to critically evaluate papers for rigor
Audience: Graduate

10. Learn how to design an experiment
Audience: Graduate

PATH 755 – RESPONSIBLE CONDUCT IN RESEARCH: RESEARCH ETHICS, RIGOR, REPRODUCIBILITY AND TRANSPARENCY
2 credits.

Meets the NIH Institutional Training Grant requirements covering all ten of targeted areas in biomedical research. Subject matter incorporates the following topics for instruction: 1) Conflict of interest - personal, professional, and financial; 2) Policies regarding human subjects, and rigor and reproducibility in clinical research; 3) Policies regarding live vertebrate animal subjects, rigor and reproducibility and transparency in pre-clinical research, and safe laboratory practices; 4) Mentor and mentee responsibilities and relationships; 5) Collaborative research including collaborations with industry; 6) Peer review; 7) Data acquisition and laboratory tools (management, sharing and ownership); 8) Research misconduct and policies for handling misconduct; 9) Responsible authorship and publication; 10) The scientist as a responsible member of society, contemporary ethical issues in biomedical research, and the environmental and societal impacts of scientific research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate proficiency in the Federal, State of Wisconsin, and UW-Madison rules and regulations relevant to the performance of research in the sciences.
Audience: Graduate

2. Explain practices and approaches that can enhance the rigor and reproducibility of their work.
Audience: Graduate

3. Demonstrate problem-solving strategies and how to respond properly after witnessing research misconduct.
Audience: Graduate

PATH 802 – HISTOPATHOLOGY FOR TRANSLATIONAL SCIENTISTS
3 credits.

Introduces the pathogenesis of disease via integration of actual autopsy patient cases. Emphasis is placed on understanding the basic mechanisms of disease at the level of cell, organ, and body, as well as the morphologic expression patterns of selected common specific disease processes. Participate in autopsy gross organ conferences as well as microscopic review sessions. Concepts covered in lectures will be applied and reinforced in the interactive autopsy sessions. Observe at least one full autopsy, gaining a three-dimensional understanding of structure and disease.
Requisites: Declared in Cellular and Molecular Pathology graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Gain an appreciation of how disease processes directly impact patients
Audience: Graduate

2. Be able to distinguish the morphologic patterns of normal versus pathologic tissues
Audience: Graduate

3. Be familiar with the pathogenesis of selected common disease processes
Audience: Graduate

4. Recognize how basic laboratory research may be applied to specific disease processes
Audience: Graduate

PATH 803 – PATHOGENESIS OF MAJOR HUMAN DISEASES
3 credits.

This course will focus on disease pathogenesis and discussion of the leading disease research model. Throughout the course, we will combine expert clinicians, basic scientists, and literature review on specific major diseases.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop an understanding of the basic principles of pathology (inflammation, cell death and degeneration and neoplasia).
Audience: Graduate

2. Discuss clinical features of human diseases that are major causes of global death and disability.
Audience: Graduate

3. Define pathogenesis of human diseases that are major causes of global death and disability.
Audience: Graduate

4. Discuss leading disease in vitro and in vivo research models for major human diseases.
Audience: Graduate

5. Develop an understanding of cutting-edge research techniques to study major human diseases.
Audience: Graduate

PATH 807 – IMMUNOPATHOLOGY: THE IMMUNE SYSTEM IN HEALTH AND DISEASE
2 credits.

Gain fundamental knowledge of immunopathology and molecular immunology medicine, and have an in-depth research experience that combines pathobiological and translational immunology research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Understand the development and function of the immune response in human disease.
Audience: Graduate

2. Understand malfunctions of immune system like immunodeficiency, autoimmunity & allergies.
Audience: Graduate

3. Learn basic mechanisms by which the immune system protects against infectious disease.
Audience: Graduate

4. Understand how the immune system may be manipulated to facilitate transplantation and treat cancer.
Audience: Graduate

PATH 809 – MOLECULAR MECHANISMS OF DISEASE
2 credits.

Focuses on molecular mechanisms of diseases. Course will focus on four modules: Neuroscience, cancer biology, growth factor/matrix biology, and immunology. Course will consist of a one hour lecture and a one hour group discussion.
Requisites: Declared in Cellular and Molecular Pathology graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand how to write a proposal (Grant Workmanship).
Audience: Graduate

2. Develop the ability to critically evaluate research papers and grants (Peer Reviewing).
Audience: Graduate

3. Understand how to design an experiment to test a novel hypothesis.
Audience: Graduate

4. Understand and learn how to give a successful talk.
Audience: Graduate

PATH 900 – SEMINAR
0 credits.

Weekly Seminar for graduate students, professional students, medical professionals.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Gain overall breath of knowledge in disease pathogenesis.
Audience: Graduate

2. Provide a platform for student interaction with invited faculty from UW-Madison and other institutions.
Audience: Graduate

3. Develop skills for communicating complex ideas in a clear and understandable manner.
Audience: Graduate

PATH 901 – STUDENT SEMINAR / JOURNAL CLUB
1 credit.

Review of current publications on relevant topics selected by department faculty and trainer.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Develop skills to discuss research progress with peer group.
Audience: Graduate

2. Develop excellent presentation skills to communicate complex ideas in a clear and understandable manner.
Audience: Graduate

3. Learn how to provide constructive feedback to strengthen peer student's presentation.
Audience: Graduate

4. Articulate research problems, potentials, and limits within the field of study.
Audience: Graduate

5. Formulate ideas, concepts, designs, and techniques beyond the current boundaries of knowledge within the chosen field of study#
Audience: Graduate

PATH 913 – TECHNIQUES IN VIROLOGY
4 credits.

Culture-based methods for detecting and quantifying viruses. Describe concepts such as viral load, transmissibility, tissue tropism, host immune responses, and the effectiveness of various antiviral therapies. Perform multiple techniques for working with and quantifying viruses. Compare and contrast various methods of detecting and quantifying viruses.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Demonstrate training-level-appropriate understanding of viruses and host biology.
Audience: Graduate

2. Integrate scientific evidence into clinical practice concepts.
Audience: Graduate

3. Effectively communicate basic science concepts related to infectious diseases, immunology, and virology.
Audience: Graduate

4. Demonstrate the ability to evaluate basic science and clinical literature.
Audience: Graduate

5. Develop an understanding of how basic science experiments are conceived, planned, executed, analyzed, and interpreted.
Audience: Graduate

6. Describe how viruses are propagated and quantified.
Audience: Graduate

7. Describe how viral infections are diagnosed.
Audience: Graduate

8. Describe the nuances and caveats associated with different methods of diagnosis.
Audience: Graduate

PATH 914 – CLINICAL MICROBIOLOGY: PHENOTYPIC IDENTIFICATION OF COMMON ORGANISMS
2 credits.

Clinical microbiology lab practice, with a focus on identification of bacteria, fungi, and parasites. Learn techniques in specimen collection, staining, and plating. Gain an understanding of culture media, incubation, isolation, and microscopic and colony characteristics.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand different ways of collecting and transporting specimens
Audience: Graduate

2. List common stains used for direct specimen examination
Audience: Graduate

3. Recall different types of culture media and their uses
Audience: Graduate

4. Explain the purpose of varying incubation conditions
Audience: Graduate

5. Recognize common Gram-positive bacteria based on phenotypic characterisitcs
Audience: Graduate

6. Recognize common fungi based on phenotypic characteristics
Audience: Graduate

7. Recognize common parasites based on phenotypic characteristics
Audience: Graduate

8. Recognize common Gram-negative bacteria based on phenotypic characteristics
Audience: Graduate

PATH 915 – CLINICAL MICROBIOLOGY: OVERVIEW OF TECHNOLOGIES AND METHODOLOGIES
2 credits.

Learn the variety of techniques, methodologies, and instrumentation used in modern clinical microbiology laboratory practice. Gain an understanding of mass spectrometry, NAAT, PCR, sequencing, antigen/antibody detection, antimicrobial susceptibility testing, point-of-care testing, and biomarkers of infection.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Summarize microscopic and phenotypic techniques used for identification
Audience: Graduate

2. Understand MALDI-TOF MS uses, advantages, and limitations
Audience: Graduate

3. Describe NAAT technologies such as PCR and TMA
Audience: Graduate

4. Explain how DNA sequencing works and its role in diagnosis
Audience: Graduate

5. Recognize common uses for antigen and antibody tests
Audience: Graduate

6. List different methods for antimicrobial susceptibility testing
Audience: Graduate

7. Differentiate rapid and POC testing from lab-based testing
Audience: Graduate

8. Discuss methods used for public health and infection control
Audience: Graduate

PATH 916 – CLINICAL MICROBIOLOGY: ANTIMICROBIAL RESISTANCE AND EMERGING PATHOGENS
2 credits.

Understand the battle between humans and infectious diseases. Learn how microbes evade the immune system and develop resistance to antibiotics. Discuss emerging pathogens and multidrug resistant organisms and the techniques used to combat them.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe how microorganisms evade the immune system
Audience: Graduate

2. List major antibiotic classes and resistance mechanisms
Audience: Graduate

3. Explain the significance of ESKAPE pathogens
Audience: Graduate

4. Recognize the importance of emerging pathogens
Audience: Graduate

5. Recall techniques used to identify resistant and emerging pathogens
Audience: Graduate

6. Understand the role and antimicrobial stewardship
Audience: Graduate

7. Understand the role of infection prevention and control
Audience: Graduate

8. Explain treatment and eradication strategies
Audience: Graduate

PATH 920 – GENERAL PATHOLOGY CLERKSHIP
2-4 credits.

Understand the central role that diagnostic pathology and laboratory testing play in medical care in all specialties. Review your course work in anatomic and clinical Pathology and add to your fund of knowledge. Familiarize yourself with the workings of a busy diagnostic tissue laboratory. Participate in daily "clinical-pathologist" discussions concerning the effects of various pathological conditions as they relate to specific clinical problems. Understand the role of anatomic and clinical pathology as they contribute to the understanding of disease processes.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the role of the pathology laboratories and pathologists in patient care
Audience: Graduate

2. Describe the specimen requirements, processing, and workup of patient samples in the pathology laboratory area in which they rotated
Audience: Graduate

3. Demonstrate increased facility with the underlying basic science knowledge required for these areas (eg histology, anatomy, molecular biology, microbiology, etc.)
Audience: Graduate

4. Independently assess patient materials and construct a differential diagnosis of the disease process involved
Audience: Graduate

5. Communicate and collaborate with consultants and/or primary clinical team and other providers to coordinate care
Audience: Graduate

6. Review, interpret and present current literature to support the diagnostic workup
Audience: Graduate

PATH 921 – TRANSFUSION MEDICINE CUSTOMIZED
2 credits.

Maximize preparedness for residency by correlating basic science concepts with practical decision-making in clinical transfusion medicine. Tested topics are customized based on the student's specialty interests. Topics include hemostasis, immunology of transfusions, transfusion reactions, red blood cell (RBC) antigens and antibodies, product modifications, lab tests, indications, therapeutic apheresis, blood donation, special patient populations and circumstances such as obstetrics or neonates, and massive transfusion in surgery and trauma.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the basic physiology of hemostasis and how it relates to lab testing and transfusion practice.
Audience: Graduate

2. Explain the basic immunology of red cell antigens, antibodies, and acute and delayed hemolysis.
Audience: Graduate

3. Explain the immunology of ABO blood-typing, antibody screen and identification, and direct antiglobulin test.
Audience: Graduate

4. Explain the pathophysiology and management of transfusion reactions.
Audience: Graduate

5. Explain the basic physiology of and indications for blood products and product modifications.
Audience: Graduate

6. Explain the pathophysiology and management of typical diseases treated by therapeutic apheresis.
Audience: Graduate

7. Explain the basic steps in blood donation and donor screening.
Audience: Graduate

8. Explain the pathophysiology and management of the alloimmunization of pregnancy.
Audience: Graduate

9. Explain the physiology of neonates that lead to special transfusion practices.
Audience: Graduate

10. Explain the pathophysiology of a massive transfusion and the coagulopathy of trauma.
Audience: Graduate

PATH 922 – LABORATORY MEDICINE CUSTOMIZED
2 credits.

Learn the basic science principles of common laboratory tests. Apply this knowledge to assignments in which you make clinical judgments and answer common patient questions about lab test interpretations. Customize the curriculum based on your specialty interests.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define and apply the concepts of sensitivity and specificity.
Audience: Graduate

2. Define and apply negative and positive predictive value. Explain how these values are influenced by the prevalence (prior probability) of disease in defined populations (Bayes theorem).
Audience: Graduate

3. Describe how reference intervals are derived and used and the different types of reference intervals including those derived from population distributions, from expert consensus recommendation, or from evidence-based determination of "threshold" values based on a test's predictive value in a clinical algorithm.
Audience: Graduate

4. Explain why 5% percent of laboratory test results from healthy individuals might fall outside a reference range.
Audience: Graduate

5. Explain the concept of variability in repeated measurements, as well as variability within and between individuals.
Audience: Graduate

6. Describe the contributors to analytical uncertainty (precision, accuracy, bias, coefficient of variation) and how the sources of variability relate to clinical interpretation of changes in test results.
Audience: Graduate

7. Discuss the consequences of ordering unnecessary testing.
Audience: Graduate

8. Explain the roles of preanalytical and postanalytical variables in affecting test results and thereby impacting patient care.
Audience: Graduate

9. List common sources of preanalytical errors.
Audience: Graduate

10. Describe the effects of blood-drawing technique on test results.
Audience: Graduate

11. Compare and contrast the use of specimen tubes with various colored tops, as well as other specimen containers, and why they cannot be used interchangeably.
Audience: Graduate

12. Describe the broad categories of situations that may result in test interference such as incomplete tube fill, hemolysis, lipemia, bilirubinemia, cross-reacting and interfering substances.
Audience: Graduate

13. List some important limitations and pitfalls of common lab tests.
Audience: Graduate

PATH 923 – SICKLE CELL DISEASE AND PUBLIC HEALTH
2 credits.

Patients with sickle cell disease can present to any medical specialty with manifestations or complications of the disease. Using a disease-focused biopsychosocial approach, the goal is the identification and understanding of barriers to health and the potential opportunities for improvement. The topics surveyed include: 1) clinical review, 2) community voices, 3) diversity, equity, and inclusion, 4) practical communication skills, 5) actionable examples of quality improvement, 6) health care systems, 7) economics, 8) global health, 9) ethics, and 10) advocacy via intellectual persuasion.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the basic epidemiology, genetics, pathophysiology, diagnosis, clinical manifestations, & treatments for sickle cell disease (SCD).
Audience: Graduate

2. Explain the common stigmas and misconceptions related to SCD, race, racism, pain, and addiction as well as their impacts on health care decision-making.
Audience: Graduate

3. Explain and apply some common practical written and oral communication skills in clinical settings involving the care of individuals with SCD that maximize respect and quality.
Audience: Graduate

4. Focusing patients and populations with SCD, describe how quality improvement tools can be incorporated into the clinical and community settings and how these translate across populations
Audience: Graduate

5. Explain 4 health care systems models of SCD care & how your future practice can contribute.
Audience: Graduate

6. Explain the economic burdens of SCD, reasons why there is a shortage of hematologists, the basic economics of price controls, and different economic policy views.
Audience: Graduate

7. Explain some challenges that affect patients with SCD in different countries, reasons why these challenges exist, and different views on opportunities for improvement.
Audience: Graduate

8. Describe the application of ethical frameworks in influencing policies that impact the health of patients and populations with SCD.
Audience: Graduate

9. Frame a persuasive policy advocacy message that seeks to positively impact health outcomes for individuals with SCD.
Audience: Graduate

PATH 924 – IMMUNOHEMATOLOGY
2 credits.

Utilize a case-based learning approach to interpret blood bank test results such as ABO typing data, antibody screens, antibody panels, and direct antiglobulin tests. Identify antibodies to red blood cell and platelet antigens. Demystify the inner workings of the blood bank clinical laboratory. Improve your ability to understand and communicate results from the blood bank.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge of the basic science principles of pretransfusion testing including ABO/Rh testing, RBC antibody screen, and antibody identification.
Audience: Graduate

2. Identify RBC antibodies from an antibody panel.
Audience: Graduate

3. Demonstrate knowledge of alloimmunization of pregnancy.
Audience: Graduate

4. Demonstrate knowledge of refractoriness to platelet transfusions.
Audience: Graduate

5. Demonstrate knowledge of neonatal alloimmune thrombocytopenia.
Audience: Graduate

6. Communicate interpretations of these results to patients in layman's terms.
Audience: Graduate

PATH 926 – PATHOLOGY: CLINICAL MICROBIOLOGY-MARSHFIELD
2-12 credits.

Clinical elective for fourth year medical students.
Requisites: Declared in Medicine program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024
Learning Outcomes: 1. Explain the role of the clinical laboratory and microbiology section in diagnosing infectious diseases and guiding their treatment
Audience: Graduate

2. Describe various methods for identifying infectious agents including culture, mass spectroscopy, and genetic analyses
Audience: Graduate

3. Explain the role of the microbiology laboratory in maintaining antibiotic stewardship and the importance of this endeavor in public health
Audience: Graduate

PATH 949 – GENETICS THROUGH THE LIFE CYCLE
4 credits.

The genome impacts human health and disease from the moment of conception throughout growth, development, and aging. This course offers a comprehensive overview of clinical laboratory testing in the fields of medical genetics and public health. Topics include how genetic testing is integrated into patient care, including prenatal genetics, newborn screening, genetic testing in children and adults, and oncology genetics. Students will develop a strong foundational knowledge of basic genetics principles, identify indications for genetic testing, interpret population screening results and the implications for public health, assess the utility of diagnostic testing, and recognize the limitations of genetic testing and clinical laboratory medicine. It is anticipated that students will incorporate these concepts, knowledge, experiences, and evidence in their future clinical practice.
Requisites: Declared in Medicine program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Demonstrate knowledge of fundamental principles of genetics
Audience: Graduate

2. Differentiate a screening test versus a diagnostic test
Audience: Graduate

3. Identify indications for genetic testing
Audience: Graduate

4. Assess the clinical utility of a genetic test
Audience: Graduate

5. State the limitations of genetic tests and clinical laboratory medicine
Audience: Graduate

PATH 950 – INFECTIOUS DISEASE DETECTIVES
2 credits.

In much of the world, infection remains the leading cause of disease and death. While medicine has made great strides in the diagnosis and treatment of infection, new and deadly pathogens continue to emerge, and antibiotic resistance continues to grow. No matter what a physician's specialty, understanding principals of infectious disease manifestations, diagnosis and treatment are key.
Requisites: Declared in the Medical program with 4th year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Identify characteristic gross/histologic features seen in various types of infectious disease
Audience: Graduate

2. Demonstrate understanding of the relative merits of various infectious disease diagnostic testing modalities
Audience: Graduate

3. Relate basic concepts of inflammation and mechanisms of infectious disease to potential clinical manifestations
Audience: Graduate

4. Demonstrate understanding of the collaborative relationship between the pathology department and treating physicians in cases of infectious disease
Audience: Graduate

PATH 960 – PATHOLOGY FOR SURGEONS
2 credits.

The surgeon-pathologist relationship is an integral aspect of the surgical care process. The intraoperative and postoperative findings of the pathologist confirm that the appropriate course of action was taken, and this information determines what the surgeon will tell the patient and his or her family about the disease entity, prognosis, and recommended next steps. In this basic science selective, future surgeons will have the opportunity to refresh their understanding of essential anatomy and histology, and deepen their knowledge of disease pathophysiology. They will also engage in multiple practical learning activities such as cutting a frozen section, working up a transfusion reaction, staining and interpreting an FNA cytology slide, assisting in prosecting (grossing) surgical pathology and autopsy specimens and following up on the diagnosis/molecular testing/tumor board discussion to enhance their understanding of the pathologist's critical role in managing surgical patients.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Reinforce knowledge of critical human anatomy and improve anatomic dissection skills
Audience: Graduate

2. Compare and contrast the indications, interpretative considerations, and relative merits of cytologic versus tissue diagnosis via core or open biopsy
Audience: Graduate

3. Develop familiarity with basic concepts of molecular testing and how it impacts disease diagnosis, prognosis and choice of targeted therapy
Audience: Graduate

4. Explain the pathophysiology of transfusion reactions and review other potential pitfalls of intraoperative blood product utilization
Audience: Graduate

5. Deepen understanding of disease features and the integral role pathologists play in management of surgical patients
Audience: Graduate

PATH 962 – THE MOLECULAR BASIS OF HEMATOLOGIC MALIGNANCIES
2 credits.

Understanding molecular mechanisms of hematologic disease, and developing a foundation in the principles of relevant molecular assays, is critical to providing appropriate patient care. Topics include bases of neoplastic disorders of the hematopoietic and lymphoid systems, how underlying molecular abnormalities contribute to the pathophysiology of these diseases, and the evolving spectrum of molecular and cytogenetic/FISH testing and other ancillary testing (such as flow cytometry), which are often utilized in the work-up of hematopoietic and lymphoid malignancies. Learn about strengths and weaknesses of these technologies, and how pathologists integrate results of molecular testing with the traditional histologic exam to produce accurate diagnoses and drive clinical decision making. Develop an understanding of how knowing the underlying molecular pathology of a hematopoietic or lymphoid malignancy can inform prognosis and guide therapy.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe basic processes underlying normal hematopoiesis and lymphocyte development.
Audience: Graduate

2. Apply basic principles, advantages, and limitations of the most common forms of ancillary testing in hematopathology, including flow cytometry, cytogenetics/FISH, and select molecular assays.
Audience: Graduate

3. Explain types of molecular abnormalities observed in neoplasia and how these abnormalities contribute to neoplastic growth via various cellular pathways.
Audience: Graduate

4. Describe the molecular basis, pathophysiology, and laboratory evaluation of known or suspected myeloid malignancies (including MDS, MPN, MDS/MPN, AML, and systemic mastocytosis)
Audience: Graduate

5. Describe the molecular basis and pathophysiology of clonal hematopoiesis of indeterminate potential (CHIP) and clonal cytopenia of uncertain significance (CCUS), and understand how these entities may complicate the molecular evaluation of suspected myeloid malignancies.
Audience: Graduate

6. Describe the molecular basis, pathophysiology, and laboratory testing of lymphoid malignancies, including lymphoblastic lymphomas/leukemias and B-cell and T-cell lymphomas.
Audience: Graduate

7. Describe the role of precision medicine and the utility of current and evolving targeted therapies in hematolymphoid disorders.
Audience: Graduate

PATH 963 – WOMEN'S GLOBAL HEALTH: A FOCUS ON WOMEN'S CANCERS AND PUBLIC HEALTH INTERVENTIONS
2 credits.

Unique opportunity for fourth year medical students to develop an intervention project focused on women's health and cancer prevention, diagnosis, treatment, or awareness globally and locally. Explore how women's health is influenced by both biological and sociocultural factors. Observe components of diagnosis of women's related cancers. Analyze molecular components of cancers used for diagnosis and treatment. Deconstruct the unique diseases that affect women throughout the life cycle and social factors that influence them.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Deconstruct differences in female biology that impact medical/public health research and health outcomes
Audience: Graduate

2. Describe the burden of cancers among women globally and locally
Audience: Graduate

3. Critique scientific literature to assess for inclusion of women’s specific issues and/or inclusion of women in outcome analysis
Audience: Graduate

4. Identify solutions to address unique women’s health challenges
Audience: Graduate

5. Propose public health interventions that address cancer-related women’s health challenges
Audience: Graduate

PATH 970 – GENOMICS, PROTEOMICS, AND METABOLOMICS: A DEEP DIVE INTO OMICS DATA ANALYSIS
2 credits.

Advances in medicine are increasingly being driven by "big data" analyses, including proteomics, genomics, and metabolomics. Basic knowledge of how to analyze these datasets can allow one to generate and test hypotheses that have the potential to transform a field. In this course, students will conduct individual data mining expeditions using a collection of large proteomics and metabolomics data sets. Formulate hypotheses about the interrelationships of molecules and their potential relationship to health, disease, and biological phenotypes. Basic background instruction on "omics" methodologies, heritability studies, and analytical methods will be provided. Provides the basic knowledge to carry out future 'omics analyses; using scientific inquiry to potentially transform the practice of medicine.
Requisites: MED SC-M 810, 811, 812 and 813; or Declared in Cellular and Molecular Pathology Graduate Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Examine and critically evaluate databases for adequacy of data.
Audience: Graduate

2. Demonstrate understanding of biological variability, data scaling, and data normalization schemes
Audience: Graduate

3. Demonstrate a basic understanding of statistical associations using bioinformatics, such as hierarchical clustering and correlation matrices.
Audience: Graduate

4. Demonstrate a basic understanding of analyte pathways using bioinformatics databases such as Uniprot.
Audience: Graduate

5. Demonstrate appropriate consideration of false discovery.
Audience: Graduate

6. Develop hypothetical models of molecular interactions.
Audience: Graduate

7. Synthesize knowledge of molecular pathways and apply this knowledge to potential health and clinical factors.
Audience: Graduate

8. Prepare and defend a hypothetical model of molecular interactions.
Audience: Graduate

9. Demonstrate critical thinking skills and an understanding of the underlying science behind analytical methodologies
Audience: Graduate

PATH 980 – CLINICAL EXPERIENCES FOR RESEARCHERS
1 credit.

Structured observation experiences across various medical clinics, including hematology, oncology, infectious diseases, and surgical pathology settings. Bridge the gap between laboratory research and clinical practice; enhanced understanding of disease diagnosis, treatment planning, and patient care. Supplemental discussions and reflective assignments encourage critical thinking about how research can directly impact patient care.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Develop a comprehensive understanding of how translational research applies in the clinical setting
Audience: Graduate

2. Identify opportunities to bridge your research and clinical applications
Audience: Graduate

3. Enhance interdisciplinary communication between researchers and clinicians
Audience: Graduate

4. Understand practical barriers to translational applications of research to the clinic
Audience: Graduate

PATH 990 – RESEARCH
1-8 credits.

For Grad and medical students desiring advanced pathology; work done under the direction of a senior staff member.
Requisites: Declared in Medicine program or Cellular and Molecular Pathology graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Exhibit a broad understanding of general principles in the field of pathology and laboratory medicine.
Audience: Graduate

2. Conduct independent research using a variety of approaches.
Audience: Graduate

3. Think critically to address research challenges.
Audience: Graduate

4. Exhibit and foster professional and ethical conduct in their research.
Audience: Graduate

5. Collaborate with other investigators within or outside the thesis lab.
Audience: Graduate

PEDIATRICS (PEDIAT)

PEDIAT 699 – INDEPENDENT STUDY
0-5 credits.

Independent study projects as arranged with faculty or instructional staff.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Develop critical, analytical, and independent thinking skills
Audience: Undergraduate

PEDIAT/MED PHYS 705 – WOMEN AND LEADERSHIP: SCIENCE, HEALTH AND ENGINEERING
2 credits.

Multiple professional and scientific groups have identified the underrepresentation and lack of advancement of women in academia as a national workforce problem. Review evolving perspectives of leadership and how unconscious assumptions about the behaviors and traits of men, women, and leaders impede women's advancement. Emphasizes the implications for women in the fields of science, health and engineering and explore the potential impact on the advancement of knowledge and improvements in health. Provides the opportunity to apply evidence-based perspectives using experiential methods.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Be conversant with several definitions and styles of leadership, as well as with research on how leadership and gender intersect/interact, particularly in an academic context.
Audience: Graduate

2. Reflect on personal leadership goals and skills based on readings, discussion, and online reflection assignments.
Audience: Graduate

3. Demonstrate knowledge of effective evidence-based leadership strategies.
Audience: Graduate

4. Consider the integral link between women leaders and the advancement of women's health.
Audience: Graduate

PEDIAT 909 – PEDIATRICS INTERNSHIP PREP COURSE (PIPC)
1 credit.

Use both didactics and simulations to cover high yield topics that a new Pediatric Intern should know to start a Pediatrics Residency. Working with a team of faculty, multi-disciplinary staff, residents, fellows and course directors, review topics such as intravenous fluid management, nutrition, vaccines, newborn care, fever and antibiotic therapy, developmental skills, hematology/oncology emergencies, dermatology, respiratory distress, endocrine emergencies, radiology, and informed consent. Participate in simulations to review medical knowledge, communication skills, and teamwork. Participate in difficult communication cases including obtaining informed consent or talking with parents of patients who choose to decline recommended management options. Practice common pediatric skills including IV placement, umbilical line placement, defibrilation, airway management, lumbar puncture, and suturing.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Communicate effectively with patients, families, and all members of the healthcare team
Audience: Graduate

2. Diagnose and manage common and critical medical conditions
Audience: Graduate

3. Perform duties as first responder to urgent/emergent patient care situations
Audience: Graduate

4. Practice skills including placing PIV/IO, umbilical lines, performing lumbar puncture, suturing, defibrillation, and securing the pediatric airway
Audience: Graduate

5. Simulate difficult conversations with patients/families and variable pediatric scenarios that require teamwork and knowledge of basic resuscitation
Audience: Graduate

PEDIAT 910 – INDEPENDENT READING AND RESEARCH IN PEDIATRICS
1-8 credits.

Independent research under the direct supervision of department of pediatrics faculty. Each students research project is individualized to meet student research goals within context of faculty research needs.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Formulate a hypothesis or specific objective if study does not involve hypothesis generating research
Audience: Graduate

2. Conduct a thorough literature review of the specific research question
Audience: Graduate

3. Select and apply statistical methodologies appropriate for the proposed analyses
Audience: Graduate

4. Interpret results correctly and in context of previous findings from literature review
Audience: Graduate

PEDIAT 911 – ABLEISM IN HEALTHCARE: UNDERSTANDING THE PROBLEM TO IMPROVE CARE
2 credits.

Disability rights, disability identity, and access and inclusion factors leading to disparities in care. Build a conceptual framework of the problem and utilize this framework to identify and implement potential solutions.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Explain the heterogenous definition of disability, the disability identity and how this relates to anti-ableism, and the intersectionality of disability with other identities.
Audience: Graduate

2. Examine the history of disability rights in the United States and how this applies to access to care, education and other services.
Audience: Graduate

3. Describe how current systems create inaccessibility in social interactions, education, employment, and healthcare for people with disabilities.
Audience: Graduate

4. Identify the various statewide organizations that can provide additional support for children and adults with disabilities.
Audience: Graduate

5. Illustrate ways to improve accessibility and inclusion for those with disabilities in the medical system (including disabilities knowledge in medical training).
Audience: Graduate

6. Implement strategies participants can use to improve their future care of individuals with disabilities.
Audience: Graduate

PEDIAT 919 – INDIVIDUALIZED CLINICAL ELECTIVE IN PEDIATRICS
1-4 credits.

Supervised activities include interacting with patients primarily in outpatient setting, participating in all clinical activities and other components of the individualized rotation.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a hypothesis driven history and complete a targeted exam.
Audience: Graduate

2. Develop and present a weighted differential diagnosis.
Audience: Graduate

3. Using clinical evidence, adapt and justify the working diagnosis.
Audience: Graduate

4. Present a diagnostic plan including laboratory and imaging modalities.
Audience: Graduate

5. Correctly interpret imaging and laboratory findings and communicate results to patients and team members.
Audience: Graduate

6. Complete written documentation in a comprehensive, concise, accurate and timely manner.
Audience: Graduate

7. Review, interpret and present current literature to support patient care.
Audience: Graduate

8. Develop clinically relevant questions to advance learning.
Audience: Graduate

9. Communicate effectively with patients, families, physicians and non-physician team members.
Audience: Graduate

10. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care.
Audience: Graduate

11. Engage patients in shared decision making regarding tests, orders and procedures.
Audience: Graduate

12. Avoid medical jargon when communicating with patients and families.
Audience: Graduate

13. Recognize limitations and seek assistance as appropriate.
Audience: Graduate

PEDIAT 921 – WISCONSIN LEADERSHIP EDUCATION IN NEURODEVELOPMENTAL AND RELATED DISABILITIES (LEND)
2 credits.

Participate in an interdisciplinary training program to learn foundational knowledge, skills, and attitudes related to the care of individuals with developmental disabilities. Covers neuromotor development, cognitive development, communication development, psychosocial development, physical health, quality of life, and other topics relevant to the care of individuals with developmental disabilities, as well as Lifecourse Story Team sessions that focus on a family-centered exploration of the experience of a child with a developmental disability and their family. Learn the role of different disciplines and the relevant systems of care for individuals with developmental disabilities. Explore impact of different legal and health policies on individuals with developmental disabilities and their families, as well as the concept of "ableism" and strategies to reduce this.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 3 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge of the process of diagnosis and management of common developmental disabilities
Audience: Graduate

2. Identify relevant systems of care for developmental services
Audience: Graduate

3. Discuss the role of interdisciplinary team in providing care for individuals with developmental disabilities
Audience: Graduate

4. Demonstrate knowledge of relevant legal and health policies which effect individuals with developmental disabilities
Audience: Graduate

5. Describe health disparities in individuals with developmental disabilities and strategies to mitigate them
Audience: Graduate

PEDIAT 930 – PEDIATRIC NEONATOLOGY ELECTIVE
2-4 credits.

Activities include attending deliveries of high-risk infants, admitting and managing a circumscribed select group of patients under the supervision of the attending neonatologist. Daily notes and orders are written and counter-signed by the neonatologist. Weekly rounds are made with social worker/discharge planner. Night call will be taken every fourth night. Attend appropriate perinatal conferences.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a hypothesis driven history and complete a targeted exam.
Audience: Graduate

2. Develop and present a weighted differential diagnosis.
Audience: Graduate

3. Using clinical evidence, adapt and justify the working diagnosis.
Audience: Graduate

4. Present a diagnostic plan including laboratory and imaging modalities
Audience: Graduate

5. Correctly interpret imaging and laboratory findings and communicate results to patients and team members.
Audience: Graduate

6. Complete written documentation in a comprehensive, concise, accurate and timely manner.
Audience: Graduate

7. Review, interpret and present current literature to support patient care.
Audience: Graduate

8. Develop clinically relevant questions to advance learning.
Audience: Graduate

9. Communicate effectively with patients, families, physicians and non-physician team members.
Audience: Graduate

10. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care.
Audience: Graduate

11. Engage patients in shared decision making regarding tests, orders and procedures.
Audience: Graduate

12. Avoid medical jargon when communicating with patients and families.
Audience: Graduate

13. Recognize limitations and seek assistance as appropriate.
Audience: Graduate

PEDIAT 931 – CHILD ABUSE PEDIATRICS ELECTIVE
2-4 credits.

Gain essential skills and knowledge to effectively recognize, diagnose, and treat cases of child maltreatment. Identify medical evidence that should raise reasonable suspicion of child abuse and neglect and become familiar with mandatory reporting requirements, including how to make a report to Child Protective Services and Law Enforcement. Collect special history, examination, laboratory, and imaging information necessary in cases of suspected child maltreatment. Develop skills to thoroughly document examination findings using written notes, drawings, and forensic photography. Practice communication skills when dealing with high-stress medical situations.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Recognize, diagnose and treat cases of child maltreatment.
Audience: Graduate

2. Identify medical evidence that should create reasonable suspicion of child abuse.
Audience: Graduate

3. Summarize mandatory reporting requirements and how to make a report to Child Protective Services and Law Enforcement.
Audience: Graduate

4. Summarize the special history, examination, laboratory, and imaging information that should be collected in cases of suspected child maltreatment.
Audience: Graduate

5. Document thoroughly the results of an examination by using written notes, drawings, and forensic photography.
Audience: Graduate

6. Adapt and apply communication skills to high stress clinical situations.
Audience: Graduate

PEDIAT 935 – SURGICAL, NEUROLOGIC, & COMPLEX CARE OF THE NEONATE ELECTIVE
2-4 credits.

Supervised activities include inpatient management in an intensive care setting and attending all the neonatal division educational sessions, which may include; Neonatology journal club, Multidisciplinary discharge planning rounds, and Individual patient care conferences.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a hypothesis driven history and complete a targeted exam.
Audience: Graduate

2. Develop and present a weighted differential diagnosis.
Audience: Graduate

3. Using clinical evidence, adapt and justify the working diagnosis.
Audience: Graduate

4. Present a diagnostic plan including laboratory and imaging modalities.
Audience: Graduate

5. Correctly interpret imaging and laboratory findings and communicate results to patients and team members.
Audience: Graduate

6. Complete written documentation in a comprehensive, concise, accurate and timely manner.
Audience: Graduate

7. Review, interpret and present current literature to support patient care.
Audience: Graduate

8. Develop clinically relevant questions to advance learning.
Audience: Graduate

9. Communicate effectively with patients, families, physicians and non-physician team members.
Audience: Graduate

10. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care.
Audience: Graduate

11. Engage patients in shared decision making regarding tests, orders and procedures.
Audience: Graduate

12. Avoid medical jargon when communicating with patients and families.
Audience: Graduate

13. Recognize limitations and seek assistance as appropriate.
Audience: Graduate

PEDIAT 938 – INPATIENT ACTING INTERNSHIP-PEDIATRICS
4 credits.

Pediatric acting interns will serve as the primary provider for pediatric patients in one of the offered inpatient settings. This includes responsibility for diagnosis and management; communication with patients, families, and other interdisciplinary care providers; and self-directed learning and application of evidence-based medicine. The student will work under the direct supervision of a senior resident, fellows and the pediatric faculty. This rotation will provide the student with the opportunity to function at the intern level and play an active role in inpatient management of inpatient pediatric patients.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a hypothesis driven history
Audience: Graduate

2. Complete a targeted exam
Audience: Graduate

3. Develop and present a weighted differential diagnosis (EPA 2)
Audience: Graduate

4. Using clinical evidence, select a working diagnosis (EPA 2)
Audience: Graduate

5. Present diagnostic plan including laboratory and imaging modalities
Audience: Graduate

6. Interpret imaging and laboratory findings in the context of patient presentation
Audience: Graduate

7. Write admitting and daily orders (EPA 4)
Audience: Graduate

8. Justify orders based upon working diagnosis and cost-effectiveness (EPA 4)
Audience: Graduate

9. Complete written patient evaluation using standard format
Audience: Graduate

10. Write daily progress notes including assessments and plans using standard format
Audience: Graduate

11. Present initial patient evaluation including assessments and plans
Audience: Graduate

12. Summarize patient's hospital course during rounds and manage day to day care
Audience: Graduate

13. Present current literature to support patient care
Audience: Graduate

14. Based on case load, develop clinically relevant questions to further individual and team learning
Audience: Graduate

15. Give and receive patient handovers (EPA 8)
Audience: Graduate

PEDIAT 940 – ADOLESCENT MEDICINE ELECTIVE
2-4 credits.

Supervised activities include interacting with patients in adolescent outpatient clinics, performing histories, physical examinations and managing patients with supervision by our staff. Give a didactic presentation at the end of the rotation on a topic of student's choice as well as write a blog for Writes of Passage. Customize clinic schedule from a menu of opportunities provided by the director.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a hypothesis driven history and complete a targeted exam.
Audience: Graduate

2. Develop and present a weighted differential diagnosis.
Audience: Graduate

3. Using clinical evidence, adapt and justify the working diagnosis.
Audience: Graduate

4. Present a diagnostic plan including laboratory and imaging modalities.
Audience: Graduate

5. Correctly interpret imaging and laboratory findings and communicate results to patients and team members.
Audience: Graduate

6. Complete written documentation in a comprehensive, concise, accurate and timely manner.
Audience: Graduate

7. Review, interpret and present current literature to support patient care.
Audience: Graduate

8. Develop clinically relevant questions to advance learning.
Audience: Graduate

9. Communicate effectively with patients, families, physicians and non-physician team members.
Audience: Graduate

10. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care.
Audience: Graduate

11. Engage patients in shared decision making regarding tests, orders and procedures.
Audience: Graduate

12. Avoid medical jargon when communicating with patients and families.
Audience: Graduate

13. Recognize limitations and seek assistance as appropriate.
Audience: Graduate

PEDIAT 941 – PEDIATRIC ALLERGY/IMMUNOLOGY ELECTIVE
2-4 credits.

Supervised activities include seeing patients in outpatient clinics, observing procedures and attending weekly pediatric allergy conferences. Hands-on clerkship experience in this sub-specialty involves both very common and uncommon diseases in pediatrics in allergy and immunology. Specific topics that are covered include food allergy, asthma, allergic rhinitis, atopic dermatitis, and primary immune deficiency. As these diseases are increasing in prevalence and have broad impacts on child health, this experience is ideal preparation for careers in pediatric and medical specialties, or surgical specialties.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Perform a hypothesis driven history and complete a targeted exam.
Audience: Graduate

2. Develop and present a weighted differential diagnosis.
Audience: Graduate

3. Using clinical evidence, adapt and justify the working diagnosis.
Audience: Graduate

4. Present a diagnostic plan including laboratory and imaging modalities.
Audience: Graduate

5. Correctly interpret imaging and laboratory findings and communicate results to patients and team members.
Audience: Graduate

6. Complete written documentation in a comprehensive, concise, accurate and timely manner.
Audience: Graduate

7. Review, interpret and present current literature to support patient care.
Audience: Graduate

8. Develop clinically relevant questions to advance learning.
Audience: Graduate

9. Communicate effectively with patients, families, physicians and non-physician team members.
Audience: Graduate

10. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care.
Audience: Graduate

11. Engage patients in shared decision making regarding tests, orders and procedures.
Audience: Graduate

12. Avoid medical jargon when communicating with patients and families.
Audience: Graduate

13. Recognize limitations and seek assistance as appropriate.
Audience: Graduate

14. Take an accurate exam and history pertaining to common allergic disorders (e.g. allergic rhinitis, drug allergy, food allergy) and asthma.
Audience: Graduate

PEDIAT 942 – PEDIATRIC COMPLEX CARE ELECTIVE
2-4 credits.

Under direct supervision by faculty, participate in medical co-management and care coordination for children with medical complexity. Multifaceted approach to learning about children with medical complexity, with focus on history and exam skills during scheduled maintenance and acute care visits. Pediatric ethics, organizing and maintaining accurate and up-to-date electronic medical records, documentation skills.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a hypothesis driven history and complete a targeted exam.
Audience: Graduate

2. Develop and present a weighted differential diagnosis.
Audience: Graduate

3. Using clinical evidence, adapt and justify the working diagnosis.
Audience: Graduate

4. Present a diagnostic plan including laboratory and imaging modalities.
Audience: Graduate

5. Correctly interpret imaging and laboratory findings and communicate results to patients and team members.
Audience: Graduate

6. Complete written documentation in a comprehensive, concise, accurate and timely manner.
Audience: Graduate

7. Review, interpret and present current literature to support patient care.
Audience: Graduate

8. Develop clinically relevant questions to advance learning.
Audience: Graduate

9. Communicate effectively with patients, families, physicians and non-physician team members.
Audience: Graduate

10. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care.
Audience: Graduate

11. Engage patients in shared decision making regarding tests, orders and procedures.
Audience: Graduate

12. Avoid medical jargon when communicating with patients and families.
Audience: Graduate

13. Recognize limitations and seek assistance as appropriate.
Audience: Graduate

14. Explore ambiguities in the ethics of caring for children with medical complexity.
Audience: Graduate

15. Demonstrate independent research skills and presentation abilities through a self-directed learning project.
Audience: Graduate

PEDIAT 943 – PEDIATRIC CARDIOLOGY ELECTIVE
2-4 credits.

Supervised by house staff and attending physicians activities include attending a variety of outpatient clinics with pediatric cardiologists, inpatient pediatric cardiology rounds and consults with the inpatient service team, observing various scheduled procedures (including echocardiography, ECG, cardiac catheterization, electrophysiology study), attending pediatric cardiology related conferences, presenting cases and teaching topics, and discussing patient cases.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a hypothesis driven history and complete a targeted exam.
Audience: Graduate

2. Develop and present a weighted differential diagnosis.
Audience: Graduate

3. Using clinical evidence, adapt and justify the working diagnosis.
Audience: Graduate

4. Present a diagnostic plan including laboratory and imaging modalities.
Audience: Graduate

5. Correctly interpret testing (i.e. ECG and echocardiogram) and communicate results to patients (once reviewed with cardiologist) and team members.
Audience: Graduate

6. Complete written documentation in a comprehensive, concise, accurate and timely manner.
Audience: Graduate

7. Review, interpret and present current literature to support patient care.
Audience: Graduate

8. Develop clinically relevant questions to advance learning.
Audience: Graduate

9. Communicate effectively with patients, families, physicians and non-physician team members.
Audience: Graduate

10. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care.
Audience: Graduate

11. Engage patients in shared decision making regarding tests, orders and procedures.
Audience: Graduate

12. Avoid medical jargon when communicating with patients and families.
Audience: Graduate

13. Recognize limitations and seek assistance as appropriate.
Audience: Graduate

PEDIAT 950 – PEDIATRIC ENDOCRINOLOGY AND DIABETES ELECTIVE
2-4 credits.

Supervised activities include interacting with patients primarily in outpatient (some inpatient) settings, performing histories and physical examinations and managing patients with supervision by our staff. Group and individual discussions concerning patients seen in both the outpatient and inpatient settings will occur.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a hypothesis driven history and complete a targeted exam.
Audience: Graduate

2. Develop and present a weighted differential diagnosis.
Audience: Graduate

3. Using clinical evidence, adapt and justify the working diagnosis.
Audience: Graduate

4. Present a diagnostic plan including laboratory and imaging modalities.
Audience: Graduate

5. Correctly interpret imaging and laboratory findings and communicate results to patients and team members.
Audience: Graduate

6. Complete written documentation in a comprehensive, concise, accurate and timely manner.
Audience: Graduate

7. Review, interpret and present current literature to support patient care.
Audience: Graduate

8. Develop clinically relevant questions to advance learning.
Audience: Graduate

9. Communicate effectively with patients, families, physicians and non-physician team members.
Audience: Graduate

10. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care.
Audience: Graduate

11. Engage patients in shared decision making regarding tests, orders and procedures.
Audience: Graduate

12. Avoid medical jargon when communicating with patients and families.
Audience: Graduate

13. Recognize limitations and seek assistance as appropriate.
Audience: Graduate

PEDIAT 953 – CLINICAL GENETICS ELECTIVE
2-4 credits.

Supervised activities include interacting with patients primarily in outpatient setting, participating in all clinics, rounds, consults and other components of the service. Active participation in patient evaluations and patient management is another component of this rotation.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a hypothesis driven history and complete a targeted exam.
Audience: Graduate

2. Develop and present a weighted differential diagnosis.
Audience: Graduate

3. Using clinical evidence, adapt and justify the working diagnosis.
Audience: Graduate

4. Present a diagnostic plan including laboratory and imaging modalities.
Audience: Graduate

5. Correctly interpret imaging and laboratory findings and communicate results to patients and team members.
Audience: Graduate

6. Complete written documentation in a comprehensive, concise, accurate and timely manner.
Audience: Graduate

7. Review, interpret and present current literature to support patient care.
Audience: Graduate

8. Develop clinically relevant questions to advance learning.
Audience: Graduate

9. Communicate effectively with patients, families, physicians and non-physician team members.
Audience: Graduate

10. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care.
Audience: Graduate

11. Engage patients in shared decision making regarding tests, orders and procedures.
Audience: Graduate

12. Avoid medical jargon when communicating with patients and families.
Audience: Graduate

13. Recognize limitations and seek assistance as appropriate.
Audience: Graduate

PEDIAT 956 – PEDIATRIC HEMATOLOGY-ONCOLOGY ELECTIVE
2-4 credits.

Supervised activities include attending pediatric hematology/oncology clinics, evaluating patients in the clinics and attending the weekly pediatric hematology/oncology conferences.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a hypothesis driven history and complete a targeted exam.
Audience: Graduate

2. Develop and present a weighted differential diagnosis.
Audience: Graduate

3. Using clinical evidence, adapt and justify the working diagnosis.
Audience: Graduate

4. Present a diagnostic plan including laboratory and imaging modalities.
Audience: Graduate

5. Correctly interpret imaging and laboratory findings and communicate results to patients and team members.
Audience: Graduate

6. Complete written documentation in a comprehensive, concise, accurate and timely manner.
Audience: Graduate

7. Review, interpret and present current literature to support patient care.
Audience: Graduate

8. Develop clinically relevant questions to advance learning.
Audience: Graduate

9. Communicate effectively with patients, families, physicians and non-physician team members.
Audience: Graduate

10. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care.
Audience: Graduate

11. Engage patients in shared decision making regarding tests, orders and procedures.
Audience: Graduate

12. Avoid medical jargon when communicating with patients and families.
Audience: Graduate

13. Recognize limitations and seek assistance as appropriate.
Audience: Graduate

PEDIAT 963 – PEDIATRIC NEPHROLOGY
2-4 credits.

Provides an in-depth introduction to a variety of kidney diseases, allowing students to build upon their ability to diagnose and treat complex pediatric and adolescent patients. Students will rotate through the American Family Children's Hospital inpatient nephrology service, outpatient nephrology clinic, and the inpatient dialysis unit. Two and four week rotations are available.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

PEDIAT 966 – PRIMARY CARE SPORTS MEDICINE ELECTIVE
2-4 credits.

Supervised activities include interacting with patients and Licensed Athletic Trainers, residents and primary care sports medicine fellow in various outpatient settings and participating in assigned sports medicine clinics. Participating in patient evaluations, patient management and attending the weekly Friday morning sports medicine conference are additional components of this rotation. Other opportunities may include observing or evaluating patients in other clinical situations including the McClain Center UW athlete clinics, high school game coverage, PT clinics, other orthopedic clinics.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a hypothesis driven history and complete a targeted exam.
Audience: Graduate

2. Develop and present a weighted differential diagnosis.
Audience: Graduate

3. Using clinical evidence, adapt and justify the working diagnosis.
Audience: Graduate

4. Present a diagnostic plan including laboratory and imaging modalities.
Audience: Graduate

5. Correctly interpret imaging and laboratory findings and communicate results to patients and team members.
Audience: Graduate

6. Complete written documentation in a comprehensive, concise, accurate and timely manner.
Audience: Graduate

7. Review, interpret and present current literature to support patient care.
Audience: Graduate

8. Develop clinically relevant questions to advance learning.
Audience: Graduate

9. Communicate effectively with patients, families, physicians and non-physician team members.
Audience: Graduate

10. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care.
Audience: Graduate

11. Engage patients in shared decision making regarding tests, orders and procedures.
Audience: Graduate

12. Avoid medical jargon when communicating with patients and families.
Audience: Graduate

13. Recognize limitations and seek assistance as appropriate.
Audience: Graduate

PEDIAT 967 – PEDIATRIC PULMONOLOGY ELECTIVE
2-4 credits.

Supervised activities include: attending outpatient clinics, rounding with inpatient attendings, attending weekly didactic and clinical conferences, observation of flexible bronchoscopies and participating in one-on-one tutorials.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a hypothesis driven history and complete a targeted exam.
Audience: Graduate

2. Develop and present a weighted differential diagnosis.
Audience: Graduate

3. Using clinical evidence, adapt and justify the working diagnosis.
Audience: Graduate

4. Present a diagnostic plan including laboratory and imaging modalities.
Audience: Graduate

5. Correctly interpret imaging and laboratory findings and communicate results to patients and team members.
Audience: Graduate

6. Complete written documentation in a comprehensive, concise, accurate and timely manner.
Audience: Graduate

7. Review, interpret and present current literature to support patient care.
Audience: Graduate

8. Develop clinically relevant questions to advance learning.
Audience: Graduate

9. Communicate effectively with patients, families, physicians and non-physician team members.
Audience: Graduate

10. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care.
Audience: Graduate

11. Engage patients in shared decision making regarding tests, orders and procedures.
Audience: Graduate

12. Avoid medical jargon when communicating with patients and families.
Audience: Graduate

13. Recognize limitations and seek assistance as appropriate.
Audience: Graduate

PEDIAT 970 – PEDIATRIC RHEUMATOLOGY ELECTIVE
2-4 credits.

Supervised activities include seeing patients in outpatient clinics, rounding with inpatient attendings, attending weekly pediatric rheumatology conferences, observing procedures and attending one-to-one tutorials.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a hypothesis driven history and complete a targeted exam.
Audience: Graduate

2. Develop and present a weighted differential diagnosis.
Audience: Graduate

3. Using clinical evidence, adapt and justify the working diagnosis.
Audience: Graduate

4. Present a diagnostic plan including laboratory and imaging modalities.
Audience: Graduate

5. Correctly interpret imaging and laboratory findings and communicate results to patients and team members.
Audience: Graduate

6. Complete written documentation in a comprehensive, concise, accurate and timely manner.
Audience: Graduate

7. Review, interpret and present current literature to support patient care.
Audience: Graduate

8. Develop clinically relevant questions to advance learning.
Audience: Graduate

9. Communicate effectively with patients, families, physicians and non-physician team members.
Audience: Graduate

10. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care.
Audience: Graduate

11. Engage patients in shared decision making regarding tests, orders and procedures.
Audience: Graduate

12. Avoid medical jargon when communicating with patients and families.
Audience: Graduate

13. Recognize limitations and seek assistance as appropriate.
Audience: Graduate

PEDIAT 971 – PEDIATRIC INFECTIOUS DISEASES
2-4 credits.

Students will round as members of the inpatient Pediatric Infectious Disease consult team. They will perform infectious disease focused history and physical examinations and participate in the development and communication of management recommendations. Students will also attend outpatient infectious disease clinics, case conferences, microbiology rounds and daily pediatric conferences including morning report, problem conference and grand rounds.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PEDIAT 973 – PEDIATRIC GASTROENTEROLOGY
2-4 credits.

Students will participate in pediatric gastroenterology outpatient clinics, round with inpatient faculty, attend pediatric gastroenterology conferences, attend daily pediatric conferences including morning report, case conferences, and grand rounds. Students will also be able to observe procedures in the operating room. Students will be responsible for a 20 minute case-based presentation at the end of the rotation.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PEDIAT 975 – DEVELOPMENTAL PEDIATRICS
2-4 credits.

An introduction to developmental pediatrics and the care of children with developmental disabilities. Students will rotate through a variety of clinics which will be tailored based on interest.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PEDIAT 990 – RESEARCH
1-12 credits.

Research and/or scholarly work (e.g. quality improvement, clinical case reports) supervised by faculty and/or staff member within the Department of Pediatrics with appropriate content expertise. A supervisor and project must be identified prior to requesting enrollment in this course.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PHARMACEUTICAL SCIENCES (PHM SCI)

PHM SCI 254 — TINY EARTH GENOMICS - RESEARCHING UNCULTURED ANTIBIOTIC-PRODUCING MICROBES
3 credits.

Collaborate on a research project from the conception of research questions through data analysis and the effective communication of results. Explore the biosynthesis of antibiotics and other small molecules by uncultured bacteria through the analysis of culture-independent DNA sequencing (metagenomics) data, learning about bioinformatics and genomics along the way. Make new discoveries of microbial species and biochemical pathways.
Requisites: ZOOLOGY/BIOLOGY 101, ZOOLOGY/BIOLOGY/BOTANY 151, MICROBIO 101, 303, or BIOCORE 381
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Navigate genomic databases to find required information and data
Audience: Undergraduate

2. Interpret results using available bioinformatic tools
Audience: Undergraduate

3. Formulate a research question and testable hypothesis
Audience: Undergraduate

4. Refute or support a hypothesis using evidence
Audience: Undergraduate

5. Interpret data and draw conclusions
Audience: Undergraduate

6. Communicate research design and results in written and oral forms
Audience: Undergraduate

PHM SCI 310 — DRUGS AND THEIR ACTIONS
2 credits.

Introduces students to the biological effects of drugs on human health. Emphasis on how drugs, especially those used in diseases of major human health significance, act in the body. Drugs that are abused also will be covered. This course is not intended for medical, nursing, pharmacy, and physician assistant students.
Requisites: Not open to students declared in the Nursing, Physician Assistant, or Doctor of Pharmacy programs
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Define basic principles of pharmacology including pharmacokinetics and pharmacodynamics
Audience: Undergraduate

2. Memorize examples of drugs, drug classes, and pharmacology of drugs used to treat various disease states including anxiety, depression, pain, schizophrenia, Alzheimer's disease, cancer, and infectious diseases
Audience: Undergraduate

3. Describe examples of drugs, drug classes, and pharmacology of drugs used for non-medical purposes including alcohol, caffeine, nicotine, barbiturates, amphetamine, marijuana, cocaine, and opiates
Audience: Undergraduate

4. Describe examples of drugs, drug classes, and pharmacology of drugs used as PEDs including anabolic steroids and blood doping drugs
Audience: Undergraduate

PHM SCI 420 – PHYSICOCHEMICAL PRINCIPLES OF DRUG FORMULATION AND DELIVERY
3 credits.

Applications of physicochemical principles to pharmaceutical systems.
Requisites: Declared in Doctor of Pharmacy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. State the major physical and chemical properties of drugs and excipients that influence the performance of drugs and dosage forms.
Audience: Graduate

2. Apply the different expressions for the concentrations and doses of drug products, and convert different expressions for concentrations and doses.
Audience: Graduate

3. Apply thermodynamic principles to important equilibria in pharmaceutical systems, including isotonicity, acid-base equilibrium, binding equilibrium, partition, hygroscopicity, and solubility.
Audience: Graduate

4. Propose procedures to prepare isotonic solutions and buffered solutions.
Audience: Graduate

5. Understand suspensions and colloids and their role in drug formulations
Audience: Graduate

6. Calculate the distribution of drugs between aqueous and lipid phases based on the principle of partition.
Audience: Graduate

7. Identify the different solid phases of the same drug and predict their impact on drug performance.
Audience: Graduate

8. Predict the aqueous solubility of drugs and its dependence on pH, common ions, and solid forms, and understand its impact on drug performance.
Audience: Graduate

9. Predict shelf life and suggest storage conditions from reaction rate constants and orders of reactions.
Audience: Graduate

10. State the major factors that influence the chemical stability of drugs (e.g., temperature, humidity, light, pH, oxygen, and free radicals) and the common reaction mechanisms (e.g., hydrolysis and oxidation), and propose approaches to stabilization and extending the expiration date of drug products (e.g., pH control, antioxidants, and packaging).
Audience: Graduate

PHM SCI/B M E 430 – BIOLOGICAL INTERACTIONS WITH MATERIALS
3 credits.

Addresses the range of materials currently being utilized for various biomedical applications, the biological systems governing biomaterial applications, analytical techniques pertinent to biomaterial evaluation, and selected major medical applications in which biomaterials play an important role.
Requisites: (ZOOLOGY/BIOLOGY 101 and 102, ZOOLOGY/BIOLOGY/BOTANY 151, ZOOLOGY 153, or BIOCORE 383) and (CHEM 341 or 343)
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Integrate biology, material science, and engineering
Audience: Undergraduate

2. Evaluate the design of materials for specific biomedical applications
Audience: Undergraduate

3. Formulate experimental designs and demonstrate data analyses to assess biological responses to materials
Audience: Undergraduate

4. Describe the clinical utility and limitations of various materials for specific biomedical applications
Audience: Undergraduate

5. Demonstrate practical understanding of biomaterial-based laboratory safety and techniques
Audience: Undergraduate

PHM SCI 432 – BIOCHEMICAL PRINCIPLES OF DRUG TREATMENT
3 credits.

Basic biochemistry as the biochemical basis for drug action. Focus on biopolymers (proteins, nucleic acids) as intended and unintended targets of current drug therapy and the major biochemical pathways in which they operate. Review of protein structure, enzymatic activity, metabolic pathways, membrane biochemistry, mechanism of drug action, DNA mutation and repair.
Requisites: Declared in Doctor of Pharmacy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Deduce aspects of protein structure and catalysis from kinetics and other data
Audience: Graduate

2. Summarize how nucleic acids are used to store information in living organisms, including the molecular mechanisms for replication and protein expression
Audience: Graduate

3. Apply knowledge of the pathways by which energy is derived from fats and carbohydrates to both the clinical progression of diabetes and its treatment
Audience: Graduate

4. Differentiate between the different methods of biosignaling, in terms of whether energy is required and whether molecules are physically moved through membrane barriers
Audience: Graduate

5. Integrate understanding of biochemical systems and the ways that drugs are able to target them to therapeutic effect
Audience: Graduate

PHM SCI 490 – SELECTED TOPICS IN PHARMACEUTICAL SCIENCES
1-4 credits.

Specialized subject matter of current interest to undergraduate and professional students.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023

PHM SCI 493 – SELECTED TOPICS IN PHARMACEUTICAL SCIENCES
1-4 credits.

Specialized subject matter of current interest to graduate students.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PHM SCI 510 – PHARMACOLOGY PRINCIPLES AND APPLICATIONS
2 credits.

Underlying science and pharmacological actions of drugs and the biological effects of drugs on human health. Covers drugs used to treat common illnesses and diseases as well as commonly abused drugs.
Requisites: Declared in Pharmacology and Toxicology BS. Not open to students with credit for PHM SCI 310.
Repeatable for Credit: No
Learning Outcomes: 1. Explain principles of pharmacology
Audience: Undergraduate

2. Apply chemistry and biology knowledge to pharmacokinetics and pharmacodynamics
Audience: Undergraduate

3. Identify types of drugs used to treat various disease states
Audience: Undergraduate

PHM SCI 521 – PHARMACOLOGY I
3 credits.

Pharmacological actions of important drugs, including drugs that affect the peripheral and central nervous systems.
Requisites: Declared in the Doctor of Pharmacy program with second year standing; or declared in Pharmacology and Toxicology BS, BIOCHEM 508, PATH 404, and (ANAT&PHY 335, 435, or BIOCORE 486)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the neurotransmitters of the central and autonomic nervous systems including their physiologic role, distribution, location, synthesis, storage, release, receptor activation and transmitter inactivation which may serve as sites for drug action
Audience: Undergraduate

2. Describe and differentiate the drug pharmacology of drugs that act in the central and autonomic nervous systems
Audience: Undergraduate

PHM SCI/PHMCOL-M 522 – PHARMACOLOGY II
3-4 credits.

Pharmacological actions of important drugs, including hematopoietic, thrombolytic, antihyperlipidemic, immunopharmacologic, anticancer, anti-inflammatory, diuretic, antihypertensive, antianginal, and anti-arrhythmic agents, and agents used to treat congestive heart failure.
Requisites: PHM SCI 521
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recall the names of different drugs, and be able to link these drug names to not only specific uses, but also to more general concepts about physiology, disease, and drug mechanism of action
Audience: Undergraduate

2. Describe and differentiate the pharmacology of drugs that act on organ systems, including the endocrine, gastrointestinal, cardiovascular, renal, hematopoietic, and immune systems
Audience: Undergraduate

PHM SCI 531 – MEDICINAL CHEMISTRY I
3 credits.

Basic concepts in the chemistry of small molecule medicinal products. Structure activity of cholinergic, adrenergic, serotonergic and dopaminergic agents, antidepressant, antianxiety drugs, opioids, and antihistamines. Overview of drug metabolism and the clinical effects of metabolic drug interactions and genetic variability in drug metabolism genes.
Requisites: PHM SCI 432
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify drugs, their therapeutic use, and side effects based on drug name and structure
Audience: Undergraduate

2. Use pharmacophoric drug models to predict potency, metabolism, or side effects
Audience: Undergraduate

3. Apply mechanisms of drug/xenobiotic biotransformation to parent drugs
Audience: Undergraduate

4. Explain factors affecting drug/xenobiotic metabolism in humans, including both environmental and genetic effects and the resulting clinical implications
Audience: Undergraduate

PHM SCI 532 – MEDICINAL CHEMISTRY II
2 credits.

Chemistry of medicinal products, including antihyperlipidemics, glucocorticoids, estrogens, progestins, nonsteroidal anti-inflammatories, antitumor agents, and enzyme inhibitors.
Requisites: PHM SCI 531
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain basic chemical principles as they apply to drug SAR
Audience: Undergraduate

2. Identify drug classes and origin based in part on drug structures
Audience: Undergraduate

3. Recognize the mechanism of drugs that act via enzyme inhibition
Audience: Undergraduate

4. Explain the difficulty of drug design in light of side effects and complexity of possible drug targets
Audience: Undergraduate

5. Apply the knowledge of structural modifications to enhance drug delivery via increased solubility, metabolic stability and bioavailability
Audience: Undergraduate

PHM SCI 540 – DRUG DELIVERY SYSTEMS FOR PHARMACOTHERAPY
3 credits.

A series of lectures by experts covering: i) introductory drug development and delivery system development processes; ii) various drug delivery routes (oral, topical, rectal, vaginal, urethral, nasal, and pulmonary); iii) various delivery systems (conventional, ophthalmic, CNS, and recent advances); iv) delivery systems related to biofilms, infection, and vaccines.
Requisites: Declared in the Doctor of Pharmacy program with second year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe theories, approaches, concepts, and current research findings in the area of drug delivery.
Audience: Graduate

2. Apply knowledge of drug development, dissolution, and dosage forms to delivery systems.
Audience: Graduate

3. Identify the characteristics of various common dosage forms and describe/recognize/explain how composition impacts drug release, stability, and bioavailability.
Audience: Graduate

4. Demonstrate, using knowledge of mathematics, chemistry, and biology, concepts of solubility, stability, drug release, dissolution, diffusion, partitioning, dose, absorption, and disposition as related to pharmacology and pharmacokinetics.
Audience: Graduate

5. Demonstrate underlying principles of advanced drug delivery systems which are either entering clinical practice or on the advanced stage in clinical trials/development phase.
Audience: Graduate

6. Identify the rationale for therapeutic use, administration route, formulation, and manufacture of common dosage forms.
Audience: Graduate

7. Utilize proper techniques and skills to be able to advise patients and health care professionals on drug storage, handling, and administration, as well as be able to identify factors that influence bioavailability and related safety issues.
Audience: Graduate

8. Demonstrate professional and ethical responsibility.
Audience: Graduate

PHM SCI 541 – PHARMACEUTICAL CALCULATIONS, DISPENSING AND COMPOUNDING
3 credits.

Introductory laboratory course in compounding and dispensing of pharmaceutical dosage forms, including sterile products. Includes practice in interpretation of prescription orders, pharmaceutical calculations, compounding procedures, physical manipulation of drugs and dosage form components, and product packaging and labeling.
Requisites: PHM SCI 420
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Read and accurately interpret prescription and medication orders
Audience: Undergraduate

2. Correctly identify, interpret and utilize for calculation, the information presented in a written problem, a prescription or medication order, and directions taken from the labeling of a container
Audience: Undergraduate

3. Accurately calculate the quantities needed to compound a dosage form, the dosage of ingredients, and the amount of any drug source required to fulfill the dosing needs of the patient
Audience: Undergraduate

4. Know the dimensions or units of measurements for drugs and chemicals, expressions of quantity and concentration for drug products and preparations, and appropriate methods of expressing doses and dosing regimens for patients
Audience: Undergraduate

5. Perform the accepted techniques used for extemporaneous compounding of non-sterile drug products
Audience: Undergraduate

6. Identify the physical and chemical properties of drugs, pharmaceutical necessities, excipients, and dosage forms, and practice with handling and manipulating them
Audience: Undergraduate

7. Use a variety of pharmacy references for determining appropriate doses and dosage regimens, and drug delivery systems
Audience: Undergraduate

PHM SCI 542 – PARENTERAL THERAPY AND NUTRITION
3 credits.

An introduction to parenteral therapy and nutrition focusing on the fundamental properties, calculations involved and the methods to prepare safe and reliable injectable medications for patients.
Requisites: PHM SCI 541 and concurrent registration in PHM SCI 540
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Become proficient in solving mathematical problems for determining appropriate dosing of medications, for compounding prescription orders, and for providing safe and accurate drug therapy for patients
Audience: Undergraduate

2. Improve compounding skills and ability to critically analyze prescription and medication orders for compounded drug preparations
Audience: Undergraduate

3. Develop competence in aseptic processing and in dealing with intravenous solutions, IV admixtures, reconstitution of parenterals and total parenteral nutrition solutions
Audience: Undergraduate

4. Utilize pharmacy reference books to determine which references to use for specific problems or questions
Audience: Undergraduate

5. Illustrate practical aspects of compatibility and stability of compounded prescriptions and parenteral products, including the application of scientific principles, legal standards, and use of published literature in assigning beyond-use dates to drug preparations
Audience: Undergraduate

6. Explain the pharmacists' responsibility for handling and dispensing quality pharmaceutical drug products and preparations as promulgated in the USP
Audience: Undergraduate

PHM SCI 558 – LABORATORY TECHNIQUES IN PHARMACOLOGY AND TOXICOLOGY
2 credits.

Basic laboratory techniques employed in pharmacological and toxicological research.
Requisites: Declared in the Pharmacology and Toxicology undergraduate program
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate procedural knowledge of general laboratory skills
Audience: Undergraduate

2. Explain the processes and applications related to science subjects
Audience: Undergraduate

3. Handle basic scientific equipment carefully and correctly
Audience: Undergraduate

4. Demonstrate a scientific understanding of molecular biological concepts
Audience: Undergraduate

5. Coherently convey scientific data and results in a written report
Audience: Undergraduate

6. Define principles of evidence-based date interpretation and scientific integrity
Audience: Undergraduate

PHM SCI 581 – MOLECULAR AND CELLULAR PRINCIPLES IN PHARMACOLOGY
4 credits.

In-depth introduction to the molecular and cellular principles of pharmacology. Emphasis on the mechanisms of drug and small molecule action in cells, with a focus on downstream signaling pathways, second messenger systems, protein kinase cascades, and the regulation of gene transcription.
Requisites: Declared in Pharmacology and Toxicology BS, BIOCHEM 508, PATH 404, and (ANAT&PHY 335, 435, or BIOCORE 486)
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize the fundamental principles of drug actions at their target sites (e.g. receptors, enzymes, etc.)
Audience: Undergraduate

2. Recognize the various mechanisms by which drugs can mediate their pharmacological effect.
Audience: Undergraduate

3. Describe how drugs mimic or modify physiological function, including the various actions and clinical uses.
Audience: Undergraduate

4. Describe the major classes of therapeutic drugs that affect the primary systems within the body.
Audience: Undergraduate

5. Choose a relevant experimental system to test experimental hypotheses (e.g. in vitro or in vivo; animal species, etc.)
Audience: Undergraduate

6. Design experiments which are properly controlled and which use appropriate statistical methods of data analysis.
Audience: Undergraduate

PHM SCI 623 – PHARMACOLOGY III
3 credits.

Pharmacological actions and underlying basic and clinical science of antimicrobial and antiviral drugs. Pharmacology of hormones and other drugs affecting the endocrine system.
Requisites: PHM SCI/PHMCOL-M 522
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Classify the physiologic and pathophysiologic features of the human endocrine system and the pancreas
Audience: Undergraduate

2. Connect the drugs/drug classes to the pharmacology of drugs used to manage diseases relating to the functions of the endocrine pancreas
Audience: Undergraduate

3. Classify physiologic and pathophysiologic features of the human thyroid gland
Audience: Undergraduate

4. Connect the drugs/drug classes to the pharmacology of drugs used to manage diseases relating to the functions of the thyroid gland
Audience: Undergraduate

5. Classify the physiologic and pathophysiologic features of endocrine sex hormones and human reproduction
Audience: Undergraduate

6. Connect the drugs/drug classes to the pharmacology of drugs used to manage diseases and/or functions of the human reproductive tract
Audience: Undergraduate

7. Describe the physiologic and pathophysiologic features of Calcium Homeostasis
Audience: Undergraduate

8. Connect the drugs/drug classes to the pharmacology of drugs used to manage diseases relating to imbalances of Calcium Homeostasis
Audience: Undergraduate

PHM SCI/M&ENVTOX/ONCOLOGY/PHMCOL-M/POP HLTH 625 – TOXICOLOGY I
3 credits.

Basic principles of toxicology and biochemical mechanisms of toxicity in mammalian species and man. Correlation between morphological and functional changes caused by toxicants in different organs of the body.
Requisites: (BIOCHEM 501 or 508) and (ANAT&PHY 335, 435, or (BIOCORE 485 and 486)) and PATH 404; or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss the physiology and pathology of toxicology, understanding the basicfundamentals of toxicology and toxic agents
Audience: Both Grad & Undergrad

2. Demonstrate metabolism and breakdown of toxicants using a given dataset
Audience: Both Grad & Undergrad

3. Recognize various experimental models to obtain scientific results
Audience: Both Grad & Undergrad

4. Implement knowledge to design experiments applicable to one's own research
Audience: Both Grad & Undergrad

5. Critique an example of toxicology in media and develop a presentation of this example
Audience: Both Grad & Undergrad

6. Explore new areas to assist in career development via journal club
Audience: Graduate

PHM SCI/M&ENVTOX/PATH/PHMCOL-M/POP HLTH 626 – TOXICOLOGY II
3 credits.

Survey of the basic methods and fundamental biochemical mechanisms of toxicity. Toxicity in mammalian organ systems, techniques for evaluating toxicity, as well as mechanisms of species specificity, and environmental interactions (with toxicant examples) are presented.
Requisites: POP HLTH/M&ENVTOX/ONCOLOGY/PHM SCI/PHMCOL-M 625
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain and identify the effects of toxicants on specific organs within the human body
Audience: Both Grad & Undergrad

2. Demonstrate metabolism and reactions of toxicants within organ systems using a given dataset
Audience: Both Grad & Undergrad

3. Classify different means of risk assessment and the conceptual rationale behind these methods
Audience: Both Grad & Undergrad

4. Implement knowledge to design experiments applicable to one's own research
Audience: Both Grad & Undergrad

5. Relate specific organ concepts with conceptual examples from M&ENVTOX 625 to enhance scientific understanding
Audience: Undergraduate

6. Appraise concepts to research to identify future research concepts.
Audience: Graduate

PHM SCI 679 – PHARMACOLOGY AND TOXICOLOGY SEMINAR
1 credit.

Senior student presentations of independent research or of published papers on a specific topic approved by the course coordinator. Faculty-led seminars on selected topics regarding responsible conduct of research. The course also provides a venue for career talks by Pharmacology and Toxicology alumni and guests working in a variety of professional settings - research, industry (pharmaceutical; biotech; contract research; consumer products; etc.), a variety of healthcare professions, and law.
Requisites: Declared in the Pharmacology and Toxicology undergraduate program
Repeatable for Credit: Yes, for 2 number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Design and give a verbal scientific presentation that explains the scientific method as it applies to a real-life research project
Audience: Undergraduate

2. Identify and appraise strengths and weaknesses of scientific presentations
Audience: Undergraduate

PHM SCI 680 – PRINCIPLES OF PHARMACEUTICAL SCIENCES
3 credits.

Learn about essential components of drug development and cutting-edge research in drug discovery, drug action, and drug delivery. Focus on useful and practical information and essential underpinnings in chemistry, biology, physical chemistry, and engineering.
Requisites: (BIOCHEM 508 and declared in Pharmacology and Toxicology BS) or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge in a diverse range of drug discovery areas, both from academic and industry settings
Audience: Both Grad & Undergrad

2. Identify mechanisms of action for major drug targets, with emphasis on receptor proteins that constitute targets for a majority of FDA-approved drugs
Audience: Both Grad & Undergrad

3. Explain model systems and methods used for discovery of novel drug targets
Audience: Both Grad & Undergrad

4. Demonstrate knowledge of the basic principles of drug formulation and delivery
Audience: Both Grad & Undergrad

5. Demonstrate knowledge of the current research in drug delivery
Audience: Both Grad & Undergrad

6. Apply knowledge to solve related problems in drug discovery
Audience: Graduate

PHM SCI 691 – SENIOR THESIS
2 credits.

Individual study for seniors completing theses as arranged with a faculty member.
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Fall 2023

PHM SCI 692 – SENIOR THESIS
2 credits.

Individual study for seniors completing theses as arranged with a faculty member.
Requisites: Consent of instructor
Repeatable for Credit: No
Last Taught: Spring 2024

PHM SCI 699 – ADVANCED INDEPENDENT STUDY
0-3 credits.

Directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PHM SCI 751 – INTRODUCTION TO REGULATORY PRACTICE
3 credits.

Identifies and examines the key regulatory agencies and practices that govern the highly regulated and diverse pharmaceutical industry. Highlights current and emerging FDA and ICH regulations and guidance documents to successfully navigate meeting with the agencies and to submit required documentation for successful product development.
Requisites: Declared in MS Pharmaceutical Sciences or Capstone Certificate in Applied Drug Development
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the laws and regulations associated with drugs, biologics, and medical devices in the United States.
Audience: Graduate

2. Justify the importance of regulatory affairs in Life Sciences.
Audience: Graduate

3. Develop a meeting and communication strategy for interacting with the FDA and submitting appropriate documentation
Audience: Graduate

4. Analyze the regulations that impact drug and biologics development, dietary supplements, medical devices, and diagnostics.
Audience: Graduate

5. Analyze and compare nonclinical and clinical product development.
Audience: Graduate

PHM SCI 752 – GXP (GOOD PRACTICE): WORKING IN A REGULATED ENVIRONMENT
3 credits.

The pharmaceutical and biopharmaceutical industries have strict documentation and production requirements. Prepares the learner to work in a regulated environment. Explains roles and responsibilities across multiple disciplines and proper documentation practices. Prepares learner for protocol, report creation and audit responses. Discusses specifications, guidances and root-cause analysis.
Requisites: Declared in MS Pharmaceutical Sciences or Capstone Certificate in Applied Drug Development
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the laws, processes, and regulations associated with drugs, biologics, and medical devices in the United States.
Audience: Graduate

2. Articulate and apply quality based systems in a GxP regulated environment.
Audience: Graduate

3. Explain and analyze when and how the GxP requirements are applied over the course of the product life cycle.
Audience: Graduate

4. Identify the key factors in GxP facility and equipment design, qualification, and maintenance.
Audience: Graduate

5. Identify the key elements required to operate a compliant control laboratory.
Audience: Graduate

PHM SCI 753 – PROJECT MANAGEMENT IN DRUG DEVELOPMENT
3 credits.

Key concepts and body of knowledge of Project Management (PM) applied to the specifics of the drug development process. PM theory and language. The life cycle of a project: Initiating, Planning, Executing, Monitoring and Control, and Closing. Predictive, adaptive and hybrid PM frameworks and tools. Project Charter, statement-of-work, scope of work, work-breakdown structure, project network and timelines. Critical path method and earned value analysis to adjust schedules, allocate resources, and implement corrective actions. Risk management in pharmaceutical projects. An overview of documents management and decision-making strategies.
Requisites: Declared in MS Pharmaceutical Sciences, Capstone Certificate in Applied Drug Development, or Capstone Certificate in Psychoactive Pharmaceutical Investigation
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the concepts, principles and language of PM and its impact and role in the pharmaceutical industry.
Audience: Graduate

2. Describe the functions of a Project Manager in general and within the drug development process (pre-clinical and clinical phases).
Audience: Graduate

3. Compare and contrast different frameworks and tools of PM to make informed decisions on tailoring the PM approach to suit the project needs.
Audience: Graduate

4. Develop a project charter, statement-of-work, scope of work, work-breakdown structure, a resource-loaded timeline, and a project plan.
Audience: Graduate

5. Apply the critical path method and earned-value analysis to track progress and forecast outcomes against a project's plan baseline.
Audience: Graduate

6. Weight proper corrective measures according to earned-value analysis forecast methods, to ensure a project's outcomes and deliverables.
Audience: Graduate

7. Implement risk identification, mitigation and management strategies during project planning (pre-mortem), life cycle, and project closeout (post-mortem).
Audience: Graduate

8. Consolidate the PM concepts and principles studied during the course by developing a Project Plan as Final Project.
Audience: Graduate

PHM SCI 754 – BUSINESS TOOLS FOR PHARMACEUTICAL SCIENTISTS
3 credits.

Explores business aspects of pharmaceutical product development and post-approval product maturation. Covers startup financing, risk management, intellectual property considerations, supply chain management, and strategic decision-making, as applied to both large and small pharmaceutical companies.
Requisites: Declared in Pharmaceutical Sciences MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify the essential features of a well-constructed life cycle management plan for different types of pharmaceutical products (small molecules, biologics, in vitro diagnostics, and medical devices).
Audience: Graduate

2. Analyze the elements of business development for a novel therapeutic and contrast the differences between a startup effort vs. one from an established company.
Audience: Graduate

3. Describe the key business considerations involved in pharmaceutical product development.
Audience: Graduate

4. Justify strategies for mitigating scientific and business risks.
Audience: Graduate

5. Predict and evaluate how different market forces and business decisions impact supply chains.
Audience: Graduate

6. Explain the role of intellectual property during pharmaceutical product development and post-approval lifecycle.
Audience: Graduate

PHM SCI 755 – LABORATORY AND INSTRUMENTATION METHODS
3 credits.

Teaches the theory and application of many common laboratory techniques and instruments used in drug discovery and development. Includes a laboratory component to teach safety and basic techniques necessary for working in a lab. Instruction begins with basic techniques and builds upon these techniques to instruct in proper sample preparation and handling for analysis using a variety of analytical instrumentation.
Requisites: Declared in the MS Pharmaceutical Sciences: Applied Drug Development
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Practice good laboratory techniques including proper handling of instrumentation, aseptic methods, and record keeping
Audience: Graduate

2. Explain the fundamentals of DNA science and be able to isolate genomic DNA and perform allelic discrimination
Audience: Graduate

3. Describe the fundamentals of chromatography and be able to apply them to small molecule analysis
Audience: Graduate

4. Practice routine cell culture techniques including aseptic methods, passaging cells and performing routine toxicity assays
Audience: Graduate

5. Know the different methods to quantify and visualize protein and be able to quantify and visualize proteins in biological samples
Audience: Graduate

6. Recognize the basic mechanisms of cellular toxicity and be able to measure toxic effects of compounds on cells grown in culture
Audience: Graduate

7. Describe the fundamentals of mass spectrometry and be able to apply these to both small molecules and proteins
Audience: Graduate

PHM SCI 756 – INTRODUCTION TO DATA ANALYSES IN DRUG DEVELOPMENT
3 credits.

Provides a high-level overview of how data analysis techniques augment the drug discovery and development process. Focuses on project-based skills-building through the application of industry-standard software and use of public databases. Explores best practices for data processing and management to ensure experimental reproducibility. Develops troubleshooting skills through critical evaluation of data analysis results and root cause analysis.
Requisites: Declared in MS Pharmaceutical Sciences: Applied Drug Development
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify relevant software platforms, programming tools, and databases relevant to various drug development tasks.
Audience: Graduate

2. Apply best practices, critical thinking skills, and troubleshooting techniques to data analysis projects.
Audience: Graduate

3. Complete data analysis projects representative of those used in drug target characterization.
Audience: Graduate

4. Analyze large high throughput screening (HTS) datasets to confirm positive hits and identify common issues that arise in these datasets.
Audience: Graduate

5. Perform chemical similarity searches and hits triage by applying industry-standard tools and practices.
Audience: Graduate

6. Conduct physiologically-based pharmacokinetic (PBPK) modeling and simulation projects using industry-standard software packages.
Audience: Graduate

PHM SCI 757 – INTRODUCTION TO DRUG DEVELOPMENT
2 credits.

Scientific process of drug development from discovery through clinical trials. Brief history of drug development, along with an overview of drug discovery, preclinical, and clinical activities that take place during development. Application to real-world drug development scenarios and challenges, especially as they apply to development of drugs to treat neurological diseases.
Requisites: Declared in MS Pharmaceutical Sciences: Psychoactive Pharmaceutical Investigation
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Provide historical context for the modern drug discovery and development process.
Audience: Graduate

2. Describe the high-level goals and activities that take place during discovery, preclinical development, and clinical development and the different functional areas that perform this work.
Audience: Graduate

3. Apply the knowledge learned throughout the course to address specific drug development scenarios.
Audience: Graduate

4. Propose novel strategies to address current drug development challenges.
Audience: Graduate

5. Evaluate scientific literature and regulatory documents to find important information about specific drugs.
Audience: Graduate

PHM SCI 759 – CURRENT TRENDS IN DRUG DISCOVERY AND DEVELOPMENT
1 credit.

Provides the experience and skill to find, read and critically analyze scientific and regulatory literature in the field of drug discovery and development.
Requisites: Declared in MS Pharmaceutical Sciences or Capstone Certificate in Psychoactive Pharmaceutical Investigation
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Know where to search for appropriate primary literature and guidance documents associated with drug discovery and development
Audience: Graduate

2. Critically analyze primary research literature and guidance documents in the field of drug discovery and development and neuroscience
Audience: Graduate

3. Succinctly and accurately communicate the merits and limitations of primary drug discovery and development research publications and guidance documents
Audience: Graduate

PHM SCI 760 – SUMMATIVE RESEARCH INTERNSHIP
3-4 credits.

Summation of core coursework to a real-world project and/or internship experience. Synthesis of knowledge, skills and abilities to demonstrate aptitude for careers in respective industries.
Requisites: Declared in MS Pharmaceutical Sciences
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Demonstrate critical knowledge and in-depth understanding of principles in pharmaceutical sciences and its application in drug development.
Audience: Graduate

2. Identify important research questions, formulate testable hypotheses, design experiments to test those hypotheses and use appropriate statistical methods for analyzing data
Audience: Graduate

3. Conduct research that contributes to the student's field of study
Audience: Graduate

4. Communicate technical knowledge and research results effectively to a range of audiences
Audience: Graduate

5. Apply ethical principles in all work in both independent and collaborative settings
Audience: Graduate

6. Demonstrate comprehension of business principles and the ability to apply them to the pharmaceutical industry
Audience: Graduate

PHM SCI 761 – INTRODUCTION TO PHARMACOLOGY
1 credit.

Introduction to basic concepts of drug delivery and action, methods used to study drug action. Includes a brief survey of drugs acting on the cardiovascular system, the central nervous system and other drug targets.
Requisites: Declared in MS Pharmaceutical Sciences: Applied Drug Development
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe how different dosage forms of drugs are used to deliver drugs to specific organs and sites of action and how drugs are removed from the body.
Audience: Graduate

2. Identify how drugs interact with specific target receptors to produce physiological responses, including desired and undesired effects.
Audience: Graduate

3. Analyze how microbes such as viruses and bacteria evade drug treatment.
Audience: Graduate

4. Specify how drugs are used to affect the cardiovascular system.
Audience: Graduate

5. Specify how drugs are used to treat disorders of the CNS.
Audience: Graduate

6. Explain how "drugable targets" have been used to create new drugs.
Audience: Graduate

PHM SCI 762 – THE DRUG DEVELOPMENT PROCESS FROM DISCOVERY TO INVESTIGATIONAL NEW DRUG APPLICATION (IND)
3 credits.

Overview of the drug development process from discovery to investigational new drug application (IND). Drug discovery (target identification, target validation, and hit-to-lead) preclinical CMC activities, and preclinical pharmacology, pharmacokinetic, and toxicology studies as they apply to both small and large molecule drugs.
Requisites: Declared in Pharmaceutical Sciences: Applied Drug Development MS or Capstone Certificate in Applied Drug Development
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the phases of drug development from target discovery to investigational new drug (IND) submission and the different functional areas involved.
Audience: Graduate

2. Explain how target pharmacology and drug safety are assessed using both in vitro and in vivo preclinical models.
Audience: Graduate

3. Explain the chemistry, manufacturing, and controls (CMC) activities that take place during discovery and preclinical development.
Audience: Graduate

4. Apply the knowledge learned throughout the course to address specific drug development challenges and propose novel solutions.
Audience: Graduate

5. Evaluate how preclinical development might differ between small molecule drugs and protein therapeutics.
Audience: Graduate

6. Create a preclinical drug development strategy for a specific drug modality and disease combination.
Audience: Graduate

PHM SCI 763 – THE DRUG DEVELOPMENT PROCESS FROM FIH TO BLA/NDA
3 credits.

Overview of the drug development process from first-in-human (FIH) to submission of a new drug application (NDA) or biologics license application (BLA). Phases of clinical development and the role of biomarkers, companion diagnostics, statistical analysis, and CMC in clinical trials. Both small molecule and protein therapeutics will be addressed.
Requisites: Declared in MS Pharmaceutical Sciences: Applied Drug Development or Capstone Certificate in Applied Drug Development
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the phases of drug development from first-in-human (FIH) studies to NDA/BLA submission and the different functional areas involved.
Audience: Graduate

2. Explain the goals, expectations, and objectives for the different phases of clinical development and describe innovative trial design
Audience: Graduate

3. Define a biomarker, a companion diagnostic, and a statistical analysis plan (SAP) and describe the important elements of all three.
Audience: Graduate

4. Explain the chemistry, manufacturing, and controls (CMC) activities that take place during clinical phases of drug development and pre-launch.

Audience: Graduate

5. Apply the knowledge learned throughout the course to address specific drug development challenges and propose novel solutions.
Audience: Graduate

6. Evaluate how clinical trial design and execution might differ between different therapeutic areas and between small molecule drugs and protein therapeutics.
Audience: Graduate

7. Create a clinical development strategy for a specific drug modality and disease combination.
Audience: Graduate

PHM SCI/CHEM 766 – MOLECULAR RECOGNITION
2-3 credits.

Origin, nature, classification, and description of intermolecular forces. The hydrophobic effect. Molecular complexes, binding constants, and their measurements. General principles of self-assembly, molecular recognition, complex formation, host design. Supramolecular systems and their dynamics. Micelles, bilayers, vesicles, biological membranes.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

PHM SCI 768 – PHARMACOKINETICS
3 credits.

Quantitative aspects of drug absorption, distribution, metabolism, and excretion. Philosophy and applications of pharmacokinetic modeling and its use in clinical practice.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze and interpret pharmacokinetic profiles following different routes of drug administration and differing dosing regimens
Audience: Graduate

2. Conduct a noncompartmental pharmacokinetic analysis and interpret resulting pharmacokinetic parameter data in context of fundamental pharmacokinetic principles learned
Audience: Graduate

3. Identify the key features of clinical pharmacology studies and how this data will be used to inform drug labeling
Audience: Graduate

4. Describe the importance of a statistical analysis plan and implement key information that should be included
Audience: Graduate

5. Demonstrate their understanding of pharmacokinetic concepts by application to review, analysis, interpretation and reporting from example clinical study data
Audience: Graduate

6. Utilize industry standard software (e.g. Phoenix, R) to review, analyze and report clinical study data
Audience: Graduate

7. Identify regulatory requirements for reporting pharmacokinetic data
Audience: Graduate

8. Describe population pharmacokinetics and physiologically based pharmacokinetic modeling and demonstrate how these approaches may be used in drug development
Audience: Graduate

PHM SCI 773 – MOLECULAR SOLIDS
2-3 credits.

Science and technology of molecular solid materials with applications in medicine, food, energetic materials, and organic electronics.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Identify the molecules in molecular solids, including the active pharmaceutical ingredients
Audience: Graduate

2. Use molecular structures to predict solid-state properties
Audience: Graduate

3. Solve crystal structures and use the information to predict the properties of crystals
Audience: Graduate

4. Describe the elemental steps of crystallization and their distinct kinetics and use the information to control a crystallization process
Audience: Graduate

5. Identify, discover and predict crystal polymorphs and predict the effect of polymorphism on material properties, including dissolution and bioavailability
Audience: Graduate

6. Predict aqueous solubility and its dependence on pH, complexing agents, common ions, and solid forms, and understand its impact on drug performance
Audience: Graduate

7. Prevent crystallization and prepare amorphous solids and glasses and describe areas of applications where amorphous materials outperform crystalline materials
Audience: Graduate

8. Design strategies to stabilize molecular solid materials against physical and chemical changes
Audience: Graduate

PHM SCI 775 – POLYMERIC DRUG DELIVERY
3 credits.

Introduces synthetic and biological polymers applied for drug targeting and controlled drug release, focusing on injectable drugs, including biologics.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Classify polymeric drug delivery systems.
Audience: Graduate

2. Differentiate bioconjugation, complexation and encapsulation.
Audience: Graduate

3. Describe major sterile product requirements.
Audience: Graduate

4. Differentiate major mechanisms of drug release.
Audience: Graduate

5. Relate physicochemical properties to biodistribution, metabolism, and clearance.
Audience: Graduate

6. Predict rates of drug absorption after SC injection.
Audience: Graduate

7. Describe peptide long-acting injectables.
Audience: Graduate

8. Describe antibody-drug conjugates.
Audience: Graduate

PHM SCI 786 – NATURAL PRODUCT SYNTHESIS, BIOSYNTHESIS AND DRUG DISCOVERY
3 credits.

Synthesis and biosynthesis of natural products in drug discovery. Topics include: natural products in drug discovery; biosynthetic pathways and synthetic strategies for major natural product classes; and basic bioorganic chemistry and enzyme mechanisms in biosynthesis.
Requisites: CHEM 345 and BIOCHEM 508
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

PHM SCI 931 – PHARMACEUTICAL SCIENCES SEMINAR
1 credit.

Weekly series that provides exposure to a diverse array of research topics. Students enroll in one of three sections, corresponding to their research core (Drug Action, Drug Discovery, or Drug Delivery). Students in their 2nd year and beyond present their research progress or review literature. The course includes talks from nationally and internationally recognized scientists from academia and industry.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Evaluate how important research questions are identified, hypotheses are formulated, and experiments are designed to test those hypotheses by attending the research presentations of fellow students and outside invited seminar speakers and will use this knowledge to shape their own research ideas
Audience: Graduate

2. Communicate scientific knowledge and research ideas, methodology, models, and results effectively to a range of audiences by presenting a seminar of their original research (in either 931 or 932) with relevant background information and by incorporating changes to their slide design and/or presentation style as they receive feedback from faculty and students
Audience: Graduate

3. Evaluate how existing principles in pharmaceutical sciences intersect with cutting edge research by asking seminar-specific questions and participating in discussions in civil, constructive ways
Audience: Graduate

PHM SCI 932 – PHARMACEUTICAL SCIENCES SEMINAR
1 credit.

Weekly series that provides exposure to a diverse array of research topics. Students enroll in one of three sections, corresponding to their research core (Drug Action, Drug Discovery, or Drug Delivery). Students in their 2nd-year and beyond present their research progress or review literature. The course includes talks from nationally and internationally recognized scientists from academia and industry.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Evaluate how important research questions are identified, hypotheses are formulated, and experiments are designed to test those hypotheses by attending the research presentations of fellow students and outside invited seminar speakers and will use this knowledge to shape their own research ideas
Audience: Graduate

2. Communicate scientific knowledge and research ideas, methodology, models, and results effectively to a range of audiences by presenting a seminar of their original research (in either 931 or 932) with relevant background information and by incorporating changes to their slide design and/or presentation style as they receive feedback from faculty and students
Audience: Graduate

3. Evaluate how existing principles in pharmaceutical sciences intersect with cutting edge research by asking seminar-specific questions and participating in discussions in civil, constructive ways
Audience: Graduate

PHM SCI 990 – RESEARCH
1-12 credits.

Independent research and writing for graduate and students under the supervision of a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PHM SCI 999 – ADVANCED INDEPENDENT STUDY
1-12 credits.

Directed study projects for graduate students as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PHARMACOLOGY (PHMCOL-M)

PHMCOL-M/PHM SCI 522 – PHARMACOLOGY II
3-4 credits.

Pharmacological actions of important drugs, including hematopoietic, thrombolytic, antihyperlipidemic, immunopharmacologic, anticancer, anti-inflammatory, diuretic, antihypertensive, antianginal, and anti-arrhythmic agents, and agents used to treat congestive heart failure.
Requisites: PHM SCI 521
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recall the names of different drugs, and be able to link these drug names to not only specific uses, but also to more general concepts about physiology, disease, and drug mechanism of action
Audience: Undergraduate

2. Describe and differentiate the pharmacology of drugs that act on organ systems, including the endocrine, gastrointestinal, cardiovascular, renal, hematopoietic, and immune systems
Audience: Undergraduate

PHMCOL-M/B M E/MED PHYS/PHYSICS/RADIOL 619 – MICROSCOPY OF LIFE
3 credits.

Survey of state of the art microscopic, cellular and molecular imaging techniques, beginning with subcellular microscopy and finishing with whole animal imaging.
Requisites: PHYSICS 104, 202, 208, or 248 or PHYSICS/MED PHYS 265
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PHMCOL-M/M&ENVTOX/ONCOLOGY/PHM SCI/POP HLTH 625 – TOXICOLOGY I
3 credits.

Basic principles of toxicology and biochemical mechanisms of toxicity in mammalian species and man. Correlation between morphological and functional changes caused by toxicants in different organs of the body.
Requisites: (BIOCHEM 501 or 508) and (ANAT&PHY 335, 435, or (BIOCORE 485 and 486)) and PATH 404; or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss the physiology and pathology of toxicology, understanding the basicfundamentals of toxicology and toxic agents
Audience: Both Grad & Undergrad

2. Demonstrate metabolism and breakdown of toxicants using a given dataset
Audience: Both Grad & Undergrad

3. Recognize various experimental models to obtain scientific results
Audience: Both Grad & Undergrad

4. Implement knowledge to design experiments applicable to one’s own research
Audience: Both Grad & Undergrad

5. Critique an example of toxicology in media and develop a presentation of this example
Audience: Both Grad & Undergrad

6. Explore new areas to assist in career development via journal club
Audience: Graduate

PHMCOL-M/M&ENVTOX/PATH/PHM SCI/POP HLTH 626 – TOXICOLOGY II
3 credits.

Survey of the basic methods and fundamental biochemical mechanisms of toxicity. Toxicity in mammalian organ systems, techniques for evaluating toxicity, as well as mechanisms of species specificity, and environmental interactions (with toxicant examples) are presented.
Requisites: POP HLTH/M&ENVTOX/ONCOLOGY/PHM SCI/PHMCOL-M 625
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain and identify the effects of toxicants on specific organs within the human body
Audience: Both Grad & Undergrad

2. Demonstrate metabolism and reactions of toxicants within organ systems using a given dataset
Audience: Both Grad & Undergrad

3. Classify different means of risk assessment and the conceptual rationale behind these methods
Audience: Both Grad & Undergrad

4. Implement knowledge to design experiments applicable to one's own research
Audience: Both Grad & Undergrad

5. Relate specific organ concepts with conceptual examples from M&ENVTOX 625 to enhance scientific understanding
Audience: Undergraduate

6. Appraise concepts to research to identify future research concepts.
Audience: Graduate

PHMCOL-M 699 – INDEPENDENT STUDY
1-3 credits.

Directed study projects for juniors and seniors.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply concepts learned in coursework to real life situations
Audience: Undergraduate

2. Read and effectively search scientific literature
Audience: Undergraduate

3. Develop critical, analytical, and independent thinking skills
Audience: Undergraduate

PHMCOL-M 715 – GRANT WRITING
1 credit.

Develop a predoctoral fellowship application based on the student's proposed thesis project. Receive input on ideas and writing, both from the instructor and peers.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Write a cogent specific aims page for a grant proposal.
Audience: Graduate

2. Summarize background information in a coherent and concise manner, highlighting the significance of research being proposed.
Audience: Graduate

3. Outline methodologies to address a specific set of research questions.
Audience: Graduate

4. Read and critique grant proposals written by peers.
Audience: Graduate

5. Design experiments which are properly controlled and which use appropriate statistical methods of data analysis.
Audience: Graduate

PHMCOL-M 739 – RIGOR, REPRODUCIBILITY AND BECOMING AN EFFECTIVE RESEARCHER
1 credit.

Focuses on two of the cornerstones of science advancement, which are rigor in designing and performing scientific research and the ability to reproduce biomedical research findings. Emphasizes the application of rigor that ensures robust and unbiased experimental design, methodology, analysis, interpretation, and reporting of results. Highlights topics of particular importance to first year graduate students, including the development of effective presentation skills, communication in a professional setting, and a strong mentor-mentee relationship.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Select a well-controlled experimental design that is appropriate to answer a research question
Audience: Graduate

2. Consider all relevant biological variables to include in the experimental design
Audience: Graduate

3. Authenticate key biological and chemical resources used in experiments

Audience: Graduate

4. Perform statistical analyses appropriate for the experimental design
Audience: Graduate

5. Use transparency in reporting and publishing results, so that others may reproduce and extend the findings
Audience: Graduate

6. Develop skills to cope with the rigors of a graduate education in the pharmacological sciences
Audience: Graduate

PHMCOL-M 781 – MOLECULAR AND CELLULAR PRINCIPLES IN PHARMACOLOGY
4 credits.

Provides an in-depth introduction to the molecular and cellular principles of pharmacology. Emphasis is on the mechanisms of drug and small molecule action in cells, with a particular focus on downstream signaling pathways, second messenger systems, protein kinase cascades, and the regulation of gene transcription.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize the fundamental principles of drug actions at their target sites (e.g. receptors, enzymes, etc)
Audience: Graduate

2. Understand the various mechanisms by which drugs can mediate their pharmacological effect
Audience: Graduate

3. Describe how drugs mimic or modify physiological function, including the various actions and clinical uses
Audience: Graduate

4. Describe the major classes of therapeutic drugs that affect the primary systems within the body
Audience: Graduate

5. Choose a relevant experimental system to test experimental hypotheses (e.g. in vitro or in vivo; animal species, etc)
Audience: Graduate

6. Design experiments which are properly controlled and which use appropriate statistical methods of data analysis
Audience: Graduate

PHMCOL-M 875 – SPECIAL TOPICS IN PHARMACOLOGY
1-3 credits.

Special topics in pharmacology. Topics may vary.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022
Learning Outcomes: 1. Apply, analyze, or evaluate advanced theories, concepts, or methods in pharmacology
Audience: Graduate

PHMCOL-M 901 – SEMINAR AND JOURNAL CLUB
1-2 credits.

Students and staff present research reports of current interest.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Organize and present a research presentation, which includes background information, data slides, conclusions, and future directions
Audience: Graduate

2. Offer constructive feedback to peers on research presentation style and information delivery
Audience: Graduate

3. Design experimental approaches that are properly controlled and use appropriate statistical methods of data analysis
Audience: Graduate

4. Identify relevant experimental systems to test experimental hypotheses (e.g. in vitro or in vivo; animal species, etc)
Audience: Graduate

PHMCOL-M 990 – RESEARCH
1-12 credits.

Research facilities of the department available to qualified students.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Exhibit a broad understanding of general pharmacology principles
Audience: Graduate

2. Conduct independent research using a variety of approaches
Audience: Graduate

3. Think critically to address research challenges
Audience: Graduate

4. Exhibit and foster professional and ethical conduct in their research
Audience: Graduate

5. Collaborate with other investigators within or outside the thesis lab
Audience: Graduate

PHARMACY (PHARMACY)

PHARMACY 125 – EXPLORING PHARMACY I
2 credits.

Provides opportunities to integrate and apply introductory concepts and content related to Pharmaceutical Sciences, Social Administrative Pharmacy, and Pharmacy Practice. Students also develop academic and interpersonal skills helpful for success in current and future courses.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe roles, responsibilities, and training of pharmacists to provide care for patients and populations in a variety of practice settings
Audience: Undergraduate

2. Explain the roles of pharmacists related to public health, health literacy and health disparities
Audience: Undergraduate

3. Explain the process of gaining admission into and matriculating through a Doctor of Pharmacy program
Audience: Undergraduate

4. Create a holistic approach for successful transition from high school to college
Audience: Undergraduate

5. Develop connections to peers, student mentors, faculty and staff
Audience: Undergraduate

6. Identify common medical terms and medication names
Audience: Undergraduate

PHARMACY 126 – EXPLORING PHARMACY II
1 credit.

Expands upon the learning foundations provided in PHARMACY 125. Additional opportunities to develop pre-professional plans, explore unique pharmacy career opportunities and learn about pharmacy student co-curricular and professional development experiences. Prepare students to successfully participate in the pharmacy admissions process.
Requisites: PHARMACY 125
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain the pharmacy school admissions process
Audience: Undergraduate

2. Create SMART goals regarding pharmacy admissions, pre-professional development, and unique opportunities in pharmacy practice and pharmacy student co-curricular opportunities
Audience: Undergraduate

3. Create a pharmacy admissions personal statement
Audience: Undergraduate

4. Construct reflections about guest speaker presentations, job shadow experiences, a mock interview, and cultural awareness as it relates to pharmacy careers and patient care
Audience: Undergraduate

5. Analyze a pharmacy organization or pharmacy-focused event
Audience: Undergraduate

6. Revise a pre-pharmacy resume originally developed in PHARMACY 125
Audience: Undergraduate

PHARMACY 225 – PHARMACY EXPLORATION SEMINAR
2 credits.

Provides opportunities to explore pharmacy career paths, develop pre-professional plans, learn about pharmacy student co-curricular and professional development experiences, and prepare to successfully participate in the pharmacy admissions process.
Requisites: Not open to students with credit for PHARMACY 125 or 126
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe roles, responsibilities, and training of pharmacists to provide care for patients and populations in a variety of practice settings
Audience: Undergraduate

2. Examine the roles of pharmacists related to public health, health literacy, and health disparities
Audience: Undergraduate

3. Explain the holistic student experience throughout the Doctor of Pharmacy program
Audience: Undergraduate

4. Assemble a competitive application for admission into the Doctor of Pharmacy program
Audience: Undergraduate

5. Develop connections to peers, student mentors, faculty and staff
Audience: Undergraduate

6. Identify common medical terms and medication names
Audience: Undergraduate

PHARMACY 423 – PHARMACY INTEGRATED LEARNING LABORATORY
1 credit.

Provides an interdivisional foundation for pharmacy students to understand many aspects of pharmacy through a wide variety of activities. Delivers a broad understanding of the pharmacist's public health and patient advocacy role with opportunities to practice basic calculations related to drug formulations in the context of safety, drug stability, and patient care. Fosters development of communication skills with peers and patients and be introduced to patient counseling principles. Includes active participation in a longitudinal group experience with an assigned senior in the community to apply course content.
Requisites: Declared in the Doctor of Pharmacy Program with first year standing only
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop and enhance oral and written communication skills with patients/clients, peers, and pharmacists. (EO6)
Audience: Graduate

2. Employ interpersonal and intergroup behaviors in order to collaborate effectively in a variety of situations and reflect on teams and teamwork by: a) describing the process of team development and the roles and practices of effective teams and b) reflecting on individual and team performance for performance improvement. (EO7, IPEC TT1 & TT8)
Audience: Graduate

3. While applying the Pharmacists' Patient Care Process, discover aspects of patient-centered care by reflecting on the patient's/client's perspective on health, social, economic and psychological needs. (EO11, EO12, EO13)
Audience: Graduate

4. Apply social and behavioral principles and theories, including empathy, to patient communication. (EO8)
Audience: Graduate

5. Retrieve professional and lay literature in order to acquire information about therapeutic agents (i.e. evidence-based drug information) and to provide health information to patients and the public. (EO1)
Audience: Graduate

6. Identify the pharmacists' role in public health/health promotion activities while increasing awareness of community-based resources and identifying potential causes of health disparities. (EO12, EO13, EO14)
Audience: Graduate

7. Accurately measure and weigh drug products and complete calculations necessary for pharmaceutical preparations and pharmacy practice. (EO5)
Audience: Graduate

8. Complete drug dissolution and drug dilution activities and discuss how various drug properties (e.g. solubility, stability) can impact drug performance. (EO2)
Audience: Graduate

PHARMACY 426 – INTRODUCTORY PHARMACY PRACTICE EXPERIENCES I
1 credit.

Explore the role of the pharmacist and the many patient care opportunities that exist in and out of the community pharmacy practice setting. Observe pharmacists in a community pharmacy. Gain a broad understanding of the pharmacist's public health role.
Requisites: Declared in Doctor of Pharmacy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and discuss the various roles pharmacists assume in the health care system, especially their role in managing pharmacy operations and providing patient-centered care using the Pharmacists' Patient Care Process (PPCP).
Audience: Graduate

2. Observe and participate in public health/health promotion activities in the community pharmacy setting in order to increase awareness of community-based resources.
Audience: Graduate

3. Develop and enhance oral and written communication skills with patients, pharmacists, and other healthcare providers.
Audience: Graduate

4. Retrieve professional and lay literature in order to acquire information about therapeutic agents (i.e. Top Drugs) and to provide health information to patients and the public.
Audience: Graduate

5. Develop an understanding of the pharmacist's role on the healthcare team and the complexities involved in interprofessional communication.
Audience: Graduate

6. Display professional attitudes, habits, and values in accordance with ethical and social guidelines.
Audience: Graduate

PHARMACY 434 – PHARMACEUTICAL GENETICS AND IMMUNOLOGY
2 credits.

Facilitates the understanding and application of the principles of pharmaceutical genetics, immunology, and biotechnology.
Requisites: Declared in Doctor of Pharmacy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain how genotypes relate to human disease.
Audience: Graduate

2. Explain how model organism research underpins our knowledge of human genetic diseases.
Audience: Graduate

3. Describe how genetic/genomic technologies are used in research and can be applied to pharmacy.
Audience: Graduate

4. Explain how pharmacogenomics can identify and be used as markers for drug response.
Audience: Graduate

5. Describe how the immune system both causes and fights disease.
Audience: Graduate

6. Describe how biotechnology can be used to develop and produce drugs.
Audience: Graduate

PHARMACY 435 – PULMONARY SCIENCE AND THERAPEUTICS
2 credits.

Integration of pharmacologic knowledge and clinical decision-making to optimize patient management of pulmonary disease states and promote and support tobacco cessation. Emphasis on patient assessment and provision of evidence-based practices through application of pharmacotherapy principles, and drug monitoring to support person-centered care. Development of skills in gathering information, identifying and resolving medication-related problems, providing patient communication and education, and completing clinical documentation.
Requisites: Declared in Doctor of Pharmacy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Assess pulmonary health conditions by evaluating diagnostic criteria, risk factors, etiology, and treatment goals
Audience: Graduate

2. Differentiate among the therapeutic drug classes based on mechanisms of action, clinical use, adverse effects, contraindications, interactions, and dosage forms used for pulmonary conditions
Audience: Graduate

3. Describe why a drug is selected for a condition or person based on its properties
Audience: Graduate

4. Design a person-centered care plan consisting of both drug and non-drug elements appropriate for an individual with pulmonary conditions using evidence-based principles and guidelines
Audience: Graduate

5. Evaluate a person-centered care plan to optimize safety and efficacy, considering patient-specific factors, to improve therapeutic outcomes for pulmonary conditions
Audience: Graduate

6. Design a person-centered communication approach utilizing effective oral and written communication strategies
Audience: Graduate

PHARMACY 451 – MARGINALIZED POPULATIONS IN HEALTHCARE AND MEDIA
1 credit.

Provides opportunities for learning about healthcare barriers and facilitators: health disparities; and health outcomes using popular culture movies, and media that portray marginalized communities. Provides opportunities to discuss how their identities influence their view of the movie's theme and how bias may impact care provided in a healthcare setting.
Requisites: Declared in the Doctor of Pharmacy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022
Learning Outcomes: 1. Critique the portrayal of marginalized communities in the movies regarding health disparities and public health.
Audience: Graduate

2. Describe and differentiate how one’s own identity influences the relationship to the community in the movie and how intrinsic biases may impact the care provided to marginalized communities.
Audience: Graduate

3. Analyze how the social determinants of health and systemic racism impact a character’s health and wellbeing.
Audience: Graduate

4. Describe and differentiate attitudes and stereotypes concerning marginalized communities and how this may impact a person’s individualized clinical and self-care.
Audience: Graduate

PHARMACY 462 – PROFESSIONAL DEVELOPMENT AND ENGAGEMENT 1: DEVELOPING YOUR PROFESSIONAL IDENTITY
1 credit.

Explore aspects of professional identity and how to become more engaged with the pharmacy profession. Explore personal values, skills, and strengths and identify their implications for patient care and professional practice. Engage in continuing professional and interprofessional development to promote quality patient care and advocacy.
Requisites: Declared in Doctor of Pharmacy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Identify personal and professional strengths and discuss the application of these strengths within contemporary pharmacy practice.
Audience: Graduate

2. Identify professional role within an interprofessional team and demonstrate effective team communication and collaboration skills.
Audience: Graduate

3. Describe how personal identity, beliefs, attitudes, and biases may impact patient care and professional practice and how continued experiences relate to professional identity formation.
Audience: Graduate

4. Identify areas of interest related to professional engagement and patient advocacy; complete related co-curricular activities and reflect on personal and professional growth.
Audience: Graduate

5. Apply the continuing professional development cycle to reflect and plan for academic and professional growth; create two SMART learning objectives for completion during spring semester.
Audience: Graduate

PHARMACY 490 – SELECTED TOPICS IN PHARMACY
1-2 credits.

Various topics related to the Pharmacy profession.
Requisites: Declared in Doctor of Pharmacy program
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PHARMACY 562 – PROFESSIONAL DEVELOPMENT & ENGAGEMENT 2: CULTIVATING LEADERSHIP AND ADVOCACY WITHIN THE PROFESSION
1 credit.

Continue to develop professional identity and engage with the pharmacy profession through leadership and professional advocacy. Explore wellness; personal values, skills, and strengths; and identify their implications for leadership and professional advocacy within pharmacy practice. Engage in career, continuing professional, and interprofessional development to promote quality patient care.
Requisites: PHM PRAC 462 or PHARMACY 462
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Create a professional curriculum vitae, draft a letter of intent, and explore professional online networking and job search resources.
Audience: Graduate

2. Demonstrate effective communication skills with peers, faculty, preceptors, and employers to build professional relationships.
Audience: Graduate

3. Identify strategies to manage emotional stress and compassion fatigue as a health professional.
Audience: Graduate

4. Identify areas of interest related to leadership and professional advocacy at the local, state, and national levels and complete related leadership and professional advocacy co-curricular activities, reflecting on personal and professional growth.
Audience: Graduate

5. Work with individuals from other professions to maintain a climate of mutual respect and shared values while promoting the role of the pharmacist in the healthcare system.
Audience: Graduate

PHARMACY 563 – DRUG HISTORY: DANGEROUS DRUGS AND MAGIC BULLETS
2 credits.

A history of medicinal substances and dangerous drugs in wider context, with a focus on gender, race, class, business, and other analytical categories. "Medicines" and "drugs" change over time -- and concepts of risk, danger, legality, and even scientific evidence are elastic. Histories of laws, regulations, and key historical actors, as well as specific drug biographies, will be provided.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Outline the key theoretical issues in history of medicine and drugs.
Audience: Graduate

2. Explain the relationship, including explanatory models of change, between specific medicines and drugs and society.
Audience: Graduate

3. Critically assess the historiographies of the history of medicine.
Audience: Graduate

4. Evaluate the reputations of specific medicines, medicinal substances and drugs.
Audience: Graduate

5. Effectively communicate conclusions regarding the history of medicines and drugs.
Audience: Graduate

6. Apply historical understandings to contemporary issues regarding drug regulation and political conflicts.
Audience: Graduate

PHARMACY 564 – PSYCHEDELIC HISTORY: SACRED PLANTS, SCIENCE & PSYCHOTHERAPY
3 credits.

A history of psychedelics in the U.S. and more globally. Read texts that were formative in the development of the history of psychopharmacology, pharmaceuticals, and the "war on drugs." Examine readings that represent different themes, subfields, or areas of research interest within the history of psychedelics (medicine science). Beyond biomedicine, types of analysis include: consumerism, class, ethnicity, gender, and military history. Histories of laws, regulations, and key historical actors, as well as specific drug biographies, will be provided.
Requisites: Declared in MS Pharmaceutical Sciences: Psychoactive Pharmaceutical Investigation
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Outline the key theoretical issues in the history and historiographical discussions relevant to psychedelics in biomedicine and society.
Audience: Graduate

2. Describe the role of the psychedelics in treatment settings and as part of indigenous and religious rituals.
Audience: Graduate

3. Analyze and present primary and lay literature; apply knowledge to present problems and situations.
Audience: Graduate

4. Critique and construct tools to help shape new understandings of psychedelic historiography
Audience: Graduate

PHARMACY/I SY E 608 – SAFETY AND QUALITY IN THE MEDICATION USE SYSTEM
3 credits.

Addresses the problems of medication errors and quality in health care, problem resolutions, methods of assessment, and intervention implementation and quality management.
Requisites: Declared in Doctor of Pharmacy program with third year standing
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize types, sources, and contributors to error within the medication use system.
Audience: Undergraduate

2. Explain the influence of work systems and human factors on the development of safe processes for improving safety within the medication use system.
Audience: Undergraduate

3. Apply tools for identifying, analyzing, and anticipating errors within the medication use system (e.g., error reporting systems, root cause analysis, failure modes and effects analysis) and use these to develop safer processes.
Audience: Undergraduate

4. Describe characteristics of healthcare settings that contribute to improved quality and how pharmacists can influence the characteristics.
Audience: Undergraduate

5. Explain how quality indicators are developed, measured, and monitored in the US healthcare system.
Audience: Undergraduate

6. Describe and apply economic evaluation and pharmacoeconomic principles to evaluate pharmacy programs and drug products.
Audience: Undergraduate

PHARMACY 612 – LEGAL STRUCTURES FOR CONTROLLED SUBSTANCES
1 credit.

Discusses federal statutes and regulations related to drug manufacturing, drug distribution, and drug use, with an emphasis on drug scheduling and controlled substances. Describes the governmental framework within which pharmaceutical development is regulated and practiced. Covers statues and regulations protecting human subjects' privacy and autonomy in research.
Requisites: Declared in MS Pharmaceutical Sciences: Psychoactive Pharmaceutical Investigation or Capstone Certificate in Psychoactive Pharmaceutical Investigation
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and describe the major federal statutes and regulations affecting use of controlled substances
Audience: Graduate

2. Identify potential legal problems in use and handling of controlled substances before they may occur
Audience: Graduate

3. Apply knowledge of the statutes/regulations to various research settings
Audience: Graduate

4. Locate and identify reputable sources of legal information
Audience: Graduate

PHARMACY 621 – PHARMACOKINETICS
3 credits.

Introduction to pharmacokinetics. Fundamental principles and specific physical models are discussed. Absorption, distribution, metabolism, and excretion are thoroughly described including applications to pharmacotherapy mostly through a one body compartment model. Biopharmaceuticals and small molecule drugs are discussed based on their specific pharmacokinetics. All pharmacokinetics and pharmacodynamics principles and concepts are further described in depth in terms of their clinical applications with an emphasis on the role of the pharmacy professional.
Requisites: Declared in the Doctor of Pharmacy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply the one-compartment pharmacokinetic model as it relates to the IV bolus dose, extravascular dose, constant rate regimens and multiple dose regimens.
Audience: Graduate

2. Describe drug movement through membranes, drug absorption, distribution and elimination.
Audience: Graduate

3. Explain enzyme kinetics, protein binding, and blood flow influences on a drug's pharmacokinetics.
Audience: Graduate

4. Describe integration of drug kinetics with physiology.
Audience: Graduate

5. Discuss drug Pharmacodynamics and its relationship to drug pharmacokinetics.
Audience: Graduate

6. Develop a drug dosing regimen for a medication in a patient with kidney or liver impairment using only the FDA-approved labeling (prescribing information) for a medication.
Audience: Graduate

7. Apply pharmacokinetics and pharmacodynamics to drug regimen modifications based on therapeutic drug monitoring.
Audience: Graduate

PHARMACY 630 – RURAL PHARMACY PRACTICE
2 credits.

Explore how public health intersects with healthcare delivery in rural settings through direct engagement with rural communities, practitioners, and themes in rural practice. Apply therapeutic knowledge to fulfill unmet community needs, and thereby enhance delivery of healthcare in rural communities. Create a pharmacy-driven service with the goal of enhancing healthcare delivery in a rural area based on a community assessment, exploration of contemporary rural health care trends, and discussion with current rural health practitioners.
Requisites: Declared in the Doctor of Pharmacy Program with third year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the importance of a community-based assessment as a method for exploring community healthcare needs.
Audience: Graduate

2. Explain the essential role that community health departments play in supporting rural communities, as well as the opportunities for pharmacists and community health departments to collaborate in improving healthcare delivery.
Audience: Graduate

3. Identify opportunities to improve rural pharmacy practice through assessment of evidence based resources and literature.
Audience: Graduate

4. Identify challenges in rural healthcare and recommend potential pharmacy practice solutions through dialogue with rural health practitioners and patients.
Audience: Graduate

5. Explore service models and opportunities for interprofessional care in rural communities.
Audience: Graduate

6. Evaluate rural hospital and community pharmacy financial models to identify strategies to remaining financially solvent.
Audience: Graduate

7. Assess pharmacists' leadership opportunities in rural practice and how effective pharmacy leaders can shape the landscape of practice and service opportunities delivered in rural communities.
Audience: Graduate

8. Examine the interplay between public health and epidemiology to design healthcare services to match community needs.
Audience: Graduate

PHARMACY 632 – NEUROSCIENCE OF PSYCHEDELICS
3 credits.

Learn about psychiatric disorders and the profound effects of classical psychedelics on neural processes. Assess current hypotheses on their molecular actions and coupling to cellular, network, and behavioral effects, and how they might translate into therapeutic benefit. Explore the intersection of the actions of these agents with current models of the neural basis of perception, cognition, and consciousness.
Requisites: PSYCH/ZOOLOGY 523, PSYCH/NEURODPT/NTP 611 or PHARMACY 770. Not open to students with credit for NTP 632.
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe experimental techniques and measurements used to probe changes in neuronal activity and connectivity and identify the major limitations of each method and propose approaches to overcome those limitations
Audience: Graduate

2. Describe experimental techniques and measurements used to probe changes in neuronal activity and connectivity
Audience: Undergraduate

3. Identify the major known classical psychedelic agents in terms of their chemical structure, targets (receptors, cells, brain areas) in the brain, duration of action, and suitability for administration in a clinical setting
Audience: Undergraduate

4. Identify the major known classical psychedelic agents in terms of their chemical structure, targets (receptors, cells, brain areas) in the brain, duration of action, and suitability for administration in a clinical setting and also summarize the signaling pathways underlying cellular actions of psychedelic agents.
Audience: Graduate

5. Demonstrate knowledge of the cell types and brain areas most likely to mediate distinct behavioral effects of psychedelics, and of the experimental support for these hypotheses.
Audience: Undergraduate

6. Demonstrate knowledge of the cell types and brain areas most likely to mediate distinct behavioral effects of psychedelics, and of the experimental support for these hypotheses, and also demonstrate ability to identify gaps in experimental support for these hypotheses and to design experiments to fill those gaps
Audience: Graduate

7. Identify and summarize the major behavioral assays of the psychedelic experience and of psychiatric disorders (e.g. depression scales).
Audience: Undergraduate

8. Identify and summarize the major behavioral assays of the psychedelic experience and of psychiatric disorders (e.g. depression scales), and also identify and summarize the shortcomings of the major behavioral assays of the psychedelic experience and of psychiatric disorders (e.g. depression scales), and demonstrate ability to propose revisions of those scales to address those shortcomings.
Audience: Graduate

9. Identify and summarize clinical applications of psychedelics, and the theories and factors contributing to their therapeutic benefit

PHARMACY 640 – APPROPRIATE USE OF ABUSED DRUGS
2 credits.

Discusses the biological and pharmacological basis of dependence of substances of abuse. Teaches the skills required for best practices in prescribing agents of abuse. Drugs of abuse covered include opioids use for acute and chronic pain, in addition to other abused substances such as cannabinoids, psychedelics, amphetamines and related agents. Students will learn appropriate methods of therapeutic tapering and treatment of withdrawal, as well as the treatment of known and unknown agent overdose. Teaches skills in interpreting and responding to findings of urine drug tests and the prescription drug monitoring database.
Requisites: PHM SCI 521
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate knowledge about the neuro- and psycho-pharmacology of substance dependence.
Audience: Undergraduate

2. Define and distinguish between substance use, misuse, abuse and dependence
Audience: Undergraduate

3. Explain the public health implications of substance misuse
Audience: Undergraduate

4. Identify optimal treatment of patients with chronic, malignant pain
Audience: Undergraduate

5. Describe the best practices for initiating opioids therapy for acute and chronic non-malignant pain
Audience: Undergraduate

6. Design pain medication regiments that include the selection of the appropriate opioid, dose, and titration/de-titration plan
Audience: Undergraduate

7. Describe how and why to switch from one opioid to another
Audience: Undergraduate

8. Develop a medication plan for the management of opioid use disorder in a patient
Audience: Undergraduate

9. Interpret urine drug tests and the Prescription Drug Monitoring Program, and create patient treatment plans based upon these findings
Audience: Undergraduate

10. Understand pharmacology, appropriate use and misuse of CNS stimulants and CNS depressants
Audience: Undergraduate

11. Identify the symptoms of toxicity from overdoses of abused drugs.
Audience: Undergraduate

12. Manage patients admitted with toxicity from overdoses of abused drugs.
Audience: Undergraduate

13. Anticipate the agents of misuse in specific populations as athletes and students.
Audience: Undergraduate

14. Describe alternative, opioid-sparing strategies for treating acute and chronic pain.
Audience: Undergraduate

PHARMACY 658 – SPECIALTY PHARMACY IN A MODERN HEALTHCARE SETTING
2 credits.

Introduction to specialty pharmacy, a growing and important segment of the pharmaceutical marketplace. Importance of economic, business and management principles to develop, implement and evaluate specialty pharmacy services within health systems. Modern health system cases about implementation of specialty pharmacy services in clinic and in pharmacy departments to improve patient outcomes from specialty medications and increase volume of specialty medications dispensed.
Requisites: Declared in Doctor of Pharmacy program with third year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the core fundamentals of specialty pharmacy including economics, market trends, contracting, and specialty pharmaceutical reimbursement
Audience: Graduate

2. Analyze data demonstrating the impact that specialty pharmacy has on health systems and patient outcomes
Audience: Graduate

3. Analyze case studies of specialty pharmacy topics in modern health care systems
Audience: Graduate

4. Describe current specialty pharmacy accreditation regulations and the application for accreditation status process
Audience: Graduate

5. Describe and analyze the process related to starting a specialty pharmacy program within a health system and the associated considerations
Audience: Graduate

PHARMACY 662 – PROFESSIONAL DEVELOPMENT AND ENGAGEMENT 3: EMBRACING CONTINUING PROFESSIONAL DEVELOPMENT
1 credit.

Become more engaged with the pharmacy profession through further development and refinement of professional identity and continuing professional development. Use appropriate published evidence to answer clinical questions and complete orientations to understand expectations and prepare for advanced pharmacy practice field experiences.
Requisites: PHM PRAC 464 or PHARMACY 562
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Retrieve and interpret primary, secondary, and tertiary sources to answer a clinical question.
Audience: Graduate

2. Identify areas of interest and complete co-curricular activities for continuing professional development and professional identity formation
Audience: Graduate

3. Reflect on your professional identity and create a professional philosophy statement.
Audience: Graduate

4. Demonstrate reflective behaviors and goal settings for academic and professional growth.
Audience: Graduate

5. Describe experiential requirements and course policies in preparation for advanced pharmacy practice experiences.
Audience: Graduate

PHARMACY 670 – VETERINARY THERAPEUTICS
1 credit.

Presentation and discussion of topics that involve the therapeutic management of disease states of companion, food, and exotic animals. Emphasis is placed upon the principles of drug regulations, drug therapy, toxicology, and available commercial products.
Requisites: Declared in Doctor of Pharmacy program with second year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify resources where accurate and reliable information can be found
Audience: Graduate

2. Identify laws and regulations affecting the practice of pharmacy (dispensing and compounding products)
Audience: Graduate

3. Identify state and federal laws affecting dispensing, filling, and compounding for animal patients
Audience: Graduate

4. Identify toxic/poisonous substances to cats and dogs
Audience: Graduate

5. Compare and contrast disease states in cats vs. dogs vs. humans
Audience: Graduate

6. Identify treatment options for each disease/disorder and the current accepted treatments
Audience: Graduate

7. Identify key counseling points, side effects, and clinical pearls for drugs commonly dispensed to pets
Audience: Graduate

8. Calculate the dose of a drug for an animal patient
Audience: Graduate

PHARMACY 671 – PSYCHEDELIC DRUGS IN SCIENCE AND SOCIETY
2 credits.

Overview of the science behind therapeutic use of psychedelic drugs such as psilocybin and LSD; basic medicinal chemistry of the tryptamine and phenethylamine psychedelics, as well as the neurochemistry and neuropharmacology of their action. Fundamentals of drug development and FDA approval process; Standards of screening and guiding individuals before and during a therapeutic psychedelic session contrasted with the recreational use of these drugs; Appraisal of current clinical research including an objective analysis of risk/benefit for indications such as depression and addiction. History of traditional, ceremonial use of psychedelics, as well as the relationship between recreational use and attempts to regulate and restrict their use. Role of psychedelics in indigenous cultures, impacts of psychedelic tourism and wild-crafting of plants and animals on indigenous peoples. Contrasts in psychedelic treatments to other therapeutic interventions such as mindfulness and meditation.
Requisites: Declared in MS Pharmaceutical Sciences: Psychoactive Pharmaceutical Investigation or Capstone Certificate in Psychoactive Pharmaceutical Investigation
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the roles of psychedelic compounds in the traditional rituals of indigenous peoples, and the impact of psychedelic tourism upon these native societies and their environment.
Audience: Graduate

2. Describe the history and rationale for the regulation and prohibition of these compounds in the past century.
Audience: Graduate

3. Describe the similarities between efforts to decriminalize cannabis and psychedelics, including pros and cons for each position.
Audience: Graduate

4. Describe the path by which psychedelic drugs may be proposed to the FDA for approval drugs, and rescheduled by the DEA.
Audience: Graduate

5. Identify the basic chemical structures of the most common psychedelic tryptamines and phenethylamines, and their usual pharmacologic targets in the brain.
Audience: Graduate

6. Describe and critique examples of the research literature on the human use of psilocybin and LSD for the treatment of diseases such as depression and substance abuse disorders, including proposed metrics of effect.
Audience: Graduate

7. Describe the usual screening, preparation, and care of a subject receiving psilocybin, and the expected skills, training, and role of the attending clinicians.
Audience: Graduate

8. Describe the relationship of psychedelic treatment to other methods of care such as meditation, mindfulness, and cognitive behavioral therapy.
Audience: Graduate

PHARMACY 674 – CANNABINOIDS IN SCIENCE AND SOCIETY
2 credits.

Provides an overview of the history, botany, and legal policies of cannabis and examines cannabinoid pharmacology and the most common therapeutic applications. Assessment of cannabinoid therapy with an emphasis on evaluating the risks and benefits of cannabinoid therapy for these conditions, product and dose regimen selection, monitoring and titration.
Requisites: Graduate/professional standing or declared in Pyschoactive Pharmaceutical Investigation Capstone Certificate
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the role of the endocannabinoid system in human disease.
Audience: Graduate

2. Identify appropriate cannabinoid use in various disease states.
Audience: Graduate

3. Describe the mechanism of action of THC and CBD on several body systems and disease states.
Audience: Graduate

4. Explain the pharmacology of THC and CBD.
Audience: Graduate

5. Describe common / serious drug interactions and adverse effects of cannabis therapies and methods for preventing or minimizing their occurrence.
Audience: Graduate

6. Analyze and present primary and lay literature regarding cannabinoid therapy.
Audience: Graduate

PHARMACY/NURSING/PHY ASST/PHY THER/PUBLHLTH 758 – INTERPROFESSIONAL PUBLIC HEALTH LEADERSHIP
1 credit.

Build skills in collaboration, problem solving, and reflection to approach complex community-based public health problems contribute to becoming a public leader. Explore the six levels of public health leadership through the practices of current and past public health leaders, case studies, and personal experience.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019
Learning Outcomes: 1. Describe the roles and responsibilities of their profession with all participating health professional students, while examining the roles and responsibilities of all other health professions.
Audience: Graduate

2. Compare and contrast the diversity of expertise among participating health professions.
Audience: Graduate

3. Apply their profession's roles and responsibilities to case studies that address complex public health issues.
Audience: Graduate

4. Describe what it means to be part of an interprofessional team and illustrate how the different professions and systems can complement and facilitate one another in addressing public health issues.
Audience: Graduate

5. Apply the principles of public health leadership via reflective exercises, case studies and facilitated discussion.
Audience: Graduate

6. Promote a public health cause or principle through legislative advocacy.

Audience: Graduate

7. Elucidate the importance of reflection as a life-long learning and leadership tool.
Audience: Graduate

PHARMACY 770 – CNS DRUG DESIGNS, ACTIONS, AND APPLICATIONS I
2 credits.

Provides a foundational understanding of how chemical features can influence the biological activity of a molecule on molecular targets within the central nervous system (CNS), how alteration of signaling through these targets occurs and leads to physiologically relevant changes, and how major classes of pharmaceuticals acting on the central nervous system are applied in healthcare settings to improve patient outcomes. Integration between concepts arising at the chemical, molecular, cellular, systems, organism, and societal levels will be explored.
Requisites: Declared in MS Pharmaceutical Sciences
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify CNS active drug classes and origins of cholinergic and glutamatergic drugs based in part on structural aspects of the molecule
Audience: Graduate

2. List physicochemical properties of drugs that influence their ability to access the CNS
Audience: Graduate

3. Recall anatomical structures and molecular machinery that influences drug access to and efflux from the CNS
Audience: Graduate

4. Describe the major neurotransmitters of the central nervous system, including their physiologic role, distribution, synthesis, storage, and release

Audience: Graduate

5. Recall the principal mechanisms by which receptors affect cellular signaling in the Central Nervous System
Audience: Graduate

6. Compare and contrast the actions of psychoactive pharmaceuticals on cholinergic and glutamatergic signaling within the Central Nervous System

Audience: Graduate

7. Recognize the psychiatric conditions and target symptoms of these conditions that are commonly treated with cholingergic and glutamateric pharmaceuticals
Audience: Graduate

8. Explain how the use of cholinergic and gluatamatergic pharmaceuticals fits in with other non-pharmacologic approaches to clinical care for psychiatric conditions
Audience: Graduate

9. Describe common / serious adverse effects of cholinergic and glutamatergic pharmaceuticals and methods for preventing or minimizing their occurrence
Audience: Graduate

10. Match cholinergic and glutamatergic pharmaceutical agents to the psychiatric conditions they are commonly used to treat
Audience: Graduate

PHARMACY 771 – CNS DRUG DESIGNS, ACTIONS, AND APPLICATIONS II
2 credits.

Gain additional understanding of how chemical features can influence the biological activity of a molecule on molecular targets within the central nervous system, how alteration of signaling through these targets occurs and leads to physiologically relevant changes, and how major classes of pharmaceuticals acting on the central nervous system are applied in healthcare settings to improve patient outcomes. Integration between concepts arising at the chemical, molecular, cellular, systems, organism, and societal levels will be explored.
Requisites: PHARMACY 770
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify GABAergic, adrenergic, dopaminergic, serotonergic, and opioid drug classes and drug origins based in part on structural aspects of the molecule
Audience: Graduate

2. Compare and contrast the actions of GABAergic, adrenergic, dopaminergic, serotonergic, and opioid pharmaceuticals on chemical and electrical signaling within the Central Nervous System
Audience: Graduate

3. Recognize the psychiatric conditions and target symptoms of these conditions that are commonly treated with GABAergic, adrenergic, dopaminergic, serotonergic, and opioid pharmaceuticals
Audience: Graduate

4. Describe common / serious adverse effects of GABAergic, adrenergic, dopaminergic, serotonergic, and opioid pharmaceuticals and methods for preventing or minimizing their occurrence
Audience: Graduate

5. Match GABAergic, adrenergic, dopaminergic, serotonergic, and opioid pharmaceutical agents to the psychiatric conditions they are commonly used to treat
Audience: Graduate

6. Assess challenges to development and use of psychoactive pharmaceuticals that are either shared across major neurotransmitter systems or unique to specific classes of drugs
Audience: Graduate

PHARMACY 800 – RESEARCH ETHICS: SCIENTIFIC INTEGRITY AND THE RESPONSIBLE CONDUCT OF RESEARCH
2 credits.

Familiarizes graduate students with basic ethical issues associated with biomedical science research, taught via a case study approach. Content structured to meet NIH and NSF requirements for Responsible Conduct of Research (RCR) training. Students declared in the Pharmacology and Toxicology undergraduate program may enroll via consent of instructor.
Requisites: Declared in the Pharmaceutical Sciences PhD, Social and Administrative Sciences in Pharmacy PhD, or in the Pharmacy Master's program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: . Identify, analyze, and explain basic ethical issues and the responsible conduct of biomedical clinical and translational research on topics including but not limited to NIH mandated subjects
Audience: Graduate

. Communicate knowledge about ethical principles in scientific research effectively to a range of audiences
Audience: Graduate

PHARMACY 801 – BIOETHICS AND SCIENTIFIC INTEGRITY
2 credits.

Explores basic ethical issues associated with biomedical science research, particularly as pertains to the development of drugs and emergent pharmaceutical therapies, such as psychoactive-assisted therapies.
Requisites: Declared in MS Pharmaceutical Sciences: Psychoactive Pharmaceutical Investigation or Capstone Certificate in Psychoactive Pharmaceutical Investigation
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe elements of proper scientific conduct and the institutional oversight that regulates scientific conduct
Audience: Graduate

2. Explain how socially responsible scientific practices can be used in scientific and medical research, scientific communication, and intellectual property
Audience: Graduate

3. Identify best practices for clinical research and the necessary elements to ensure patient safety, reliable data, and public benefit
Audience: Graduate

4. Define the different types of intellectual property and how it can both enable and stifle innovation
Audience: Graduate

5. Explain the elements of misconduct in scientific literature and publishing. Give examples of how this misconduct causes harm to both scientific reputations and public health
Audience: Graduate

6. Critique peer reviewed research from the psychedelic field using the ethical issues named in the above outcomes
Audience: Graduate

PHARMACY PRACTICE (PHM PRAC)

PHM PRAC 305 – CONSUMER SELF-CARE AND OVER-THE-COUNTER DRUGS
2 credits.

Provides learners with information regarding self-care of common, minor health conditions. Emphasis on: illness prevention, health condition symptoms, guidelines for over-the-counter product use, adverse effects and alcohol/drug interactions of over-the-counter products, when to request professional care.
Requisites: Not open to students declared in the Nursing, Physician Assistant, or Doctor of Pharmacy programs
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe signs and symptoms of common health conditions
Audience: Undergraduate

2. Explain guidelines for self-treatment with over-the-counter products
Audience: Undergraduate

3. Describe basic drug action & common side effects of selected over-the-counter products
Audience: Undergraduate

4. Explain appropriate use of nonprescription treatments
Audience: Undergraduate

5. Identify drug and alcohol interactions with over-the-counter products
Audience: Undergraduate

6. Discuss precautions or contraindications (including pregnancy issues) and adverseeffects associated with over-the-counter treatments
Audience: Undergraduate

7. Illustrate when to request professional care
Audience: Undergraduate

8. Select appropriate measures to prevent health conditions
Audience: Undergraduate

PHM PRAC 438 – NONPRESCRIPTION MEDICATIONS AND SELF-CARE
2 credits.

Develop knowledge and skills needed to perform triage and make self-care and therapeutic recommendations for self-limiting health conditions commonly encountered in pharmacy practice.
Requisites: Declared in the Doctor of Pharmacy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss accessibility, affordability, trust, and empowerment regarding nonprescription products
Audience: Graduate

2. Employ the QuEST SCHOLAR-MAC triage process and the Pharmacists' Patient Care Process to self-care cases and consultations
Audience: Graduate

3. Recognize and respect patient experiences, cultural influences, health disparities, and social identity aspects during self-care cases and consultations
Audience: Graduate

4. Discuss laws and liability related to nonprescription products and self-care consultations
Audience: Graduate

5. Identify signs and symptoms of each health condition covered in this course
Audience: Graduate

6. Discuss exclusions for self-care related to each health condition covered in this course
Audience: Graduate

7. Differentiate self-care aspects given unique characteristics of the person being evaluated/advised (such as pediatrics, pregnancy & lactation, and older adults)
Audience: Graduate

8. Classify individual nonprescription medications into distinct medication classes based on therapeutic use
Audience: Graduate

9. Choose appropriate nonprescription medications and non-drug/general care measures for cases/situations
Audience: Graduate

10. Explain common adverse effects and drug interactions for nonprescription medications and methods for managing them
Audience: Graduate

11. Construct treatment plans, including key education points, for self-care of each health condition covered in this course
Audience: Graduate

PHM PRAC 461 – PATHWAYS IN PHARMACY PRACTICE
1 credit.

Introduction to, and exploration of, contemporary pharmacy practice settings and interprofessional practice, including opportunities for career advancement.
Requisites: Declared in Doctor of Pharmacy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe multiple pathways in contemporary pharmacy practice.
Audience: Graduate

2. Demonstrate knowledge of interprofessional teamwork and articulate its importance to pharmacy practice.
Audience: Graduate

3. Evaluate curricular options available to customize educational pathways.
Audience: Graduate

4. Evaluate co- and extra-curricular options available to advance post-graduation employment/training goals
Audience: Graduate

PHM PRAC/MEDICINE/NURSING/SOC WORK 467 – INTERPROFESSIONAL COLLABORATIVE PRACTICE IN HIV CARE
1 credit.

Gain foundational knowledge and skills in interprofessional collaborative practice and HIV care. Explore the roles of medicine, nursing, pharmacy, and social work in the HIV care continuum. Discuss quality team-based care as a member of an interprofessional student team.
Requisites: Declared in Nursing BSN (Traditional, Collaborative, Accelerated), Social Work BSW, Medicine MD, Pharmacy PharmD, or Social Work MSW.
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the history and epidemiology of the HIV epidemic.
Audience: Both Grad & Undergrad

2. Define Interprofessional Collaborative Practice (ICP) and describe the characteristics of effective ICP.
Audience: Both Grad & Undergrad

3. Describe the natural history of HIV disease with and without antiretroviral therapy (ART).
Audience: Both Grad & Undergrad

4. Discuss US Dept of Health and Human Services guidelines and recommendations for prevention, screening, diagnosis, treatment, and management of HIV infection and HIV-related diseases in the United States.
Audience: Both Grad & Undergrad

5. Describe the HIV care continuum including testing, entry and retention in care, and treatment including associated stigma and discrimination as barriers.
Audience: Both Grad & Undergrad

6. Discuss dimensions of wellness (emotional, environmental, financial, intellectual, occupational, physical, social and spiritual).
Audience: Both Grad & Undergrad

7. Identify potential co-morbid conditions in the HIV infected population.
Audience: Both Grad & Undergrad

8. Discuss stigma and discrimination as barriers to prevention, care, and treatment.
Audience: Both Grad & Undergrad

9. Discuss the history of the Ryan White Care Act and other federal and state policies and their current importance in HIV prevention and HIV care.
Audience: Both Grad & Undergrad

10. Identify HIV care needs and common health issues among high risk and vulnerable populations.
Audience: Both Grad & Undergrad

11. Develop a plan of care for an HIV positive individual as part of an interprofessional team.
Audience: Both Grad & Undergrad

12. Develop skills working with mixed teams including undergraduate students
Audience: Graduate

13. Demonstrate higher level skills in identifying and resolving barriers to

PHM PRAC 468 – INTRODUCTION TO PHARMACY INFORMATICS
1 credit.

Introduction to Pharmacy Informatics, the scientific field that utilizes a systems approach to medication-related data and information, including its acquisition, storage, analysis, and dissemination, in the delivery of optimal medication-related patient care and health outcomes.
Requisites: Declared in the Doctor of Pharmacy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Define the basic terminology used in health informatics
Audience: Graduate

2. Describe the benefits and current constraints in using information and communication technology in healthcare
Audience: Graduate

3. Identify the reasons for the systemic processing of data, information, and knowledge in healthcare
Audience: Graduate

PHM PRAC 469 – HEALTH EQUITY & SOCIAL JUSTICE FOR HEALTHCARE PROVIDERS
2 credits.

Social justice seminar focusing on diversity, equity, inclusion, and leadership in the health professions. Focus on historical and contemporary issues in the healthcare system and equip students to develop the awareness, skills, and applied behaviors to impact healthcare inequities at the micro and macro level.
Requisites: Nursing BSN (Traditional, Accelerated or Collaborative), senior standing and declared in Health Promotion and Health Equity BS, or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate knowledge of social identities and cultural differences of self and others.
Audience: Both Grad & Undergrad

2. Gain intercultural competencies in personal and professional environments
Audience: Both Grad & Undergrad

3. Continue to develop and hone skills in critical thinking and interpersonal communication
Audience: Both Grad & Undergrad

4. Identify root causes of health disparities and develop skills and behaviors to help decrease them
Audience: Both Grad & Undergrad

5. Increase awareness of how social identities impact relationships to the healthcare system, access to health care, and patient/provider interactions

Audience: Both Grad & Undergrad

6. Integrate multiple definitions of health and health care into our professional philosophies
Audience: Both Grad & Undergrad

7. Reinforce leadership skills and develop opportunities for informal mentoring/support.
Audience: Graduate

PHM PRAC 471 – EXPLORING PHARMACY PEER MENTOR SEMINAR
1 credit.

A mentoring, leadership and facilitation class for pharmacy student peer mentors who are assisting instructors of the Exploring Pharmacy courses
Requisites: Declared in Doctor of Pharmacy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate familiarity with college student development theory and how it applies to pre-pharmacy students
Audience: Graduate

2. Develop group facilitation, leadership, and mentoring skills
Audience: Graduate

3. Describe how peer mentoring supports personal and professional development
Audience: Graduate

4. Employ effective interpersonal communication skills
Audience: Graduate

5. Demonstrate the ability to provide verbal and written feedback on student work
Audience: Graduate

PHM PRAC 490 – SELECTED TOPICS IN PHARMACY PRACTICE
1-4 credits.

Specialized Pharmacy subject matter of current interest to undergraduate and professional students.
Requisites: Declared in Doctor of Pharmacy program
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023

PHM PRAC 526 – PHARMACY PRACTICE EXPERIENCES II
1 credit.

The second experience of a three-year Introductory Pharmacy Practice Experiences (IPPEs) sequence. Provides opportunities to integrate learning from prior didactic courses such as The Role of the Pharmacist in the Public Health System, Managing Pharmacy Systems for Patient Care, current pharmacotherapy courses, and a previous community IPPE, into observation and discussion of the provision of patient care. Participate in a wide-variety of activities to expose them to the role of the pharmacist and patient care opportunities that exist in and out of the pharmacy practice setting. Focus on the provision of care in an institutional setting along with a variety of pharmacy practice settings which fall under an elective category. Continued exposure to the Pharmacist Patient Care Process (PPCP), which is a framework for providing patient care in a pharmacy practice setting.
Requisites: PHM PRAC 426
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop and enhance oral and written communication skills with patients, pharmacists, and other healthcare providers.
Audience: Graduate

2. Retrieve professional and lay literature in order to acquire information about therapeutic agents and to provide health information to patients, other health professionals and the public.
Audience: Graduate

3. Explore sources of information that can lead to appropriate clinical decision making (i.e. medical records, laboratory reports, and institutional policies and procedures).
Audience: Graduate

4. Display professional attitudes, habits, and values in accordance with ethical and social guidelines.
Audience: Graduate

5. Identify examples of bias in the healthcare setting and how they contribute to the quality of care provided to a patient.
Audience: Graduate

6. Develop an understanding of the pharmacist's role on the healthcare team and the complexities involved in interdisciplinary communications.
Audience: Graduate

7. Identify and discuss the various roles pharmacists assume in the health care system, especially their role in providing patient-centered care using the Pharmacist Patient Care Process (PPCP).
Audience: Graduate

PHM PRAC 550 – FLUID AND ELECTROLYTE THERAPY
2 credits.

Clinical management of disorders of fluid, electrolytes, and acid-base in patients with normal and abnormal homeostatic mechanisms. Also included is parenteral nutritional support.
Requisites: Declared in Doctor of Pharmacy program with third year standing
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the physiological processes that normally maintain fluid and electrolyte homeostasis
Audience: Undergraduate

2. Explain how disease processes result in a failure of homeostasis, leading to fluid and electrolyte imbalances, and the clinical manifestations of the imbalances
Audience: Undergraduate

3. Connect how basic concepts from chemistry, biochemistry, physical chemistry, physiology, and pathophysiology can be applied directly to the management of fluid and electrolyte disorders
Audience: Undergraduate

4. Utilize information from a patient's history, symptoms, physical and laboratory findings to evaluate the type of imbalance, the magnitude of the imbalance, and the urgency of the problem
Audience: Undergraduate

5. Propose treatment strategies that will stabilize urgent problems, utilize homeostatic mechanisms, correct imbalances, and avoid complications
Audience: Undergraduate

6. Review primary literature and authoritative review articles to obtain the most current ideas regarding optimal treatment of the disorders
Audience: Undergraduate

PHM PRAC 553 – INTEGRATED PHARMACOTHERAPY SKILLS I
1 credit.

Learn pharmacotherapeutic skills necessary to develop competence as a pharmacist to assume the responsibility to improve therapeutic patient outcomes related to medication use. Skills will include patient communication, identification and resolution of drug related problems, and documentation.
Requisites: Declared in Doctor of Pharmacy program with second year standing
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use therapeutic decision-making skills and drug information to apply clinical knowledge to address drug-related problems and promote health improvement, wellness, and disease prevention in cooperation with individual patients
Audience: Undergraduate

2. Perform steps of the pharmacists' patient care process (PPCP): collect, assess, plan, implement, and follow-up through documentation, communication, and collaboration in a patient-centeredand efficient manner as consistent with the University of Wisconsin – Madison School of Pharmacy's technical standards
Audience: Undergraduate

3. Acquire the necessary skills and experience to provide patient care as a member of an interprofessional team
Audience: Undergraduate

4. Begin to develop skills and commitment for life-long learning in order to maintain professional competence
Audience: Undergraduate

5. Demonstrate professionalism by exhibiting behaviors and values that are consistent with the trust given to the profession by patients, other health care providers, and society
Audience: Undergraduate

PHM PRAC 554 – INTEGRATED PHARMACOTHERAPY SKILLS II
1 credit.

Learn pharmacotherapeutic skills necessary to develop competence as a pharmacist to assume the responsibility to improve therapeutic patient outcomes related to medication use. Skills will include patient and provider communication, identification and resolution of drug related problems, and documentation.
Requisites: PHM PRAC 553 and 555
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Use therapeutic decision-making skills and drug information to apply clinical knowledge to address drug-related problems and promote health improvement, wellness, and disease prevention in cooperation withindividual patients
Audience: Undergraduate

2. Perform steps of the pharmacist patient care process (PPCP): collect, assess, plan, implement, and follow-up through collaboration, communication, and documentation in a patient-centered and efficientmanner as consistent with the University of Wisconsin – Madison School of Pharmacy's technical standards
Audience: Undergraduate

3. Acquire the necessary skills and experience to provide patient-centered care as a member of an interprofessional team
Audience: Undergraduate

4. Begin to develop skills and commitment for life-long learning in order to maintain professional competence
Audience: Undergraduate

5. Demonstrate professionalism by exhibiting behaviors and values that are consistent with the trust given to the profession by patients, other health care providers, and society
Audience: Undergraduate

PHM PRAC 555 – PHARMACOTHERAPY I
3 credits.

Clinical application of medications in the management of various neurologic and psychiatric disease states. Assessment and therapeutic monitoring of drug therapy with emphasis on the concepts of drug selection, monitoring of drug effect and titration of regimen. Also incorporates issues regarding pharmacokinetics/dynamics, drug interactions, pharmacy practice, and patient education.
Requisites: Declared in the Doctor of Pharmacy program with second year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize the target symptoms of mental health and neurologic conditions commonly encountered in pharmacy practice including epilepsy, headache, multiple sclerosis, Parkinson's disease, depression, anxiety, bipolar disorder, schizophrenia, sleep disorders, and dementia.
Audience: Graduate

2. Classify individual psychotropic and neurologic medications into distinct medication classes based on mechanism of action and therapeutic use (i.e. antiepileptic drugs, selective serotonin reuptake inhibitors, tricyclic antidepressants, second-generation antipsychotics, benzodiazepine, dopaminergic agents, etc).
Audience: Graduate

3. Devise key education points that should be communicated to a patient prescribed a psychotropic or neurologic medication (including indication, administration/dosing, monitoring for safety and efficacy, interactions).
Audience: Graduate

4. Describe common/serious adverse effects of psychotropic and neurologic medications and methods for preventing and/or minimizing occurrence.
Audience: Graduate

5. Identify clinically relevant interactions between psychotropic and neurologic medications and other medications, substances, foods, and disease states.
Audience: Graduate

6. Create a treatment plan to minimize an individual patient's risk of experiencing poor outcomes related to psychotropic and neurologic medication interactions.
Audience: Graduate

7. Select a first-line medication regimen (including specific agent, formulation, dose and frequency) for an individual patient, targeted at treating a specific mental health or neurologic condition.
Audience: Graduate

8. Develop a monitoring plan (including timeframe and monitoring parameters) for an individual patient newly starting or restarting a psychotropic or neurologic medication.
Audience: Graduate

9. Formulate key questions or strategies to assess psychotropic or neurologic medication response in an individual patient.
Audience: Graduate

10. Provide a recommendation to adjust a psychotropic or neurologic medication regimen based on individual patient response.
Audience: Graduate

PHM PRAC 556 – PHARMACOTHERAPY II
3 credits.

Clinical application of medications in the management of various disease states. Assessment and therapeutic monitoring of disease states and drug therapy using the concepts of pharmacokinetics/dynamics, drug interactions, pharmacy practice and patient counseling. Topics include cardiovascular and pulmonary therapeutics.
Requisites: PHM PRAC 553 and 555
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Define the goals of treatment - both overall and related to individual patient cases
Audience: Undergraduate

2. Design a therapeutic regimen consisting of both non-drug and drug elements appropriate for individual patients. In selecting drug therapy, consider the patient's age, disease, clinical condition/severity of illness, concomitant diseases and medications
Audience: Undergraduate

3. Select the initial dosing regimen and plan a dose titration scheme not exceeding maximal recommended doses (unless such excess is warranted)

Audience: Undergraduate

4. Provide the patient and health care personnel with information on the nature, likelihood and management of relevant (likely or severe) adverse effects
Audience: Undergraduate

5. Design a treatment monitoring plan incorporating symptoms, physical assessment, diagnostic test and laboratory findings as needed to document patient response and possible drug-related problems. Identify monitoring parameters, including endpoints/goals, timing and follow-up
Audience: Undergraduate

6. Explain the disease process, purpose of drug therapy, and other information pertinent to patient education in lay terms
Audience: Undergraduate

PHM PRAC 559 – INTRODUCTION TO ANTIMICROBIAL PHARMACOTHERAPY
1 credit.

Preparation for antimicrobial exposure and monitoring during internships to ensure safe and effective patient use of antimicrobials. Exposure to antibiotic-related drug information questions in the community and institution settings and review of primary literature to respond to these questions.
Requisites: Declared in Doctor of Pharmacy program with second year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020
Learning Outcomes: 1. Assess an antibiotic prescription in outpatient and inpatient settings for safety and efficacy based on patient-specific criteria.
Audience: Graduate

2. Identify components of a safe and effective antibiotic patient consultation.
Audience: Graduate

3. Recognize when a patient with an infection should be referred to a provider for evaluation.
Audience: Graduate

4. Monitor a patient's response to an antimicrobial.
Audience: Graduate

5. Demonstrate understanding of common infections.
Audience: Graduate

6. Identify first-line antimicrobials for common infections.
Audience: Graduate

7. Demonstrate competence in utilization of antimicrobial resources available through responding to drug information questions in the inpatient out outpatient settings.
Audience: Graduate

PHM PRAC 560 – SEMINARS IN ANTIMICROBIAL STEWARDSHIP
2 credits.

Gain foundational knowledge of the societal implications of antimicrobial resistance and the basic tenets of antimicrobial stewardship in multiple practice settings. Apply these tenets by developing antimicrobial stewardship intervention(s) and design measurement of associated outcomes.
Requisites: Declared in the Doctor of Pharmacy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the benefits of antimicrobial stewardship
Audience: Graduate

2. Describe how antimicrobial use in humans, agriculture, and animals contribute to the development of antimicrobial resistance.
Audience: Graduate

3. Discuss strategies to improve antimicrobial prescribing in outpatient, inpatient, and long-term care settings
Audience: Graduate

4. Describe components of an Antimicrobial Stewardship Program.
Audience: Graduate

5. Discuss how technology such as rapid diagnostics and electronic decision support tools can support stewardship initiatives and improve patient care.
Audience: Graduate

6. Apply Centers for Disease Control and Prevention Core Elements for a Stewardship Program to propose the development of a program in an inpatient, outpatient, or long-term care setting.
Audience: Graduate

7. Identify state-, national-, and international initiatives to improve patient outcomes related to inappropriate antimicrobial use.
Audience: Graduate

8. Design an educational antimicrobial stewardship intervention and outcomes measurements as a part of a team.
Audience: Graduate

9. Present a proposed policy or procedure to a mock Pharmacy and Therapeutics Committee as a part of a team.
Audience: Graduate

PHM PRAC 570 – DRUG LITERATURE EVALUATION
3 credits.

Fundamentals of drug literature and statistical evaluation to enable students to make decisions regarding the clinical use of drugs in their practice.
Requisites: Declared in Doctor of Pharmacy program with second year standing
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Determine the strengths and weaknesses of clinical trials and observational research
Audience: Undergraduate

2. Analyze a guideline recommendation given a cited clinical trial
Audience: Undergraduate

3. Interpret the statistics presented in published literature
Audience: Undergraduate

4. Report the results of clinical trials in a coherent and articulate fashion using written communication
Audience: Undergraduate

PHM PRAC/NURSING 605 – PHARMACOTHERAPEUTICS FOR ADVANCED PRACTICE NURSES
3 credits.

Pharmacotherapeutics content and application for advanced practice nursing. Emphasis on selection of appropriate therapeutics, development of clinical decision-making skills, and examination of legal, ethical, and safety issues in prescribing medications.
Requisites: Declared in a School of Nursing graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Select appropriate therapeutics for specific acute and chronic health conditions using an evidenced based approach.
Audience: Graduate

2. Develop the clinical decision making skills necessary to individualize prescribing to meet patient's needs and resources.
Audience: Graduate

3. Examine the appropriate rules for issuing safe prescriptions and minimize errors.
Audience: Graduate

4. Describe the legal and ethical ramifications of prescribing medications.
Audience: Graduate

PHM PRAC 610 – LEADERSHIP IN HEALTH-SYSTEM PHARMACY
2 credits.

Designed to expose students to personal leadership qualities essential to operate efficiently within an integrated health care delivery system and advance the profession and practice of pharmacy. Students will gain a foundation to become future pharmacy leaders through an understanding of pharmacy's continual evolution in the changing health care environment.
Requisites: Declared in Doctor of Pharmacy program with third year standing
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop personal and practice-related leadership skills
Audience: Undergraduate

2. Apply health system management techniques
Audience: Undergraduate

3. Utilize skills needed to create, promote, and market the pharmacist's role within integrated health systems
Audience: Undergraduate

4. Provide a foundation for students/practitioners to become future pharmacy leaders through an understanding of our profession's role in the evolving health care environment
Audience: Undergraduate

5. Expose personal leadership qualities essential to operate effectively within an integrated health care delivery system and advance the profession and practice of pharmacy
Audience: Undergraduate

6. Develop skills in the following areas: project management, decision making, productivity management, quality methodologies, organizational design and behavior, and strategic planning
Audience: Undergraduate

7. Develop administrative acumen within the principles of human resource management, financial management, and pharmacy/health care reimbursement
Audience: Undergraduate

PHM PRAC 611 – MEDICAL IMAGING FOR PHARMACISTS
2 credits.

An overview of the imaging modalities offered in a Hospital Radiology Department. Completion of this course will help students understand the concepts of radiation, how it is used, and some of the tests and medications a patient may encounter when in the Radiology Department of a hospital.
Requisites: Declared in Doctor of Pharmacy program
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the components of a nuclear pharmacy practice site
Audience: Undergraduate

2. Identify the most common types of radiation used in radiology and describe their physical characteristics
Audience: Undergraduate

3. Explain how radiation affects the human body and how regulatory agencies have set standards for protection
Audience: Undergraduate

4. Identify common imaging modalities in radiology
Audience: Undergraduate

5. Empathize with patients undergoing radiology procedures
Audience: Undergraduate

PHM PRAC 612 – RADIOPHARMACEUTICALS
2 credits.

A survey of the clinical diagnostic and therapeutic use of radioactive pharmaceuticals. Included is a review of nuclear physics, radiation biology, radiation chemistry, regulatory issues, and radiation safety, as these areas relate to the synthesis, formulation, dispensing, and administration of radiopharmaceuticals.
Requisites: PHM PRAC 611
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply the knowledge learned in Medical Imaging 611 to explain the biological effects of radiation used clinically with FDA approved radiopharmaceuticals
Audience: Undergraduate

2. Identify common production methods for common radionuclides
Audience: Undergraduate

3. Explain the common indications of FDA approved radiopharmaceuticals in clinical Radiology
Audience: Undergraduate

4. Describe the pharmacokinetics and biodistribution of common radiopharmaceuticals
Audience: Undergraduate

PHM PRAC 617 – HEALTH SYSTEM PHARMACY DATA ANALYSIS AND INFORMATICS
2 credits.

Weekly lectures will familiarize the student with pharmacy information systems and the use of data and data processing systems for decision support. Students will complete a data analysis and report project to drive a decision in the hospital.
Requisites: Graduate standing or declared in the Doctor of Pharmacy program with third year standing
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Articulate how EHR systems store data, and how they impact patient care
Audience: Undergraduate

2. Elaborate on medication use systems and core components of pharmacy informatics
Audience: Undergraduate

3. Design and present solutions using analytical tools to effectively analyze and visualize data
Audience: Undergraduate

4. Communicate effectively with informatics teams and healthcare providers
Audience: Undergraduate

PHM PRAC 625 – PHARMACY PRACTICE EXPERIENCES III
2 credits.

Integrates didactic learning with active participation in a wide-variety of patient-care activities under the supervision of a pharmacist preceptor including medication reconciliation, patient consultation, complex medication reviews, documentation, therapeutic drug monitoring and calculations. Continued exposure to the Pharmacist Patient Care Process (PPCP), which is a framework for providing patient care in a pharmacy practice setting.
Requisites: PHM PRAC 526
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop and enhance oral and written communication skills with patients, pharmacists, and other healthcare providers
Audience: Graduate

2. Retrieve and interpret primary, secondary, and tertiary sources to answer clinical questions encountered by patients and other healthcare providers
Audience: Graduate

3. Identify, assess, and provide recommendations to patients and other healthcare providers to resolve medication- and health-related problems using the Pharmacist Patient Care Process
Audience: Graduate

4. Design or modify dosage regimens using pharmacokinetic data, plasma concentration, and factors that alter them
Audience: Graduate

5. Educate patients and caregivers on the safe and effective use of medications while considering the patient's perspective on health, social, economic, and psychological needs
Audience: Graduate

6. Observe and participate in pharmacy operations including accurate dispensing and preparation of a medication
Audience: Graduate

7. Apply legal principles to perform professional activities as a pharmacy intern
Audience: Graduate

8. Display professional attitudes, habits, and values in accordance with ethical and social guidelines
Audience: Graduate

9. Develop individualized goals and reflect on experiences through structured learning activities and assignments
Audience: Graduate

PHM PRAC 626 – PHARMACY PRACTICE EXPERIENCES IV
2 credits.

Integrates didactic learning with active participation in a wide-variety of patient-care activities under the supervision of a pharmacist preceptor including medication reconciliation, patient consultation, complex medication reviews, documentation, therapeutic drug monitoring and calculations. Continued exposure to the Pharmacist Patient Care Process (PPCP), which is a framework for providing patient care in a pharmacy practice setting.
Requisites: PHM PRAC 625
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop and enhance oral and written communication skills with patients, pharmacists, and other healthcare providers
Audience: Graduate

2. Retrieve and interpret primary, secondary, and tertiary sources to answer clinical questions encountered by patients and other healthcare providers
Audience: Graduate

3. Identify, assess, and provide recommendations to patients and other healthcare providers to resolve medication- and health-related problems using the Pharmacist Patient Care Process
Audience: Graduate

4. Design or modify dosage regimens using pharmacokinetic data, plasma concentration, and factors that alter them
Audience: Graduate

5. Educate patients and caregivers on the safe and effective use of medications while considering the patient's perspective on health, social, economic, and psychological needs
Audience: Graduate

6. Observe and participate in public health activities in the community to address and promote health and wellness and increase awareness of community-based resources
Audience: Graduate

7. Select a marginalized population within the community and complete structured learning activity to identify factors that may impact the health of that population
Audience: Graduate

8. Observe and participate in pharmacy operations including accurate dispensing and preparation of a medication
Audience: Graduate

9. Apply legal principles to perform professional activities as a pharmacy intern
Audience: Graduate

10. Display professional attitudes, habits, and values in accordance with ethical and social guidelines
Audience: Graduate

11. Develop individualized goals and reflect on experiences through structured learning activities and assignments
Audience: Graduate

PHM PRAC 628 – PRACTICE INNOVATION I
1 credit.

Application of foundational knowledge of project management to hands-on experiences planning positive change within the health care system. Students will learn to think strategically, to critically assess a problem, identify solutions, and implement change. Students will integrate concepts in their practice area of interest with the project management skills learned in this course.
Requisites: Declared in Doctor of Pharmacy program with third year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Serve as strategic decision makers able to effectively organize and prioritize needs within a health care organization to produce meaningful results
Audience: Graduate

2. Engage as agents for pharmacy practice advancement through successful project development, management, and assessment
Audience: Graduate

3. Articulate project management essentials inspired by the Project Management Institute, with application to unique areas of pharmacy practic
Audience: Graduate

4. Collaborate with project stakeholders to identify a problem in pharmacy practice, define end goals, and strategize solutions
Audience: Graduate

5. Utilize project management principles to develop a project plan, manage stakeholders, and lead meetings to develop, measure, and implement meaningful change
Audience: Graduate

PHM PRAC 629 – PRACTICE INNOVATION II
1 credit.

Expand upon the knowledge gained in Practice Innovation I to produce positive change within the health care system. Students will integrate concepts in their practice area of interest with the project management skills learned placing special emphasis on project implementation, measurement, and articulation of results.
Requisites: PHM PRAC 628
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Serve as strategic decision makers able to effectively organize and prioritize needs within a health care organization to produce meaningful results
Audience: Graduate

2. Engage as agents for pharmacy practice advancement through successful project development, management, and assessment
Audience: Graduate

3. Articulate project management essentials inspired by the Project Management Institute, with application to unique areas of pharmacy practice
Audience: Graduate

4. Collaborate with project stakeholders to identify a problem in pharmacy practice, define end goals, and strategize solutions
Audience: Graduate

5. Utilize project management principles to develop a project plan, manage stakeholders, and lead meetings to develop, measure, and implement meaningful change
Audience: Graduate

PHM PRAC 650 – COMPREHENSIVE IMMUNIZATION DELIVERY
1 credit.

Addresses vaccine-preventable diseases and the implementation of pharmacy-based immunization delivery programs.
Requisites: Declared in the Doctor of Pharmacy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply the principles of immunization
Audience: Graduate

2. Recommend vaccinations for patients based on their ages, concurrent illnesses or conditions, and lifestyle
Audience: Graduate

3. Describe how to implement and maintain a pharmacy-based immunization service
Audience: Graduate

4. Develop vaccine administration skills
Audience: Graduate

PHM PRAC 653 – INTEGRATED PHARMACOTHERAPY SKILLS III
1 credit.

Learn and build upon pharmacotherapeutic skills necessary to develop competence as a pharmacist to assume the responsibility to improve therapeutic patient outcomes related to medication use. Skills will include patient and healthcare provider communication, identification and resolution of drug related problems, documentation, and complex problem solving skills.
Requisites: Declared in Doctor of Pharmacy program with third year standing
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use therapeutic decision-making skills and drug information to apply clinical knowledge to address drug-related problems and promote health improvement, wellness, and disease prevention in cooperation with individual patients
Audience: Undergraduate

2. Perform steps of the pharmacists' patient care process (PPCP): collect, assess, plan, implement, and follow-up through documentation, communication, and collaboration in a patient-centered and efficient manner as consistent with the University of Wisconsin – Madison School of Pharmacy's technical standards
Audience: Undergraduate

3. Acquire the necessary skills and experience to provide patient care as a member of an interprofessional team
Audience: Undergraduate

4. Begin to develop skills and commitment for life-long learning in order to maintain professional competence
Audience: Undergraduate

5. Demonstrate professionalism by exhibiting behaviors and values that are consistent with the trust given to the profession by patients, other health care providers, and society
Audience: Undergraduate

PHM PRAC 654 – INTEGRATED PHARMACOTHERAPY SKILLS IV
1 credit.

Learn and build upon pharmacotherapeutic skills necessary to develop competence as a pharmacist to assume the responsibility to improve therapeutic patient outcomes related to medication use. The course will focus on building complex problem solving skills including the integration of patient and provider communication, documentation, and evaluation of integrated patient cases with a secondary focus on patient profile reviews and comprehensive medication review and assessment.
Requisites: PHM PRAC 653 and 655
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Use therapeutic decision-making skills and drug information to apply clinical knowledge to address drug-related problems and promote health improvement, wellness, and disease prevention in cooperation with individual patients
Audience: Undergraduate

2. Perform steps of the pharmacists' patient care process (PPCP): collect, assess, plan, implement, and follow-up through documentation, communication, and collaboration in a patient-centered and efficient manner as consistent with the University of Wisconsin – Madison School of Pharmacy's technical standards
Audience: Undergraduate

3. Acquire the necessary skills and experience to provide patient care as a member of an interprofessional team
Audience: Undergraduate

4. Begin to develop skills and commitment for life-long learning in order to maintain professional competence
Audience: Undergraduate

5. Demonstrate professionalism by exhibiting behaviors and values that are consistent with the trust given to the profession by patients, other health care providers, and society
Audience: Undergraduate

PHM PRAC 655 – PHARMACOTHERAPY III
3 credits.

Clinical application of medications in the management of various disease states. Assessment and therapeutic monitoring of disease states and drug therapy using the concepts of pharmacokinetics/dynamics, drug interactions, pharmacy practice and patient counseling. Topics include various renal, endocrine, gastrointestinal, rheumatologic and immunologic disease therapeutics.
Requisites: PHM PRAC 554 and 556
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define the goals of treatment - both overall and related to individual patient cases
Audience: Undergraduate

2. Design a therapeutic regimen consisting of both non-drug and drug elements appropriate for individual patients. In selecting drug therapy, consider the patient's age, disease, clinical condition/severity of illness, concomitant diseases and medications
Audience: Undergraduate

3. Select the initial dosing regimen and plan a dose titration scheme not exceeding maximal recommended doses (unless such excess is warranted)

Audience: Undergraduate

4. Provide the patient and health care personnel with information on the nature, likelihood and management of relevant (likely or severe) adverse effects
Audience: Undergraduate

5. Design a treatment monitoring plan incorporating symptoms, physical assessment, diagnostic test and laboratory findings as needed to document patient response and possible drug-related problems. Identify monitoring parameters, including endpoints/goals, timing and follow-up
Audience: Undergraduate

6. Explain the disease process, purpose of drug therapy, and other information pertinent to patient education in lay terms
Audience: Undergraduate

PHM PRAC 656 – PHARMACOTHERAPY IV
3-4 credits.

Clinical application of medications in the management of various disease states. Assessment and therapeutic monitoring of disease states and drug therapy using the concepts of pharmacokinetics/dynamics, drug interactions, pharmacy practice and patient counseling. Topics include various oncology and infectious disease therapeutics. A one credit elective option will be offered to students and involves academic leadership skill development. Student leaders will lead discussion activities which involve clinical cases, scientific literature review, oncology literature discussions.
Requisites: PHM PRAC 653, 655 and PHM SCI 623
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Use patient and laboratory evidence to design initial regiments and tailor regiments based on patient monitoring and guidelines for specific infections
Audience: Undergraduate

2. Examine patients' antimicrobial regiments to minimize potential adverse events and drug-drug interactions
Audience: Undergraduate

3. Demonstrate the basic biology, microbiology and epidemiology of microorganism and antimicrobial spectra to apply to patients with infectious diseases
Audience: Undergraduate

4. Implement appropriate antimicrobial stewardship principles for safe and effective antimicrobial use in patients and populations
Audience: Undergraduate

5. Design a therapeutic regimen consisting of both non-drug and drug elements appropriate for individual cancer patients receiving a specified antineoplastic drug therapy regimen. In selecting drug therapy, consider the patient's age, disease, clinical condition/severity of illness, concomitant diseases and medications
Audience: Undergraduate

6. Describe current recommendations for decreasing the risk of developing cancer
Audience: Undergraduate

7. Describe current recommendations for cancer screening, including physical examinations, serology, and genetic screening
Audience: Undergraduate

8. Describe factors that affect the pharmacokinetics of antineoplastic chemotherapy, and the extent to which monitoring renal, hepatic, or drug concentrations can be used to titrate or empirically adjust the drug regimen
Audience: Undergraduate

9. Describe how cytotoxic medications should be prepared and how they should be safely disposed in the inpatient and outpatient environment
Audience: Undergraduate

10. Describe how reimbursement issues affect the selection of drug and administration of the drug in the outpatient and inpatient environment, and how pharmacy services can facilitate access to the intended therapy
Audience: Undergraduate

PHM PRAC 657 – SEMINARS IN PEDIATRIC PHARMACOTHERAPY
2 credits.

Addresses the selection, dosing, and monitoring of drugs in children from birth to adolescence. Drugs in pregnancy and lactation are also addressed. The course combines lecture,small group work, and discussion.
Requisites: PHM PRAC 656 or concurrent enrollment
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize the differences in development of drug distribution and elimination in children from birth to adulthood.
Audience: Undergraduate

2. Use the available literature to recommend a dose of drug for a child based upon age, weight, and organ function.
Audience: Undergraduate

3. Describe peri-partum diagnostic and therapeutic interventions to prevent or treat infections or to delay or stimulate delivery.
Audience: Undergraduate

4. Describe how the prevention and treatment of diabetes may differ between children and adults.
Audience: Undergraduate

5. Describe drugs and doses used for sedation and analgesia in children
Audience: Undergraduate

6. Describe risk factors and common treatment approaches for fluid and electrolyte repletion in children.
Audience: Undergraduate

7. Describe the nature of treatments for pediatric-predominant cancers, including ways in which chemotherapy or other treatment-related toxicities can be minimized.
Audience: Undergraduate

8. Interact with the faculty as an opportunity to learn more about pediatric pharmacy, and various pediatric residency opportunities (several of the presenters are pediatric specialty residents).
Audience: Undergraduate

PHM PRAC 659 – INFECTIOUS DISEASES PHARMACOTHERAPY IN THE ACUTE CARE SETTING
1 credit.

Antimicrobial Stewardship has emerged as an important component of patient care in both inpatient and outpatient settings. Pharmacists can play an essential role in Antimicrobial Stewardship through application of knowledge in pharmacology, therapeutics, pharmacokinetics, microbiology, and biotechnology, most often expressed in the acute care setting, where patient health status and therapeutic decision making are ongoing. Addresses the ever-changing skill set required for pharmacists to understand therapeutic options and make effective interventions in the care of infected patients. Emphasis is placed on new treatment modalities as well as challenging the status quo of conventional management principles.
Requisites: PHM PRAC 655
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply knowledge of concepts presented in the required Infectious Diseases Pharmacotherapy course to foster skills required in conducting an antimicrobial stewardship program.
Audience: Graduate

2. Apply principles of antimicrobial pharmacology and clinical management of diseases in patients treated in a hospital setting that are not covered in required coursework, at a point in the curriculum when students are near the start of clinical rotations.
Audience: Graduate

3. Recognize topics subject to dynamic changes and that may not be reflected in currently published guidelines.
Audience: Graduate

4. Enhance ability to evaluate published literature in infectious diseases.
Audience: Graduate

5. Apply algorithmic strategies to drug selection, dosing, and monitoring.
Audience: Graduate

6. Generate solutions for patient-specific care via case-based discussion.
Audience: Graduate

PHM PRAC 668 – SEMINARS IN CRITICAL CARE
2 credits.

Addresses the pharmacotherapeutic management of various critical care conditions. Guest lectures, primary literature review, patient case discussions, student-led presentations, and small group work will be utilized.
Requisites: PHM PRAC 550, 555, 556, and 655
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Critically evaluate published clinical research and apply evidence-based medicine to individual patients
Audience: Graduate

2. Design a therapeutic regimen consisting of both non-drug and drug therapy that is appropriate for an individual patient based on clinical condition (severity of illness), concomitant diseases and medications
Audience: Graduate

3. Analyze medication orders and determine appropriateness for an individual patient
Audience: Graduate

PHM PRAC 671 – INTRODUCTION TO ACADEMIC PHARMACY I
2 credits.

Introduces students to pharmacy faculty responsibilities. Students will participate in a variety of activities to expose them to the role of the pharmacy educator and will actively participate in the education of DPH-1 or DPH-2 students.
Requisites: Declared in Doctor of Pharmacy program with third year standing
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Discuss a variety of remote and face-to-face instructional methodologies and assessment strategies
Audience: Undergraduate

2. Evaluate the merits and pitfalls of manuscripts in the area of teaching and learning
Audience: Undergraduate

3. Create and co-lead a group journal club discussion on an educational journal
Audience: Undergraduate

4. Develop and deliver an education-based topic discussion within the context of pharmacy education
Audience: Undergraduate

5. Design, evaluate, and/or analyze a pharmacy-related educational activity in conjunction with your mentor
Audience: Undergraduate

6. Report and critique a student-teaching interaction
Audience: Undergraduate

7. Demonstrate collaborative interpersonal and intergroup behaviors effective in various teaching situations
Audience: Undergraduate

PHM PRAC 673 – SEMINARS IN GLOBAL HEALTH PHARMACY
1 credit.

Explores the contribution of pharmacy and pharmacists to global health initiatives. Topics will be selected and presented by course faculty and students.
Requisites: Declared in Doctor of Pharmacy program
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Explain and interpret the Sustainable Development Goals from a healthcare professional/pharmacist perspective
Audience: Undergraduate

2. Explain the Global Pharmacy Practice Standards and compare these standards to actual practice around the world
Audience: Undergraduate

3. Identify ways that international organizations are working to improve pharmacy practice and education globally
Audience: Undergraduate

4. Compare and contrast issues raised in the classroom from an international and domestic perspective
Audience: Undergraduate

5. Identify and important topic related to this course, retrieve appropriate literature, post relevant readings in advance for class, and present a seminar (lecture and discussion) on the topic
Audience: Undergraduate

PHM PRAC/NURSING 674 – SEMINARS IN INTERPROFESSIONAL MENTAL HEALTH CARE
2 credits.

Addresses the team-based and patient-centered care of persons with mental health conditions. A special focus will be put on the management of psychotropic medication regimens. A combination of lecture, discussion, and small group work will be utilized.
Requisites: PHM PRAC 555
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Assess an individual person and his/her psychotropic medication regimen to identify potential and actual drug related problems
Audience: Undergraduate

2. Develop and recommend an appropriate therapeutic regimen consisting of both non-drug and drug therapy recommendations to facilitate optimal care and outcomes for an individual person
Audience: Undergraduate

3. Design an appropriate monitoring plan in collaboration with the person you are serving in order to appropriately evaluate the individual person's treatment plan
Audience: Undergraduate

4. Apply evidence-based care to practice by critically reviewing current published clinical research and guidelines
Audience: Undergraduate

5. Support persons in successfully navigating the wider mental health care system
Audience: Undergraduate

6. Apply ethical and legal concepts and processes in the analysis of clinical situations
Audience: Undergraduate

PHM PRAC 677 – SEMINARS IN CARDIOLOGY
2 credits.

Seminars, primary literature review, and patient case discussions on selected cardiovascular conditions, including: ACS, HF, valvular disease, cardiac devices, hemodynamic monitoring, heart transplantation, arrhythmias, ACLS, pulmonary arterial hypertension, stroke, and metabolic syndrome.
Requisites: Declared in Doctor of Pharmacy program with third year standing
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Critically review published clinical research so as to apply evidence based medicine principles to future practice
Audience: Undergraduate

2. Describe clinical applications of patient care from the perspectives of other disciplines
Audience: Undergraduate

3. Design a therapeutic regimen consisting of both non-drug and drug therapy that is appropriate for an individual patient based on clinical condition (severity of illness), concomitant diseases and medications
Audience: Undergraduate

PHM PRAC 678 – SEMINARS IN ONCOLOGY
1 credit.

Addresses practical issues surrounding the optimization of medication use in the treatment of patients with cancer. Practical solutions to the everyday challenges of providing exceptional clinical oncology care in a safe, fiscally responsible manner to optimize clinical outcomes of patients with cancer. Included subjects range across clinical, operational, and practice management issues that affect oncology pharmacy practice. These subjects include: pharmacogenomics, cell therapies, oncology research, survivorship, oral chemotherapy management, hazardous drug handling, value of cancer care, specialty pharmacy and Risk Evaluation and Mitigation Strategy (REMS) processes, and transitions of care. Although focused on oncology patients, offers practical exposure to issues confronting the care of patients with other types of diseases.
Requisites: Declared in the Doctor of Pharmacy Program with third year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the steps needed to safely provide parenteral cytotoxic agents to an inpatient or outpatient (clinic) setting.
Audience: Graduate

2. Describe how to address patient access to oncology medications, including management of drug shortages.
Audience: Graduate

3. Describe how to seek financial or product support for patients prescribed expensive medications.
Audience: Graduate

4. Demonstrate how to converse and support patients and/or caregivers struggling with a diagnosis of incurable or terminal disease.
Audience: Graduate

5. Describe how to develop a de novo clinical pharmacy service in an oncology clinic.
Audience: Graduate

PHM PRAC 679 – ADVANCED DIABETES MANAGEMENT
2 credits.

Enhanced education on diabetes topics; current approaches to the medical management of patients with diabetes including the pharmacist's role in diabetes education and coaching/case management.
Requisites: PHM PRAC 655 or (NURSING 312 and NURSING 422)
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe interprofessional roles and responsibilities of various health care providers in delivering care to people with diabetes
Audience: Undergraduate

2. Discuss economic, ethnic, racial and age diversity aspects related to health care for people living with diabetes
Audience: Undergraduate

3. Construct assessments and plans for diabetes case studies including lifestyle considerations, medications, medication delivery devices, and diabetes complications
Audience: Undergraduate

4. Discuss issues and experiences faced by people living with diabetes
Audience: Undergraduate

5. Critique media reports related to diabetes
Audience: Undergraduate

6. Communicate diabetes-related topics through oral presentation and discussion facilitation
Audience: Undergraduate

PHM PRAC 691 – SENIOR THESIS
2 credits.

Individual study for seniors completing theses as arranged with a faculty member.
Requisites: Consent of instructor
Repeatable for Credit: No

PHM PRAC 692 – SENIOR THESIS
2 credits.

Individual study for seniors completing theses as arranged with a faculty member.
Requisites: Consent of instructor
Repeatable for Credit: No

PHM PRAC 699 – ADVANCED INDEPENDENT STUDY
0-3 credits.

Directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PHM PRAC 740 – ACUTE PHARMACEUTICAL CARE CLERKSHIP
1-6 credits.

Integrates prior didactic course work in pharmacotherapy, pathophysiology, and drug literature evaluation into the provision of pharmaceutical care to hospitalized patients. Participate in the provision of direct pharmaceutical care, by monitoring drug therapy, providing patient counseling, and providing drug information and pharmacokinetic dosing recommendations for patients. Gain experience and insight into health education by interacting with other health professionals and health-professions students.
Requisites: Declared in Doctor of Pharmacy program with fourth year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PHM PRAC 741 – AMBULATORY PHARMACEUTICAL CARE CLERKSHIP
1-6 credits.

Integrates prior course work in pharmacotherapy, pathophysiology, and drug literature evaluation into the provision of pharmaceutical care to ambulatory patients. Activities include conducting patient interviews and assessments, providing drug information to patients and health professionals, and monitoring drug therapy in ambulatory settings.
Requisites: Declared in Doctor of Pharmacy program with fourth year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PHM PRAC 742 – HEALTH-SYSTEM PHARMACY PRACTICE CLERKSHIP
1-6 credits.

Integrates prior didactic course work into the provision of care and the development and delivery of services for hospitalized patients. Exposure to the five pillars of the medication use system (prescribing, transcribing, dispensing, administering, monitoring), plus procurement/storage along with the hospital services and processes that support them. Includes exposure to hospital-based services/programs/committees such as investigational drugs, Pharmacy and Therapeutics, quality/performance improvement (MUE), technologies, and personnel management. Exposure to best-practices, regulatory, legal, and accreditation standards/requirements that influence the quality and delivery of care to hospitalized patients.
Requisites: Declared in Doctor of Pharmacy program with fourth year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PHM PRAC 743 – COMMUNITY PHARMACY PRACTICE CLERKSHIP
1-6 credits.

Develops the skills and judgment necessary to apply the knowledge gained in the basic and clinical sciences to specific patient care situations. In addition, demonstrates the philosophy that clinical (APPE) and distributive pharmaceutical services should be patient oriented and integrated in contemporary ambulatory practice.
Requisites: Declared in Doctor of Pharmacy program with fourth year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PHM PRAC/NURSING/SOC WORK 746 – INTERDISCIPLINARY CARE OF CHILDREN WITH SPECIAL HEALTH CARE NEEDS
3 credits.

Interdisciplinary team care of children with special health care needs across the trajectory of illness presented within the context of family, culture, social determinants of health, community, and healthcare policy. Students introduced to interdisciplinary, collaborative, family-centered team care.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the interdisciplinary team approach to the care of the child with a chronic illness from the perspective of a child with a chronic illness and their family, community care providers, and each of the disciplines involved, including the student's own.
Audience: Graduate

2. Demonstrate an understanding of issues relating to larger social and cultural context for the care of children with chronic illness.
Audience: Graduate

3. Identify and assess healthcare delivery systems and financing for children with chronic illness.
Audience: Graduate

4. Describe ways to advocate for pediatric patients with chronic disease and their families at an individual level and a policy level.
Audience: Graduate

PHM PRAC 760 – ELECTIVE PHARMACY PRACTICE CLERKSHIP
1-6 credits.

Experiential course that integrates prior course work in pharmacotherapy, pathophysiology, and drug literature evaluation into the provision of pharmaceutical care to ambulatory patients. Students will conduct patient interviews and assessments, provide drug information to patients and health professionals, and monitor drug therapy in ambulatory settings.
Requisites: Declared in Doctor of Pharmacy program with fourth year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PHM PRAC 761 – INTERNATIONAL PHARMACY CLERKSHIP
1-6 credits.

Gain immersive pharmacy practice experience in a different country. Learn about global health, medication use, health systems, and pharmacy practice with a health equity lens.
Requisites: Declared in Doctor of Pharmacy program with fourth year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 3 number of completions
Last Taught: Fall 2025

PHM PRAC 764 – VETERINARY PHARMACY CLERKSHIP
1-6 credits.

Practical experience in a veterinary medicine environment with emphasis on the drug treatment of diseases in animals.
Requisites: Declared in Doctor of Pharmacy program with fourth year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Provide patient care collaborating with clients/animal owners, veterinarians, veterinary technicians and other members of the veterinary healthcare team.
Audience: Graduate

2. Manage and use resources of the healthcare system to ensure appropriate medication therapy for veterinary patients.
Audience: Graduate

3. Develop proficiency with medication order fulfillment.
Audience: Graduate

PHM PRAC 769 – CLINICAL RESEARCH AND PHARMACY INVESTIGATION CLERSKSHIP
1-6 credits.

Gain experience with clinical and translational research in a mentored situation. Learn study design, laboratory techniques, statistical analysis, manuscript preparation, and ethical principles of research.
Requisites: Declared in Doctor of Pharmacy program with fourth year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe different study designs and methods
Audience: Graduate

2. Review and apply statistical tests
Audience: Graduate

3. Apply laboratory techniques
Audience: Graduate

4. Prepare and write a manuscript
Audience: Graduate

PHM PRAC 961 – GRADUATE SEMINAR IN HEALTH-SYSTEM PHARMACY
1 credit.

Specialized subject matter of current interest to graduate students in the MS Pharmacy Administration program.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PHM PRAC 962 – GRADUATE SEMINAR IN HEALTH-SYSTEM PHARMACY
1 credit.

Specialized subject matter of current interest to graduate students in the MS Pharmacy Administration program.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

PHM PRAC 999 – ADVANCED INDEPENDENT STUDY
1-12 credits.

Directed study projects for graduate students as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PHILOSOPHY (PHILOS)

PHILOS 101 – INTRODUCTION TO PHILOSOPHY
3-4 credits.

Introduction to various philosophical questions and to the strategies that philosophers use to address these.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PHILOS 104 – SPECIAL TOPICS IN PHILOSOPHY FOR FRESHMEN
3 credits.

Selected topics addressing various philosophical questions and to the strategies that philosophers use to address these.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PHILOS 106 – STUDY ABROAD IN PHILOSOPHY
2-4 credits.

Treatment of a topic in philosophy in a course offered at a university outside the United States.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 1999

PHILOS 141 – THE MEANING OF LIFE
3-4 credits.

Introduces the subject of philosophy through a question that is familiar to nearly every person: What is the meaning of life? This question will be approached through reading both classical philosophical works and the works of contemporary philosophers.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

PHILOS 206 – STUDY ABROAD IN PHILOSOPHY
2-4 credits.

Treatment of a topic in philosophy in a course offered at a university outside the United States.
Requisites: None
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2001

PHILOS 210 – REASON IN COMMUNICATION
3-4 credits.

Argument in familiar contexts; emphasis upon developing critical skills in comprehending, evaluating, and engaging in contemporary forms of reasoning, with special attention to the uses of argument in mass communication media.
Requisites: MATH 96 or placement into MATH 141
Course Designation: Gen Ed - Quantitative Reasoning Part A
Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PHILOS 211 – ELEMENTARY LOGIC
3-4 credits.

The formal characteristics of logical truth and inference.
Requisites: Sophomore standing and satisfied Quantitative Reasoning (QR) A requirement
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Ability to think critically about arguments.
Audience: Undergraduate

PHILOS 241 – INTRODUCTORY ETHICS
3-4 credits.

Nature of moral problems and of ethical theory, varieties of moral skepticism, practical ethics and the evaluation of social institutions.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PHILOS 243 – ETHICS IN BUSINESS
3-4 credits.

Case studies of moral issues in business; types or reasons appealed to for settlement.
Requisites: Sophomore standing or 3 Credits in PHILOS
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PHILOS 244 – INTRODUCTORY ARTIFICIAL INTELLIGENCE (AI) AND DATA ETHICS
3-4 credits.

Introduction to contemporary moral and political issues in Artificial Intelligence (AI) and Data Ethics, integrating urgent problems, controversies, and continuously updated case studies. Introduces basic technical concepts such as the bias/variance tradeoff, the reference class problem, and inductive risk. Covers topics such as data and privacy, the impacts of automation on society, and the use of algorithms in medicine and criminal law.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Critically evaluate ethical arguments in relation to data and artificial intelligence (AI).
Audience: Undergraduate

2. Interpret complex texts accurately and analyze them logically by identifying explicit and implicit background assumptions, and by understanding which conclusions necessarily follow from them.
Audience: Undergraduate

3. Discuss controversial ethical and social questions respectfully and with the aim of uncovering the truth.
Audience: Undergraduate

4. Identify and evaluate the ethical, legal, and political implications of artificial intelligence (AI), as well as their historical and societal context.
Audience: Undergraduate

PHILOS 304 – TOPICS IN PHILOSOPHY: HUMANITIES
3-4 credits.

Examination of selected topics in philosophy.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

PHILOS 320 – PHILOSOPHY OF SCIENCE
3-4 credits.

Focus on various central questions in philosophy of science, potentially including topics from the history of philosophy of science as well as topics important to contemporary philosophy of science. Topics might include: What is science? How does scientific explanation work? How do scientists generate and use evidence? What is the relationship between science and social or political values? What are the aims of science? May also include discussion of specific subdisciplines of philosophy of science, such as philosophy of biology, philosophy of physics, philosophy of medicine, and more.
Requisites: Sophomore standing. Not open to students with credit for PHILOS 220.
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Think critically about philosophical and scientific arguments.
Audience: Undergraduate

2. Interpret complex texts accurately and analyze them logically.
Audience: Undergraduate

3. Communicate precisely and concisely in both writing and speech.
Audience: Undergraduate

4. Explain several central concepts in science and philosophy of science, such as explanation, confirmation, underdetermination, objectivity, (anti)realism, scientific revolutions, pluralism, reductionism, models, measurement, data, research ethics
Audience: Undergraduate

5. Reflect on their own society's relationship to science or scientific advancements
Audience: Undergraduate

6. Synthesize and understand multiple perspectives in philosophy of science or other science studies disciplines (e.g., history and sociology of science)
Audience: Undergraduate

PHILOS 340 – 19TH CENTURY PHILOSOPHY: IDEALISM AND ITS CRITICS
3 credits.

Examine debates about the legacy of idealism by discussing some of their most familiar interlocutors - Hegel, Nietzsche, Marx - as well as interlocutors who were obscured from history.
Requisites: 3 credits in PHILOS
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Understand major nineteenth-century debates about epistemology, metaphysics, and ethics.
Audience: Undergraduate

2. Make persuasive philosophical arguments.
Audience: Undergraduate

3. Interpret complex texts accurately and analyze them logically.
Audience: Undergraduate

4. Practice interpretative charity and intellectual honesty, which includes appropriate attribution to others of their ideas, and recognition and frankness about the limitations of one's own ideas.
Audience: Undergraduate

PHILOS 341 – CONTEMPORARY MORAL ISSUES
3-4 credits.

A philosophical study of some of the major moral issues in contemporary society, such as those concerning abortion, euthanasia, punishment, property, politics, sex, nuclear disarmament, and world hunger.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PHILOS/MED HIST 344 — FOOD ETHICS
3 credits.

There are many ethical issues related to food production, distribution, consumption, and policy, including animal welfare, animal rights, vegetarianism and veganism, environmental impact, treatment of workers, prospects for agricultural reform, ethical responsibilities of corporate and industry actors, and labeling issues surrounding the use of genetically engineered foods. Some are more theoretical, such as which individuals affected by agriculture deserve direct moral consideration. Other are more practical, such as how to feed a growing global population. We will begin with a brief survey of ethical theories and methods of ethical reasoning, and then explore, from both personal and policy perspectives, several food ethics issues. Among the aims of the course are the goals of helping you think critically about the ethically relevant impacts of your own food choices and improving your understanding of ethical issues implicated in food systems.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2021
Learning Outcomes: 1. Think critically about arguments.
Audience: Undergraduate

2. Interpret complex texts accurately and analyze them logically.
Audience: Undergraduate

3. Think critically about ethical issues.
Audience: Undergraduate

4. Explain the social, economic, and/or environmental dimensions of the sustainability challenge(s) of modern food systems.
Audience: Undergraduate

5. Apply sustainability principles and/or frameworks to addressing the challenge of human and environmental harms arising from modern food systems.
Audience: Undergraduate

PHILOS 430 — HISTORY OF ANCIENT PHILOSOPHY
3-4 credits.

Various philosophers from the presocratics to the Stoics and Epicureans; particular emphasis on Plato and Aristotle.
Requisites: Junior standing or 3 Credits in PHILOS
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PHILOS 432 — HISTORY OF MODERN PHILOSOPHY
3-4 credits.

Covers various philosophers from the 17th century through early 20th century.
Requisites: Junior standing or 3 Credits in PHILOS
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PHILOS 440 — EXISTENTIALISM
3-4 credits.

Feeling like life is absurd, that existence is meaningless? Worried that you aren't living authentically? Then a course in Existentialism is just what you need. Study the classic texts of this intellectual movement that expressed despondency about Western civilization, its decadence, and its values. Along the way you'll meet the likes of Kierkegaard, Nietzsche, Heidegger, Sartre, Camus, and De Beauvoir.
Requisites: Junior standing or 3 Credits in PHILOS
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PHILOS/ENVIR ST 441 — ENVIRONMENTAL ETHICS
3-4 credits.

Adequacy of ethical theories in handling such wrongs as harm to the land, to posterity, to endangered species, and to the ecosystem itself. Exploration of the view that not all moral wrongs involve harm to humans. Inquiry into the notion of the quality of life and the ethics of the "lifeboat" situation.
Requisites: Junior standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PHILOS/JEWISH 442 — MORAL PHILOSOPHY AND THE HOLOCAUST
3 credits.

Selected moral and philosophical issues raised by the Holocaust such as when and whom to rescue; includes issues arising after the annihilation such as forgiveness and reconciliation.
Requisites: Sophomore standing or 3 Credits in PHILOS
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2021

PHILOS 454 – CLASSICAL PHILOSOPHERS
3 credits.

One or more classical philosophers, movements, or problems selected for intensive study.
Requisites: Junior standing or 3 Credits in PHILOS
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PHILOS/RELIG ST 501 – PHILOSOPHY OF RELIGION
3-4 credits.

Analysis of religious experience and activity, and examination of principal religious ideas in light of modern psychology, philosophy, science, and anthropology.
Requisites: Junior standing or 3 Credits in PHILOS
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

PHILOS 503 – THEORY OF KNOWLEDGE
3 credits.

A survey of problems concerning the nature, sources, and limits of human knowledge, including such topics as scepticism, the concept of knowledge, sensory perception, evidence, justified belief, induction.
Requisites: Junior standing or 3 Credits in PHILOS
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

PHILOS 504 – SPECIAL TOPICS IN THE THEORY OF KNOWLEDGE
3 credits.

One or more special topics in the Theory of Knowledge or one or more major theories of knowledge. Variable content.
Requisites: Junior standing or 3 Credits in PHILOS
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

PHILOS/MED HIST 505 – JUSTICE AND HEALTH CARE
3 credits.

Examines ethical issues in the distribution, financing, and delivery of health care (primarily in the United States). Explores key issues in U.S. health policy and forms the empirical foundation for the rest of the class. Engages is ongoing debates in moral and political philosophy over putative entitlements to health and health care. Investigates the nature, justifiability, and methods of health care rationing (including bedside rationing by doctors) and the myriad issues implicated by the near-universally shared goal of health care cost containment.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2019
Learning Outcomes: 1. Understand the conversation about justice and health care as an enterprise incorporating moral philosophy, bioethics, and evidence-based social science
Audience: Both Grad & Undergrad

2. Identify and clarify diverse moral norms and principles that underlie diverse convictions about justice and health care
Audience: Both Grad & Undergrad

3. Subject these norms and principles to dispassionate critical reasoning aimed at evaluating the force of underlying reasons for and against them
Audience: Both Grad & Undergrad

4. Write clear and concise essays subjecting issues concerning justice and health to dispassionate ethical analysis
Audience: Both Grad & Undergrad

5. Write a clear and concise 15-page essay arguing for a novel thesis concerning justice and health.
Audience: Graduate

PHILOS 506 – STUDY ABROAD IN PHILOSOPHY
2-4 credits.

Treatment of a topic in philosophy in a course offered at a university outside the United States.
Requisites: Junior standing or 3 Credits in PHILOS
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2001

PHILOS 511 – SYMBOLIC LOGIC
3 credits.

Propositional and predicate logic, with emphasis on metatheory; independence of rules and completeness theorems; discussion of technical and philosophical limitations of classical logic.
Requisites: PHILOS 211
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2022

PHILOS 512 – METHODS OF LOGIC
3 credits.

Selected topics in philosophical logic and in the various applications of logic to philosophical problems. Variable content.
Requisites: PHILOS 211
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

PHILOS/MED HIST 515 – PUBLIC HEALTH ETHICS
3 credits.

Focuses on ethical issues implicated in a population-level approach to disease prevention and health promotion. Explores prominent theoretical approaches to public health ethics and engages with several ethical tensions. Example issues include: the use of coercive or intrusive public health; the justification of patemalistic measures in societies; the extent to which societies should hold individuals responsible for their health conditions; the need to decide who receives life-saving treatment or vaccination; and climate changes and intergenerational justice; ethical issues in international pharmaceutical research.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Understand the conversation about public health ethics as an enterprise incorporating moral philosophy, bioethics, and evidence-based social science.
Audience: Both Grad & Undergrad

2. Identify and clarify diverse moral norms and principles that underlie diverse convictions about public health ethics.
Audience: Both Grad & Undergrad

3. Subject these norms and principles to dispassionate critical reasoning aimed at evaluating the force of underlying reasons for and against them.
Audience: Both Grad & Undergrad

4. Write clear and concise essays subjecting issues of public health ethics to dispassionate ethical analysis.
Audience: Both Grad & Undergrad

5. Write a clear and concise 15-page essay arguing for a novel thesis concerning public health ethics.
Audience: Graduate

PHILOS 516 – LANGUAGE AND MEANING
3 credits.

The nature and function of language, theories of meaning, semantic and syntactic paradoxes, proper names, private languages, rules, and linguistic relativity.
Requisites: Junior standing or 3 Credits in PHILOS
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PHILOS 520 – PHILOSOPHY OF THE NATURAL SCIENCES
3 credits.

Nature and functions of science; the logic of scientific method; clarification of such concepts as cause, law, theory, probability, determinism, teleology.
Requisites: Junior standing or 3 Credits in PHILOS
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

PHILOS 522 – SPECIAL TOPIC
3 credits.

Selected from logic of theory construction, theoretical entities, models, applied mathematics, nature of laws, conventionalism, probability, etc. Variable content.
Requisites: Junior standing or 3 Credits in PHILOS
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2020

PHILOS/ENVIR ST 523 – PHILOSOPHICAL PROBLEMS OF THE BIOLOGICAL SCIENCES
3 credits.

Problems raised by genetics, evolutionary theory, and taxonomy: patterns of explanatory force and dispensability of teleology; objectivity of taxonomy.
Requisites: Junior standing or 3 Credits in PHILOS
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2021

PHILOS/ECON 524 – PHILOSOPHY AND ECONOMICS
3 credits.

Economics examined from the viewpoint of the philosophy of science. Normative and positive aspects of economic theory. Deterministic and statistical explanation. Arrow impossibility theorem. Radical economics.
Requisites: Sophomore standing and 3 credits of PHILOS or ECON
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

PHILOS 530 – FREEDOM FATE AND CHOICE
3 credits.

An examination of the philosophical problems associated with free will.
Requisites: Junior standing or 3 Credits in PHILOS
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PHILOS/MED HIST 534 – ETHICS AND THE BRAIN
3 credits.

In-depth analysis of ethical issues arising from the practices and advances of brain science in clinical, research, legal, and consumer contexts. Includes a foundation in ethical theory and philosophical methodology.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Gain knowledge about neurological and neuroscientific technologies and practices.
Audience: Both Grad & Undergrad

2. Gain understanding of major ethical theories and approaches.
Audience: Both Grad & Undergrad

3. Learn to employ philosophical methodology.
Audience: Both Grad & Undergrad

4. Utilize ethical theories and approaches, and philosophical methodologies to critically interrogate the ethical dimensions of the brain sciences.
Audience: Both Grad & Undergrad

5. Develop the skill of writing rigorous, analytical philosophical papers.
Audience: Graduate

6. Expand research beyond material learned in class to incorporate outside scientific and philosophical work.
Audience: Graduate

PHILOS/ED POL 540 – EGALITARIANISM AND EDUCATIONAL JUSTICE
3 credits.

Examines significant disagreements about educational justice-about the very concept of educational justice; about the most plausible substantive account of educational justice and the way that an ideal of equality bears on it; and about what kinds of policies the most plausible account of educational justice would require in circumstances like our own. Introduces tools that contemporary moral and political philosophers use to investigate those questions. Understand and evaluate efforts to resolve those questions.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the structure of, and the differences among, major accounts of educational justice that have been defended in the literature on the philosophy of education
Audience: Both Grad & Undergrad

2. Examine the educational policies that different accounts of educational justice would favor, and evaluate existing educational policies by the standards of different accounts of educational justice
Audience: Both Grad & Undergrad

3. Construct and evaluate complex normative—moral and political—arguments about the concept of educational justice, the most plausible account of educational justice, and the practical implications of accounts of educational justice
Audience: Both Grad & Undergrad

4. Construct and defend novel versions, objections, and assessments of egalitarian theories of educational justice for educational policy and practice by conducting original philosophical research.
Audience: Graduate

PHILOS 541 – MODERN ETHICAL THEORIES
3 credits.

Ethical theories and problems as discussed in the late nineteenth and twentieth centuries.
Requisites: Junior standing or 3 Credits in PHILOS
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PHILOS 543 – SPECIAL TOPICS IN ETHICS
3 credits.

Intensive study of ethical theory, or of one or more ethical theories or moral philosophers of the present or modern period. Variable content.
Requisites: Junior standing or 3 Credits in PHILOS
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

PHILOS/ED POL 545 – PHILOSOPHICAL CONCEPTIONS OF TEACHING AND LEARNING
3 credits.

Examination and analysis of conceptions of teaching and learning in classical philosophical works and in contemporary literature in the philosophy of education.
Requisites: Junior standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

PHILOS 549 – GREAT MORAL PHILOSOPHERS
3 credits.

Major themes of moral philosophy, from Plato and Aristotle to Bentham and Mill, with critical study of outstanding works.
Requisites: Junior standing or 3 Credits in PHILOS
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PHILOS/ED POL 550 – PHILOSOPHY OF MORAL EDUCATION
3 credits.

Critical examination of classical and contemporary conceptions of moral education.
Requisites: Junior standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

PHILOS 551 – PHILOSOPHY OF MIND
3 credits.

Nature of mind (mental states such as thinking and feeling) and its relation to physical states, with emphasis on recent advances in philosophy and psychology.
Requisites: Junior standing or 3 Credits in PHILOS
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PHILOS 553 – AESTHETICS
3 credits.

Analysis of current philosophies of art and of criticism.
Requisites: Junior standing or 3 Credits in PHILOS
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PHILOS 555 – POLITICAL PHILOSOPHY
3 credits.

Philosophical doctrines involved in justification of political decisions; analysis of some fundamental concepts, e.g. the common good, authority, justice, natural law, natural rights.
Requisites: Junior standing or 3 Credits in PHILOS
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PHILOS/GEN&WS 556 – TOPICS IN FEMINISM AND PHILOSOPHY
3 credits.

Topics from historical and contemporary feminist thought; attention to one or more feminist philosophers, historical movements, philosophical frameworks, or sets of philosophically related issues.
Requisites: Junior standing or 3 Credits in PHILOS
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Think critically about arguments.
Audience: Undergraduate

2. Interpret complex texts accurately and analyze them logically.
Audience: Undergraduate

3. Communicate precisely and concisely in both writing and speech.
Audience: Undergraduate

4. Express familiarity with central concepts in feminist philosophy.
Audience: Undergraduate

PHILOS 557 – ISSUES IN SOCIAL PHILOSOPHY
3 credits.

Specific topics in social and political philosophy such as war and peace, property and industry, individualism and collectivism, freedom and justice.
Requisites: Junior standing or 3 Credits in PHILOS
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

PHILOS/MED HIST 558 – ETHICAL ISSUES IN HEALTH CARE
3 credits.

Ethical issues apparently created by new biomedical technologies, such as genetic screening, prenatal diagnosis, prolongation of life, treatment of severe birth defects, in vitro fertilization, behavior modification, psychosurgery, and transplantation.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Gain knowledge about ethical issues in healthcare

Audience: Both Grad & Undergrad

2. Communicate precisely and concisely in both writing and speech
Audience: Both Grad & Undergrad

3. Think critically about arguments related to ethical issues in health care with the aim of uncovering the truth
Audience: Both Grad & Undergrad

4. Practice interpretive charity and intellectual honesty, which includes appropriate attribution to others of their ideas, and recognition and frankness about the limitations of one's own ideas
Audience: Both Grad & Undergrad

5. Independently locate and engage with the latest relevant empirical and philosophical research relevant to evaluating ethical issues in health care
Audience: Graduate

6. Exhibit substantial synthetic and analytic abilities in considering the ethical dimensions of ethical issues in health care
Audience: Graduate

PHILOS 560 – METAPHYSICS
3 credits.

Major problems in metaphysics, such as: existence, universals and particulars, space and time, individuals, categories, substance and attribute, necessity.
Requisites: Junior standing or 3 Credits in PHILOS
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PHILOS 562 – SPECIAL TOPICS IN METAPHYSICS
3 credits.

An intensive study of one or more topics such as: existence, universals and particulars, space and time, individuals, individuation, categories, substance and attribute, necessity, events and processes.
Requisites: Junior standing or 3 Credits in PHILOS
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PHILOS/C&E SOC/MED HIST 565 – THE ETHICS OF MODERN BIOTECHNOLOGY
3 credits.

An in-depth study of a selection of ethical issues arising from the application of modern biotechnology to microorganisms, plants, non-human animals, and human beings. We will aim at a discussion that is informed by empirical research and by work done in ethical theory, political philosophy, and other relevant disciplines, and whose character is rigorous, clear, nuanced, and unbiased.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Think critically about arguments.
Audience: Both Grad & Undergrad

2. Communicate precisely and concisely in both writing and speech.
Audience: Both Grad & Undergrad

3. Exchange reasons about controversial matters respectfully and with the aim of uncovering the truth.
Audience: Both Grad & Undergrad

4. Practice interpretive charity and intellectual honesty, which includes appropriate attribute to others of their ideas, and recognition and frankness about the limitations of one's own ideas.
Audience: Both Grad & Undergrad

5. Independently locate and engage with the latest relevant empirical and philosophical research.
Audience: Graduate

6. Exhibit substantial synthetic and analytic abilities by considering how an application of modern biotechnology ethically compares to the status quo and to other possible alternatives.
Audience: Graduate

PHILOS 566 – PHILOSOPHY OF ACTION
3 credits.

Human beings, and perhaps other kinds of creatures, are agents: we can make things happen. We do things intentionally, guide our behavior in light of our reasons, exhibit self-control, and plan for the future. What is it to be an agent, and what makes an event an intentional action? As Wittgenstein put the question, "What is left over if I subtract the fact that my arm goes up from the fact that I raise my arm?" Emphasis on contemporary readings, including Donald Davidson and G.E.M. Anscombe.
Requisites: Junior standing or 3 Credits in PHILOS
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No

PHILOS 567 – TOPICS IN CONTEMPORARY PHILOSOPHY
3 credits.

One or more specific topics in contemporary philosophy bridging two or more areas such as epistemology, metaphysics, philosophy of mind, philosophy of language, or moral philosophy.
Requisites: Junior standing and completion of 3 credits in PHILOS
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2021
Learning Outcomes: 1. Think critically about arguments.
Audience: Undergraduate

2. Interpret complex texts accurately and analyze them logically.
Audience: Undergraduate

3. Communicate precisely and concisely in both writing and speech.
Audience: Undergraduate

PHILOS/MATH 571 – MATHEMATICAL LOGIC
3 credits.

Basics of logic and mathematical proofs; propositional logic; first order logic; undecidability.
Requisites: (MATH 234 or 375), (MATH 320, 340, 341, or 375), and (MATH 341, 375, 421, 467, or 521), or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Recall and state the formal definitions of the first-order logic and their properties used in formal logic (e.g., truth assignments, syntax, semantics, theories, models, etc.).
Audience: Both Grad & Undergrad

2. Use such definitions to argue certain objects do or do not have the condition or property (e.g., decidability, compactness, undecidability, etc.).

Audience: Both Grad & Undergrad

3. Recall and state the standard theorems of logic. (e.g., Soundness and Completeness Theorems, the Compactness Theorem, Godel's Incompleteness Theorem, etc.) and recall the arguments for these theorems and the underlying logic of their proofs.
Audience: Both Grad & Undergrad

4. Use concepts from logic in the context of larger arguments (e.g., nonstandard models of arithmetic, etc.).
Audience: Both Grad & Undergrad

5. Prove or disprove statements related to the above definitions, properties, and theorems using techniques of mathematical argument (direct methods, indirect methods, constructing examples and counterexamples, induction, etc.).
Audience: Both Grad & Undergrad

6. Convey arguments using English and appropriate mathematical terminology, notation and grammar.
Audience: Both Grad & Undergrad

7. Identify applications of course content in areas of modern research .
Audience: Graduate

PHILOS 599 – DIRECTED STUDY
1-3 credits.

Independent study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PHILOS 681 – SENIOR HONORS THESIS
1-3 credits.

Individual mentored study for seniors completing theses for honors in the major, as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PHILOS 682 – SENIOR HONORS THESIS
3 credits.

Individual mentored study for seniors completing theses for honors in the major, as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PHILOS 691 – SENIOR THESIS
3 credits.

Individual mentored study for seniors completing theses, as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2018

PHILOS 692 – SENIOR THESIS
3 credits.

Individual mentored study for seniors completing theses, as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2019

PHILOS 698 – DIRECTED STUDY
2-3 credits.

Independent study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No

PHILOS 699 – DIRECTED STUDY
2-3 credits.

Independent study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023

PHILOS 701 – READING SEMINAR
3 credits.

An examination of select topics in philosophy.
Requisites: Declared in Philosophy graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PHILOS 799 – DIRECTED STUDY
1-3 credits.

Independent study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PHILOS 830 – ADVANCED HISTORY OF PHILOSOPHY
3 credits.

Seminar on the history of philosophy focusing on a period or figure(s).
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

PHILOS 835 – ADVANCED HISTORY OF PHILOSOPHY
3 credits.

Seminar on the history of philosophy focusing on a period or figure(s).
Requisites: Declared in Philosophy graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PHILOS 902 – PROSEMINAR IN PHILOSOPHY
3 credits.

Survey of various texts with an emphasis on close reading and developing writing skills.
Requisites: Declared in Philosophy graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PHILOS 903 – SEMINAR: EPISTEMOLOGY
3 credits.

Seminar on epistemology.
Requisites: Declared in Philosophy graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

PHILOS 904 – TEACHING PHILOSOPHY
1 credit.

Focuses on the conceptual and ethical recognition of the importance of good teaching, and skills and knowledge drawn from up-to-date pedagogical research. Engages with complex questions about the purposes of higher education and your role in it to better understand your own beliefs, attitudes, and values regarding higher education. Use best practices in teaching and learning in a low-stakes environment to practice and receive feedback on your performance of those skills.
Requisites: Declared in a Philosophy graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Design curriculum for undergraduate courses in their areas of expertise and competence.
Audience: Graduate

2. Foster ethical and professional conduct.
Audience: Graduate

3. Demonstrate high quality undergraduate instruction in their areas of expertise and competence.
Audience: Graduate

PHILOS 911 – SEMINAR-LOGIC
3 credits.

Seminar on logic.
Requisites: Declared in Philosophy graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PHILOS 916 – SEMINAR-PHILOSOPHY OF LANGUAGE
3 credits.

Seminar on philosophy of language.
Requisites: Declared in Philosophy graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

PHILOS 920 – SEMINAR-PHILOSOPHY OF SCIENCE:CAUSATION, EXPLANATION & PROBABILITY
3 credits.

Seminar on philosophy of science.
Requisites: Declared in Philosophy graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PHILOS 941 – SEMINAR-ETHICS
3 credits.

Seminar on ethics.
Requisites: Declared in Philosophy graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PHILOS 951 – SEMINAR-PHILOSOPHY OF MIND
3 credits.

Seminar on philosophy of mind.
Requisites: Declared in Philosophy graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

PHILOS 955 – SEMINAR SOCIAL AND POLITICAL PHILOSOPHY
3 credits.

Seminar on social and political philosophy.
Requisites: Declared in Philosophy graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022

PHILOS 960 – METAPHYSICS SEMINAR
3 credits.

Seminar on metaphysics.
Requisites: Declared in Philosophy graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

PHILOS 990 – RESEARCH AND THESIS
2-9 credits.

Individual mentored study for graduate students completing theses, as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PHILOS 999 – INDEPENDENT WORK
2-9 credits.

Individual mentored study for graduate students, as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PHYSICAL THERAPY (PHY THER)

PHY THER 500 – FUNCTIONAL NEUROANATOMY FOR PHYSICAL THERAPY
3 credits.

Development, structure, regions and function of the nervous system are covered with the purpose of providing insight into the clinical treatment of common neurological conditions. General principles of the development, connectivity and blood supply of both the central and peripheral nervous system (spinal cord, brainstem, and above the brainstem) are taught.
Requisites: Declared in Doctor of Physical Therapy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Summarize the main structures and functions within the major divisions of the nervous system (brain and spinal cord), peripheral and autonomic nervous systems.
Audience: Graduate

2. Describe how regions of the nervous system interact to perform specific functions.
Audience: Graduate

3. Describe the functional consequences of damage to the nervous system (e.g., as in ischemic stroke syndromes).
Audience: Graduate

4. Determine the location of neural damage through a synthesis of signs and symptoms of the functional neuroanatomy.
Audience: Graduate

5. Describe the neural underpinnings of symptoms encountered and addressed through the practice of physical therapy.
Audience: Graduate

PHY THER 501 – ANATOMICAL APPLICATIONS IN PHYSICAL THERAPY
3 credits.

Application of anatomy and palpatory skills in a clinically-oriented environment. Focus is on applied anatomy, kinesiology, posture, movement analysis, medical terminology.
Requisites: Declared in Doctor of Physical Therapy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

PHY THER 512 – PRINCIPLES OF PROFESSIONAL PRACTICE AND ADMINISTRATION
3 credits.

Ethics, organization and administration of physical therapy departments. Planning and correlation of hospital and community health services. Study background, organization and responsibilities of health care team members in hospital services and programs.
Requisites: Declared in Doctor of Physical Therapy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

PHY THER 521 – PHYSICAL AGENTS
2 credits.

The scientific rationale for and the clinical application of thermal, electrical, and mechanical agents in physical therapy practice.
Requisites: Declared in Doctor of Physical Therapy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

PHY THER 523 – CARDIOVASCULAR AND PULMONARY ASPECTS OF PHYSICAL THERAPY TREATMENT
3 credits.

Covers: 1) methods used in physical therapy (PT) management of cardiovascular and pulmonary disease, 2) influence of coexisting cardiovascular and pulmonary dysfunction on PT treatment for other primary diagnoses, and 3) screening for occult cardiovascular and pulmonary disease.
Requisites: Declared in Doctor of Physical Therapy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PHY THER 527 – FOUNDATIONS OF PHYSICAL THERAPY: EXAMINATION AND EVALUATION
4 credits.

Lab-based course that introduces history taking and physical examination skills germane to assessment of patients with orthopedic and neurologic diagnoses in inpatient and outpatient settings. Introduces clinical decision-making and documentation skills with a focus on examination tests and measures. Labs involve the psychomotor application of exam skills. Outside activities with community partners are an integral part of the course.
Requisites: Declared in Doctor of Physical Therapy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PHY THER 534 – FOUNDATIONS OF PHYSICAL THERAPY INTERVENTION
4 credits.

Examination for exercise design, implementation, and progression. Range of motion, flexibility, joint mobilization, balance/gait training, proprioceptive neuromuscular facilitation, balance, coordination, agility training, body mechanics, postural stabilization, resistive and endurance training, aquatic therapy, relaxation, manual traction, massage. Scientific rationale for treatment interventions.
Requisites: Declared in Doctor of Physical Therapy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

PHY THER 538 – INTRODUCTION TO THE PHYSICAL THERAPY PROFESSION AND PROFESSIONALISM
1 credit.

Professional attitudes, beliefs, behaviors relevant to physical therapy practice through the Guide to Physical Therapist Practice, APTA history, Generic Abilities, APTA Code of Ethics, APTA Core Values, PT roles and practice settings, professional autonomy, health care teams, professional learning opportunities.
Requisites: Declared in Doctor of Physical Therapy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

PHY THER 539 – PHYSICAL THERAPY EDUCCATION AND LIFESPAN LEARNING ISSUES
1 credit.

Instructional design, learning theories and styles throughout the lifespan, literacy issues, professional presentations and posters, the physical therapist as educator, professional behaviors and emotional preparation for the clinic.
Requisites: Declared in Doctor of Physical Therapy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PHY THER 540 – PSYCHOSOCIAL ASPECTS OF HEALTH CARE
1 credit.

Professional attitudes, beliefs and behaviors relevant to physical therapy practice. Communication issues related to caregiving, multidisciplinary teams, conflict management, body image, psychosocial aspects of aging, stages of loss, collaborative care, and family-centered care.
Requisites: Declared in Doctor of Physical Therapy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

PHY THER 541 – ISSUES OF CULTURE AND DIVERSITY IN HEALTH CARE
1 credit.

Students will explore their own backgrounds and will learn constructs of cultural competency; cultural beliefs and practices; impact of diversity issues such as SES, sexual preference, disability, educational level, ethnicity and race; and the culture of medicine.
Requisites: Declared in Doctor of Physical Therapy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PHY THER 542 – MEDICAL ETHICS, JURISPRUDENCE, AND HEALTH CARE REGULATIONS
1 credit.

Provides an introduction to medical ethics and jurisprudence as they apply to physical therapy. Includes information on health care regulatory agencies and health care regulations.
Requisites: Declared in Doctor of Physical Therapy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

PHY THER 543 – PROFESSIONAL PRACTICE ISSUES IN PHYSICAL THERAPY
1 credit.

The final of six seminar courses, this course will present issues that will assist the physical therapist student transition into the profession during and following their final clinical internships.
Requisites: Declared in Doctor of Physical Therapy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

PHY THER 627 – CLINICAL DECISION-MAKING: TISSUE MECHANICS AND ADAPTATIONS
3 credits.

Addresses the cardiovascular, pulmonary, neuromuscular and connective tissue properties and adaptations that influence human movement through the lifespan. Through an understanding of the system integration, gain an appreciation of the physiological complexities underlying human movement.
Requisites: Declared in Doctor of Physical Therapy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PHY THER 628 – CLINICAL DECISION MAKING: NEUROMUSCULAR MECHANICS AND CONTROL
4 credits.

Addresses the mechanics and control of the neuromuscular and skeletal systems as they relate to human movement. Neural control of movement is discussed in detail with specific emphasis on theories underlying recruitment of muscle in health and disease.
Requisites: Declared in Doctor of Physical Therapy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

PHY THER 635 – MOTOR DONTROL DYSFUNCTION : EXAMINATION, DIAGNOSIS, AND MANAGEMENT I
5 credits.

Application of motor control and motor learning principles to the examination, diagnosis, and management of people with movement disorders stemming from CNS pathology. Emphasis on neurological interventions across the lifespan.
Requisites: Declared in Doctor of Physical Therapy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PHY THER 636 – MOTOR CONTROL DYSFUNCTION: EXAMINATION, DIAGNOSIS, AND MANAGEMENT II
5 credits.

Application of motor control and motor learning principles to the examination, diagnosis, and management of people with movement disorders from spinal cord injuries, PNS dysfunction and progressive disorders of the CNS.
Requisites: Declared in Doctor of Physical Therapy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

PHY THER 640 – SCIENTIFIC INQUIRY IN PHYSICAL THERAPY
3 credits.

Focuses on critical evaluation of research findings, a fundamental component of evidence-based practice. Examples from the rehabilitation literature are used to illustrate principles of measurement theory, research design, statistical analysis, and scientific inference.
Requisites: Declared in Doctor of Physical Therapy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

PHY THER 641 – CURRENT ISSUES IN REHABILITATION
1 credit.

Focuses on critical evaluation of published research relevant to physical therapy. In seminar format, present the results of original research, and lead discussions of the strengths, weaknesses, and underlying theory of the research.
Requisites: Declared in Doctor of Physical Therapy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PHY THER 642 – RESEARCH PRACTICUM
1-3 credits.

An in-depth training in various aspects of research (e.g., literature review, understanding of study methodology, data collection, data reduction and analysis, dissemination of findings). Work independently under the supervision of a faculty member from the UW Doctor of Physical Therapy program and will participate in an on-going project for the semester.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PHY THER 643 – CURRENT ISSUES IN REHABILITATION RESEARCH II
1 credit.

Focuses on critical evaluation of published research relevant to physical therapy. In seminar format, present the results of original research, and lead discussions of the strengths, weaknesses, and underlying theory of the research.
Requisites: Declared in Doctor of Physical Therapy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

PHY THER 664 – CLINICAL MEDICINE I
5 credits.

Modules in medical screening, pharmacological principles, diagnostic imaging, laboratory testing, psychological disorders, ENT, endocrinology, dermatology, and geriatrics are presented in the context of pathophysiology, differential diagnosis, prevention, and management. Lectures provided by physicians, physician assistants and physical therapists. Case studies are utilized for development of clinical problem solving skills.
Requisites: Declared in Doctor of Physical Therapy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PHY THER 665 – CLINICAL MEDICINE II
4 credits.

Common pathological processes, risk factors, clinical manifestations, and pathogenesis of disease for the cardiovascular, pulmonary, hematology, neurology, gastrointestinal, urological, gynecological, musculoskeletal, and rheumatological systems. Medical tests and treatments including medications, diagnostic imaging, and pharmacology principles will also be covered.
Requisites: Declared in Doctor of Physical Therapy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

PHY THER 668 – HEALTH PROMOTION AND WELLNESS
2 credits.

Physical, psychological, spiritual, social, emotional, intellectual and vocational aspects of wellness. The physical therapist's role in primary, secondary and tertiary prevention; health promotion, and individual and community screening activities for wellness/fitness; and safety and environmental considerations for health and wellness.
Requisites: Declared in Doctor of Physical Therapy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

PHY THER 675 – OTHOTICS: APPLICATIONS IN PHYSICAL THERAPY PRACTICE
2 credits.

Provides the the cognitive, affective and psychomotor skills for efficacious examination/evaluation and treatment of patients with conditions requiring orthotic, protective and supportive devices. Specific orthotic topics include: material technology; biomechanics of orthoses; orthotic design and fabrication principles, lower limb orthoses (LLO); spinal orthoses (SO); upper limb orthoses (ULO); and wheelchair seating and propulsion. Provides the foundation for clinical applications in the musculoskeletal (PHY THER 676/677) and neuromuscular clinical tracts (PHY THER 635/636).
Requisites: Declared in Doctor of Physical Therapy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

PHY THER 676 – MUSCULOSKELETAL DYSFUNCTION : EXAMINATION, DIAGNOSIS, & MANAGEMENT I
5 credits.

Provides the physical therapy student with the cognitive, affective, and psychomotor knowledge for effective examination, evaluation, diagnosis and management of patients/clients of all ages with various musculoskeletal dysfunctions related specifically to the spine.
Requisites: Declared in Doctor of Physical Therapy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PHY THER 677 – MUSCULOSKELETAL DYSFUNCTION : EXAMINATION, DIAGNOSIS, & MANAGEMENT II
5 credits.

Provides the physical therapy student with the cognitive, affective, and psychomotor knowledge for effective examination, evaluation, diagnosis and management of patients/clients of all ages with various musculoskeletal dysfunctions related specifically to the extremities.
Requisites: Declared in Doctor of Physical Therapy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

PHY THER 678 – PHYSICAL THERAPY MANAGEMENT OF INTEGUMENT CONDITIONS
1 credit.

Provides the cognitive, affective and psychomotor skills for efficacious examination/evaluation and treatment of specific integument system conditions. Topics include the management of patients/clients with wounds, burn, frostbite, insensate and/or diseased integument. Functional training in self-care and home management including activities of daily living and instrumental activities of daily living, as well as in the context of patients with specific integument conditions. Specific wound topics include: infection control in the health care environment, classification of wounds, examination and physical therapy and medical management of persons with wounds. Specific burn topics include: epidemiology of thermal injuries; classification of burn depth; determination of percentage burn; physiological effects of burn by body system; interdisciplinary medical management and physical therapy management for persons with burns/frostbite.
Requisites: Declared in Doctor of Physical Therapy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

PHY THER 679 – PROSTHETICS: APPLICATIONS IN PHYSICAL THERAPY PRACTICE
1 credit.

Provides the cognitive, affective and psychomotor skills for efficacious examination/evaluation and treatment of patients/clients with amputation. Course topics include the management of patients/clients with congenital and/or acquired amputation and its subsequent prosthetic management. Functional training in self-care and home management including activities of daily living (ADLs) and instrumental activities of daily living (IADLs), as well as functional training in work (job/school/play) are covered in the context of patients with limb loss.
Requisites: PHY THER 676 and PHY THER 677
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

PHY THER 700 – CLINICAL INTERNSHIP I
2 credits.

80-hour physical therapy internship in a pre-determined clinical environment.
Requisites: Declared in Doctor of Physical Therapy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

PHY THER 701 – CLINICAL INTERNSHIP II
4 credits.

160-hour physical therapy internship in a predetermined clinical environment.
Requisites: Declared in Doctor of Physical Therapy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

PHY THER 702 – CLINICAL INTERNSHIP III
9 credits.

Nine-week physical therapy internship in a pre-determined clinical environment.
Requisites: Declared in Doctor of Physical Therapy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

PHY THER 703 – CLINICAL INTERNSHIP IV
9 credits.

Nine-week physical therapy internship in a pre-determined clinical environment.
Requisites: Declared in Doctor of Physical Therapy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PHY THER 704 – CLINICAL INTERNSHIP V
4-9 credits.

Physical therapy internship in a pre-determined clinical environment.
Requisites: Declared in Doctor of Physical Therapy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 1 number of completions
Last Taught: Fall 2025

PHY THER 705 – CLINICAL INTERNSHIP VI
9 credits.

Nine-week physical therapy internship in a pre-determined clinical environment.
Requisites: Declared in Doctor of Physical Therapy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

PHY THER 706 – CLINICAL INTERNSHIP VII
5 credits.

Learning experiences in a clinical setting under the direct guidance of a physical therapist (Clinical Instructor). Ability to perform physical therapy examinations of body structures and functions, and other evaluations, interventions, and outcomes assessed by evaluative tools, such as the Clinical Performance Instrument (CPI).
Requisites: PHY THER 679
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate critical thinking skills by applying clinical decision-making solutions while on their clinical experiences and assessing the appropriateness of their solutions.
Audience: Graduate

2. Apply concrete coursework (didactic) knowledge in an unfamiliar clinical environment and self-assess as well as receive assessment and feedback from the Clinical Instructor.
Audience: Graduate

3. Evaluate information received from the patient examination and establish a diagnosis, prognosis, and intervention with minimal to no assistance from the Clinical Instructor (CI) in simple to somewhat complex cases.
Audience: Graduate

4. Evaluate information received from the patient examination and establish a diagnosis, prognosis, and intervention with complex tasks with minimal to no guidance from the CI.
Audience: Graduate

5. Display professional behaviors commonly seen in a practicing physical therapist.
Audience: Graduate

6. Adapt psychomotor skills to any clinical situation and value feedback given from the CI regarding strategies to improve this.
Audience: Graduate

7. Internalize and verify values of professional behavior demonstrated by the CI and other clinicians.
Audience: Graduate

PHY THER/NURSING/PHARMACY/PHY ASST/PUBLHLTH 758 – INTERPROFESSIONAL PUBLIC HEALTH LEADERSHIP
1 credit.

Build skills in collaboration, problem solving, and reflection to approach complex community-based public health problems contribute to becoming a public leader. Explore the six levels of public health leadership through the practices of current and past public health leaders, case studies, and personal experience.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019
Learning Outcomes: 1. Describe the roles and responsibilities of their profession with all participating health professional students, while examining the roles and responsibilities of all other health professions.
Audience: Graduate

2. Compare and contrast the diversity of expertise among participating health professions.
Audience: Graduate

3. Apply their profession's roles and responsibilities to case studies that address complex public health issues.
Audience: Graduate

4. Describe what it means to be part of an interprofessional team and illustrate how the different professions and systems can complement and facilitate one another in addressing public health issues.
Audience: Graduate

5. Apply the principles of public health leadership via reflective exercises, case studies and facilitated discussion.
Audience: Graduate

6. Promote a public health cause or principle through legislative advocacy.

Audience: Graduate

7. Elucidate the importance of reflection as a life-long learning and leadership tool.
Audience: Graduate

PHY THER 799 – INDEPENDENT STUDY
1-3 credits.

Course content is designed specifically for the individual student.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PHYSICIAN ASSISTANT PROGRAM (PHY ASST)

PHY ASST 550 – FUNDAMENTALS OF CLINICAL MEDICINE
3 credits.

Introduces information fundamental to understanding clinical medicine principles. Topics addressed include select areas of physiology-pathophysiology, pharmacology, laboratory medicine, and common systemic disease processes. There will also be instruction relative to cognitively approaching the patient.
Requisites: Declared in Physician Assistant program
Repeatable for Credit: No
Last Taught: Summer 2025

PHY ASST 601 – CLINICAL MEDICINE I
5 credits.

Covers the knowledge and skills required to diagnose and treat patient health problems. Topics include genomics, neurology, psychiatry, hematology/oncology, endocrinology, ophthalmology, otorhinolaryngology, and dermatology.
Requisites: Declared in Physician Assistant program
Repeatable for Credit: No
Last Taught: Fall 2025

PHY ASST 602 – CLINICAL MEDICINE II
6 credits.

Covers the knowledge and skills required to diagnose and treat patient health problems. Topics addressed include cardiology, pulmonology, nephrology/urology, gastroenterology, rheumatology, geriatrics, and family medicine.
Requisites: Declared in Physician Assistant program
Repeatable for Credit: No
Last Taught: Spring 2025

PHY ASST 603 – PEDIATRICS
2 credits.

Examines important aspects of primary care pediatrics including assessment of the child patient, preventive health, and pediatric diseases and conditions. The student will also learn examination techniques specific to the pediatric population.
Requisites: Declared in Physician Assistant program
Repeatable for Credit: No
Last Taught: Spring 2025

PHY ASST 610 – CLINICAL PREVENTION AND COMMUNITY PRACTICE I
1 credit.

Addresses the concepts of prevention and population health. Multiple topics will be explored including but not limited to: Health Information Literacy, Immunizations, Nutrition, Exercise, Communication and Counseling Skills, and Integrative Medicine.
Requisites: Declared in Physician Assistant program
Repeatable for Credit: No
Last Taught: Fall 2025

PHY ASST 611 – CLINICAL PREVENTION AND COMMUNITY PRACTICE II
1 credit.

Addresses the concepts of prevention and population health and explores the topics of: health systems/policy, and community aspects of practice. Case examples and community-oriented learning experiences will be incorporated into the course.
Requisites: Declared in Physician Assistant program
Repeatable for Credit: No
Last Taught: Spring 2025

PHY ASST 616 – PROFESSIONAL SEMINAR I
1 credit.

Emphasizes an understanding of basic research methodology, project development, collaborative research, and project evaluation.
Requisites: Declared in Physician Assistant program
Repeatable for Credit: No
Last Taught: Summer 2025

PHY ASST 617 – PROFESSIONAL SEMINAR II
1 credit.

Emphasizes medical ethics as well as fundamental principles of evidence-based medicine. Research and statistical concepts are taught within the framework of epidemiologic study to develop skills in evaluating and interpreting the medical literature.
Requisites: Declared in Physician Assistant program
Repeatable for Credit: No
Last Taught: Fall 2025

PHY ASST 618 – PROFESSIONAL SEMINAR III
1 credit.

Emphasizes an understanding of basic research methodology, project development, collaborative research, and project evaluation.
Requisites: Declared in Physician Assistant program
Repeatable for Credit: No
Last Taught: Spring 2025

PHY ASST 619 – HISTORY AND PHYSICAL EXAMINATION FOR PHYSICIAN ASSISTANTS
4 credits.

Provides the primary care physician assistants with the knowledge and physical exam skills to evaluate patients in a variety of settings. Normal and pathological physical findings are discussed. Master interview skills and physical exam skills applicable to all patients. Selected physical exam techniques are emphasized.
Requisites: Declared in Physician Assistant program
Repeatable for Credit: No
Last Taught: Summer 2025

PHY ASST 620 – ADVANCED PATIENT EVALUATION I
1 credit.

Advanced physical examination and patient evaluation techniques with an emphasis on the musculoskeletal system; selected physical exam procedures in the complete evaluation of patients; advanced medical interviewing skills.
Requisites: Declared in Physician Assistant program
Repeatable for Credit: No
Last Taught: Fall 2025

PHY ASST 621 – ADVANCED PATIENT EVALUATION IN THE PRIMARY CARE SETTING II
1 credit.

Instruction in advanced skills in history and physical examination including comprehensive patient history and physical examination, focused history with related male genitalia and rectal exams, and focused history with female breast and pelvic exams.
Requisites: Declared in Physician Assistant program
Repeatable for Credit: No
Last Taught: Spring 2025

PHY ASST 629 – APPLIED HUMAN ANATOMY FOR PHYSICIAN ASSISTANTS
7 credits.

Gross human anatomy involving complete dissection of the human body. Major topic areas: Thorax; abdomen and pelvis; head and neck; limbs. Focus on anatomical organization of the trunk, head and neck, and limbs. Application of functional anatomical information to clinical practice/problems. Practice in teamwork and teaching.
Requisites: Declared in Physician Assistant program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Describe the anatomical organization of the trunk, head and neck, and limbs.
Audience: Graduate

2. Apply functional anatomical information to clinical practice/problems.
Audience: Graduate

3. Demonstrate teaching skills and the ability to work effectively in a team.

Audience: Graduate

PHY ASST 630 – WOMEN'S HEALTH FOR PHYSICIAN ASSISTANTS
3 credits.

Provides a theoretical and clinical background for the assessment, diagnosis and management of problems in obstetrics and gynecology.
Requisites: Declared in Physician Assistant program
Repeatable for Credit: No
Last Taught: Fall 2025

PHY ASST 640 – CLINICAL PHARMACOLOGY I
2 credits.

Emphasizes pharmacotherapeutics relative to disease processes of the neurologic, psychiatric, hematologic/oncologic, ophthalmologic, otolaryngologic, endocrinologic, and dermatologic systems. Antimicrobial and pain management principles will also be addressed.
Requisites: Declared in Physician Assistant program
Repeatable for Credit: No
Last Taught: Fall 2025

PHY ASST 641 – CLINICAL PHARMACOLOGY II
2 credits.

Emphasizes pharmacotherapeutics relative to disease processes of the cardiovascular, pulmonary, renal, urologic, gastrointestinal, and rheumatologic systems. Other topics addressed include geriatric pharmacology, pharmacoeconomics, complementary and alternative medicines, and treatment of sexually transmitted infections.
Requisites: Declared in Physician Assistant program
Repeatable for Credit: No
Last Taught: Spring 2025

PHY ASST 648 – EMERGENCY MEDICINE
2 credits.

Fundamental concepts related to the provision of emergency medical care and urgent ambulatory care.
Requisites: Declared in Physician Assistant program
Repeatable for Credit: No
Last Taught: Spring 2025

PHY ASST 650 – DIAGNOSTIC METHODS I
2 credits.

Primary focus is laboratory medicine assessments and ECG interpretation with additional content in imaging modalities, utilization of survey tools, screening assessments, as well as selected specialized examination techniques.
Requisites: Declared in Physician Assistant program
Repeatable for Credit: No
Last Taught: Fall 2025

PHY ASST 651 – DIAGNOSTIC METHODS II
3 credits.

Primary focus is laboratory medicine assessments, heart sounds interpretation, and imaging modalities.
Requisites: Declared in Physician Assistant program
Repeatable for Credit: No
Last Taught: Spring 2025

PHY ASST 660 – CLINICAL SKILLS LABORATORY
1 credit.

Hands-on clinical skill laboratory that includes: dermatologic procedures, splinting, casting, suturing, IV access, venipuncture, injections, joint aspiration/injection, and advanced cardiac life support (ACLS).
Requisites: Declared in Physician Assistant program
Repeatable for Credit: No
Last Taught: Spring 2025

PHY ASST 662 – PREPARATION FOR INTERDISCIPLINARY HEALTH CARE IN BELIZE
1 credit.

Preparation for PHY ASST 663. Examination of important and ever-changing topics related to global healthcare. Focus on the more remote, indigenous populations of Belize, their current healthcare system and their access-to-care. Content relates to historical, social, economic and cultural perspectives of the under-served Belizean populations, as well as medical-related topics from an interdisciplinary perspective. Activities and self-study exercises include team-building and self-reflection exercises. Specific topics will include; Belize anthropology, health care in a resource limiting setting, human trafficking, cervical cancer, etc.
Requisites: Declared in Physician Assistant, Nursing Practice DNP, or Pharmacy Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Articulate understanding of the historical, societal, economic and cultural perspectives and values of the Belizean population and unique problems that affect this population
Audience: Graduate

2. Demonstrate knowledge of diagnoses and interventions utilized by professionals who work in global, rural, underserved villages in remote areas of Belize
Audience: Graduate

3. Apply their profession's roles and responsibilities to cases that address complex medical and public health issues
Audience: Graduate

4. Compare and contrast the diversity of expertise and skills among participating interprofessional disciplines in a resource-limited setting
Audience: Graduate

5. Describe what it means to be a part of an interdisciplinary team and illustrate how the different professions and systems can complement and facilitate one another in addressing health care needs of an underserved population
Audience: Graduate

6. Explain and apply health inequalities from a global perspective via reflective exercises and facilitated discussion
Audience: Graduate

PHY ASST 663 – INTERDISCIPLINARY FIELD EXPERIENCE IN RURAL BELIZE
1 credit.

One-week service-learning field experience in rural Belize. Provide health care to the more remote, indigenous populations of Belize. Must have a valid passport that does not expire 6 months past your Belize field experience dates.
Requisites: PHY ASST 662
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Demonstrate history and physical exam skills with a culturally sensitive approach that permits accurate diagnostic evaluation
Audience: Graduate

2. Identify predominant cross-cultural and underserved issues in primary care, and appreciate how this knowledge can be utilized in the practice of medicine in the participants' home country
Audience: Graduate

3. Recognize and implement cost-effective approaches to providing health care in a resource-limited setting
Audience: Graduate

4. Demonstrate interdisciplinary team work (communication, negotiation, respect for group dynamics, and conflict resolution) and describe how an interdisciplinary approach to care contributes to improved patient outcomes
Audience: Graduate

5. Examine Belizean culture through rural connections, community interactions, and guided cultural excursions. Discuss this relationship to the concept of Global to Local
Audience: Graduate

6. Discuss the structure of the health care system in Belize from the role of the traditional medicinal healer to the community health worker and primary health care physician
Audience: Graduate

PHY ASST 670 – FUNDAMENTALS OF SURGERY
1 credit.

An introduction to the role of the physician assistant in surgery, fundamental principles of pre-, intra- and post-operative surgical care, operating room aseptic technique, and common strategies to avoid and to treat surgical complications.
Requisites: Declared in Physician Assistant program
Repeatable for Credit: No
Last Taught: Summer 2025

PHY ASST 699 – INDEPENDENT STUDY
1-3 credits.

Directed study projects as arranged with instructor.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

PHY ASST 716 – PROFESSIONAL SEMINAR IV
1 credit.

Emphasis will be on placed on refining the capstone project and writing an initial paper draft. Also includes instructional content on professional issues in preparation for clinical experiences and clinical practice.
Requisites: Declared in Physician Assistant program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

PHY ASST 717 – PROFESSIONAL SEMINAR AND CAPSTONE I
1 credit.

Emphasis will be placed on completion of capstone projects with preparations for oral and poster presentation of the projects. Also includes instructional content on professional issues in preparation for certification and clinical practice.
Requisites: Declared in Physician Assistant program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PHY ASST 718 – PROFESSIONAL SEMINAR AND CAPSTONE II
1 credit.

Emphasis will be placed on preparing poster and lecture presentation for completed capstone projects. Also includes instructional content on professional issues in preparation for certification and clinical practice.
Requisites: Declared in Physician Assistant program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

PHY ASST 729 – PHYSICIAN ASSISTANT PRECEPTORSHIP: SURGERY
8 credits.

A 2 month intensive clinical learning experience with an emphasis in surgery and taking place in a variety of off-campus clinical settings under the direction of a supervising physician preceptor.
Requisites: Declared in Physician Assistant program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PHY ASST 739 – PHYSICIAN ASSISTANT PRECEPTORSHIP: FAMILY MEDICINE
8 credits.

A 2 month intensive clinical learning experience with an emphasis in family medicine and taking place in a variety of off-campus clinical settings under the direction of a supervising physician preceptor.
Requisites: Declared in Physician Assistant program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PHY ASST 749 – PHYSICIAN ASSISTANT PRECEPTORSHIP: INTERNAL MEDICINE
8 credits.

A 2 month intensive clinical learning experience with an emphasis in internal medicine and taking place in a variety of off-campus clinical settings under the direction of a supervising physician preceptor.
Requisites: Declared in Physician Assistant program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PHY ASST/NURSING/PHARMACY/PHY THER/PUBLHLTH 758 – INTERPROFESSIONAL PUBLIC HEALTH LEADERSHIP
1 credit.

Build skills in collaboration, problem solving, and reflection to approach complex community-based public health problems contribute to becoming a public leader. Explore the six levels of public health leadership through the practices of current and past public health leaders, case studies, and personal experience.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019
Learning Outcomes: 1. Describe the roles and responsibilities of their profession with all participating health professional students, while examining the roles and responsibilities of all other health professions.
Audience: Graduate

2. Compare and contrast the diversity of expertise among participating health professions.
Audience: Graduate

3. Apply their profession's roles and responsibilities to case studies that address complex public health issues.
Audience: Graduate

4. Describe what it means to be part of an interprofessional team and illustrate how the different professions and systems can complement and facilitate one another in addressing public health issues.
Audience: Graduate

5. Apply the principles of public health leadership via reflective exercises, case studies and facilitated discussion.
Audience: Graduate

6. Promote a public health cause or principle through legislative advocacy.

Audience: Graduate

7. Elucidate the importance of reflection as a life-long learning and leadership tool.
Audience: Graduate

PHY ASST 759 – PHYSICIAN ASSISTANT PRECEPTORSHIP: EMERGENCY MEDICINE
8 credits.

A 2 month intensive clinical learning experience with an emphasis in emergency medicine and taking place in a variety of off-campus clinical settings under the direction of a supervising physician preceptor.
Requisites: Declared in Physician Assistant program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PHY ASST 769 – PHYSICIAN ASSISTANT PRECEPTORSHIP: ELECTIVE
8 credits.

A 2 month intensive clinical learning experience with an emphasis in an elective specialty discipline and taking place in a variety of off-campus clinical settings under the direction of a supervising physician preceptor. Elective specialty disciplines include but are not limited to family medicine, internal medicine, emergency medicine, general surgery, cardiothoracic surgery, orthopedic surgery, ENT, dermatology, pediatrics, women's health and psychiatry/behavioral health.
Requisites: Declared in Physician Assistant program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PHY ASST 787 – SEMINAR ON INTEGRATING PUBLIC HEALTH INTO PA PRACTICE
1 credit.

Provides direction to Physician Assistant (PA) Path of Distinction (PoD) students for the PoD capstone project and to provide an overview of public health, some of its current issues and tools to help become engaged in the communities in which clinical experiences and practice takes place.
Requisites: Declared in Physician Assistant program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PHYSICS (PHYSICS)

PHYSICS 103 – GENERAL PHYSICS
4 credits.

Introduction to physics at the non-calculus level. Principles of mechanics, heat, and waves, with applications to a number of different fields. Not recommended for students in the physical sciences and engineering.
Requisites: MATH 112, 113, 114, 171, placement into MATH 211 or 221, or special student standing. Not open to students with credit for PHYSICS 201, 207, or 247.
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PHYSICS 104 — GENERAL PHYSICS
4 credits.

Continuation of PHYSICS 103. Principles of electricity and magnetism, light, optics, and modern physics, with applications to a number of different fields. Not recommended for students in the physical sciences and engineering.
Requisites: PHYSICS 103, 201, 207, 247, E M A 201 or special student standing. Not open to students with credit for PHYSICS 202, 208, or 248.
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PHYSICS 106 — PHYSICS OF SPORTS
3 credits.

A tenth of a second, a single inch, or a slightly different angle can make all the difference in a sporting event. Application of physical principles to competitive sport, leading to a better understanding of performances in such sports as track and field, cycling, archery, golf, football and basketball.
Requisites: Satisfied Quantitative Reasoning (QR) A requirement. Not open to students with credit for PHYSICS 103, 201, 207, or 247.
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain how sport performance is governed by universal physical principles.
Audience: Undergraduate

2. Solve problems relevant to sport performance proficiently regarding both quantitative and qualitive applications of these physical principles.
Audience: Undergraduate

3. Explain the significance of sport-related measurements and observations made in the presence of statistical and systematic uncertainties.
Audience: Undergraduate

4. Communicate effectively with scientific peers and the public regarding physical principles and measurements and observations relevant to sport performance.
Audience: Undergraduate

5. Be able to continue to educate themselves regarding the physical principles relevant to sport performance after completion of the course.
Audience: Undergraduate

PHYSICS 107 — THE IDEAS OF MODERN PHYSICS
3 credits.

The twentieth-century physical world picture and its origins. Selected topics in classical physics, relativity, and the quantum theory with emphasis on the meaning of basic concepts and their broader implications, rather than practical applications.
Requisites: Satisfied Quantitative Reasoning (QR) A requirement or special student standing
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PHYSICS 109 — PHYSICS IN THE ARTS
3 credits.

The nature of sound and sound perception; fundamentals of harmony, musical scales, and musical instruments. Studies of light including lenses, photography, color perception, and color mixing.
Requisites: Satisfied Quantitative Reasoning (QR) A requirement or special student standing. Not open to students with credit for PHYSICS 371.
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PHYSICS 115 — ENERGY AND CLIMATE
3 credits.

Introduction to energy, focusing on energy sources and their impacts on humans and the environment, particularly through climate change. Develop basic physics skills to form opinions on energy-related issues affecting the world as well as your own use of energy. Apply the physical principles of mechanics, heat, electricity, and atomic nuclei to various energy sources (fossil fuels, renewables, and nuclear) and their impacts.
Requisites: Satisfied Quantitative Reasoning (QR) A requirement. Not open to students with credit for PHYSICS 103, 201, 207, or 247.
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Qualitatively describe and quantitatively analyze the physics behind energy technologies and their impacts, including climate change
Audience: Undergraduate

2. Apply foundational physics concepts to solve quantitative problems regarding energy use in society
Audience: Undergraduate

3. Critically assess and discuss current issues in energy and climate, and how these issues are reported in the news
Audience: Undergraduate

PHYSICS 120 – SPECIAL TOPICS IN PHYSICS
1-3 credits.

Explores topics in Physics at the elementary undergraduate level.
Requisites: Satisfied Quantitative Reasoning (QR) A requirement
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Use physics concepts to explain the physical phenomena related to the topic of this course.
Audience: Undergraduate

2. Apply algebraic models of physics theories.
Audience: Undergraduate

3. Identify physical principles in the context of the student experience.
Audience: Undergraduate

PHYSICS 198 – DIRECTED STUDY
1-3 credits.

Introductory-level mentored research project in physics.
Requisites: Consent of instructor
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

PHYSICS 199 – DIRECTED STUDY
1-3 credits.

Introductory-level mentored research project in physics.
Requisites: Consent of instructor
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2022

PHYSICS 201 – GENERAL PHYSICS
5 credits.

Calculus-based introduction to physics intended for engineering students. Mechanics: kinematics, statics, dynamics; energy and momentum.
Requisites: MATH 217 or 221. Not open to students with credit for PHYSICS 207 or 247.
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PHYSICS 202 – GENERAL PHYSICS
5 credits.

Calculus-based introduction to physics intended for engineering students. Electricity, magnetism, light, and sound.
Requisites: (PHYSICS 103, 201, 207, 247, or E M A 201) and (MATH 217 or 221). Not open to students with credit for PHYSICS 208 or 248.
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PHYSICS 205 – MODERN PHYSICS FOR ENGINEERS
3 credits.

Introduction to atomic, solid state, and nuclear physics.
Requisites: PHYSICS 202, 208 or 248. Not open to students with credit for PHYSICS 241, 244, or 249.
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2021

PHYSICS 206 – SPECIAL TOPICS IN PHYSICS
1-5 credits.

Special topics in physics at the intermediate undergraduate level.
Requisites: (PHYSICS 103, 201, 207 or 247) and (MATH 217 or 221)
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2022

PHYSICS 207 – GENERAL PHYSICS
5 credits.

Calculus-based introduction to physics intended for students majoring in biological sciences. Mechanics: kinematics, statics, dynamics; energy and momentum. Heat and sound.
Requisites: MATH 217 or 221. Not open to students with credit for PHYSICS 201 or 247.
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PHYSICS 208 – GENERAL PHYSICS
5 credits.

Continuation of PHYSICS 207: calculus-based introduction to physics intended for students majoring in biological sciences. Electricity, magnetism, light, and modern physics.
Requisites: PHYSICS 201, 207, 247, E M A 201, or (PHYSICS 103 and MATH 217 or 221). Not open to students with credit for PHYSICS 202 or 248.
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PHYSICS/E C E 235 – INTRODUCTION TO SOLID STATE ELECTRONICS
3 credits.

An introduction to the physical principles underlying solid-state electronic and photonic devices, including elements of quantum mechanics, crystal structure, semiconductor band theory, carrier statistics, and band diagrams. Offers examples of modern semiconductor structures. Prior experience with MATLAB [such as E C E 203] is strongly encouraged but not required.
Requisites: MATH 222 and (PHYSICS 202, 208, or 248), or member of Engineering Guest Students
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PHYSICS 241 – INTRODUCTION TO MODERN PHYSICS
3 credits.

Kinetic theory; relativity; experimental origin of quantum theory; atomic structure and spectral lines; topics in solid state, nuclear and particle physics.
Requisites: (PHYSICS 202, 208, or 248) and MATH 222. Not open to students with credit for PHYSICS 205, 244, or 249.
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PHYSICS 247 – A MODERN INTRODUCTION TO PHYSICS
5 credits.

Calculus-based introduction to physics intended for Physics, AMEP, and Astronomy-Physics majors. Mechanics, waves, thermodynamics and statistical mechanics, topics in modern physics; with computation. A more mathematically rigorous and in-depth introduction to physics than the other introductory physics sequences.
Requisites: MATH 222 or concurrent enrollment
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PHYSICS 248 – A MODERN INTRODUCTION TO PHYSICS
5 credits.

Continuation of PHYSICS 247. Electromagnetism, circuits, optics, additional topics in modern physics; with computation.
Requisites: PHYSICS 247 and (MATH 234 or concurrent enrollment or MATH 376 or concurrent enrollment)
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PHYSICS 249 – A MODERN INTRODUCTION TO PHYSICS
4 credits.

Continuation of PHYSICS 248. Modern physics: introduction to quantum mechanics, topics from nuclear and particle physics, condensed matter physics, and atomic physics. Three lectures and one discussion per week.
Requisites: PHYSICS 248
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PHYSICS/MED PHYS 265 – INTRODUCTION TO MEDICAL PHYSICS
2 credits.

A general interest survey that introduces the principles and applications of medical physics. Topics include biomechanics, energy usage and temperature regulation, pressure, sound and hearing, ultrasound, electricity in the body, optics and the eye, ionizing radiation in diagnosis and therapy, radiobiology, and nuclear medicine.
Requisites: PHYSICS 104, 202, 208, or 248
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply physics concepts, such as force, energy, and pressure, to the study of human physiology
Audience: Undergraduate

2. Describe the relevance of physics concepts to the etiology of major disease, such as heart failure, sudden cardiac death, obstructive lung disease, and nerve conduction disorders
Audience: Undergraduate

3. Explain the principles of medical imaging based on x-rays, gamma rays, sound, and other physical phenomena
Audience: Undergraduate

4. Understand the principles of radiobiology that underlie radiation sickness and radiation therapy
Audience: Undergraduate

PHYSICS 298 – DIRECTED STUDY
1-3 credits.

Intermediate-level mentored research project in physics.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2021

PHYSICS 299 – DIRECTED STUDY
1-3 credits.

Intermediate-level mentored research project in physics.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PHYSICS 301 – PHYSICS TODAY
1 credit.

A series of weekly presentations and discussions of current research topics in physics, by scientists directly involved in those studies. Provides undergraduates with access to the topics and excitement of the research frontier in a manner not possible in normal subject courses.
Requisites: PHYSICS 202 or concurrent enrollment, PHYSICS 208 or concurrent enrollment, or PHYSICS 248 or concurrent enrollment
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

PHYSICS 307 – INTERMEDIATE LABORATORY-MECHANICS AND MODERN PHYSICS
2 credits.

Experiments in modern physics, with discussion of statistical uncertainties and error analysis. Propagation of error. Available labs include gamma-ray spectroscopy, X-ray physics and diffraction, blackbody radiation, and Cavendish measurement of the gravitational constant G.
Requisites: PHYSICS 202, 208, 248 or graduate/professional standing.
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Learn how to keep a lab notebook, a laboratory skill essential to the study of physics.
Audience: Undergraduate

2. Perform quantitative measurements of physical phenomena, and understand the statistical significance of observations made in the presence of statistical and systematic uncertainties.
Audience: Undergraduate

3. Become proficient in using common research-grade laboratory equipment.
Audience: Undergraduate

4. Understand basic physical principles, as revealed in laboratory experiments.
Audience: Undergraduate

5. Gain an appreciation for, and an understanding of, scientific method.
Audience: Undergraduate

PHYSICS 311 – MECHANICS
3 credits.

Origin and development of classical mechanics; mathematical techniques, especially vector analysis; conservation laws and their relation to symmetry principles; brief introduction to orbit theory and rigid-body dynamics; accelerated coordinate systems; introduction to the generalized-coordinate formalisms of Lagrange and Hamilton.
Requisites: (PHYSICS 202, 208, or 248) and (MATH 234, 321, or 376), or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PHYSICS 321 – ELECTRIC CIRCUITS AND ELECTRONICS
4 credits.

Direct current circuits, circuit theorems, alternating current circuits, transients, non-sinusoidal sources, Fourier analysis, characteristics of semiconductor devices, typical electronic circuits, feedback, non-linear circuits; digital and logic circuits.
Requisites: PHYSICS 202, 208, 248 or graduate/professional standing.
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PHYSICS 322 – ELECTROMAGNETIC FIELDS
3 credits.

Electrostatic fields, capacitance, multi-pole expansion, dielectric theory; magnetostatics; electromagnetic induction; magnetic properties of matter; Maxwell's equations and electromagnetic waves; relativity and electromagmetism. Experiments for this course are covered in PHYSICS 308.
Requisites: (PHYSICS 202, 208 or 248) and (MATH 234, 321 or 376), or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PHYSICS 323 – ELECTROMAGNETIC FIELDS
3 credits.

Special relativity, electromagnetic momentum, electromagnetic waves: propagation, interference, scattering, reflection and refraction at a dielectric interface, waves in a conductor. Wave packets and group velocity, dispersion. Waveguides and transmission lines. Retarded potentials. Radiation.
Requisites: PHYSICS 322 or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Be able to use the principles of special relativity to transform electric and magnetic fields between reference frames.
Audience: Undergraduate

2. Be able to use the Maxwell stress tensor to calculate electromagnetic forces and momentum density.
Audience: Undergraduate

3. Be able to calculate the properties of electromagnetic waves reflecting from surfaces.
Audience: Undergraduate

4. Be able to calculate the characteristics of guided waves.
Audience: Undergraduate

5. Be able to use electromagnetic principles to calculate the propagation of electromagnetic waves in conductors.
Audience: Undergraduate

6. Be able to calculate radiation patterns from dynamic charges and currents.
Audience: Undergraduate

7. Be able to use the principles of retardation to calculate Liénard-Wiechert potentials, and from them calculate radiation fields
Audience: Undergraduate

PHYSICS 325 – OPTICS
4 credits.

Classical and modern optics, including imaging, polarization optics, optical telescopes, optical microscopes, interference and interferometers, optical fibers and fiber-optic communication, optical resonators, lasers, optical modulators, introduction to quantum and nonlinear optics. Concepts covered in lecture reinforced by weekly laboratory experiments.
Requisites: (PHYSICS 202, 208, or 248) and (PHYSICS 322 or concurrent enrollment), or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Be able design and analyze an imaging instrument involving two or more optical elements including mirrors and lenses.
Audience: Undergraduate

2. Be able to quantitatively analyze images obtained from an optical microscope using physics calculation software.
Audience: Undergraduate

3. Be able to design, construct, and evaluate an optical telescope.
Audience: Undergraduate

4. Be able to use the principles of Fourier optics and interference to design and analyze interferometric instruments, including a Michelson interferometer and a grating spectrometer, and use these instruments to characterize light sources
Audience: Undergraduate

5. Be able to apply the fundamental properties of electromagnetic waves to determine the behavior of fiber optic combinations
Audience: Undergraduate

6. Be able to calculate parameters of a functioning laser, and design, align, and operate a diode pumped solid-state laser.
Audience: Undergraduate

7. Be able to apply the principles of refraction modulation to calculate the behavior of acousto-optic and electro-optic modulators.
Audience: Undergraduate

PHYSICS 361 – MACHINE LEARNING IN PHYSICS
3 credits.

A detailed introduction to the use of machine learning techniques in physics. Topics will include basics of probability theory and statistics, basics of function fitting and parameter inference, basics of optimization, and machine learning techniques. A selection of physics topics that are particularly amenable to analysis using machine learning will be discussed. These might include processing collider data, classifying astronomical images, solving the Ising model, parameter estimation from physics data sets, learning physical probability distributions, finding string theory compactifications, and finding symbolic physical laws.
Requisites: MATH 234 and (PHYSICS 104, 202, 208, or 248), or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand the conceptual foundations of machine learning and its application to physics problems. Be able to describe accurately and quantitatively the benefits of machine learning over other methods.
Audience: Undergraduate

2. Master the techniques of supervised and unsupervised machine learning, and neural networks. Be able to apply this knowledge to identification and classification of physical events, and the analysis of data.

Audience: Undergraduate

3. Become familiar with the programming techniques and common tools used in machine learning. Learn how to construct a working program and to recognize and solve problems that may arise in a large piece of code.
Audience: Undergraduate

4. Grasp the big picture behind a project that involves machine learning. Be able to articulate the goals, and the project, and where it fits into the overall scientific context.
Audience: Undergraduate

5. Understand how novel machine learning developments from the last years can be used to solve physics problems that were previously intractable.
Audience: Undergraduate

PHYSICS 371 – ACOUSTICS FOR MUSICIANS
3 credits.

Intended for music students who wish to learn about physical basis of sound, sound perception, musical scales, musical instruments, and room acoustics.
Requisites: Satisfied Quantitative Reasoning (QR) A requirement
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2022

PHYSICS 406 – SPECIAL TOPICS IN PHYSICS
1-4 credits.

Special topics in physics at the advanced undergraduate level.
Requisites: PHYSICS 205, 241, 244, 249, or PHYSICS/E C E 235
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PHYSICS 407 – ADVANCED LABORATORY
2-4 credits.

Advanced experiments in classical and modern physics. Possible experiments include beta decay, muon lifetime, nuclear magnetic resonance, Stern-Gerlach atomic beam, Mossbauer scattering, velocity of light, Zeeman effect, and Compton scattering. Techniques for the statistical analysis of experimental data and keeping a proper research lab notebook are emphasized. Two (four) credit students will typically perform four (eight) experiments.
Requisites: PHYSICS 307
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PHYSICS 415 – THERMAL PHYSICS
3 credits.

An introduction to thermodynamics and statistical mechanics from a physics perspective. Thermodynamics, phase equilibrium, kinetic theory of gases, classical and quantum statistical mechanics.
Requisites: (PHYSICS 205, 241, 249, or PHYSICS/E C E 235) and PHYSICS 311, or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. use aspects of probability and statistics to describe the basic thermodynamic properties of macroscopic systems, and interactions between systems
Audience: Undergraduate

2. use the principles of statistical analysis to explain equilibrium between systems, and thermodynamic reservoirs
Audience: Undergraduate

3. use macroscopic system parameters to calculate general properties of homogeneous systems using Maxwell relations
Audience: Undergraduate

4. explain and use the canonical distribution to calculate the properties of systems in contact with a heat reservoir
Audience: Undergraduate

5. use the partition function approach to calculate properties of systems.
Audience: Undergraduate

6. calculate the properties of systems undergoing phase transitions
Audience: Undergraduate

7. use quantum statistics to calculate the properties of non-interacting quantum systems
Audience: Undergraduate

PHYSICS 448 – ATOMIC AND QUANTUM PHYSICS
3 credits.

Review of atomic and other quantum phenomena and special relativity; introduction to quantum mechanics treating the more advanced topics of atomic physics and applications to molecular, solid state, nuclear, and elementary particle physics and quantum statistics.
Requisites: (PHYSICS 205, 241, 244, 249, or PHYSICS/E C E 235) and PHYSICS 311 and 322, or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PHYSICS 449 – ATOMIC AND QUANTUM PHYSICS
3 credits.

Continuation of PHYSICS 448. Review of atomic and other quantum phenomena and special relativity; introduction to quantum mechanics treating the more advanced topics of atomic physics and applications to molecular, solid state, nuclear, and elementary particle physics and quantum statistics.
Requisites: PHYSICS 448 or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

PHYSICS 498 – DIRECTED STUDY
1-3 credits.

Advanced-level mentored research project in physics.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PHYSICS 499 – DIRECTED STUDY
1-3 credits.

Advanced-level mentored research project in physics.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PHYSICS/B M E/H ONCOL/MED PHYS 501 – RADIATION PHYSICS AND DOSIMETRY
3 credits.

Interactions and energy deposition by ionizing radiation in matter; concepts, quantities and units in radiological physics; principles and methods of radiation dosimetry.
Requisites: (PHYSICS 323, 449 and MATH 320) or graduate/professional standing or declared in Medical Physics VISP
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use the physics of microscopic structures of nucleus, nuclear decay, electronic structure of atoms to calculate nuclear decay lifespan and solid state energy band structure
Audience: Both Grad & Undergrad

2. Calculate the radiation power spectrum for an accelerating charge particle under different physical conditions
Audience: Both Grad & Undergrad

3. Calculate cross-sections for the following interaction processes between photons and matter: Rayleigh scattering, photoelectric effect, Compton scattering, and pair production
Audience: Both Grad & Undergrad

4. Calculate the scattering cross-section of Coulomb scattering and energy transfer cross-section in collisions processes and radiative energy loss processes
Audience: Both Grad & Undergrad

5. Calculate radiation dose for both external photon beams, neutron beams, and charged particle beams
Audience: Both Grad & Undergrad

6. Identify open research topics in radiation imaging, radiation therapy, and radiation protection fields
Audience: Graduate

PHYSICS/E C E/N E 525 – INTRODUCTION TO PLASMAS
3 credits.

Basic description of plasmas: collective phenomena and sheaths, collisional processes, single particle motions, fluid models, equilibria, waves, electromagnetic properties, instabilities, and introduction to kinetic theory and nonlinear processes. Examples from fusion, astrophysical and materials processing processing plasmas.
Requisites: (E C E 320 or PHYSICS 322), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PHYSICS/E C E/N E 527 – PLASMA CONFINEMENT AND HEATING
3 credits.

Principles of magnetic confinement and heating of plasmas for controlled thermonuclear fusion: magnetic field structures, single particle orbits, equilibrium, stability, collisions, transport, heating, modeling and diagnostics. Discussion of current leading confinement concepts: tokamaks, tandem mirrors, stellarators, reversed field pinches, etc.
Requisites: E C E/N E/PHYSICS 525, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

PHYSICS 531 – INTRODUCTION TO QUANTUM MECHANICS
3 credits.

Historical background and experimental basis of quantum mechanics; de Broglie waves, correspondence principle, uncertainty principle, Schrodinger equation, hydrogen atom, electron spin, Pauli principle; applications of wave mechanics.
Requisites: (PHYSICS 205, 241, 244, 249, or PHYSICS/E C E 235) and PHYSICS 311 and 322, or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Master the concept of the wavefunction
Audience: Both Grad & Undergrad

2. Perform statistical analysis using operator algebra
Audience: Graduate

3. Understand the energy levels of the hydrogen atom
Audience: Both Grad & Undergrad

4. Obtain the mathematical skills necessary to solve the 3-dimensional wave equation
Audience: Graduate

5. Acquire the skills necessary to apply various types of perturbation theory
Audience: Both Grad & Undergrad

6. Use the variational principle including taking advantage of symmetry
Audience: Graduate

7. Understand the necessary mathematical apparatus of scattering theory
Audience: Both Grad & Undergrad

8. Discuss and explain fully the logical foundations of quantum mechanics
Audience: Both Grad & Undergrad

PHYSICS 535 – INTRODUCTION TO PARTICLE PHYSICS
3 credits.

Review of quantum physics; introduction to particles, antiparticles and fundamental interactions; detectors and accelerators; symmetries and conservation laws; electroweak and color interactions of quarks and leptons; unification theories.
Requisites: PHYSICS 448 or concurrent enrollment, PHYSICS 531 or concurrent enrollment, or graduate/professional or special student standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

PHYSICS 545 – INTRODUCTION TO ATOMIC STRUCTURE
3 credits.

Nuclear atom; hydrogen atom; Bohr-Sommerfeld model, wave model, electron spin, description of quantum electron spin, description of quantum electrodynamic effects; external fields; many-electron atoms; central field, Pauli principle, multiplets, periodic table, x-ray spectra, vector coupling, systematics of ground states; nuclear effects in atomic spectra; interaction with coherent radiation, optical forces, laser cooling and trapping.
Requisites: PHYSICS 448 or concurrent enrollment, PHYSICS 531 or concurrent enrollment, or graduate/professional or special student standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Master the concept of the Bohr Atom
Audience: Both Grad & Undergrad

2. Fully understand the orbitals of the hydrogen atom, including how to calculate their explicit forms
Audience: Both Grad & Undergrad

3. Prove and apply the Wigner-Eckart Theorem
Audience: Graduate

4. Become familiar with the phenomenology of multi-electron atoms
Audience: Both Grad & Undergrad

5. Calculate lifetimes and linewidths from first principles
Audience: Graduate

6. Determine quantum states and their properties in the presence of external fields
Audience: Both Grad & Undergrad

7. Categorize and explain the different types of atom traps
Audience: Both Grad & Undergrad

8. Perform density-matrix calculations to quantitatively measure entanglement and decoherence
Audience: Graduate

PHYSICS 551 – SOLID STATE PHYSICS
3 credits.

Mechanical, thermal, electric, and magnetic properties of solids; band theory; semiconductors; crystal imperfections.
Requisites: PHYSICS 205, 241, 244, 249, 448, 531, PHYSICS/E C E 235, or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Utilize ideas of atomic bonding to understand crystal lattice structures and reciprocal space
Audience: Both Grad & Undergrad

2. Use the reciprocal lattice to determine complex x-ray diffraction patterns
Audience: Graduate

3. Become familiar with the calculation of simple phonon dispersion relations and use them to determine lattice thermal properties
Audience: Both Grad & Undergrad

4. Master the electronic properties of metals in the quantum free-electron model and distinguish insulators, metals, and semiconductors
Audience: Both Grad & Undergrad

5. Obtain the ability to calculate general band structures in the nearly-free electronic and tight-binding approximations
Audience: Graduate

6. Analyze and calculate properties of bulk semiconductors and semiconductor junctions
Audience: Both Grad & Undergrad

7. Describe quantitatively ordered systems such as ferroelectrics, ferromagnets and superconductors
Audience: Both Grad & Undergrad

8. Understand the physics of superconducting junctions
Audience: Graduate

PHYSICS 603 – WORKSHOP IN COLLEGE PHYSICS TEACHING
1-2 credits.

Discussion, practice, and occasional lectures on various aspects of the teaching of physics. Course planning; course materials; lecture, demonstration, and discussion techniques; laboratory; problem solving; examinations, grading, and evaluation. Problems arising in the teaching of physics; levels of difficulty, differences in talents and backgrounds; methods of presentation of various specific topics.
Requisites: PHYSICS 311 and 322
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2021

PHYSICS/B M E/MED PHYS/PHMCOL-M/RADIOL 619 – MICROSCOPY OF LIFE
3 credits.

Survey of state of the art microscopic, cellular and molecular imaging techniques, beginning with subcellular microscopy and finishing with whole animal imaging.
Requisites: PHYSICS 104, 202, 208, or 248 or PHYSICS/MED PHYS 265
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PHYSICS 623 – ELECTRONIC AIDS TO MEASUREMENT
4 credits.

Fundamentals of electronics, electronic elements, basic circuits; combinations of these into measuring instruments.
Requisites: (PHYSICS 202, 208, or 248) and (MATH 234 or 376), or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

PHYSICS 625 – APPLIED OPTICS
4 credits.

Optical methods in research and technology. Reflection, refraction, absorption, scattering. Imaging. Sources and sensors. Schlieren methods. Interferometry. Instrumental spectroscopy. Fourier optics, image processing, holography. Laser technology, Gaussian beams, nonlinear optics.
Requisites: PHYSICS 322 or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PHYSICS 681 – SENIOR HONORS THESIS
3 credits.

Mentored individual research and study for students completing Physics Honors in the Major.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PHYSICS 682 – SENIOR HONORS THESIS
3 credits.

Mentored individual research and study for students completing Physics Honors in the Major.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PHYSICS/MED PHYS 688 – RADIATION PRODUCTION AND DETECTION
4 credits.

Physics of ionizing radiation production and detection in medical science; ionization chambers, solid-state detectors, charged and neutral particles for external beam radiotherapy, radionuclides activated with accelerators for diagnostic and therapeutic applications, radiochemistry, and X-ray tube physics.
Requisites: PHYSICS/B M E/H ONCOL/MED PHYS 501
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Achieve competence in experimental measurement methods of radiation dose
Audience: Both Grad & Undergrad

2. Develop a functional understanding of the principles and operation of the major types of ionizing radiation detectors used in modern medical physics including ion chambers, scintillators, semiconductors, chemical detectors, and calorimeters.
Audience: Both Grad & Undergrad

3. Apply fundamental atomic and nuclear physics and chemistry to radiation production using charged and neutral particles with accelerators and reactors, especially in the context of radionuclide production for diagnostic and therapeutic medical applications.
Audience: Both Grad & Undergrad

4. Develop an understanding of the principles and operation of medical electron linear accelerators for radiation therapy.
Audience: Both Grad & Undergrad

5. Apply physics and engineering concepts to understand the basic hardware configuration of an x-ray tube, the production of electrons by thermionic emission, the acceleration of electrons to a target material, and the physical interactions in the target resulting in x-rays.
Audience: Both Grad & Undergrad

6. Apply what has been learned to their current research project.
Audience: Graduate

PHYSICS 691 – SENIOR THESIS
2-3 credits.

Mentored individual research and study for students completing a thesis.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PHYSICS 692 – SENIOR THESIS
2-3 credits.

Mentored individual research and study for students completing a thesis.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

PHYSICS 701 – GRADUATE INTRODUCTORY SEMINARS
1 credit.

Designed to give new students an introduction to the broad range of modern research going on at UW Physics, and to help students find research opportunities in the department. Each week, faculty from each major research area will present their research in a seminar setting. The research areas will include selected topics both in theory and experiment from biophysics; atomic, molecular, and optical physics; plasma; condensed matter; quantum information and computation; high energy and nuclear physics; particle physics, astrophysics, and cosmology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Gains a broad awareness of the status of contemporary research in physics
Audience: Graduate

2. Learns to engage and communicate with other research professionals
Audience: Graduate

3. Learn how to work with the scientific literature
Audience: Graduate

4. Learn professional standards for the responsible conduct of research
Audience: Graduate

5. Learn responsibilities of authors and co-authors and acceptable authorship practices
Audience: Graduate

PHYSICS 707 – QUANTUM COMPUTING LABORATORY
4 credits.

Provides an intensive introduction to the experimental techniques of quantum computing. Students will do 8 experiments chosen from: Bell violation with entangled photons, Stern-Gerlach, Pulsed NMR, Optical pumping of Rb, Nanofabrication, Fiber optics communication, Diode pumped YAG laser, and Acousto-optic modulator.
Requisites: PHYSICS 709 and (PHYSICS 531 or 731)
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Master fundamental techniques in experimental physics of quantum computing. This includes, but is not limited to: calibration and operation of devices to measure electromagnetic signals, particle detection, lasers and other optical equipment.
Audience: Graduate

2. Be able to analyze experimental data. This involves physical interpretation and judgment of data quality. Understand error analysis and how to extract signals from noisy data.
Audience: Graduate

3. Become familiar with all the requirements involved in the presentation of scientific data at an international level. Be able to achieve logical structure, clarity of expression and convincing narrative from introduction to conclusion.
Audience: Graduate

4. Acquire the skill of keeping a good lab notebook. This will include concision and accuracy of description and clear writing, particularly for mathematical arguments.
Audience: Graduate

PHYSICS 709 – INTRODUCTION TO QUANTUM COMPUTING
3 credits.

A detailed introduction to quantum computation and quantum information processing. Basic topics of quantum mechanics that are most relevant to quantum computing, particularly measurement theory. Specialized topics such as entanglement, other measures of quantum correlation and the Bell inequalities. Classical and quantum information theory, classical and quantum complexity theory. Qubits, quantum gates, quantum circuits. Teleportation, quantum dense coding, quantum cryptography. Quantum algorithms: Deustch, Simon, Shor, Grover, and adiabatic algorithms. Basic quantum error correction: 5-qubit, Steane and Shor codes. Completion of one undergraduate course in quantum mechanics recommended, such as PHYSICS 448 or 531.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand the conceptual foundations of quantum computing and its relation to classical computing. Be able to describe accurately and quantitatively the differences in their capacities.
Audience: Graduate

2. Master the formalism of many-qubit quantum mechanics, including Pauli matrices, commutation relations and repeated unitary transformations. Be able to apply this knowledge to quantum gates, quantum circuits and quantum algorithms.
Audience: Graduate

3. Become familiar with the differences between quantum correlations and classical correlations at a conceptual level. Use this knowledge to be able to analyze experiments on Bell inequalities.
Audience: Graduate

4. Understand the motivation for quantum error correction. Be able to follow and verify error-correction protocols.
Audience: Graduate

PHYSICS 711 – THEORETICAL PHYSICS-DYNAMICS
3 credits.

Lagrange's equations, Principle of Least Action, orbits and scattering, kinematics of rotation, rigid body dynamics, small oscillations, special relativistic dynamics, Hamiltonian formulation, canonical transformations, Hamilton-Jacobi theory, canonical perturbation theory, chaos, continuum mechanics, introduction to general relativity.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PHYSICS 715 – STATISTICAL MECHANICS
3 credits.

Statistical foundations, Liouville's theorem, ensembles, classical and quantum distribution functions, entropy and temperature, connection with thermodynamics, partition functions, quantum gases, non-ideal gases, phase transitions and critical phenomena, non-equilibrium problems, Boltzmann equation and the H-theorem, transport properties, connections with quantum field theory, applications of statistical mechanics to selected problems.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

PHYSICS 716 – STATISTICAL MECHANICS II
3 credits.

Symmetries and symmetry breaking, phase transitions, mean field theory, critical exponents, scaling hypothesis, renormalization group, diagrammatic expansion, epsilon-expansion, exact solution of the 2d Ising model. Boltzman kinetic equation, H-theorem, Fokker-Planck and Langevin equations, Born-Markov master equation, Lindblad superoperators, classical and quantum noise, theory of amplifiers.
Requisites: PHYSICS 715 and 731
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PHYSICS 717 – RELATIVITY
3 credits.

Special and general theories of relativity, relativistic electrodynamics, cosmology, unified field theories.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PHYSICS 721 – THEORETICAL PHYSICS-ELECTRODYNAMICS
3 credits.

Electrostatics, magnetostatics, Green functions, boundary value problems, macroscopic media, Maxwell's equations, the stress tensor and conservation laws, electromagnetic waves, wave propagation, dispersion, waveguides, radiation, multipole expansions, diffraction and scattering, special relativity, covariance of Maxwell's equations, Lienard-Wiechert potentials, radiation by accelerated charges. Knowledge of electrodynamics (such as PHYSICS 322) strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PHYSICS/E C E/N E 724 – WAVES AND INSTABILITIES IN PLASMAS
3 credits.

Waves in a cold plasma, wave-plasma interactions, waves in a hot plasma, Landau damping, cyclotron damping, magneto-hydrodynamic equilibria and instabilities, microinstabilities, introduction to nonlinear processes, and experimental applications. Basic knowledge of plasmas [such as PHYSICS/E C E/N E 525] and advanced electromagnetics [such as PHYSICS 721 or E C E 740] strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

PHYSICS/E C E/N E 725 – PLASMA KINETIC THEORY AND RADIATION PROCESSES
3 credits.

Coulomb Collisions, Boltzmann equation, Fokker-Planck methods, dynamical friction, neoclassical diffusion, collision operators radiation processes and experimental applications. Basic knowledge of plasmas [such as PHYSICS/E C E/N E 525] and advanced electromagnetics [such as PHYSICS 721 or E C E 740] strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PHYSICS/E C E/N E 726 – PLASMA MAGNETOHYDRODYNAMICS
3 credits.

MHD equations and validity in hot plasmas; magnetic structure and magnetic flux coordinates; equilibrium in various configurations; stability formulation, energy principle, classification of instabilities; ideal and resistive instability in various configurations, evolution of nonlinear tearing modes; force-free equilibria, helicity, MHD dynamo; experimental applications. Basic knowledge of plasmas [such as PHYSICS/E C E/N E 525] and advanced electromagnetics [such as PHYSICS 721 or E C E 740] strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

PHYSICS 731 – QUANTUM MECHANICS
3 credits.

Schrodinger equation, operator theory, matrix mechanics, transformation theory, Heisenberg representation, orbital angular momentum, bound-state problems, scattering theory, stationary perturbation theory, degenerate systems, time-dependent perturbation theory, Born approximation, other approximation methods. Knowledge of quantum mechanics and atomic physics (such as PHYSICS 449 or 531) strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PHYSICS 732 – QUANTUM MECHANICS
3 credits.

Interaction of electromagnetic radiation with matter, quantization of the electromagnetic field, spontaneous transitions, identical particles and spin, addition of angular momenta, tensor operators, complex atoms, Hartree approximation, molecules, Dirac equation, relativistic effects in atoms.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

PHYSICS 735 – PARTICLE PHYSICS
3 credits.

Structure of elementary particles, quarks and gluons, introduction to calculational techniques of particle interactions (Feynman diagrams), constituent models of electroweak and strong interactions and associated phenomenological techniques. Knowledge of introductory particle physics and quantum mechanics (such as PHYSICS 535) strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PHYSICS 736 – EXPERIMENTAL METHODS IN NUCLEAR-, PARTICLE-, AND ASTROPHYSICS
3 credits.

Interaction of particles with matter; detector techniques at colliding beam machines, in nuclear and particle physics, astrophysics, and cosmology; experimental strategies in detector design; principles of simulation and Monte Carlo methods, error analysis and statistical techniques in data analysis. Knowledge of introductory particle physics (such as PHYSICS 535) strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

PHYSICS/E C E 746 – QUANTUM ELECTRONICS
3 credits.

Elementary aspects of Lagrange theory of fields and field quantization; Bose, Fermi and Pauli operators; interaction of fields; quantum theory of damping and fluctuations; applications to lasers, nonlinear optics, and quantum optics. Knowledge of lasers [such as PHYSICS 546] and graduate-level electromagnetics [such as E C E 740 or PHYSICS 721] strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

PHYSICS/E C E 748 – LINEAR WAVES
3 credits.

General considerations of linear wave phenomena; one dimensional waves; two and three dimensional waves; wave equations with constant coefficients; inhomogenous media; random media. Lagrangian and Hamiltonian formulations; asymptotic methods. Knowledge of electromagnetics [such as E C E 320 or PHYSICS 321], mechanics [such as M E 340], or vibrations [such as M E 440] strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

PHYSICS/E C E/N E 749 – COHERENT GENERATION AND PARTICLE BEAMS
3 credits.

Fundamental theory and recent advances in coherent radiation charged particle beam sources (microwave to X-ray wavelengths) including free electron lasers, wiggler/wave-particle dynamics, Cerenkov masers, gyrotrons, coherent gain and efficiency, spontaneous emission, beam sources and quality, related accelerator concepts experimental results and applications.
Requisites: E C E 740
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

PHYSICS 751 – ADVANCED SOLID STATE PHYSICS
3 credits.

Lattice dynamics; band theory; Fermi surfaces; electrodynamics of metals; optical properties; transport properties. Knowledge of introductory solid state physics (such as PHYSICS 551) strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

PHYSICS 763 – QUBIT TUNE-UP AND PROGRAMMING
3 credits.

Explore the development of quantum computers using specific hardware platforms, such as superconducting qubits. Walk through the entire process from a fabricated device to a functional quantum computer, focusing on qubit tune-up and the DiVincenzo criteria. Implement state preparation and measurement, single and two-qubit gates, and apply quantum characterization, verification, and validation (QCVV) techniques to diagnose and mitigate errors. Utilize quantum computer simulators and real quantum devices when available, leveraging current experimental data analysis methods to understand how to build scalable and reliable quantum systems. Knowledge of quantum mechanics [such as PHYSICS 531] required.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the physics underlying a specific qubit hardware.
Audience: Graduate

2. Describe and implement qubit state preparation and measurement (SPAM).
Audience: Graduate

3. Characterize and implement single and two-qubit gates.
Audience: Graduate

4. Define and implement quantum characterization, verification, and validation (QCVV) techniques to diagnose errors in quantum hardware.
Audience: Graduate

5. Utilize data analysis techniques necessary for developing quantum computers.
Audience: Graduate

PHYSICS 765 – QUANTUM ALGORITHMS AND ERROR CORRECTION
3 credits.

Dive into the quantum computing stack by starting with real-world applications and progressing through the essential components needed for fault-tolerant quantum computers. Learn about key areas such as quantum algorithms, and advanced quantum error correction. Explore algorithms for scientific applications, including quantum phase estimation and the HHL algorithm, and examine the derivation, trade-offs, and implementation of sophisticated error correction techniques. Learn to analyze and estimate the full-stack quantum resources required for novel quantum algorithms by utilizing classical computational tools, in order to develop and evaluate scalable, high-utility quantum computing solutions.
Requisites: PHYSICS 709
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Summarize how to estimate quantum resources, starting from a high-utility application, through quantum algorithms, error correcting codes, and physical qubit parameters.
Audience: Graduate

2. Discuss quantum algorithms for scientific applications, including quantum phase estimation, time-stepping schemes (Trotterization, qubitization), initial state preparation, and the HHL algorithm.
Audience: Graduate

3. Describe advanced quantum error correction codes, their derivation, trade-offs between different codes, physical overheads, decoders, and threshold calculations.
Audience: Graduate

4. Use and develop classical computational tools to study various aspects of quantum computers.
Audience: Graduate

PHYSICS 772 – HIGH ENERGY ASTROPHYSICS
3 credits.

Interactions among the particles, fields, and radiation of interstellar and intergalactic space. Gamma-ray, x-ray, and cosmic ray production, propagation, and detection. Knowledge of electrodynamics (such as PHYSICS 322) strongly encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PHYSICS 779 – ADVANCED QUANTUM COMPUTING
3 credits.

Explores applications of quantum theory to both the hardware and the software that underpin modern quantum information technology. Advanced quantum circuit theory: Clifford group and Gottesman-Knill theorem, Mathematica code. Decoherence: density matrices, probability distributions, T1 and T2. Advanced error correction: master equation, Kraus operators, fault tolerance, quantum tomography. Hardware: Trapped ions, Paul traps, sideband cooling, CZ and MS gates, neutral atoms, superconductors, quantum dots.
Requisites: PHYSICS 531 or 731
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand how to construct and analyze a quantum circuit. Be able to simulate using Mathematica.
Audience: Graduate

2. Master the formalism of decoherence of quantum computers. Be able to apply this knowledge for different noise models.
Audience: Graduate

3. Advance knowledge of error correction beyond simple 5- and 7-qubit codes. Understand connection to classical error correction methods.
Audience: Graduate

4. Be able to explain and compare all the major technologies in use today for quantum information processing. Grasp the physics behind each, including speed and resistance to decoherence.
Audience: Graduate

PHYSICS 799 – INDEPENDENT STUDY
1-3 credits.

Graduate-level mentored research project in physics.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PHYSICS 801 – SPECIAL TOPICS IN THEORETICAL PHYSICS
1-3 credits.

Selected topics in theoretical physics.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PHYSICS 805 – SPECIAL TOPICS IN PHYSICS
1-3 credits.

Special topics in physics at the graduate level.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PHYSICS 831 – ADVANCED QUANTUM MECHANICS
3 credits.

Quantum theory of free and interacting fields, formal scattering theory, dispersion theory.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PHYSICS 832 – ADVANCED QUANTUM MECHANICS
3 credits.

Continuation of PHYSICS 831. Quantum theory of free and interacting fields, formal scattering theory, dispersion theory.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

PHYSICS 835 – COLLIDER PHYSICS PHENOMENOLOGY
2-3 credits.

Standard model. Application to e+e-, proton-antiproton, pp, and ep colliders. Jets. Weak boson, heavy-quark, and Higgs boson production and decay. Quarkonia. Neutral B meson mixing. Grand unification. Supersymmetry.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2021

PHYSICS/E C E 848 – NONLINEAR WAVES
3 credits.

General considerations of nonlinear wave phenomena; nonlinear hyperbolic waves; nonlinear dispersion; nonlinear geometrical optics; Whitham's variational theory; nonlinear and parametric instabilities; solitary waves; inverse scattering method. Knowledge of electromagnetics [such as E C E 320 or PHYSICS 321] or mechanics [such as M E 340] encouraged.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019

PHYSICS 900 – COLLOQUIUM
0-1 credits.

Lectures by staff and visitors.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PHYSICS/ASTRON 910 – SEMINAR IN ASTROPHYSICS
0-1 credits.

Current topics in astrophysics.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PHYSICS/E C E/N E 922 – SEMINAR IN PLASMA PHYSICS
0-1 credits.

Current topics in plasma physics.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PHYSICS 990 – RESEARCH
1-12 credits.

Research supervised by individual faculty members.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Evaluates or synthesizes information pertaining to questions or challenges in physics.
Audience: Graduate

2. Engages appropriately and communicates clearly with other research professionals in physics.
Audience: Graduate

3. Formulates and plans original research.
Audience: Graduate

4. Creates research, scholarship, or performance that makes a substantive contribution to the field of physics.
Audience: Graduate

PHYSIOLOGY (PHYSIOL)

PHYSIOL 699 — INDEPENDENT WORK
1-4 credits.

Directed study projects for juniors and seniors.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2018
Learning Outcomes: 1. Apply concepts learned in coursework to real life situations
Audience: Undergraduate

2. Read and effectively search scientific literature
Audience: Undergraduate

3. Develop critical, analytical, and independent thinking skills
Audience: Undergraduate

PHYSIOL 901 — SEMINAR
1 credit.

Students, faculty, and staff present research reports of current interest.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2019

PHYSIOL 990 — RESEARCH
1-9 credits.

Independent research and writing for graduate students under the supervision of a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2024
Learning Outcomes: 1. Exhibit a broad understanding of general physiology principles.
Audience: Graduate

2. Conduct independent research using a variety of approaches.
Audience: Graduate

3. Think critically to address research challenges.
Audience: Graduate

4. Exhibit and foster professional and ethical conduct in their research.
Audience: Graduate

5. Collaborate with other investigators within or outside the thesis lab.
Audience: Graduate

PLANT PATHOLOGY (PL PATH)

PL PATH/BOTANY 105 — MUSHROOMS
3 credits.

An introduction to fungi. The fungal kingdom is made up of millions of species. We use fungi to brew beer and make cheese, as medicines, and as symbols of both rampant decay and unstinting selflessness. Come unpack the mythology and walk away with a deep appreciation of a poorly understood but fascinating part of Earth's biodiversity.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Notice, recognize, and catalog fungi as you walk in the world; in Madison and in all of Earth's lands and waters.
Audience: Undergraduate

2. Explain the myriad ecological roles fungi play on planet Earth.
Audience: Undergraduate

3. Talk about fungal biodiversity at length and in depth.
Audience: Undergraduate

4. Think critically about the natural world; be able to not just read but also critique popular science writing.
Audience: Undergraduate

5. Interpret "how science gets done" and what constitutes scientific knowledge.
Audience: Undergraduate

PL PATH/BOTANY 123 — PLANTS, PARASITES, AND PEOPLE
3 credits.

Explores the interaction between society and plant-associated microbes. Topics include: the Irish potato famine, pesticides in current agriculture, role of economics and consumer preference in crop disease management and the release of genetically engineered organisms.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PL PATH/ZOOLOGY 154 – TINY EARTH: ANTIBIOTIC DISCOVERY RESEARCH
2 credits.

Learn basic methodology in scientific research and discovery, including laboratory techniques, quantitative reasoning, scientific communication, and collaboration. Gain hands-on laboratory experience working with microbes to test original hypotheses concerning the discovery of potential antibiotic compounds while addressing the world's antibiotic resistance crisis by contributing data to the global "Tiny Earth" network of researchers to advance potential drug development. Tiny Earth seeks to encourage students to pursue careers in science through real-world, applied research experiences and aims to address a worldwide health threat of the diminishing supply of effective antibiotics by "student-sourcing antibiotic discovery." Concurrent enrollment in BIOLOGY/BOTANY/ZOOLOGY 152 is required for permission to enroll.
Requisites: Consent of instructor
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate basic knowledge of microbes and antibiotic resistance by (1) sufficiently explaining the process of natural selection with the accurate use of terminology, (2) describing morphological and physiological variation in bacteria and how this relates to bacterial taxonomy, and (3) summarizing mechanisms of the spread of antibiotic resistance genes across the microbial world.
Audience: Undergraduate

2. Demonstrate scientific competency as shown by their ability to (1) propose an original research question and hypothesis, (2) develop a biological rationale for the hypothesis, (3) select appropriate protocols to test the hypothesis, and (4) perform the research collaboratively with group members in a cordial and respectful way.
Audience: Undergraduate

3. Demonstrate proper techniques in basic micro- and molecular biology by (1) pipetting fluids with volume accuracy, (2) plating microbes via spread, patch, and streak methods, (3) using proper sterile technique, and (4) performing protocols for polymerase chain reaction (PCR), gel electrophoresis, and BLAST analysis for DNA amplification and sequencing.
Audience: Undergraduate

4. Demonstrate quantitative reasoning as shown by their ability to (1) select an appropriate statistical analysis for a given data set and research question, (2) carry out the statistical analysis using a vetted program (e.g. online statistical calculator tool such as Vassarstats.com), and (3) accurately interpret and the translate the results into a meaningful statement.
Audience: Undergraduate

5. Demonstrate scientific communication as shown by their ability to (1) clearly express a hypothesis, general methodology, and results in formal writing, (2) accurately visualize numerical results in the form of graph, (3) satisfactorily deliver aspects of the research project and findings via oral presentation and scientific poster presentation.
Audience: Undergraduate

PL PATH/PLANTSCI 261 – SUSTAINABLE TURFGRASS USE AND MANAGEMENT
2 credits.

Sustainable use and management of turfgrass landscapes in urban and suburban environments, including home lawns, golf courses, and sports fields. Focus is on creating sustainable and attractive turfgrass landscapes through proper species selection, use of slow-release or organic fertilizer practices, and minimizing the use of pesticides and supplemental irrigation.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe how turf is used in urban and suburban communities
Audience: Undergraduate

2. Identify the positive environmental impacts of using turfgrass
Audience: Undergraduate

3. Identify the negative environmental impacts of turfgrass management
Audience: Undergraduate

4. Identify the 3 major pest groups in turfgrass and describe sustainable management strategies for each
Audience: Undergraduate

PL PATH/PLANTSCI 262 – TURFGRASS MANAGEMENT LABORATORY
1 credit.

Hands-on turf establishment, cool- and warm-season grass, seed and weed identification, chemical application, and turf cultivation techniques and equipment use, plus field trips to major league sport facilities and golf courses.
Requisites: PL PATH/PLANTSCI 261 or concurrent enrollment
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Identify the species of turfgrass commonly used in Wisconsin and the conditions they are most suited to.
Audience: Undergraduate

2. Describe management strategies that can be implemented to increase the sustainability of turfgrass management.
Audience: Undergraduate

3. List the most common pests observed on Wisconsin turfgrass and describe strategies for their sustainable management.
Audience: Undergraduate

4. Calculate the amount of seed needed to properly establish a turfgrass site, the amount of fertilizer needed to adequately fertilize turfgrass, and the concentration of pesticides needed to suppress common turfgrass pests.
Audience: Undergraduate

PL PATH 289 – HONORS INDEPENDENT STUDY
1-2 credits.

Research work for Honors students under direct guidance of a faculty member in an area of Plant Pathology. Students are responsible for arranging the work and credits with the supervising instructor.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2000

PL PATH 299 – INDEPENDENT STUDY
1-3 credits.

Research work for students under direct guidance of a faculty member in an area of Plant Pathology. Students are responsible for arranging the work and credits with the supervising instructor.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PL PATH 300 – INTRODUCTION TO PLANT PATHOLOGY
4 credits.

Economic importance, symptoms, causes, and methods of control of representative plant diseases.
Requisites: (ZOOLOGY/BIOLOGY/BOTANY 152, BOTANY/BIOLOGY 130, or BIOCORE 381) or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PL PATH 311 – GLOBAL FOOD SECURITY
3 credits.

Isn't having enough food a basic human right? Exploration of the drivers of food insecurity: barriers to food production (pests, land availability, climate), barriers to food availability (politics, price, biofuels), and a greater need due to population growth. Examination of solutions to food insecurity.
Requisites: Satisfied Communications A requirement
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Locate, evaluate, and use credible information resources relevant to global food insecurity
Audience: Undergraduate

2. Analyze and interpret scientific evidence
Audience: Undergraduate

3. Compare and contrast information from multiple perspectives to gain a more comprehensive understanding of global food insecurity
Audience: Undergraduate

4. Demonstrate teamwork and interpersonal skills
Audience: Undergraduate

5. Analyze the barriers to food security
Audience: Undergraduate

6. Evaluate proposed solutions to food insecurity
Audience: Undergraduate

7. Apply logic-based rhetoric to communicate effectively in written and oral formats
Audience: Undergraduate

8. Demonstrate understanding of scientific reasoning, and determine when scientific information supports a given conclusion.
Audience: Undergraduate

PL PATH 315 – PLANT MICROBIOMES
4 credits.

Explore plant associated microbial communities (the plant microbiome), methods used to study them, and how we can use them to improve plant and ecosystem health in the face of challenges to agricultural and natural systems. Examples will be drawn from annual crop, grassland, and forested ecosystems. Use current molecular, bioinformatic, and statistical approaches to characterize rhizosphere microbiomes from samples collected as part of on-going research projects.
Requisites: (ZOOLOGY/BIOLOGY/BOTANY 152, ZOOLOGY/BIOLOGY 101 and 102, BOTANY/BIOLOGY 130, or BIOCORE 381) and (STAT 301 or 371), or Graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

PL PATH/BOTANY 332 – FUNGI
4 credits.

Growth, development, variability and dispersal of saprophytic, parasitic, and symbiotic fungi, with a consideration of their ecological and economic significance. Develop skills in microscopy with live fungal materials.
Requisites: ZOOLOGY/BIOLOGY/BOTANY 151, BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY 101, BIOCORE 381, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

PL PATH/BOTANY 333 – BIOLOGY OF THE FUNGI
2 credits.

Growth, development, variability and dispersal of saprophytic, parasitic, and symbiotic fungi, with a consideration of their ecological and economic significance.
Requisites: ZOOLOGY/BIOLOGY/BOTANY 151, BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY 101, BIOCORE 381, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Will have a detailed knowledge of the biodiversity of Fungi, and organisms traditionally included in mycology courses, including but not limited to systematics, life cycles, genetics, pathology, ecology.
Audience: Both Grad & Undergrad

2. Apply knowledge of Fungi and fungal-like organisms for use in agriculture and industry.
Audience: Both Grad & Undergrad

3. Communicate about fungi in either an outreach or professional capacity.
Audience: Graduate

PL PATH/A A E/PLANTSCI 367 — INTRODUCTION TO ORGANIC AGRICULTURE: PRODUCTION, MARKETS, AND POLICY
3 credits.

Provides an in-depth understanding of the history of organic agriculture, its production, processing, marketing, and social dimensions, and its impact on environmental, community, and human health.
Requisites: ENVIR ST/AGROECOL/C&E SOC/ENTOM 103, AGRONOMY 100, HORT 120, PLANTSCI 110, BOTANY/PL PATH 123, SOC/C&E SOC 222, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the history of current organic systems and how it influences the way that organic farms and industries work.
Audience: Both Grad & Undergrad

2. Explore the biological, ecological, and agricultural underpinnings of organic production systems.
Audience: Both Grad & Undergrad

3. Examine how organic systems, social initiatives, and regulations are developed and how they shape business activities, community development efforts, and human and environmental health outcomes.
Audience: Both Grad & Undergrad

4. Evaluate the benefits and limitations of organic systems, social initiatives, and regulations from environmental, social, economic, and racial justice perspectives.
Audience: Both Grad & Undergrad

5. Analyze sustainability issues and/or practices using a systems-based approach.
Audience: Both Grad & Undergrad

6. Describe the social, economic, and environmental dimensions of organic farming and identify potential tradeoffs and interrelationships among these dimensions at a level appropriate to the course.
Audience: Both Grad & Undergrad

7. Develop the capacity to evaluate sustainability and resilience outcomes of organic and other agricultural production and processing systems using interdisciplinary methods.
Audience: Graduate

PL PATH 375 — SPECIAL TOPICS
1-4 credits.

Subjects of current interest to undergrads.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PL PATH 399 — COORDINATIVE INTERNSHIP/COOPERATIVE EDUCATION
1-8 credits.

An internship under guidance of a faculty or instructional academic staff member in Plant Pathology and internship site supervisor. Students are responsible for arranging the work and credits with the faculty or instructional academic staff member and the internship site supervisor.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Workplace - Workplace Experience Course
Repeatable for Credit: Yes, for 8 number of completions
Last Taught: Spring 2020

PL PATH 400 — STUDY ABROAD IN PLANT PATHOLOGY
1-6 credits.

Provides an area equivalency for courses taken on Madison Study Abroad Programs that do not equate to existing UW courses. Current enrollment in a UW-Madison study abroad program
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions

PL PATH 499 — INDEPENDENT STUDY IN ORGANIC AGRICULTURE
2 credits.

Provide students research and/or hands-on experiences within the organic sector in order to gain scientific knowledge and/or an in-depth understanding of the research and science of organic agriculture, its production, processing, marketing, and social dimensions, and its impact on environmental, community, and human health. Declared in the Certificate in Organic Agriculture
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply knowledge of organic production through experiential opportunities within local, national and/or international communities.
Audience: Undergraduate

2. Research and/or develop innovations that integrate the biological, ecological, social, and economic concepts of organic agriculture into scientific or practical applications supporting organic farmers, industry participants, and/or consumers.
Audience: Undergraduate

PL PATH/BOTANY/ENTOM 505 — PLANT-MICROBE INTERACTIONS: MOLECULAR AND ECOLOGICAL ASPECTS
3 credits.

Molecular and ecological aspects of the interactions between plants and microorganisms. Explores many of the themes, from genetic to integrative, of modern biology, and illustrates how study of plant-microbe interactions contributes to understanding of fundamental plant science.
Requisites: MICROBIO 303, GENETICS 466, 468, BIOCHEM 501, 508, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

PL PATH 517 — PLANT DISEASE RESISTANCE
2-3 credits.

Host resistance in plant disease control. Conceptual and applied aspects of resistance: how it works, why it sometimes fails, and the traditional and modern techniques used for evaluating host resistance and incorporating resistance factors into new plant varieties.
Requisites: PL PATH 300, GENETICS 466, 468, PLANTSCI 338 or AGRONOMY 338 prior to Fall 2025, PLANTSCI 501 or AGRONOMY 501 prior to Fall 2025, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

PL PATH 559 — DISEASES OF ECONOMIC PLANTS
3 credits.

Symptoms, epidemiology and control of diseases of crop plants; emphasis on disease diagnosis.
Requisites: (PL PATH 300 and 332), or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2024

PL PATH/BOTANY 563 — PHYLOGENETIC ANALYSIS OF MOLECULAR DATA
3 credits.

Theory and practice of phylogenetic inference from DNA sequence data.
Requisites: (ZOOLOGY/BIOLOGY/BOTANY 151, BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY 101, or BIOCORE 381) and (STAT 240, 301, 324, or 371) or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain in details all the steps in the pipeline for phylogenetic inference and how different data and model choices affect the inference outcomes
Audience: Both Grad & Undergrad

2. Plan and produce reproducible scripts with the analysis of real biological data
Audience: Both Grad & Undergrad

3. Justify the data and model choices made for the data analysis
Audience: Both Grad & Undergrad

4. Interpret the results of the most widely used phylogenetic methods in biological terms
Audience: Both Grad & Undergrad

5. Orally present the results of phylogenomic data analyses based on the best scientific and reproducibility practices
Audience: Graduate

PL PATH 590 — CAPSTONE IN PLANT PATHOLOGY
1-4 credits.

Synthesizing research-based capstone experience in Plant Pathology. Develop problem-solving skills, be exposed to multidisciplinary approaches, develop teamwork and interpersonal skills, develop information resources, consider societal, economic, ethical, scientific and professional aspects of the field, and prepare and present written and/or oral reports.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

PL PATH 602 — ECOLOGY, EPIDEMIOLOGY AND CONTROL OF PLANT DISEASES
3 credits.

Environmental factors in the development and spread of diseases, pathogen variability, genetics of disease resistance, and principles of disease control.
Requisites: PL PATH 300, (MATH 217 or 221), and (STAT 301, 371, or F&W ECOL/STAT 571), or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

PL PATH 622 — PLANT-BACTERIAL INTERACTIONS
2-3 credits.

Physiology, genetics, taxonomy, and ecology of bacterial pathogens, epiphytes, and symbionts of plants.
Requisites: MICROBIO 303 and (GENETICS 466, 468, BIOCHEM 501, or 508) or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2019

PL PATH/M M & I/ONCOLOGY 640 — GENERAL VIROLOGY-MULTIPLICATION OF VIRUSES
3 credits.

The structure, multiplication, genetics, pathology and control of animal and plant viruses.
Requisites: (GENETICS 466 or 467) and (BIOCHEM 501 or 508) or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the major classes of viruses infecting animals and plants, and summarize their basic replication strategies.
Audience: Both Grad & Undergrad

2. Identify the major innate and adaptive antiviral immunity mechanisms of animals and plants, and examples of viral countermeasures against these.
Audience: Both Grad & Undergrad

3. Summarize the burdens and threats of viruses to public health, agriculture, etc.
Audience: Both Grad & Undergrad

4. Identify the major approaches and challenges to virus control at the single organism and host population levels, including why viruses are generally harder to control than bacteria, and major steps in developing new antiviral agents.
Audience: Both Grad & Undergrad

5. Illustrate beneficial uses of viruses and their genes in research, biotechnology and medicine.
Audience: Both Grad & Undergrad

6. Design and evaluate basic experiments to address specific questions in virology.
Audience: Both Grad & Undergrad

7. Read and evaluate primary literature papers in virology.
Audience: Graduate

PL PATH/BOTANY/GENETICS/M M & I 655 – BIOLOGY AND GENETICS OF FUNGI
3 credits.

Fungal genetics, genomics, and physiology using plant pathogenic fungi and the genetic models Aspergillus nidulans and Neurospora crassa as model systems to explore the current knowledge of fungal genetics and plant/fungal interactions.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Demonstrate a basic understanding of fungal biology and genetics
Audience: Graduate

2. Analyze current research topics in fungal genetics/biology
Audience: Graduate

3. Identify members of the fungal research community
Audience: Graduate

4. Write and critique research grants
Audience: Graduate

5. Critique and discuss peer reviewed manuscripts
Audience: Graduate

6. Develop and deliver oral presentations (research paper and own research)
Audience: Graduate

7. Improve communication skills (oral and written)
Audience: Graduate

PL PATH 681 – SENIOR HONORS THESIS
2-4 credits.

Individual study for undergraduate students in an Honors program completing a thesis in the area of Plant Pathology, as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025

PL PATH 682 – SENIOR HONORS THESIS
2-4 credits.

Second semester of individual study for undergraduate students in an Honors program completing a thesis in the area of Plant Pathology, as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2019

PL PATH 699 – SPECIAL PROBLEMS
1-5 credits.

Individual advanced work in an area of Plant Pathology under the direct guidance of a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PL PATH 799 – PRACTICUM IN PLANT PATHOLOGY TEACHING
1-3 credits.

Instructional orientation to teaching at the higher education level in the agricultural and life sciences, direct teaching experience under faculty supervision, experience in testing and evaluation of students, and the analysis of teaching performance.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PL PATH 875 – SPECIAL TOPICS
1-4 credits.

Topics of current interest to Grad students.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

PL PATH 923 – SEMINAR
1 credit.

Seminar series on topics related to plant pathology
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PL PATH/BOTANY 930 – SEMINAR-MYCOLOGY
1 credit.

Topics, recent advances literature in the area of Mycology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PL PATH 990 – RESEARCH
1-9 credits.

Independent laboratory research in preparation of a graduate thesis under supervision of a faculty member
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PLANT SCIENCE (PLANTSCI)

PLANTSCI 110 – INTRODUCTION TO PLANT SCIENCE AND TECHNOLOGY
4 credits.

Introduces the basic principles of plant science and technology as they apply to cultivated plants. Topics include the historical and economic importance of plants for food, feed, and fiber; origin, classification, and geographic distribution; plant breeding; growth, development, and physiology; agroecosystems and practices; field and greenhouse production; integrated pest management; and marketing practices. Discuss and apply associated technologies (e.g. gene editing, remote sensing, unmanned aerial vehicles).
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define and describe plant anatomy and morphology from subcellular through whole plant organization
Audience: Undergraduate

2. Define and describe the basic principles of plant growth and development including photosynthesis, respiration, transpiration, plant growth regulators, reproduction and genetics
Audience: Undergraduate

3. Articulate how the environment and management practices affect plant growth and development
Audience: Undergraduate

4. Illustrate how cutting-edge technologies are being used to address modern agricultural challenges
Audience: Undergraduate

5. Locate and use reputable resources to communicate scientific knowledge about plants in written and oral formats
Audience: Undergraduate

6. Identify areas of interest and potential opportunities for career development in plant science and technology
Audience: Undergraduate

PLANTSCI 121 – COLLOQUIUM IN PLANT SCIENCE AND TECHNOLOGY
1 credit.

Overview of regional, national and international areas of importance to various plant science industries. Discuss current plant science related topics of special interest.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Describe what education and training is needed for various careers in horticulture and plant sciences.
Audience: Undergraduate

2. Discuss current plant science topics and be able to find scientific, unbiased sources of information.
Audience: Undergraduate

3. Identify opportunities for career development in the plant sciences and horticulture.
Audience: Undergraduate

4. Discuss the numerous ways that plant science and horticulture can help to reduce climate change effects for a sustainable future.
Audience: Undergraduate

PLANTSCI 227 – PROPAGATION OF HORTICULTURAL PLANTS
3 credits.

Methods of propagation of herbaceous and woody plants, fundamental anatomical and physiological principles underlying sexual and asexual propagation of plants.
Requisites: Sophomore standing and (BOTANY 100, BOTANY/BIOLOGY 130, or ZOOLOGY/BIOLOGY/BOTANY 152)
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain the science behind the major types of asexual and sexual propagation methods
Audience: Undergraduate

2. Perform the major types of asexual and sexual propagation methods
Audience: Undergraduate

3. Describe the role of research in plant propagation
Audience: Undergraduate

4. Identify appropriate plant propagation reference materials available for developing propagation protocols
Audience: Undergraduate

5. Provide expertise in plant propagation for possible future employment in commercial operations
Audience: Undergraduate

PLANTSCI 230 – WINES AND VINES OF THE WORLD
2 credits.

An introduction to grape production and wine culture. Learn the science of growing grapes, wine-making, and wine appreciation. Topics include cultural history and geography of the world's grape-producing regions, principles of plant anatomy and physiology, biochemistry of wine production, wine producing regions of the world and wine styles, and sensory evaluation of wines. Includes a wine tasting discussion to explore the sensory attributes of the wines and production practices specific to the wine production regions to be covered. Students must be 21 years of age by the start of class to enroll.
Requisites: Consent of instructor
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the basic chemistry and biology concepts pertaining to viticulture and winemaking
Audience: Undergraduate

2. Explain general concepts of sustainable grape production and the winemaking process
Audience: Undergraduate

3. Discuss the history and social dimensions of wines from around the world and their relation to culture
Audience: Undergraduate

4. Implement tasting strategies to characterize wine from different regions of the world
Audience: Undergraduate

5. Analyze the causes of and solutions for the sustainability challenges of worldwide grape production
Audience: Undergraduate

6. Analyze sustainability issues and/or practices in viticulture using a systems-based approach
Audience: Undergraduate

PLANTSCI 234 – HERBACEOUS ORNAMENTAL PLANT IDENTIFICATION, CULTURE, AND USE
4 credits.

Field identification, landscape characteristics, uses, environmental requirements, and adaptability of herbaceous ornamental plants. Topics include annual flowers, herbaceous perennials and ornamental grasses, groundcovers, bulbs and containerized outdoor tropical plants.
Requisites: Sophomore standing and (BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY/BOTANY 152, or BOTANY 100)
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Use basic taxonomic tools needed for plant identification, including classification, vegetative and reproductive morphology, and nomenclature of cultivated plants
Audience: Undergraduate

2. Recognize many herbaceous plants, both native and exotic, by family, species (genus and specific epithet), variety, cultivar, and sometimes trademark
Audience: Undergraduate

3. Discuss herbaceous plant identification, distribution, ornamental characteristics as well as undesirable features, culture, adaptability, and uses
Audience: Undergraduate

4. Select herbaceous plants for specific purposes and site conditions
Audience: Undergraduate

5. Identify appropriate reference material and guides for identifying herbaceous plants
Audience: Undergraduate

PLANTSCI 240 – THE SCIENCE OF CANNABIS
1 credit.

An overview of the history, legality, regulation, anatomy and botany, agronomic and horticultural practices, and end-use potential of industrial hemp. Focus on sustainable agricultural production and processing of industrial hemp for food, fiber, and cannabinoids. Gain real world insight into this rapidly expanding area. Hands-on experience growing, propagating and pollinating hemp.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Define the past and present status of legality of hemp in Wisconsin, the United States, and in the world.
Audience: Undergraduate

2. Acquire a basic comprehension of hemp anatomy, physiology and genetics.
Audience: Undergraduate

3. Describe best practices for growing, harvesting, and processing industrial hemp for grain, fiber, and cannabinoid production.
Audience: Undergraduate

4. Discuss the pros, cons, and viability of at least 10 hemp-derived products in the U.S.
Audience: Undergraduate

5. Explain the social, economic, and environmental dimensions of the sustainability challenges of cannabis production
Audience: Undergraduate

6. Apply sustainability principles and frameworks to addressing the challenge of producing cannabis derived products
Audience: Undergraduate

PLANTSCI/PL PATH 261 – SUSTAINABLE TURFGRASS USE AND MANAGEMENT
2 credits.

Sustainable use and management of turfgrass landscapes in urban and suburban environments, including home lawns, golf courses, and sports fields. Focus is on creating sustainable and attractive turfgrass landscapes through proper species selection, use of slow-release or organic fertilizer practices, and minimizing the use of pesticides and supplemental irrigation.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe how turf is used in urban and suburban communities
Audience: Undergraduate

2. Identify the positive environmental impacts of using turfgrass
Audience: Undergraduate

3. Identify the negative environmental impacts of turfgrass management
Audience: Undergraduate

4. Identify the 3 major pest groups in turfgrass and describe sustainable management strategies for each
Audience: Undergraduate

PLANTSCI/PL PATH 262 – TURFGRASS MANAGEMENT LABORATORY
1 credit.

Hands-on turf establishment, cool- and warm-season grass, seed and weed identification, chemical application, and turf cultivation techniques and equipment use, plus field trips to major league sport facilities and golf courses.
Requisites: PL PATH/PLANTSCI 261 or concurrent enrollment
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Identify the species of turfgrass commonly used in Wisconsin and the conditions they are most suited to.
Audience: Undergraduate

2. Describe management strategies that can be implemented to increase the sustainability of turfgrass management.
Audience: Undergraduate

3. List the most common pests observed on Wisconsin turfgrass and describe strategies for their sustainable management.
Audience: Undergraduate

4. Calculate the amount of seed needed to properly establish a turfgrass site, the amount of fertilizer needed to adequately fertilize turfgrass, and the concentration of pesticides needed to suppress common turfgrass pests.
Audience: Undergraduate

PLANTSCI/LAND ARC 263 – WOODY LANDSCAPE PLANT IDENTIFICATION, CULTURE, AND USE
4 credits.

Field identification, landscape characteristics, uses, environmental requirements, and adaptability of woody ornamental plants; their autumn and winter characteristics. Topics include trees, shrubs, evergreens, vines and woody groundcovers.
Requisites: Sophomore standing and (BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY/BOTANY 152, or BOTANY 100)
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Use basic taxonomic tools needed for plant identification, including classification, vegetative and reproductive morphology, and nomenclature of cultivated plants
Audience: Undergraduate

2. Recognize many woody ornamental trees, shrubs, groundcovers, and vines, both native and exotic, by family, species (genus and specific epithet), variety, cultivar, and sometimes trademark
Audience: Undergraduate

3. Discuss woody landscape plant identification, distribution, ornamental characteristics as well as undesirable features, culture, adaptability, and uses
Audience: Undergraduate

4. Select woody landscape plants for specific purposes and site conditions
Audience: Undergraduate

5. Identify appropriate reference material and guides for identifying woody landscape plants
Audience: Undergraduate

PLANTSCI 289 – HONORS INDEPENDENT STUDY
1-2 credits.

Research work under direct guidance of a Plant and Agroecosystem Sciences faculty or instructional academic staff member. Students are responsible for arranging the work and credits with the supervising instructor. Intended for students in the CALS Honors Program.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Develop critical, analytical and independent thinking skills through a scientific research project.
Audience: Undergraduate

2. Apply the scientific method and engage in constructive problem solving in a scientific research project.
Audience: Undergraduate

3. Demonstrate application of research skills and methodologies through a research project.
Audience: Undergraduate

4. Effectively communicate scientific findings in an oral and/or written format.
Audience: Undergraduate

PLANTSCI 299 – INDEPENDENT STUDY
1-3 credits.

Research work under direct guidance of a Plant and Agroecosystem Sciences faculty or instructional academic staff member. Students are responsible for arranging the work and credits with the supervising instructor.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Develop critical, analytical and independent thinking skills through a scientific research project.
Audience: Undergraduate

2. Apply the scientific method and engage in constructive problem solving in a scientific research project.
Audience: Undergraduate

3. Demonstrate application of research skills and methodologies through a research project.
Audience: Undergraduate

4. Effectively communicate scientific findings in an oral and/or written format.
Audience: Undergraduate

PLANTSCI 300 – CROPPING SYSTEMS
3 credits.

Agronomic cropping systems of the Midwest: environmental impacts, productivity, and profitability. Cropping system diversification and sustainable agriculture. An agroecological approach, the application of ecological concepts and principles for the improvement of cropping systems is emphasized. Specific topics include agricultural intensification, agroecosystem structure and function, aspects of technology adoption, soil erosion and conservation, tillage systems, weed ecology and management, nutrient dynamics and management, water quality, crop rotation, and cropping system diversification.
Requisites: AGRONOMY 100, HORT 120, PLANTSCI 110, ENVIR ST/AGROECOL/C&E SOC/ENTOM 103, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the dynamic history and unique characteristics of agriculture
Audience: Both Grad & Undergrad

2. Identify factors that drive change and those that constrain change in cropping systems
Audience: Both Grad & Undergrad

3. Use an agroecological approach to better understand and improve cropping systems
Audience: Both Grad & Undergrad

4. Explain key components of cropping systems and their impact on agroecosystem services and sustainability
Audience: Both Grad & Undergrad

5. Evaluate new and emerging approaches to crop management in the context of sustainability and potential tradeoffs
Audience: Both Grad & Undergrad

6. Develop a comprehensive grant research proposal that effectively addresses a topic pertinent to sustainability of cropping systems
Audience: Graduate

PLANTSCI 302 – FORAGE MANAGEMENT AND UTILIZATION
3 credits.

Establishment, management, harvesting and utilization of forage crops for use as hay, pasture and silage. Emphasis on cool season perennial grasses and legumes.
Requisites: Junior standing and (DY SCI/AN SCI 101, ZOOLOGY/BIOLOGY 101, ZOOLOGY/BIOLOGY/BOTANY 151, AGRONOMY 100, PLANTSCI 110, or BIOCORE 381) or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Explain the importance of forages in Wisconsin, USA, and the world
Audience: Both Grad & Undergrad

2. Identify forage species commonly grown and know the environmental conditions to which each is best adapted
Audience: Both Grad & Undergrad

3. Identify an alfalfa variety or corn silage hybrid best suited for a specific environment
Audience: Both Grad & Undergrad

4. Describe how legumes and grasses grow, and regrow, after harvest or grazing
Audience: Both Grad & Undergrad

5. Recommend practices to optimize establishment, growth, persistence, and nutritive value of forages
Audience: Both Grad & Undergrad

6. Evaluate how the environment impacts forage persistence, production, and quality
Audience: Both Grad & Undergrad

7. Develop optimal harvest strategies based on farming operation goals
Audience: Both Grad & Undergrad

8. Explain the principles of preserving forage crops (hay or silage) and direct grazing
Audience: Both Grad & Undergrad

9. Recognize major pests (diseases, insects, and weeds) that affect alfalfa production and best management practices for control
Audience: Both Grad & Undergrad

10. Communicate effectively ideas in written reports and oral presentations
Audience: Both Grad & Undergrad

11. Understand and summarize current topics in forages research
Audience: Graduate

PLANTSCI 310 – PLANT SCIENCE AND TECHNOLOGY IN CROPPING SYSTEMS
4 credits.

Explores the application of plant science and current technologies in both field and controlled environments to enhance crop production. Analyzes the impacts of these technologies on agroecosystem structure and function, examining the trade-offs that affect productivity, profitability, environmental sustainability, and social outcomes.
Requisites: BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY/BOTANY 152, BIOCORE 381, PLANTSCI 110, HORT 120, AGRONOMY 100, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Critically assess state-of-the-art technologies in plant science, productivity, and utilization
Audience: Undergraduate

2. Evaluate technology impacts on agroecosystem structure and function specifically productivity, profitability, environmental, and social outcomes
Audience: Undergraduate

3. Articulate trade-offs associated with technology adoption, technology avoidance, and system choices
Audience: Undergraduate

4. Effectively apply and communicate knowledge about plant science and use of technologies in crop production
Audience: Undergraduate

5. Evaluate the potential applications of state-of-the-art plant science technologies in their current or proposed research, considering the practical implications, benefits, and challenges of integrating these technologies into their work
Audience: Graduate

PLANTSCI 320 – ENVIRONMENT OF CULTIVATED PLANTS
3 credits.

An exploration of major environmental factors that regulate plant growth and development - temperature, water availability, light, and carbon dioxide. Patterns are studied temporally at the daily, seasonal (yearly), and long-term (climate) time scales, geographically at the local and global scales, and contextually in natural, agricultural, and controlled environment conditions. Includes effects of environmental conditions on plant growth and development, including adaptive mechanisms to stress conditions at the physiological level.
Requisites: BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY/BOTANY 152, AGRONOMY 100, HORT 120, PLANTSCI 110, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain effects of major environmental factors on plant growth and development
Audience: Both Grad & Undergrad

2. Examine plant responses to identify effects of different weather or climate components
Audience: Both Grad & Undergrad

3. Reflect on how changes in climate will affect plants at their current distribution
Audience: Both Grad & Undergrad

4. Explain how development stages in plants are effective integrators of climate data
Audience: Both Grad & Undergrad

5. Evaluate the role of environmental variables in plant growth and development in general and specific primary literature
Audience: Graduate

PLANTSCI 333 – SURVEY OF CONTROLLED ENVIRONMENT FOOD PRODUCTION
2 credits.

Survey of the basic principles and concepts of the biology of plants and their application to cultivation of food crops in controlled environments. Integrates topics including: organic systems, sustainability, urban agriculture, and socioecological factors.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Explain and apply concepts from biological and physical sciences to growing plants in controlled environments with an emphasis on application in organic systems.
Audience: Undergraduate

2. Investigate the effects of controlled environments on plant growth and evaluate the results.
Audience: Undergraduate

3. Select crops and cultivars appropriate for growing in controlled environments, indoors and outdoors.
Audience: Undergraduate

4. Discuss the scientific principles behind food safety, sanitation, organic practices, and good agricultural practices in controlled environments.
Audience: Undergraduate

5. Apply sustainability principles and/or frameworks to addressing the challenge of food production in controlled environments, specifically their application in urban food systems.
Audience: Undergraduate

6. Describe the social, economic, and environmental dimensions of controlled environment agriculture and identify potential trade#offs and interrelationships among these dimensions at a level appropriate to the course.
Audience: Undergraduate

PLANTSCI 334 – GREENHOUSE CULTIVATION
2 credits.

Principles of selection, production, handling, use of fruits, vegetables, flowers, and foliage plants grown indoors.
Requisites: BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY/BOTANY 152, AGRONOMY 100, PLANTSCI 110, or HORT 120
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify key aspects of the greenhouse industry and the methods and principals of growth in controlled environments
Audience: Undergraduate

2. Develop critical thinking skills and apply scientific concepts related to growing plants in controlled environments
Audience: Undergraduate

PLANTSCI 335 – GREENHOUSE CULTIVATION LAB
1 credit.

Provides a hands-on experience in and understanding of greenhouse cultivation.
Requisites: PLANTSCI 334 or concurrent registration
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate the skills, techniques, and practices used in greenhouse cultivation.
Audience: Undergraduate

PLANTSCI 338 – PLANT BREEDING AND BIOTECHNOLOGY
3 credits.

Principles of crop plant improvement are discussed in the context of genetics, plant biology, plant breeding, plant biotechnology, and world food, feed, and raw material needs.
Requisites: BIOLOGY/BOTANY 130, GENETICS 466, 467, BIOCORE 381, or (ZOOLOGY/BIOLOGY/BOTANY 151 and 152 or concurrent enrollment in ZOOLOGY/BIOLOGY/BOTANY 152)
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain the basic principles of plant breeding
Audience: Both Grad & Undergrad

2. Describe and analyze different plant breeding systems and methods
Audience: Both Grad & Undergrad

3. Identify, formulate, and solve breeding problems using appropriate information and approaches
Audience: Both Grad & Undergrad

4. Discuss the professional and ethical responsibility of plant breeding activities
Audience: Both Grad & Undergrad

5. Synthesize knowledge to propose improvements to breeding systems and write clear and concise technical reports and research articles
Audience: Both Grad & Undergrad

6. Discuss the significance of current research in the field of plant breeding
Audience: Both Grad & Undergrad

7. Critically assess and compare various breeding strategies
Audience: Both Grad & Undergrad

8. Evaluate advanced breeding strategies and technologies as presented in scientific literature (e.g. use of genomic tools in breeding, CRISPR, speed breeding strategies, and use of AI in breeding among others)
Audience: Graduate

PLANTSCI 340 – PLANT GENOME ENGINEERING AND EDITING
3 credits.

Presents an overview of the techniques, biology and underlying theory of plant tissue culture, genetic engineering and genome editing. Overviews of research and commercial applications, and issues/challenges in the area of plant biotechnology are also covered.
Requisites: (BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY/BOTANY 152, ZOOLOGY/BIOLOGY 102, or BIOCORE 381) and (CHEM 104, 109, or 116), or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall and summarize the general principles, practices and application of plant cell and tissue culture, and genetic engineering and gene editing in science, agriculture and industry.
Audience: Both Grad & Undergrad

2. Apply experimental design and analysis of plant biotechnology experiments.
Audience: Both Grad & Undergrad

3. Illustrate representative plant cell culture and bioengineering techniques.
Audience: Both Grad & Undergrad

4. Recall biosafety and regulatory requirements for conducting research involving cell culture, microbes and recombinant DNA.
Audience: Both Grad & Undergrad

5. Understand issues and challenges encountered in the areas of in vitro culture and plant biotechnology
Audience: Both Grad & Undergrad

6. Demonstrate understanding, application and synthesis of concepts learned in the course through completion of a review paper on approved topics relating to plant biotechnology
Audience: Graduate

PLANTSCI 350 – PLANTS AND HUMAN WELLBEING
2 credits.

Plants provide not only the foundation of food, clothing, and shelter essential for human existence, but also some of the key raw materials for transcendence and abstraction through music, art, and spirituality. Since antiquity, we have co-evolved with plants and their derivative products, with each exerting a domesticating force on the other. It is, for example, impossible to think of our modern life without its plant-based accompaniments in the form of cotton, sugar, bread, coffee, and wood. Yet they are so ubiquitous we may forget they all derive from plants discovered, domesticated, bred, and farmed for millennia in a never-ending pursuit to improve our wellbeing. Major points of intersection between plants and human wellbeing will be explored from a horticultural point of view by highlighting a plant or group of plants that represent a primary commodity or resource through which humans have pursued their own aims and explore effects and impacts on human society.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Acquire, integrate and apply knowledge of how plants and plant materials impact human wellbeing through readings, discussions, lectures, and examination of plant materials and their products
Audience: Undergraduate

2. Develop the ability to discuss scientific topics in small groups and answer questions about how these topics intersect with human wellbeing and public policy.
Audience: Undergraduate

3. Explain the social, economic, and environmental dimensions of the sustainability challenge associated with the production of plant-based materials for needs and wants associated with human wellbeing.
Audience: Undergraduate

4. Understand how the biological aspects of plants and plant materials dictate how these crops will be used by different cultures for specific aspects of wellbeing
Audience: Undergraduate

5. Analyze the causes of and solutions for the sustainability challenge of production of plant materials for the needs and wants of human wellbeing
Audience: Undergraduate

6. Understand how plants and plant materials are intertwined with both wellbeing and un-wellbeing in modern human societies, and explore this interaction through discussions, reflections, and lecture material.
Audience: Undergraduate

PLANTSCI 351 – A DEEPER LOOK AT PLANTS AND HUMAN WELLBEING
1 credit.

Plants are essential for human wellbeing, yet they are often manipulated in ways that contribute significantly to human and environmental detriment. Provides an opportunity to consider the scientific, social, economic, and public policy implications of plants or groups of plants and dive deeply into those subjects for a variety of crops that are essential for human societies.
Requisites: Concurrent enrollment in PLANTSCI 350
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Acquire, integrate and apply knowledge of how plants and plant materials impact human wellbeing through readings, discussions, lectures, and examination of plant materials and their products.
Audience: Undergraduate

2. Develop the ability to discuss scientific topics in small groups and answer questions about how these topics intersect with human wellbeing and public policy.
Audience: Undergraduate

3. Explain the social, economic, and environmental dimensions of the sustainability challenge associated with the production of plant-based materials for needs and wants associated with human wellbeing.
Audience: Undergraduate

4. Understand how the biological aspects of plants and plant materials dictate how these crops will be used by different cultures for specific aspects of wellbeing
Audience: Undergraduate

5. Analyze the causes of and solutions for the sustainability challenge of production of plant materials for the needs and wants of human wellbeing
Audience: Undergraduate

6. Understand how plants and plant materials are intertwined with both wellbeing and un-wellbeing in modern human societies, and explore this interaction through discussions, reflections, and lecture material.
Audience: Undergraduate

PLANTSCI 360 – GENETICALLY MODIFIED CROPS: SCIENCE, REGULATION & CONTROVERSY
2 credits.

Explores how and why genetically modified (GM) crops are created and their regulation at the federal and state level. Learn about the impacts of GM crops and critically evaluate arguments both for and against their use. Introduction to the complex economic, cultural, and political issues surrounding GM crops.
Requisites: ZOOLOGY/BIOLOGY 101, BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY/BOTANY 151, BIOCORE 381, GENETICS 466, or GENETICS 467
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain how genetically modified crops are made and compare genetic engineering with other plant breeding methods.
Audience: Undergraduate

2. Describe the US coordinated framework for the regulation of biotechnology and labeling laws.
Audience: Undergraduate

3. Discuss the potential risks and benefits of genetically modified crops for agriculture, the environment, and human health.
Audience: Undergraduate

4. Analyze different perspectives on controversial topics related to genetically modified organisms.
Audience: Undergraduate

PLANTSCI/A A E/PL PATH 367 – INTRODUCTION TO ORGANIC AGRICULTURE: PRODUCTION, MARKETS, AND POLICY
3 credits.

Provides an in-depth understanding of the history of organic agriculture, its production, processing, marketing, and social dimensions, and its impact on environmental, community, and human health.
Requisites: ENVIR ST/AGROECOL/C&E SOC/ENTOM 103, AGRONOMY 100, HORT 120, PLANTSCI 110, BOTANY/PL PATH 123, SOC/C&E SOC 222, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the history of current organic systems and how it influences the way that organic farms and industries work.
Audience: Both Grad & Undergrad

2. Explore the biological, ecological, and agricultural underpinnings of organic production systems.
Audience: Both Grad & Undergrad

3. Examine how organic systems, social initiatives, and regulations are developed and how they shape business activities, community development efforts, and human and environmental health outcomes.
Audience: Both Grad & Undergrad

4. Evaluate the benefits and limitations of organic systems, social initiatives, and regulations from environmental, social, economic, and racial justice perspectives.
Audience: Both Grad & Undergrad

5. Analyze sustainability issues and/or practices using a systems-based approach.
Audience: Both Grad & Undergrad

6. Describe the social, economic, and environmental dimensions of organic farming and identify potential tradeoffs and interrelationships among these dimensions at a level appropriate to the course.
Audience: Both Grad & Undergrad

7. Develop the capacity to evaluate sustainability and resilience outcomes of organic and other agricultural production and processing systems using interdisciplinary methods.
Audience: Graduate

PLANTSCI 370 – WORLD VEGETABLE CROPS
3 credits.

An overview of the importance of fresh and processed vegetables worldwide. Vegetable origin, history, classification, culture, marketing, physiology, genetics, handling, quality, significance in world cultures and diets.
Requisites: HORT 120, AGRONOMY 100, PLANTSCI 110, BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY/BOTANY 151, or BIOCORE 381
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Integrate and apply knowledge of vegetable plants to worldwide consumption and production of vegetable crops
Audience: Undergraduate

2. Discuss the diversity of vegetable plants consumed around the world with particular attention to how vegetable plant families are used in different world regions
Audience: Undergraduate

3. Explain how the biological aspects of vegetable plants, including their physiology and genetics, dictate how these crops will be produced in different world regions
Audience: Undergraduate

4. Describe the nutritional profile, culinary characteristics, and important metabolites that are found in vegetable plants for defensive and attractant purposes
Audience: Undergraduate

PLANTSCI 372 – SEMINAR IN ORGANIC AGRICULTURE
1 credit.

Faculty, regional professionals, local organic farmers, and students present and discuss topics relevant to history, marketing, economics, production, and social context of organic and sustainable agriculture.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss the work activities, career attributes, challenges, and preparation for employment described by practitioners in organic agricultural systems.
Audience: Undergraduate

2. Identify personal interests and potential career paths within organic agriculture based on knowledge of the skills required and day-to-day work described by current practitioners.
Audience: Undergraduate

3. Demonstrate verbal and written workplace communication skills through resume-building, interviews, presentations, and networking.
Audience: Undergraduate

4. Describe the formal and informal professional development used by organic system practitioners.
Audience: Undergraduate

5. Design, plan, and implement an event to deepen the knowledge of a select audience around one or more areas of organic agricultural systems.
Audience: Undergraduate

PLANTSCI 375 – SPECIAL TOPICS
1-4 credits.

Special topics on issues relevant to plant sciences.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025
Learning Outcomes: 1. Explain concepts relating to a special topic outlined in the title
Audience: Undergraduate

PLANTSCI 376 – TROPICAL HORTICULTURAL SYSTEMS
2 credits.

Highlights the connections between tropical plants and society. Topics include multidisciplinary reflections on the biology of tropical plants, as well as an overview of different production systems and some of the social and environmental problems associated with the utilization of tropical plants in the context of local and global markets. Provides the opportunity to demonstrate comparative skills with respect to local and international challenges posed by the topics we address in class. Illustrates connections between horticulture and conservation, food security, nutrition, and global health.
Requisites: Junior standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate interdisciplinary skills, intercultural knowledge, and global competencies through the understanding of the relationships between tropical plants and different cultures.
Audience: Undergraduate

2. Recognize social, economic, and environmental issues related to sustainable food production in tropical ecosystems and find suitable methods to address them
Audience: Undergraduate

3. Discuss the unique challenges to food security and sustainability in tropical ecosystems under the pressure of climate change
Audience: Undergraduate

4. Develop a critical perspective and creative thinking regarding the production and consumption of tropical horticultural products, and how they relate to nutrition, food security, health and wellbeing, sustainable cropping practices and community development
Audience: Undergraduate

5. Recognize the importance of green spaces, conservation of biodiversity, traditional knowledge, intellectual property rights, and equitable sharing of benefits derived from the use of tropical plants
Audience: Undergraduate

6. Apply written and public speaking skills through critical explorations of tropical food systems
Audience: Undergraduate

PLANTSCI 378 – TROPICAL HORTICULTURAL SYSTEMS INTERNATIONAL FIELD STUDY
2 credits.

Visit diverse agricultural systems, such as small farms, large-scale operations, market growers, industrial export businesses, agronomic centers, botanical gardens, herbaria, germplasm banks, and nature preserves in a tropical country in Central America. Provides an opportunity to develop a holistic appreciation of horticulture by highlighting the interactions between plants and society. Reflect on the role of plants in our daily lives and the effects that our daily choices have on the environment, human health, conflicts, poverty, and development. Discuss some of the social, scientific and environmental challenges that conventional, sustainable and organic horticulture practices face in the production, marketing, and use of tropical crops. Enrollment in a UW-Madison resident study abroad program; requires completion of PLANTSCI 376.
Requisites: None
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Identify social, economic, and environmental issues related to tropical horticulture and find suitable methods to address them.
Audience: Undergraduate

2. Analyze diverse methods of tropical plant production and their correlation with nutrition, health, sustainable agricultural practices, and community development.
Audience: Undergraduate

3. Develop a critical perspective and creative thinking regarding the production and consumption of horticultural products, and how this can impact the livelihoods of small and large-scale producers and consumers in different parts of the world, particularly in tropical regions.
Audience: Undergraduate

4. Cultivate interdisciplinary skills, cultural awareness, and global competencies through the understanding of the ecological and socio-economic impacts of tropical crops in both Costa Rica and in the US.
Audience: Undergraduate

PLANTSCI 380 – INDIGENOUS FOODWAYS: FOOD AND SEED SOVEREIGNTY
2 credits.

Indigenous foods of North America are a vital component of modern agricultural and food systems. Indigenous foods and foodways will be examined from interdisciplinary historical, legal, biological, and social perspectives. Historic indigenous foodways of the present-day upper Midwestern United States and the impact on food and seed sovereignty of settler colonialism and subsequent agricultural practices and policies will be explored. Current efforts to re-claim agricultural traditions and foodways to improve public health, economic opportunity, and food and seed sovereignty will be covered, including the right to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, to define one's own food and agriculture systems, and to control the mechanisms and policies that govern food distribution. Hands-on activities are featured; previous examples include cooking with indigenous foods, ice fishing, and tapping maple trees for syrup.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate an understanding of the history, culture, and perspectives of Native American Nations in the Upper Midwest in relation to food and seed sovereignty
Audience: Both Grad & Undergrad

2. Explain the legal frameworks facing indigenous communities and how they interact with federal and state policies to influence food sovereignty
Audience: Both Grad & Undergrad

3. Research, analyze, discuss and present on the history and use of a particular plant or animal; demonstrate knowledge of scientific concepts surrounding this plant or animal
Audience: Both Grad & Undergrad

4. Identify and analyze approaches that might be used to improve food and seed sovereignty
Audience: Both Grad & Undergrad

5. Describe the social, economic, and environmental dimensions of growing and producing indigenous crops and identify potential tradeoffs and interrelationships among these dimensions at a level appropriate to the course
Audience: Both Grad & Undergrad

6. Analyze the causes of and solutions for the sustainability challenge of improving food sovereignty in tribal communities in the US
Audience: Both Grad & Undergrad

7. Develop a capstone project based on course materials
Audience: Graduate

PLANTSCI 399 – COORDINATIVE INTERNSHIP/COOPERATIVE EDUCATION
1-8 credits.

Internship under guidance of a faculty or instructional academic staff member in Plant and Agroecosystem Sciences and internship site supervisor. Students are responsible for arranging the work and credits with the faculty or instructional academic staff member and the internship site supervisor.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Workplace - Workplace Experience Course
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply concepts learned in coursework to authentic professional situations
Audience: Undergraduate

2. Demonstrate professional skills appropriate for the industry
Audience: Undergraduate

3. Identify and reflect on how concepts learned in coursework apply to specific work settings and situations
Audience: Undergraduate

PLANTSCI 400 – STUDY ABROAD IN PLANT SCIENCES
1-6 credits.

Provides an area equivalency for courses taken on Madison Study Abroad Programs that do not equate to existing UW courses. Current enrollment in a UW-Madison study abroad program.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Demonstrate understanding of concepts described in course syllabus
Audience: Undergraduate

PLANTSCI 501 – PRINCIPLES OF PLANT BREEDING
3 credits.

Principles involved in breeding and maintaining economic crops; factors affecting the choice of breeding methods; alternative approaches through hybridization and selection.
Requisites: (GENETICS 466, 467, PLANTSCI 338, or HORT 338 prior to Fall 2025) and (BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY/BOTANY 151, or BIOCORE 381), or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Identify key biological and quantitative principles behind the science of plant breeding.
Audience: Both Grad & Undergrad

2. Recognize how genetic variation is generated and how other sources of variation can affect phenotypes.
Audience: Both Grad & Undergrad

3. Describe how crops were domesticated, and how germplasm can be deployed by plant breeders to improve crops.
Audience: Both Grad & Undergrad

4. Apply scientific theories, concepts, reasoning, and quantitative and qualitative approaches to understand and solve problems in plant breeding and plant genetics.
Audience: Both Grad & Undergrad

5. Use terminology accurately and effectively in describing plant breeding phenomena and processes.
Audience: Both Grad & Undergrad

6. Evaluate and discuss relevant scientific concepts.
Audience: Both Grad & Undergrad

7. Relate scientific information found in primary scientific literature to key issues and concepts in plant breeding.
Audience: Graduate

PLANTSCI 502 – TECHNIQUES OF PLANT BREEDING
1 credit.

Introduction to a wide array of laboratory and field techniques used in breeding and maintaining economically important crops.
Requisites: (GENETICS 466, 467, PLANTSCI 338, or HORT 338 prior to Fall 2025) and (BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY/BOTANY 151, or BIOCORE 381), or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019
Learning Outcomes: 1. Define different approaches, techniques, and ideas in plant breeding from a practical and theoretical point of view by interacting with plant breeders who breed a wide range of crops.
Audience: Both Grad & Undergrad

2. Identify why certain techniques are used in certain situations, and what options might exist for plant breeders to pursue particular breeding objectives.
Audience: Both Grad & Undergrad

3. Describe why a particular crop is bred in a certain way, and be able to articulate why the crop's biology or key traits are best served by these approaches.
Audience: Both Grad & Undergrad

4. Explain how improved germplasm and cultivars are developed and released by plant breeders.
Audience: Both Grad & Undergrad

5. Use terminology accurately and effectively in describing plant breeding problems and solutions.
Audience: Both Grad & Undergrad

6. Read, evaluate, and discuss scientific concepts.
Audience: Both Grad & Undergrad

7. Relate scientific information found in primary scientific literature to key issues and concepts in plant breeding.
Audience: Graduate

PLANTSCI 510 – SENIOR CAPSTONE EXPERIENCE
2 credits.

Apply classroom learning to problems of societal relevance. Integrate diverse bodies of knowledge to identify and evaluate contemporary issues relevant to plant scientists.
Requisites: PLANTSCI 110, 310, and senior standing
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Integrate existing knowledge of plant science and technology with current research to evaluate key contemporary issues in the field of plant and agroecosystem sciences.
Audience: Undergraduate

2. Synthesize plant science information, predictions, insights, and hypotheses into effective forms of written and oral communication.
Audience: Undergraduate

3. Evaluate plant sciences information from a broad range of sources.
Audience: Undergraduate

4. Discuss societal, economic, ethical, scientific, and social issues relevant to plant scientists
Audience: Undergraduate

PLANTSCI/ATM OCN 532 – ENVIRONMENTAL BIOPHYSICS
3 credits.

Plant-environment interactions with particular reference to energy exchanges and water relations. Models are used to provide a quantitative synthesis of information from plant physiology, soil physics, and micrometeorology with some consideration of plant-pest interactions.
Requisites: (BIOLOGY/BOTANY 130, ZOOLOGY/BIOLOGY/BOTANY 152, or BIOCORE 381) and (MATH 211, 217, or 221) and (PHYSICS 103, 201, 207, or 247), or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Apply numerical models that describe radiation fluxes in natural environments and account for latitude and longitude, time of day and year, sun angle, direct and diffuse solar radiation, and radiative properties of natural surfaces
Audience: Both Grad & Undergrad

2. Apply numerical models that describe how soil and air temperatures vary across a continuum of temporal scales (from hourly to annual) and are impacted by varied physical environments
Audience: Both Grad & Undergrad

3. Calculate growing degree-days using different numerical models and demonstrate knowledge about phenological development of plants and insects
Audience: Both Grad & Undergrad

4. Apply numerical models that represent wind speed within and above vegetative canopies and account for atmospheric turbulence
Audience: Both Grad & Undergrad

5. Calculate heat and mass (water, carbon dioxide) transport between organisms, soils, plant canopies, and the atmosphere using numerical models that represent conductance, diffusion, convective transport of heat, infiltration of water and drainage in soil, evaporation, and transpiration
Audience: Both Grad & Undergrad

6. Apply numerical modeling to calculate transmission and interception of direct, diffuse, and scattered solar radiation in plant canopies
Audience: Both Grad & Undergrad

7. Demonstrate knowledge about different numerical approaches to calculate evapotranspiration and photosynthesis of plants from the leaf to canopy level
Audience: Both Grad & Undergrad

8. Demonstrate basic knowledge about environmental biophysics through application of numerical equations and/or a model to a scientific question developed in close collaboration with the course instructor
Audience: Undergraduate

9. Demonstrate advanced knowledge about environmental biophysics through the independent development of a research project that produces new information
Audience: Graduate

PLANTSCI 550 – MOLECULAR APPROACHES FOR CROP IMPROVEMENT
3 credits.

Survey and exploration of the molecular methods used by plant scientists to develop improved crop plants. Topics include CRISPR, T-DNA transformation, RNAi, gene editing systems, and molecular techniques for crop improvement.
Requisites: (BIOCHEM 501 or 507) and (GENETICS 466 or 467); or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Critically read scientific journal articles.
Audience: Both Grad & Undergrad

2. Evaluate and discuss scientific results as reported in journal articles.
Audience: Both Grad & Undergrad

3. Describe how discoveries in basic science lead to practical developments that drive crop improvement.
Audience: Both Grad & Undergrad

4. Describe the following molecular methods: Genome Sequencing, plant transformation, Gene Silencing, CRISPR-Cas9 genome editing, base-editors, and other genome manipulation methods based on CRISPR-Cas9.

Audience: Both Grad & Undergrad

5. Utilize the following bioinformatics tools: BLAST searching, EFP Browser, and gRNA design tools transformation, Gene Silencing, and CRISPR-based gene editing.
Audience: Both Grad & Undergrad

6. Demonstrate communication skills to multiple audiences.
Audience: Both Grad & Undergrad

7. Develop critical thinking skills to design experiments and peer review of scientific papers.
Audience: Graduate

PLANTSCI/GENETICS 615 – GENETIC MAPPING
3 credits.

Computing-intensive preparation for genetic mapping research, including linkage analysis and QTL mapping in designed crosses; linkage disequilibrium and association analysis (GWAS).
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Compare the principles and applicability of linkage vs association mapping
Audience: Graduate

2. Describe how population and model parameters affect statistical power

Audience: Graduate

3. Construct genetic linkage maps and discover QTL in designed crosses
Audience: Graduate

4. Conduct genome-wide association analyses and interpret the results
Audience: Graduate

PLANTSCI 681 – SENIOR HONORS THESIS
2-4 credits.

Individual study and research for students completing theses under direct guidance of a Plant and Agroecosystem Sciences faculty or instructional academic staff member. Students are responsible for arranging the work and credits with the supervising instructor. Intended for students in the CALS Honors Program.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2018
Learning Outcomes: 1. Investigate a topic in conjunction with other investigators to develop a deep understanding of a research problem.
Audience: Undergraduate

2. Identify a research problem and develop a set of testable hypotheses.
Audience: Undergraduate

3. Carry out analysis of data related to the testable hypotheses.
Audience: Undergraduate

4. Communicate the results of investigations via written and/or oral means to an appropriate audience.
Audience: Undergraduate

5. Write an honors thesis that contains an abstract, background, a demonstration of research skills, analysis of the research question, and a summary of the impact of the work.
Audience: Undergraduate

PLANTSCI 682 – SENIOR HONORS THESIS
2-4 credits.

Individual study and research for students completing theses under direct guidance of a Plant and Agroecosystem Sciences faculty or instructional academic staff member. Students are responsible for arranging the work and credits with the supervising instructor. Intended for students in the CALS Honors Program. Continuation of PLANTSCI 681
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2009
Learning Outcomes: 1. Investigate a topic in conjunction with other investigators to develop a deep understanding of a research problem.
Audience: Undergraduate

2. Identify a research problem and develop a set of testable hypotheses.
Audience: Undergraduate

3. Carry out analysis of data related to the testable hypotheses.
Audience: Undergraduate

4. Communicate the results of investigations via written and/or oral means to an appropriate audience.
Audience: Undergraduate

5. Write an honors thesis that contains an abstract, background, a demonstration of research skills, analysis of the research question, and a summary of the impact of the work.
Audience: Undergraduate

PLANTSCI 699 – SPECIAL PROBLEMS
1-4 credits.

Independent research guided by a Plant and Agroecosystem Sciences faculty or instructional academic staff member. Students are responsible for arranging the work and credits with the supervising instructor.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate a clear research question or problem and formulate a hypothesis.
Audience: Undergraduate

2. Identify appropriate research methodologies and collect sound scientific data.
Audience: Undergraduate

3. Apply critical thinking skills to interpret laboratory data and apply problem solving skills to constructively address research setbacks.
Audience: Undergraduate

4. Practice research ethics and responsible conduct in research.
Audience: Undergraduate

5. Communicate scientific ideas and results verbally and in written form effectively.
Audience: Undergraduate

PLANTSCI 720 – PHYSIOLOGY OF PLANT PRODUCTION
3 credits.

Examines the role of physiological processes in agricultural plant production, including the effects of primary productivity, water relations, mineral nutrition, and temperature responses. Plasticity and adaptation (through breeding) to different agricultural environments are studied.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Describe the role of plant physiology and how its adaptation and plasticity are important for plant production
Audience: Graduate

2. Evaluate primary literature on the use of physiological concepts in issues related to agricultural production
Audience: Graduate

3. Design experiments that test hypotheses related to the physiology of agricultural plants
Audience: Graduate

4. Analyze the potential impacts of climatic changes on production systems based on limitations of plant physiology
Audience: Graduate

PLANTSCI 771 – EXPERIMENTAL DESIGN AND ANALYSIS
2 credits.

Review of methods for controlling error in research experiments; review and in-depth development of factorial treatment designs; theory, analysis, and examples of advanced experimental designs for plant and animal research.
Requisites: F&W ECOL/STAT 572 or concurrent enrollment or AN SCI 865 or concurrent enrollment
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Describe the importance of experimental design in research.
Audience: Graduate

2. Plan and execute a proper basic experimental design, critically evaluate personal limitations, and actively seek assistance when necessary.
Audience: Graduate

3. Use proper experimental design and analysis tools for most agricultural situations.
Audience: Graduate

4. Explain experimental design in the context of agricultural experimentation.
Audience: Graduate

PLANTSCI 772 – APPLICATIONS IN ANOVA AND MIXED MODELS
2 credits.

Development of models, programs, inferences, and interpretations of analysis of variance in biological research; mixed models and their development; choosing the correct inference range; variance and covariance analyses; repeated measures; dealing with missing data.
Requisites: (F&W ECOL/STAT 572 or concurrent enrollment or AN SCI 865 or concurrent enrollment) and (PLANTSCI 771 or concurrent enrollment)
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Describe the importance of experimental design in research.
Audience: Graduate

2. Plan and execute a proper advanced experimental design.
Audience: Graduate

3. Use proper experimental design and analysis tools for most advanced agricultural experiments.
Audience: Graduate

4. Explain the theory and concepts of mixed models as well as applications of mixed models in biological research settings.
Audience: Graduate

PLANTSCI 799 – PRACTICUM IN PLANT SCIENCES TEACHING
1-3 credits.

Instructional orientation to teaching at the higher education level in the agricultural and life sciences, direct teaching experience under faculty supervision, experience in testing and evaluation of students, and the analysis of teaching performance.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate learning goals for the practicum in cooperation with supervising instructor
Audience: Graduate

2. Prepare and/or implement lesson plans for a class period, week, or module of the class
Audience: Graduate

3. Deliver course content and/or facilitate discussion
Audience: Graduate

4. Identify pedagogical strengths and opportunities for growth based on classroom assessment and/or feedback
Audience: Graduate

PLANTSCI 811 – BIOMETRICAL PROCEDURES IN PLANT BREEDING
3 credits.

Understanding and application of quantitative genetic theory and other molecular and analytical tools as it relates to plant breeding.
Requisites: Graduate/professional standing and F&W ECOL/STAT 572 or AN SCI 865
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe quantitative genetics principles, including heritability, repeatability, and resemblance between relatives, and the application of these concepts to assess genetic variation and trait inheritance in plant populations.
Audience: Graduate

2. Analyze phenotypic datasets and interpreting results, particularly in relation to variance partitioning and resource allocation in plant breeding.
Audience: Graduate

3. Identify the impact of genotype-by-environment (G × E) interactions and environmental stability on breeding outcomes, and the application of this knowledge to optimize breeding strategies.
Audience: Graduate

4. Analyze and interpret genotype-phenotype association tools to identify the genetic basis of traits and refine breeding approaches across plant populations.
Audience: Graduate

5. Communicate complex biometrical and genetic concepts, through effective scientific writing and presentations, clearly conveying research findings and upholding principles of scientific integrity.
Audience: Graduate

PLANTSCI 812 – SELECTION THEORY FOR QUANTITATIVE TRAITS IN PLANTS
2 credits.

Discuss advanced topics in selection theory and the utilization of molecular markers in selection.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Apply the breeder's equation to design and evaluate selection schemes
Audience: Graduate

2. Explain Best Linear Unbiased Prediction (BLUP) and its application to selection
Audience: Graduate

3. Analyze multi-environment trial data to make genomic predictions
Audience: Graduate

4. Identify resource allocation tradeoffs and strategies for long-term genetic gain
Audience: Graduate

PLANTSCI 875 – SPECIAL TOPICS
1-4 credits.

Special topics on issues relevant to plant sciences.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Explain concepts relating to a special topic outlined in the title
Audience: Graduate

PLANTSCI 920 – SEMINAR IN PLANT SCIENCE AND TECHNOLOGY
1 credit.

Presentations in plant science and technology to prepare for professional conferences, outreach meetings and clientele interactions.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Communicate effectively through oral presentations, discussion and writing
Audience: Graduate

2. Translate scientific information into outreach materials for agricultural stakeholder audiences
Audience: Graduate

3. Evaluate the effectiveness of oral and written scientific communication
Audience: Graduate

PLANTSCI 957 – SEMINAR IN PLANT BREEDING AND PLANT GENETICS
1 credit.

Current research in plant breeding and plant genetics. Explore cutting-edge research methods and findings. Develop and refine scientific presentation skills.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Present current research in plant breeding and genetics clearly and effectively, including appropriate visuals and following the structure of a scientific seminar
Audience: Graduate

2. Deliver constructive feedback on peers' research and presentations, fostering a collaborative and supportive academic environment
Audience: Graduate

3. Discuss current research in plant breeding and genetics, identifying strengths,weaknesses, and areas for further research
Audience: Graduate

PLANTSCI 990 – RESEARCH
1-12 credits.

Independent research and writing for graduate students under the supervision of a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate graduate-level research skills and techniques
Audience: Graduate

2. Address research challenges using a broad range of theories, research methods, and approaches to scientific inquiry
Audience: Graduate

3. Formulate and design new approaches that extend plant science and technology research beyond its current boundaries
Audience: Graduate

POLITICAL SCIENCE (POLI SCI)

POLI SCI 104 – INTRODUCTION TO AMERICAN POLITICS AND GOVERNMENT
3-4 credits.

Basic institutions and processes of American government. The role of constitutional structures, parties, interest groups and elections in the system; policy formation and policy content.
Requisites: Not open to students who have taken POLI SCI 184 or POLI SCI 404
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Familiarize students with American political institutions.
Audience: Undergraduate

2. Prepare students to take upper-level classes in American politics.
Audience: Undergraduate

3. Get students interested in American politics.
Audience: Undergraduate

4. Analyze issues and policies in U.S. politics.
Audience: Undergraduate

POLI SCI 120 – INTRODUCTION TO COMPARATIVE POLITICS
4 credits.

Introduction to Comparative Politics, one of the four sub-fields in Political Science, which involves the comparative analysis of political institutions, processes, and outcomes at the national level. Examines how to usefully compare politics in a variety of countries and makes comparisons explicit and systematic in order to determine how governments work, how power is organized and contested at the national level, and how regular people can participate and pursue their interests in different political settings. Includes key concepts, theories, methods, issues, and language.
Requisites: Not open to students with credit for POLI SCI 182 (or POLI SCI 186 prior to Fall 2017)
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Learn about some basic theoretical and methodological problems in the study of politics (concepts, theories, issues).
Audience: Undergraduate

2. Learn about the "real" world and how to explain it.
Audience: Undergraduate

3. Identify interesting questions about politics in different countries.
Audience: Undergraduate

4. Identify differences and similarities, and what both tell us about what we are studying.
Audience: Undergraduate

5. Understand and compare different forms of democratic and non-democratic rule.
Audience: Undergraduate

6. Become familiar with the language of political science.
Audience: Undergraduate

7. Apply the concepts of political science to analyze (and evaluate) political events in a variety of settings.
Audience: Undergraduate

POLI SCI 140 – INTRODUCTION TO INTERNATIONAL RELATIONS
3-4 credits.

Covers the major issues in international relations since the end of World War II including: the causes of war; civil wars and ethnic conflict; economic development; international trade; exchange rates and international monetary relations; international capital flows and financial crises; foreign direct investment; globalization and the environment; the UN, the IMF, World Bank, WTO, and other international organizations; and international law and human rights. The focus is on states' relations with each other and the factors determining the nature and outcomes of these international interactions. The course seeks to develop analytical tools for thinking about important questions in world politics regardless of the countries or issues involved, to examine international affairs in a systematic way. Students who have taken POLI SCI 103 prior to Fall 2017 may not enroll in this course.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand major historical and contemporary events in world politics.
Audience: Undergraduate

2. Analyze current world events through the lens of the major theories of international relations.
Audience: Undergraduate

3. Know how different approaches to the question of economic development emphasize different policy solutions.
Audience: Undergraduate

4. Understand the analytical theories explaining the expansion of trade and globalization.
Audience: Undergraduate

5. Understand and be able to analyze the controversies surrounding the major international financial institutions, specifically the World Bank and the International Monetary Fund.
Audience: Undergraduate

6. Understand the operation of the global exchange rate system and how state choices concerning monetary policy impact international financial flows.
Audience: Undergraduate

7. Understand the ways in which globalization both empowers and limits state leaders to conduct foreign economic policy.
Audience: Undergraduate

POLI SCI 160 – INTRODUCTION TO POLITICAL THEORY
3-4 credits.

Exploration of core problems of political life, such as the nature and limits of obligation, the concept of justice and its political implications, and the relationship between equality and liberty, through a selection of ancient and modern sources. Not open to students with credit for POLI SCI 209 prior to fall 2017
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze and explain arguments made about important political concepts by selected thinkers in the history of political thought.
Audience: Undergraduate

2. Assess political and ethical theories.
Audience: Undergraduate

3. Analyze contemporary political arguments through course concepts.
Audience: Undergraduate

4. Develop skills of critical reasoning, reading, and analysis.
Audience: Undergraduate

POLI SCI 170 – RESEARCH METHODS IN POLITICAL SCIENCE
3-4 credits.

Introduction to political science as a discipline that focuses on the development of research questions, research designs, and the quantitative and qualitative tools commonly used to implement research designs.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze relations among individuals, domestic society, political institutions, and states.
Audience: Undergraduate

2. Explain important concepts in research design and methodology.
Audience: Undergraduate

3. Assess political science theories.
Audience: Undergraduate

4. Understand and assess the quality of empirical work in political science research.
Audience: Undergraduate

5. Apply course concepts to analysis of contemporary political debates.
Audience: Undergraduate

POLI SCI 182 – INTRODUCTION TO COMPARATIVE POLITICS (HONORS)
3 credits.

Introduction to Comparative Politics, one of the four sub-fields in Political Science, which involves the comparative analysis of political institutions, processes, and outcomes at the national level. Examines how to usefully compare politics in a variety of countries and makes comparisons explicit and systematic in order to determine how governments work, how power is organized and contested at the national level, and how people can participate and pursue their interests in different political settings. Includes key concepts, theories, methods, and country case studies.
Requisites: Declared in an Honors program. Not open to students with credit for POLI SCI 120
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Gain knowledge about politics in different countries, including differences in democratic and non-democratic rule, differences in political institutions, economic policies, social cleavages, and salient contemporary political issues across countries.
Audience: Undergraduate

2. Learn about concepts and theories from political science used in the study of politics in different countries.
Audience: Undergraduate

3. Learn about different methodological approaches in studying politics, including how to develop a casual research question, and how comparisons of cases can be useful for testing theories.
Audience: Undergraduate

4. Develop research and writing skills by working throughout the semester on a research paper.
Audience: Undergraduate

5. Develop communication and presentation skills by engaging in class discussion and presenting research at the end of the semester.
Audience: Undergraduate

POLI SCI 199 – DIRECTED STUDY
2 credits.

Directed study projects for freshmen and sophomores as arranged with a faculty member; students should have completed at least one course in POLI SCI.
Requisites: Consent of instructor
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2020

POLI SCI 201 – SPECIAL TOPICS IN POLITICAL SCIENCE
3 credits.

An experimental topics course that introduces students to compelling recent events and to the current research of political scientists. This course can be repeated by students, but not with the same content.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

POLI SCI 205 – INTRODUCTION TO STATE GOVERNMENT
3-4 credits.

Basic institutions and processes of state government in the United States; the role of parties, pressure groups, and elections in the system; the policy process, its outputs and outcomes; the role of states in the federal system, and the diversity of state politics and policy.
Requisites: None
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Examine the origins of federalism in the U.S. context and the relationship between the national and state governments.
Audience: Undergraduate

2. Explore the policies and programs administered by the states, as well as the major influences on state politics
Audience: Undergraduate

3. Understand the similarities and differences between the U.S. Constitution and the state constitutions.
Audience: Undergraduate

POLI SCI 206 – INTRODUCTION TO POLITICAL PSYCHOLOGY
3-4 credits.

Examines the psychological aspects of the political behavior of individuals--whether elites, activists or members of general publics--and their consequent political behaviors in various groups and institutional contexts. Not open to students with credit for POLI SCI 267 prior to fall 2017
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Examine historical and contemporary perspectives in political psychology.
Audience: Undergraduate

2. Study the psychology of political attitudes, especially as it pertains to social groups and values.
Audience: Undergraduate

3. Examine the psychological aspects of the political behavior of individuals in group and institutional contexts.
Audience: Undergraduate

POLI SCI/LEGAL ST 217 – LAW, POLITICS AND SOCIETY
3-4 credits.

Introduction to the legal process. Examination of the various concepts of law, the perennial problems of the law, legal reasoning, and the nature and function of law and the courts.
Requisites: Freshman or sophomore standing only
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Increase knowledge about the components of the U.S. legal system.
Audience: Undergraduate

2. Understand how disputes evolve in the context of the U.S. legal system.

Audience: Undergraduate

3. Improve ability to synthesize social science readings and formulate arguments in written and oral form.
Audience: Undergraduate

4. Improve oral advocacy skills through active classroom discussion.
Audience: Undergraduate

POLI SCI/CHICLA 231 — POLITICS IN MULTI-CULTURAL SOCIETIES
3-4 credits.

Race, ethnicity, and religion as political factors; cultural pluralism, politics, and policy in the United States and selected other multi-cultural politics.
Requisites: Freshman or sophomore standing only
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate how events of the past gave rise to racial and ethnic hierarchies in the United States today and how those hierarchies manifest themselves in politics.
Audience: Undergraduate

2. Recognize and question assumptions about race and ethnicity that are embedded in discussions of U.S. politics.
Audience: Undergraduate

3. Apply concepts raised in class to life in a multi-cultural society.
Audience: Undergraduate

4. Describe the ways that racial and ethnic worldviews are shaped and how they change.
Audience: Undergraduate

POLI SCI/ASIAN/GEOG/HISTORY/SOC 244 — INTRODUCTION TO SOUTHEAST ASIA: VIETNAM TO THE PHILIPPINES
4 credits.

As an introduction to Southeast Asia, covers the ethnic, cultural, religious, and political histories of the region from the classical states period to the present, with an emphasis on colonialism, nationalism, decolonization, and the emergence of modern political and social systems into the 21st century, including an exposure to region's contemporary literature. Not open to students who completed LCA 244 prior to Fall 2019.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Examine the ethnic, cultural, religious, and political histories of Southeast Asia from the classical states period to the present.
Audience: Undergraduate

2. Analyze colonialism, nationalism, decolonization, and the emergence of modern political and social systems into the 21st century in Southeast Asia.

Audience: Undergraduate

3. Explore contemporary literature in Southeast Asia.
Audience: Undergraduate

POLI SCI/GEOG/HISTORY/SLAVIC 253 — RUSSIA: AN INTERDISCIPLINARY SURVEY
4 credits.

Comprehensive interdisciplinary survey of Russian civilization from its beginnings through the present day.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

POLI SCI/GEOG/HISTORY/SLAVIC 254 — EASTERN EUROPE: AN INTERDISCIPLINARY SURVEY
4 credits.

Comprehensive interdisciplinary survey of East European culture, society, politics, and literature from its beginnings to the present day.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

POLI SCI/ASIAN/HISTORY 255 — INTRODUCTION TO EAST ASIAN CIVILIZATIONS
3-4 credits.

Multidisciplinary and historical perspectives on the East Asian civilizations of China, Japan, Korea, Tibet and Mongolia from prehistory to the present, including developments in philosophy, economy, governance, social structure, kinship, geography, etc.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

POLI SCI/C&E SOC/HISTORY/SOC 259 — FORWARD? THE WISCONSIN IDEA, PAST AND PRESENT
1-3 credits.

Engage in ongoing reflection and dialogue on the Wisconsin Idea and how it informs the mission of the University of Wisconsin. Consider the Wisconsin Idea as it has developed since its beginnings, with a focus on what it means today and what it can mean in the future.
Requisites: Junior or senior standing only
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023
Learning Outcomes: 1. Listen respectfully to different opinions, respond rationally rather than emotionally, make reasoned arguments.
Audience: Undergraduate

2. Respond to another point of view with research and substantive comments or questions, present and support your own position, and thus engage in a wider conversation.
Audience: Undergraduate

3. Consider a specific question ("What makes an idea a Wisconsin Idea...?) and present a reasoned argument supporting the conclusion. (1-credit students)
Audience: Undergraduate

4. Deeply analyze an argument and respond by applying it to the student's own educational strengths and weaknesses. (3-credit students)
Audience: Undergraduate

5. Use course content to explain a controversial issue and suggest a course of action to address it, stating reasons, and anticipating counterarguments. (3-credit students)
Audience: Undergraduate

POLI SCI/AFROAMER/ANTHRO/C&E SOC/GEOG/HISTORY/LACIS/SOC/SPANISH 260 — LATIN AMERICA: AN INTRODUCTION
3-4 credits.

Latin American culture and society from an interdisciplinary perspective; historical developments from pre-Columbian times to the present; political movements; economic problems; social change; ecology in tropical Latin America; legal systems; literature and the arts; cultural contrasts involving the US and Latin America; land reform; labor movements; capitalism, socialism, imperialism; mass media.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Analyze Latin American culture and society from an interdisciplinary perspective.
Audience: Undergraduate

2. Examine historical developments from pre-Columbian times to the present.
Audience: Undergraduate

3. Identify political movements, economic problems, social change, and ecology in Latin America.
Audience: Undergraduate

POLI SCI/CHICLA/HISTORY/LACIS 268 — THE U.S. & LATIN AMERICA FROM THE COLONIAL ERA TO THE PRESENT: A CRITICAL SURVEY
3 credits.

A critical examination of US-Latin American relations from the colonial era to the present, tracing the emergence and evolution of the United States as a hemispheric and global power and its political and economic impact on Latin America. Primary attention will be focused on US relations with Mexico, Central America and the Caribbean, but other Latin American countries will figure prominently during certain episodes.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2020
Learning Outcomes: 1. Critically examine US-Latin American relations from the colonial era to the present.
Audience: Undergraduate

2. Examine tracing the evolution of the United States as a hemispheric and global power and its political and economic impact on Latin America.
Audience: Undergraduate

3. Discuss US relations with Mexico, Central America and the Caribbean.
Audience: Undergraduate

POLI SCI 270 – UNDERSTANDING POLITICAL NUMBERS
3-4 credits.

How numbers and statistics are used in electoral strategies, political debates and legal proceedings. Presents basic tools of analysis and how to use them. Not open to students with credit for POLI SCI 218 prior to fall 2017
Requisites: Satisfied Quantitative Reasoning (QR) A requirement
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Critically read and interpret quantitative content of many articles in the quantitative social sciences.
Audience: Undergraduate

2. Conduct, interpret, and communicate results from analysis using statistical tests and regression.
Audience: Undergraduate

3. Explain the limitations of observational data for making causal claims, and begin to use existing strategies for attempting to make causal claims from observational data.
Audience: Undergraduate

4. Write basic clean, reusable, and reliable R code.
Audience: Undergraduate

5. Feel empowered working with data.
Audience: Undergraduate

POLI SCI 272 – INTRODUCTION TO PUBLIC POLICY
3-4 credits.

Major issues of public policy in such fields as economic management, welfare, education, health, energy and the environment. How public problems develop, approaches to policy-making, why programs succeed and fail. Not open to students with credit for POLI SCI 219 prior to fall 2017
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand the provisions of the United States Constitution most related to the development and execution of public policy in the United States.
Audience: Undergraduate

2. Understand the difference between federalism and the allocation of authorities between state, county, and municipal governments.
Audience: Undergraduate

3. Learn to define and frame problems as an essential first step in the development of public policy.
Audience: Undergraduate

4. Learn to develop, analyze, and advocate policy alternatives.
Audience: Undergraduate

5. Learn how to write a policy memo.
Audience: Undergraduate

6. Learn about executive, administrative, legislative, judicial, and other governmental authorities and their respective roles in making public policy.

Audience: Undergraduate

7. Understand the role of politics in policy development.
Audience: Undergraduate

8. Learn various approaches to policy analysis.
Audience: Undergraduate

9. Learn about various tools and functions available to public policy-makers.
Audience: Undergraduate

POLI SCI 274 – POLITICAL CHOICE AND STRATEGY
3-4 credits.

An introduction to decision analysis, strategic interaction, and voting systems and their manipulation. Examines a wide range of institutions for making social choices and the opportunities for the exercise of political strategy.
Requisites: Satisfied Quantitative Reasoning (QR) A requirement
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explore a rational-choice approach to studying politics -- also called formal political theory.
Audience: Undergraduate

2. Examine how multiple people can make a social choice.
Audience: Undergraduate

3. Examine how various voting rules and types of preferences can lead to di#erent outcomes under certain circumstances, and the implications of that for democracy.
Audience: Undergraduate

4. Explore collective action in politics and examine how people can cooperate to achieve common goals.
Audience: Undergraduate

POLI SCI/AFRICAN/AFROAMER/ANTHRO/GEOG/HISTORY/ SOC 277 – AFRICA: AN INTRODUCTORY SURVEY
4 credits.

African society and culture, polity and economy in multidisciplinary perspectives from prehistory and ancient kingdoms through the colonial period to contemporary developments, including modern nationalism, economic development and changing social structure.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze African society and culture from a multidisciplinary perspective.
Audience: Undergraduate

2. Discuss polity and economy from prehistory and ancient kingdoms through the colonial period to contemporary developments.
Audience: Undergraduate

3. Study contemporary nationalism, economic development and changing social structure.
Audience: Undergraduate

POLI SCI/AFRICAN/AFROAMER/HISTORY 297 – AFRICAN AND AFRICAN-AMERICAN LINKAGES: AN INTRODUCTION
4 credits.

Analysis of retention of African elements in African-American oral, written, and material culture. Social, cultural, and political issues regarding race, self-definition, and self-determination in both Africa and North America will be examined.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze the retention of African elements in African-American oral, written, and material culture.
Audience: Undergraduate

2. Explore social, cultural, and political issues regarding race in both Africa and North America.
Audience: Undergraduate

3. Examine self-determination in both Africa and North America.
Audience: Undergraduate

POLI SCI/CHICLA 302 – MEXICAN-AMERICAN POLITICS
3-4 credits.

This class examines the major problems and issues in Mexican-American politics since World War II. An emphasis will be placed on the ways in which race, class and culture have structured politics for the Mexican origin people. Not open to students with credit for POLI SCI 464 prior to fall 2017
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop an analytical framework for understanding the political dynamics of multi-cultural societies.
Audience: Undergraduate

2. Understand how the dynamics of race, class, and ethnicity shape Mexican American politics and Latino politics.
Audience: Undergraduate

3. Examine the historical conflict between Mexican and Anglo Americans.
Audience: Undergraduate

4. Understand the politics of cultural pluralism in the United States.
Audience: Undergraduate

5. Assess the state of a body of scholarly literature related to course themes, identify gaps in that literature, and formulate an original research question in the context of those gaps.
Audience: Graduate

POLI SCI 304 – THE POLITICAL ECONOMY OF RACE IN THE UNITED STATES
3-4 credits.

Race in relation to American economic development. Problems of racial minorities in the American political and economic system. Not open to students with credit for POLI SCI 462 prior to fall 2017
Requisites: POLI SCI 104, POLI SCI 184, LEGAL ST/POLI SCI 217, CHICLA 201, or AFROAMER 151
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

POLI SCI 305 – ELECTIONS AND VOTING BEHAVIOR
3-4 credits.

Psychological and social components of voting behavior, current electoral trends, role of voters in the governing process. Not open to students with credit for POLI SCI 467 prior to fall 2017
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop a theoretical and empirical understanding of how individuals make voting decisions.
Audience: Undergraduate

2. Be able to analyze factors that affect the results of particular elections.
Audience: Undergraduate

3. Interpret surveys and election data to analyze how specific variables affect voters.
Audience: Undergraduate

4. Develop a basis for evaluating the health of the U.S. electoral system.
Audience: Undergraduate

POLI SCI 306 – AMERICAN POLITICAL PARTIES
3-4 credits.

Examination of the electoral, organizational, and governmental roles of political parties at the national and state levels in the U.S. Emphasis on changes in response to historical and contemporary circumstances.
Requisites: POLI SCI 104 or 184
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze the past, present, and future of the U.S. party system
Audience: Undergraduate

2. Consider the advantages and disadvantages of various party nomination systems.
Audience: Undergraduate

3. Understand the electoral, organizational, and governmental roles of political parties at national and state levels.
Audience: Undergraduate

POLI SCI 311 – UNITED STATES CONGRESS
3-4 credits.

Principles, procedures and problems of the legislative process of the United States Congress. Not open to students with credit for POLI SCI 426
Requisites: Sophomore standing and (POLI SCI 104, 184, or LEGAL ST/ POLI SCI 217)
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand how Congress works, and how laws are really made today.
Audience: Undergraduate

2. Explain how Congress can serve as a check on presidential and judicial power.
Audience: Undergraduate

3. Analyze what motivates members of Congress.
Audience: Undergraduate

4. Explain how legislative rules affect policy outcomes.
Audience: Undergraduate

5. Explore why money matters in Congress.
Audience: Undergraduate

POLI SCI 314 – CRIMINAL LAW AND JUSTICE
3-4 credits.

Substantive and procedural aspects of criminal law, including the purposes of criminal justice, specific crimes, criminal responsibility and punishment, legal concepts of proof, and 4th, 5th, and 6th Amendment issues. The case approach is used. Not open to students with credit for POLI SCI 452 prior to fall 2017
Requisites: Sophomore standing and a course in POLI SCI or SOC
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss the substantive and procedural aspects of criminal law.
Audience: Undergraduate

2. Explore the purposes of criminal justice.
Audience: Undergraduate

3. Examine criminal responsibility and punishment and legal concepts of proof.
Audience: Undergraduate

4. Analyze the 4th, 5th, and 6th Amendment issues.
Audience: Undergraduate

POLI SCI 315 – LEGISLATIVE INTERNSHIP
3 credits.

Practical experience in a legislative office. Policy research. Readings in legislative process.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Workplace - Workplace Experience Course
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop an understanding of work-life at the internship and what a career in the field entails.
Audience: Undergraduate

2. Build substantive knowledge about political science by linking internship experiences to classwork and critically evaluating these relationships.
Audience: Undergraduate

3. Encourage students to think about life after college by networking with other professionals, understanding the qualifications necessary to be successful in the job market, and learning how to effectively convey skills.
Audience: Undergraduate

POLI SCI 316 – CAREERS IN POLITICAL SCIENCE
1 credit.

Facilitates transitions from undergraduate academic learning related to Political Science to meaningful and rewarding professional opportunities including jobs, paid internships, graduate study, and post-graduate fellowships. Building on core coursework in Political Science and related disciplines, addresses how to utilize existing academic learning and completed readings and assignments, extra-curricular activities, student research, for-pay work, internships, and interaction with alumni and other personal networks to further develop career options. Also provides practical ways to explore and pursue a wide range of career pathways related to Political Science. Develop essential professional development materials and self-promotional skills.
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Explore and inventory individual strengths, competencies and positive professional attributes, and practice how to articulate and promote those strengths, competencies and attributes in writing (e.g., resumes, cover letters) and verbally (e.g., elevator statements), and through professional branding through online presence (e.g., LinkedIn, Handshake, ePortfolios);
Audience: Undergraduate

2. Utilize assigned readings, internet resources, social media, networking opportunities, and career interviews to gather specific information about career pathways, jobs and other professional opportunities related to Political Science and related career sectors including government, nonprofits, and for-profit entities;
Audience: Undergraduate

3. Cultivate, organize and utilize professional network relationships, including among UW and Political Science alumni, that can be instrumental in promoting further academic and early career success;
Audience: Undergraduate

4. Review and practice recommended job and related interview techniques, including behavioral-based interviewing, and become more confident in adjusting to varying interview formats and questions;
Audience: Undergraduate

5. Review current research and job sector trends involving salary expectations and negotiations, benefits packages, and evolving in-person and remote work expectations, and apply the newest research and trends in prospective job application and interview processes;
Audience: Undergraduate

6. Identify, analyze, reflect upon and discuss contemporary issues involving employee/ professional diversity, equity, and inclusion among differing career pathways and job sectors, and within varied workplace cultures, as additional considerations in future career decisions.
Audience: Undergraduate

POLI SCI 320 – GOVERNMENTS AND POLITICS OF THE MIDDLE EAST AND NORTH AFRICA
3-4 credits.

An introduction to the most pertinent themes to the study of politics and governance in the Middle East. Main topics to be covered: political economy of the region; link between Islam, culture and democracy; the politics of authoritarianism; and political Islam.
Requisites: Sophomore standing, POLI SCI 104 or 140
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop a concrete understanding of the history and politics of the Middle East and North Africa (MENA).
Audience: Undergraduate

2. Apply comparative politics' theories and frameworks toward understanding the current events and the complexities of MENA's politics and governance structures
Audience: Undergraduate

3. Apply critical and analytical skills to different, even contradictory, points of views and contemporary debates relating to MENA politics and ongoing conflicts.
Audience: Undergraduate

4. Demonstrate the ability to write in several forms and present written ideas and arguments for audiences with diverse interests and backgrounds.
Audience: Undergraduate

POLI SCI 323 – ISLAM AND WORLD POLITICS
3-4 credits.

Examines the multifaceted nature of political Islam in the contemporary world. Starting with the basic tenants of Islam, and key concepts and theoretical understandings of the relationships between Islam and politics, the course builds on the approaches developed in the first part of the course examining how Islam has influenced politics differently in various parts of the world including the Middle East, Southeast Asia, and South Asia. Students will familiarize themselves with theoretical debates about the roles of Islam in politics; analyze the impact of Islam on politics in the contemporary world; and gain empirical knowledge about how Islam functions differently in various countries.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020
Learning Outcomes: 1. Understand theoretical debates about the roles of Islam in politics.
Audience: Undergraduate

2. Analyze the impact of Islam on politics in the contemporary world.
Audience: Undergraduate

3. Gain empirical knowledge about how Islam functions differently in various countries.
Audience: Undergraduate

4. Assess the state of a body of scholarly literature related to course themes, identify gaps in that literature, and formulate an original research question in the context of those gaps.
Audience: Graduate

POLI SCI 324 – CHINESE POLITICS
3-4 credits.

Examine three questions about Chinese politics through a comparative perspective. First, what functions do formal institutions such as the political party, legislature, courts, and bureaucracy serve in an authoritarian regime? Second, what are the political forces that lay a good foundation for China to successfully transition from a planning economy to a robust market economy and sustain high-speed growth for more than four decades? Finally, how does the Chinese government deal with pressing social problems and threats to its authoritarian leadership in this new era?
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Develop an understanding of major political institutions and governance challenges of China today.
Audience: Both Grad & Undergrad

2. Evaluate evidence for China's economic reform and develop the ability to analyze other policy changes.
Audience: Both Grad & Undergrad

3. Communicate effectively through written reports and discussion.
Audience: Both Grad & Undergrad

4. Assess the state of a body of scholarly literature related to course themes, identify gaps in that literature, and formulate an original research question in the context of those gaps.
Audience: Graduate

POLI SCI/INTL ST 325 – SOCIAL MOVEMENTS AND REVOLUTIONS IN LATIN AMERICA
3-4 credits.

An introduction to the major empirical and theoretical themes in the study of social movements and politics in Latin America. While it is impossible to cover every theoretical approach or Latin American case during the semester, the course should give students the tools to begin to think critically about where and why people engage in collective action. We will develop and hone these tools through thinking about Latin American cases, paying specific attention to revolutions, social movements, and riots. The course is designed in three parts. It begins by exposing students to the dominant theoretical paradigms in the study of contentious politics as well as some prominent critiques. The course then turns to empirical themes in Latin American revolutions, challenging students to use and question the theoretical tools to which they have already been exposed. The final part of the course looks to social movements in Latin America. Cases will focus on challenges to dictatorships, identity-based movements, and resistance to globalization.
Requisites: Sophomore standing and (POLI SCI 120, 140 or INTL ST 101) or (POLI SCI 103 or 106 taken prior to Fall 2017)
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

POLI SCI 328 – POLITICS OF EAST AND SOUTHEAST ASIA
3-4 credits.

Asia is a vibrant region politically and economically, and is very important to the United States for international security and economic stability. Given its importance, this course provides broad and essential knowledge about Asian nations with a particular focus on China, South Korea, North Korea, Indonesia, Thailand, and the Philippines. Country studies are intended to introduce major issues in comparative politics such as democratization, elections, economic development, security, religion and politics. This course will enable students to (1) gain an empirical and analytical understanding of the political dynamics of the region; (2) think comparatively within the regime and across the developing world more generally; and (3) address and debate theoretical questions in political science through Asian politics materials.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2019
Learning Outcomes: 1. Gain an empirical knowledge about the political dynamics of the region.
Audience: Undergraduate

2. Analyze comparatively within the region and across the developing world more generally.
Audience: Undergraduate

3. Address and debate theoretical questions in political science through Asian politics materials.
Audience: Undergraduate

4. Assess the state of a body of scholarly literature related to course themes, identify gaps in that literature, and formulate an original research question in the context of those gaps.
Audience: Graduate

POLI SCI 329 – AFRICAN POLITICS
3-4 credits.

Process of rapid political change in contemporary Africa with special emphasis on the emergence of new states. Not open to students with credit for POLI SCI 660 prior to fall 2017
Requisites: Sophomore standing and POLI SCI 120, 182, or SOC/AFRICAN/AFROAMER/ANTHRO/GEOG/HISTORY/POLI SCI 277 (or POLI SCI 106 or 186 taken prior to Fall 2017)
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Examine the complex social, economic and political issues and problems confronting contemporary Africa.
Audience: Undergraduate

2. Critically examine previously held beliefs about the way Africa works and become critical consumers of news coverage of Africa.
Audience: Undergraduate

3. Explain the process of rapid political change in contemporary Africa and the emergence of new states.
Audience: Undergraduate

4. Assess the state of a body of scholarly literature related to course themes, identify gaps in that literature, and formulate an original research question in the context of those gaps.
Audience: Graduate

POLI SCI 330 – POLITICAL ECONOMY OF DEVELOPMENT
3-4 credits.

An introduction to the political economy of development. Why are some countries more economically developed than others? To help answer this question, examine leading theories of economic development. In light of these theories, then examine the development experiences of three major regions of the world. Consider a series of issues about development, including the effect of ethnic diversity, corruption, natural resources, and women's empowerment on economic development. Conclude with an examination of the effects of international interactions-via trade, foreign aid, migration, and war-on economic development.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2024
Learning Outcomes: 1. Address the question of why some countries are rich and others poor.
Audience: Undergraduate

2. Examine leading theories of economic development.
Audience: Undergraduate

3. Discuss the development experiences of three of the world's major regions.
Audience: Undergraduate

4. Consider selected issues—including ethnic diversity, corruption, natural resources, and women's empowerment—in economic development.
Audience: Undergraduate

5. Understand the effects of interactions between nations—via trade, foreign aid, migration and war—on economic development.
Audience: Undergraduate

POLI SCI 332 – GERMAN POLITICS
3-4 credits.

A broad overview of politics in Germany, Europe's politically and economically most powerful country. Several broad themes are covered: political institutions, electoral system and elections, parties and party system, interest representation, political participation, political economy, the legacies of Germany's past, social policy, European and foreign policy, and current and future challenges. Learn to relate the German experience to broader issues, problems, and concepts used in the comparative study of domestic politics.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Analyze politics in Germany, Europe's politically and economically most powerful country.
Audience: Undergraduate

2. Examine German political institutions and the electoral system.
Audience: Undergraduate

3. Relate the German experience to broader issues, problems, and concepts used in the comparative study of domestic politics.
Audience: Undergraduate

POLI SCI 334 – RUSSIAN POLITICS
3-4 credits.

Theory and practice of Russian States, emphasis on politics, economic and institutional developments since 1991. Not open to students with credit for POLI SCI 633 prior to fall 2017
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Increase knowledge of the trajectory of political life in Russia from 1917 through the present.
Audience: Undergraduate

2. Learn the theoretical and institutional underpinnings of democracy, markets and the rule of law, and how to structure an argument as to the presence or absence of these institutions.
Audience: Undergraduate

3. Improve oral advocacy skills through classroom discussion.
Audience: Undergraduate

4. Assess the state of a body of scholarly literature related to course themes, identify gaps in that literature, and formulate an original research question in the context of those gaps.
Audience: Graduate

POLI SCI 335 – SOCIAL IDENTITIES
3 credits.

An introduction to theories and empirical work on social identities, focusing in particular on definitions and measurement. It has three main goals: First, examine various definitions of social identities and different types of identities (ethnicity, race, nationality, gender, class, and religion). Second, look at techniques and strategies that have been developed to measure identities (content and discourse analysis, surveys, interviews and ethnography, censuses). Third, examine empirical works on identities from a variety of geographical areas and methodological perspectives.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2020
Learning Outcomes: 1. Demonstrate their understanding of major theories of social identity, types of social identities, and ways of measuring social identities.
Audience: Undergraduate

2. Utilize the techniques of content analysis, interviews, and surveys to measure social identities.
Audience: Undergraduate

3. Apply knowledge of social identities to a research question, including outlining a research plan and conducting original data collection.
Audience: Undergraduate

4. Evaluate evidence to answer their research question, and contextualize results with respect to existing published work.
Audience: Undergraduate

5. Write up a research paper and communicate the results in an oral presentation with slides.
Audience: Undergraduate

POLI SCI 336 – DEMOCRACY (AND ITS UNCERTAIN FUTURE)
4 credits.

Democracy has come under stress, both at home and across the world. The global decline of democracy has accelerated over the past decade, and levels of democracy enjoyed by the average global citizen today are down to levels last found around 1990. The promise of democracy's inevitable ascent and dominance after the end of the Cold War has proven shortlived. Examines the state and future of a political system we tend to take for granted but should not. Starts with a brief overview of the evolution of the concept of democracy over time. Examines the relationship between democracy and economic development, culture, identity, and religion. Considers and compares core democratic institutions. Investigates current challenges to democracy and democratization and offers an overview of the state of democracy across different world regions.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Learn about leading definitions, classifications, and measurements of democracy
Audience: Undergraduate

2. Understand the determinants of democracy
Audience: Undergraduate

3. Examine democratic political systems and institutions, how they function, and how they relate to each other
Audience: Undergraduate

4. Become familiar with rising threats to democracy and the prospect of autocratization
Audience: Undergraduate

5. Compare different democratic systems systematically
Audience: Undergraduate

6. Understand and choose proper evidence/sources to support an argument
Audience: Undergraduate

POLI SCI 338 – THE CIVIL-MILITARY PARADOX IN U.S. POLITICS AND SOCIETY
3 credits.

Protecting a democratic nation from foreign threats often requires that nation to create a powerful military. Yet the creation of a powerful military may undermine the democracy that it is designed to protect. How do, and how should, democracies manage the paradoxical relationship between civilian authority and military institutions. Explores civilian and military perspectives in U.S. civil-military relations; address issues such as the use of military advice by civilian leaders, military challenges to civil authority, and tensions generated by shared responsibility for national security between the executive, legislative, and judicial branches. Studies how civil-military relations impact wider American society by examining the garrison state hypothesis; debates centered upon the draft versus an all-volunteer force; issues of equity and inclusion; and current concerns regarding a civil-military "gap."
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate a critical understanding of the Civil Military Paradox and the complex web of relationships that link the American public, civil authority, and the U.S. armed forces. Articulate an appreciation for why the paradox and civil-military relationships are important.
Audience: Both Grad & Undergrad

2. Demonstrate how civil-military relations (CMR) impact our personal, professional, and civic lives.
Audience: Both Grad & Undergrad

3. Comprehend and apply the vocabulary and theoretical concepts that inform our understanding of civil-military relations.
Audience: Both Grad & Undergrad

4. Explain how big ideas, historical experiences, and wider trends shape civil-military relations in the United States. These considerations include: (a.)the U.S. Constitution(b.)national culture (core assumptions, values, and beliefs)(c.) public sentiment(d.)partisan political debates (e.)the domestic and international environments (political, security, economic, social)(f.)issues of equity/inclusion
Audience: Both Grad & Undergrad

5. Address critical issues and debates related to civil-military relations in U.S. politics and society—past, present, and future.
Audience: Both Grad & Undergrad

6. Demonstrate how to think critically and write effectively. Respond to contemporary civil-military issues by developing recommendations for action. Support these recommendations with properly interpreted evidence and sound argument.
Audience: Undergraduate

7. Produce research and analysis that deepens our understanding of the issues, theory, and/or practice of civil-military relations
Audience: Graduate

POLI SCI 339 – NON-DEMOCRACIES
3 credits.

Studies the varieties and characteristics of non-democratic regimes from around the world: how they form, why they endure, and when they collapse, engaging along the way with theories of electoral behavior, political psychology, political violence, popular mobilization, and democratization.
Requisites: POLI SCI 120 or 182
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Identify key types of non-democratic regimes and their characteristics.
Audience: Undergraduate

2. Identify why these regimes resist pressures to democratize.
Audience: Undergraduate

3. Identify the key legacies of non-democratic regimes.
Audience: Undergraduate

POLI SCI 340 – THE EUROPEAN UNION: POLITICS AND POLITICAL ECONOMY
3-4 credits.

Introduction to the politics, political economy, history, and theory of European integration. Topics include the workings of EU institutions and law, the effect of the EU on national politics and economies, economic politics and policy-making in the EU, the EU as an actor in the world economy.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Examine the history and theory of European integration.
Audience: Undergraduate

2. Explore the workings of EU institutions and law.
Audience: Undergraduate

3. Examine the effect of the EU on national politics and economy, economic politics and policy-making in the EU.
Audience: Undergraduate

4. Assess the state of a body of scholarly literature related to course themes, identify gaps in that literature, and formulate an original research question in the context of those gaps.
Audience: Graduate

POLI SCI/JEWISH 341 – ISRAELI POLITICS AND SOCIETY
3-4 credits.

Examines the issues currently facing Israeli society and the ongoing debates in Israeli politics. Provides historical background and analytical understanding of contemporary Israeli politics. Attention will be paid to political history, institutions, economic development, coalition formation, ethnic politics, and religious-secular divisions as they are manifested in Israeli politics.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Learn about Israeli politics, history, and culture.
Audience: Undergraduate

2. Apply political science concepts and theories to understand Israeli politics and society.
Audience: Undergraduate

3. Understand who the main actors are in Israeli politics.
Audience: Undergraduate

4. Understand the main social and political cleavages in Israel.
Audience: Undergraduate

5. Assess the state of a body of scholarly literature related to course themes, identify gaps in that literature, and formulate an original research question in the context of those gaps.
Audience: Graduate

POLI SCI 342 – STATE-BUILDING: HOW STATES ARE FORMED, FUNCTION, AND INFLUENCE SOCIETY
3-4 credits.

Exploration of state-building: examining how states are formed, how they develop and maintain political power, and the ways in which they shape society. Draw on insights from political science, but also economics, history, and anthropology, to learn about the processes of state formation, the importance of state capacity, and the state's role in war, governance, and social justice. Topics will include the relationship between the state and issues like the environment, gender, and identity, highlighting both the challenges and opportunities states face in a rapidly changing world. Analysis of historical and contemporary examples from various political systems yields insights into the state's role as both a force for order and a driver of social change. Lectures, discussions, and case studies, will lead to a deeper understanding of the state's central role in global politics and everyday life.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and describe key theories and historical processes involved in state formation, including the roles of conflict, economy, and ideology.
Audience: Undergraduate

2. Examine how states develop and maintain capacity, manage resources, and exert authority, including the factors that contribute to strong versus weak states.
Audience: Undergraduate

3. Use comparative analysis to understand differences in state-building processes across historical and cultural contexts, developing a critical perspective on the state's evolving role globally.
Audience: Undergraduate

POLI SCI 343 – THEORIES OF INTERNATIONAL SECURITY
3-4 credits.

Role of alliances in contemporary and historical international political systems. Purpose of alliance formation; reasons for their dissolution; relationship of alliance activity with international war and with political integration. Role of alliances in future international systems. Not open to students with credit for POLI SCI 367 prior to fall 2017
Requisites: Sophomore standing and (POLI SCI 140 or INTL ST 101) or (POLI SCI 103 taken prior to Fall 2017)
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze the role of alliances in contemporary and historical international political systems.
Audience: Undergraduate

2. Explain the purpose of alliance formation and reasons for their dissolution.
Audience: Undergraduate

3. Critically evaluate the role of alliances in future international systems.
Audience: Undergraduate

POLI SCI 344 – THE RUSSIAN WAR ON UKRAINE: CAUSES AND CONSEQUENCES
3 credits.

Examines causes and consequences of the Russian invasion and war on Ukraine. Analyzes the war using concepts in comparative politics (e.g., regime type, national identity, and domestic politics in Ukraine and Russia) and international relations (e.g., international security, institutions and norms, sanctions and trade, migration and human rights).
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze and explain political science work relevant to Russia's invasion of Ukraine.
Audience: Undergraduate

2. Critically assess how prior political science work does or does not help explain outcomes related to the Russian war in Ukraine.
Audience: Undergraduate

3. Engage and participate in discussion with peers, instructors, and the public on the topic of Russia's invasion of Ukraine
Audience: Undergraduate

4. Write an original research paper that analyzes political science theory in light of empirical data on the Russian war in Ukraine, and present the findings of the paper to the class.
Audience: Undergraduate

POLI SCI 345 – CONFLICT RESOLUTION
3-4 credits.

Every war comes to an end, but some end sooner than others. This course analyzes why and how conflicts come to an end, discussion relevant theories of conflict and conflict resolution, and important cases. Not open to students with credit for POLI SCI 378 prior to fall 2017
Requisites: Sophomore standing and (POLI SCI 140 or INTL ST 101) or (POLI SCI 103 taken prior to fall 2017) or graduate standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

POLI SCI 347 – TERRORISM
3 credits.

Examines the causes of terrorism, goals and strategies pursued by terrorist groups, the consequences of terrorism, and counterterrorism policies adopted by governments. Not open to students with credit for POLI SCI 319 prior to fall 2017
Requisites: Sophomore standing and (POLI SCI 104, 120, 140, 182, 184, INTL ST 101 or LEGAL ST/POLI SCI 217) or (POLI SCI 103, 106, or 186 taken prior to fall 2017) or graduate standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

POLI SCI 348 – ANALYSIS OF INTERNATIONAL RELATIONS
3-4 credits.

Focuses on how to analyze problems in international politics by the use of game theory. Examples include governments making choices about the size of their military forces, barriers to trade, or international agreements on environmental issues. Analysts study strategic interaction using both informal and mathematical methods. Provides a good introduction to the basics of game theory -- a tool useful in many different settings -- as well as an introduction to the study of world politics. From the perspective of quantitative reasoning, one of the most important set of lessons center on the logic of strategic interaction and the notion of equilibrium. Along with basic game theory students will also be introduced to the pragmatic use of mathematical tools including algebra, set theory, functions, and probability theory. Not open to students with credit for POLI SCI 376 prior to fall 2017
Requisites: Satisfied Quantitative Reasoning (QR) A requirement and (POLI SCI 140 or INTL ST 101) or (POLI SCI 103 taken prior to Fall 2017)
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand the logic of strategic interaction.
Audience: Undergraduate

2. Master the basics of non-cooperative game theory.
Audience: Undergraduate

3. Be able to apply the logic of strategic interaction to international politics.
Audience: Undergraduate

4. Master the algebra necessary to solve games with complete and incomplete information.
Audience: Undergraduate

5. Master the algebra necessary to solve both one-time and iterated games.
Audience: Undergraduate

6. Understand the logic of signaling games.
Audience: Undergraduate

POLI SCI 349 – GLOBAL ACCESS TO JUSTICE
3 credits.

Lawyers are present in all countries, but their roles vary tremendously. In some countries, lawyers are greatly respected and are seen as making an important contribution by representing their clients and participating in the political process. In other countries, lawyers are viewed as less essential, perhaps even as a nuisance. Study lawyers in many different countries in an effort to explain the variation in their status and the consequent impact on citizens' access to justice.
Requisites: POLI SCI 120, 140, or sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Understand and compare the role of lawyers in the U.S. and other countries.
Audience: Undergraduate

2. Contrast the role of lawyers in democratic and authoritarian political systems.
Audience: Undergraduate

3. Synthesize social science readings and formulate arguments in written and oral form.
Audience: Undergraduate

4. Improve oral advocacy skills through active classroom discussion.
Audience: Undergraduate

POLI SCI 350 – INTERNATIONAL POLITICAL ECONOMY
3-4 credits.

Analyzes the interaction of politics and economics in the international arena, both historically and in the contemporary era of globalization. Focuses on international trade, monetary, and financial relations in both developed and developing economies. Not open to students with credit for POLI SCI 371 prior to fall 2017
Requisites: Sophomore standing and (POLI SCI 140 or INTL ST 101) or (POLI SCI 103 taken prior to fall 2017) or graduate standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply basic knowledge of historical events in international political economy.
Audience: Undergraduate

2. Understand how international economic flows a#ect and constrain domestic policymakers.
Audience: Undergraduate

3. Discuss international trade, monetary, and financial relations in both developed and developing economies.
Audience: Undergraduate

4. Assess the state of a body of scholarly literature related to course themes, identify gaps in that literature, and formulate an original research question in the context of those gaps.
Audience: Graduate

POLI SCI/LEGAL ST 352 – TRANSITIONAL JUSTICE IN WORLD POLITICS
3-4 credits.

Provides an introduction to the study of transitional justice (TJ), or how institutions - local, domestic, and international - address the legacies of human rights abuses. Explore several key questions motivating the study of transitional justice: Why do societies pursue accountability for past repression in general? How do transitioning societies go about these pursuits? What effects might TJ policies have on prospects for democracy, rule of law, and future human rights abuses? Special attention to how local and global politics interact to influence both the development and the effects of different transitional justice policies.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the history and political foundations of transitional justice
Audience: Undergraduate

2. Describe and differentiate between transitional justice mechanisms at the international, domestic, and local level
Audience: Undergraduate

3. Explain the role of different international and domestic actors in designing and implementing transitional justice
Audience: Undergraduate

4. Analyze and evaluate the implications of different transitional justice mechanisms for democracy, peace, and stability
Audience: Undergraduate

POLI SCI 354 – INTERNATIONAL INSTITUTIONS AND WORLD ORDER
3-4 credits.

The study of international cooperation and the analysis of regional, functional, and universal regimes and institutions. Not open to students with credit for POLI SCI 337 prior to fall 2017
Requisites: Sophomore standing and (POLI SCI 140 or INTL ST 101) or (POLI SCI 103 taken prior to fall 2017) or graduate standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Understand the existing logics, theories, concepts, and functions of international institutions.
Audience: Undergraduate

2. Analyze the political and legal dimensions of international organizations.

Audience: Undergraduate

3. Think critically and theoretically about the dynamic roles of international institutions in world politics that impose consequences on countries and citizens of the world.
Audience: Undergraduate

4. Assess the state of a body of scholarly literature related to course themes, identify gaps in that literature, and formulate an original research question in the context of those gaps.
Audience: Graduate

POLI SCI/CHICLA/HISTORY/LACIS 355 – LABOR IN THE AMERICAS: US & MEXICO IN COMPARATIVE & HISTORICAL PERSPECTIVE
3 credits.

Provides a critical examination of the history of labor and working people in the Americas, from the colonial era to the present. It focuses on the experience of the United States and Mexico, offering a comparative perspective on their distinct but also shared (and increasingly linked) histories. The seminar proceeds chronologically, highlighting major episodes in the evolution of labor systems in the two countries, beginning with the colonial labor systems implemented by the Spanish and British empires following the European conquest of the Western Hemisphere. Among other topics, we will examine the pivotal role of slavery and other forms of forced labor, the impact of the industrial revolution, the emergence and expansion of corporate capitalism and the labor unrest it provoked in the post-civil war U.S., the role of labor in the Mexican Revolution and its aftermath, the impact of the Great Depression and labor incorporation on the post-WWII social and political order of both countries, the breakdown of that order and the move to neo-liberalism in the 1970s and 1980s, and the emergence of an increasingly integrated North American production system and its consequences for labor and working people on both sides of the US-Mexico border.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2021

POLI SCI 356 – PRINCIPLES OF INTERNATIONAL LAW
3-4 credits.

A survey course that focuses on interactions among the primary entities in the international system; namely, states, inter- governmental and non-governmental organizations, and other international actors governed by international law. The study of international relations and international law is absolutely critical to understanding contemporary politics, both domestic and foreign. This course addresses both structural and substantive issues related to international law. In other words, it should provide basic tools for understanding the way in which international law works, as well as introduce substantive issues of interest to students of world politics. The course will place special emphasis on the role of international organizations in the international legal system, and special attention will be paid to the European Union as an international actor within this system of law. Not open to students with credit for POLI SCI 316 prior to fall 2017
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain why international law exists.
Audience: Undergraduate

2. Provide a clear explanation of the different sources of international law, the various means of resolving international legal disputes, and how US courts approach questions of international law.
Audience: Undergraduate

3. Explain why different types of international problems are best addressed by different types of legal structures, and how this accounts for variation in the shape of international law across issue areas.
Audience: Undergraduate

4. Demonstrate comfort engaging with a variety of different primary sources (e.g. judicial cases, treaties).
Audience: Undergraduate

5. Demonstrate the ability to identify the key facts in a given fact pattern, identify relevant provisions of international law, and apply these legal principles to these facts to build a legal argument.
Audience: Undergraduate

6. Make an argument about whether international law is successful at achieving its goals.
Audience: Undergraduate

7. Assess the state of a body of scholarly literature related to course themes, identify gaps in that literature, and formulate an original research question in the context of those gaps.
Audience: Graduate

POLI SCI 358 – STATES IN THE WORLD: COMPARATIVE FOREIGN POLICY
3-4 credits.

How do states make foreign policy decisions? What kinds of factors most influence states' international behavior on security, economic, and humanitarian questions? What explains the foreign policies of different states? Develop skills in analyzing foreign policy from a social scientific standpoint. Examine the logic of theories and evaluate the evidence for and against different explanations for how states behave internationally. Develop knowledge of specific countries and foreign policy topics.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze the influence of domestic factors on the formulation and execution of foreign policy in different countries.
Audience: Undergraduate

2. Compare and contrast the foreign policies of multiple countries, identifying commonalities, differences, and trends.
Audience: Undergraduate

3. Apply key theories and concepts to analyze and predict the behavior of states in the international system.
Audience: Undergraduate

4. Conduct independent research on a specific foreign policy issue and/or country, utilizing relevant academic literature and primary sources.
Audience: Undergraduate

5. Effectively communicate insights into comparative foreign policy through written assignments, presentations, and class discussions.
Audience: Undergraduate

6. Engage in constructive debates and discussions on global affairs, drawing on the knowledge gained in the course.
Audience: Undergraduate

POLI SCI 359 – AMERICAN FOREIGN POLICY
3-4 credits.

This course undertakes a historical and analytical approach to U.S. foreign policy since World War II. The course is divided into three main topics: U.S. Foreign Policy since World War II and the evolution of U.S. policy and the impetus behind important foreign policy choices; The people and institutions and processes that guide foreign policy formation and implementation; And the more salient foreign policy challenges facing the U.S. in the 21st century including how the US has responded to the attacks of September 11, 2001, the effectiveness of foreign aid policy.
Requisites: Sophomore standing and (POLI SCI 104, 140, 184 or INTL ST 101) or (POLI SCI 103 taken prior to fall 2017) or graduate standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Obtain a better understanding of U.S. foreign policy.
Audience: Undergraduate

2. Examine current foreign policy issues U.S. policymakers must address.
Audience: Undergraduate

3. Understand institutional arrangements complicate the policy process.
Audience: Undergraduate

4. Explore how particular issue areas challenge decision makers.
Audience: Undergraduate

5. Examine what general theoretical statements can be made about foreign policy.
Audience: Undergraduate

6. Assess the state of a body of scholarly literature related to course themes, identify gaps in that literature, and formulate an original research question in the context of those gaps.
Audience: Graduate

POLI SCI 360 – HISTORY OF AMERICAN POLITICAL THOUGHT
3-4 credits.

The intellectual origins and evolution of American political thought as seen through the lens of leading politicians, novelists and social critics from the Puritans to the Civil War; consideration of the central tensions of American political thought from a contemporary perspective. Not open to students with credit for POLI SCI 565 prior to fall 2017
Requisites: Sophomore standing and (POLI SCI 160 or ILS 205) or (POLI SCI 209 taken prior to fall 2017) or graduate standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Examine the intellectual origins and evolution of American political thought.
Audience: Undergraduate

2. Explore American political thought as seen through the lens of leading politicians, novelists and social critics from the Puritans to the Civil War.
Audience: Undergraduate

3. Analyze the central tensions of American political thought from a contemporary perspective.
Audience: Undergraduate

4. Assess the state of a body of scholarly literature related to course themes, identify gaps in that literature, and formulate an original research question in the context of those gaps.
Audience: Graduate

POLI SCI 361 – CONTEMPORARY AMERICAN POLITICAL THOUGHT
3-4 credits.

This course considers central themes and controversies in American political thinking during the 20th and early 21st centuries. Topics include the development of liberalism from the Progressive Era to the New Deal to the Great Society and beyond; the emergence of new strands of conservatism after World War II and the tensions between those strands; challenges by excluded and marginalized groups to the traditional social and political order; and the revival of concerns about "community" in America. As a topic of study, "American Political Thought" combines philosophy, political theory, history, and practical politics. The course covers a wide variety of texts, ranging from philosophical treatises to newspaper articles, from presidential addresses to works of social science with ultimate goal to become more knowledgeable and more critical students of the American political experience. Not open to students with credit for POLI SCI 566 prior to fall 2017
Requisites: Sophomore standing and (POLI SCI 160 or ILS 205) or (POLI SCI 209 taken prior to Fall 2017)
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explore American Political Thought from the progressive era to the present day.
Audience: Undergraduate

2. Discuss the progressives; New Deal liberalism; and different strands of conservatism after World War II.
Audience: Undergraduate

3. Examine communitarianism; multiculturalism; and recent political rhetoric.
Audience: Undergraduate

4. Analyze issues of race, gender and class in the 1960s.
Audience: Undergraduate

POLI SCI/CLASSICS/HISTORY 362 – ATHENIAN DEMOCRACY
3 credits.

Explores key issues in the ideology and practice of Athenian democracy. Examines democratic values, institutions, rhetoric, and sociology in order to provide the basic tools to understand democracy in its ancient context. Engages with a variety of source material (literary, archaeological, epigraphic) in order to develop multiple skills of interpretation. Some questions examined include: What are the key features of Athenian democracy, how did it change over time, and how did it differ from modern democracy? How did the Athenians justify and critique this political system? How did they reconcile citizen egalitarianism with social inequalities of wealth, gender, and status? To what extent were women, foreigners, slaves, or the poor included or excluded from politics? Was Athenian democracy a robust political system or a system in crisis?
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand and use appropriately the specific terminology (names, places, concepts) related to Athenian democracy
Audience: Undergraduate

2. Discuss with appropriate methodological awareness conflicting views expressed in modern scholarship
Audience: Undergraduate

3. Analyze problems relating to the reconstruction of historical concepts in the ancient world with reference to relevant source material
Audience: Undergraduate

4. Critically read and engage with complex academic texts (both ancient sources and modern literature)
Audience: Undergraduate

5. Present knowledge, ideas, and analysis orally (in classroom discussion) and in written formats
Audience: Undergraduate

POLI SCI/ILS 363 – LITERATURE AND POLITICS
3-4 credits.

Interactions between literature and politics, and the role of literature more generally in the functioning of the political systems. Not open to students with credit for POLI SCI 570 prior to fall 2017
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Understand how literary writing affects political consciousness.
Audience: Undergraduate

2. Explore how literary works represent and negotiate political questions in writing.
Audience: Undergraduate

3. Encourage students of literature to read and think politically.
Audience: Undergraduate

POLI SCI 364 – CHRISTIAN POLITICAL THOUGHT
3-4 credits.

Exploration of key themes, developments, and figures in Christian political and ethical traditions.
Requisites: Sophomore standing and (POLI SCI 160 or ILS 205) or (POLI SCI 209 taken prior to Fall 2017)
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Identify the major political thinkers who developed the Christian tradition.
Audience: Undergraduate

2. Identify and summarize the important philosophical concepts of Christian political thought.
Audience: Undergraduate

3. Comprehend the influence of Christianity in our political ideas and institutions.
Audience: Undergraduate

4. Evaluate how Christian ideas influence current debates on law, constitutionalism, morality, religion, political ideology, and public policy.
Audience: Undergraduate

POLI SCI/ILS/ITALIAN/LITTRANS 365 – MACHIAVELLI AND HIS WORLD
3 credits.

Introduces students to the major works of Machiavelli through the close reading of his writings in cultural and historical contexts. Discussion and targeted writing assignments will aim at cultivating in students 1) a broad understanding of Machiavelli's principal intellectual attitudes, 2) a deeper understanding of his literary sensibility, and 3) the ability to articulate controversies and complexities surrounding his thought.
Requisites: Satisfied Communications A requirement
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop a broad understanding of Machiavelli's principal intellectual attitudes.
Audience: Undergraduate

2. Cultivate a deep understanding of Machiavelli's literary sensibility.
Audience: Undergraduate

3. Articulate controversies and complexities surrounding Machiavelli's political thought.
Audience: Undergraduate

POLI SCI 366 – CONTINENTAL POLITICAL THOUGHT
3-4 credits.

Continental political theory is a tradition of thought usually distinguished from 'Anglo-American political theory' and originally associated with French and German writers in the 19th and early 20th century. What it means for humans to be free and what the requirements of a free society are the questions that motivate Continental political thought. Topics include: what it means for humans to live freely; the nature of reason and language; the relationship between politics, reason and culture; the political effects of language and technology; and the competing models of political freedom that result. Covers leading European political theories from the 18th through the 21st centuries and their application to contemporary questions of democratic theory.
Requisites: POLI SCI 160
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate familiarity with the major European political theorists since the 18th century through written essays, quizzes and class discussion.
Audience: Undergraduate

2. Practice critical reading and writing skills through analysis of sophisticated philosophical texts in written essays.
Audience: Undergraduate

3. Identify and categorize the vocabulary and content of contemporary political theory debates through quizzes and written essays.
Audience: Undergraduate

4. Analyze and assess the theoretical roots of contemporary political conflicts in written essays.
Audience: Undergraduate

5. Assess and compare the arguments for and against different kinds of political systems in written essays and class discussions.
Audience: Undergraduate

POLI SCI 370 – ISLAM AND POLITICS
3-4 credits.

In the early twentieth century, a series of movements arose in the Middle East and South Asia, calling Muslims to return to Islam. Today, leaders and members of such groups -now known as Islamists -insist that one cannot live a fully Islamic life in the absence of an Islamic state. How and why did these movements come to focus on building an Islamic state? How do they pursue this goal?
Requisites: Sophomore standing or 3 Credits in HISTORY or POLI SCI
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify major concepts related to Islam and politics.
Audience: Undergraduate

2. Understand the historical development, major debates, and contemporary manifestations of Islam and politics.
Audience: Undergraduate

3. Become familiar with major historical and contemporary research into Islam and politics.
Audience: Undergraduate

POLI SCI/JOURN/URB R PL 373 – INTRODUCTION TO SURVEY RESEARCH
3-4 credits.

Theory and practice of survey research; questionnaire design, sampling, data visualization, statistical analysis.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Formulate and construct logical arguments about political phenomena and evaluate those arguments using survey research
Audience: Undergraduate

2. Explain the theoretical components of survey research
Audience: Undergraduate

3. Interpret survey results in general with a particular focus on political polling
Audience: Undergraduate

4. Design and assess political surveys, including questionnaire design, question wording, survey mode, sample size, nonresponse, survey experiments, standard error, and margin of error
Audience: Undergraduate

5. Demonstrate statistical analysis skills in the context of political surveys including: hypothesis testing, confidence intervals, difference of means tests, data visualization and linear regression
Audience: Undergraduate

6. Recognize ethical issues in survey research
Audience: Undergraduate

7. Assess the state of a body of scholarly literature related to course themes, identify gaps in that literature, and formulate an original research question in the context of those gaps.
Audience: Graduate

POLI SCI 377 – NUCLEAR WEAPONS AND WORLD POLITICS
3-4 credits.

Covers the origins of nuclear weapons, the reasons states seek them, the strategies developed for their use, the consequences of their development, and efforts to control and reverse their spread.
Requisites: Sophomore standing and (POLI SCI 140 or INTL ST 101) or (POLI SCI 103 taken prior to fall 2017) or graduate standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Understand how nuclear weapons are made and what states have them.
Audience: Undergraduate

2. Examine why some states develop nuclear weapons and others do not.
Audience: Undergraduate

3. Examine whether nuclear weapons make war more or less likely between states.
Audience: Undergraduate

4. Explore what strategies states develop for the potential use of nuclear weapons and why.
Audience: Undergraduate

5. Understand the history and debates surrounding efforts to control the spread of nuclear weapons, including prominent arms control treaties.
Audience: Undergraduate

6. Assess the state of a body of scholarly literature related to course themes, identify gaps in that literature, and formulate an original research question in the context of those gaps.
Audience: Graduate

POLI SCI 390 – STUDY ABROAD TOPICS IN POLITICAL SCIENCE: INTERNATIONAL RELATIONS
1-4 credits.

An umbrella course for variable credit international relations courses taken on study abroad programs.
Requisites: None
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

POLI SCI 400 – TOPICS IN POLITICAL SCIENCE
1-4 credits.

An umbrella course for variable credit topic courses, such as summer forum, intensive summer courses, half-semester courses, etc.
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

POLI SCI 401 – SELECTED TOPICS IN POLITICAL SCIENCE
3-4 credits.

A topics course for the exploration of current issues in Political Science.
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

POLI SCI 402 – WISCONSIN IN WASHINGTON INTERNSHIP COURSE
4 credits.

This course offers the opportunity to apply many things learned in the classroom to the professional world and to apply things learned in the professional world to a student's liberal arts education. Interning will introduces students to the professional world of political organizations giving them the chance to enhance professional skills, build a network of contacts, and explore possible career choices. This class stresses active reflection, self-assessment, and the honing of critical thinking and writing. The internship course builds structure with written assignments, activities, reflections, and readings to help students to make the most of their internships. Analytical work in this course will allow students to systematically analyze the workplace in ways that help them recognize prevailing office dynamics, adapt to accepted organizational standards, and to identify opportunities to be a more effective colleague. The course will ask students to analyze their current experiences and to relate them to their past learning and future possibilities.
Requisites: None
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Workplace - Workplace Experience Course
Repeatable for Credit: No

POLI SCI 405 – STATE GOVERNMENT AND PUBLIC POLICY
3-4 credits.

The structure of state government and the politics of public policy-making in the fifty states.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

POLI SCI 408 – THE AMERICAN PRESIDENCY
3-4 credits.

The President as chief administrative leader, political leader, foreign policy initiator, commander-in-chief, and head of state.
Requisites: Sophomore standing and (POLI SCI 104 or 184)
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Examine fundamental questions about the President's role as formal head of the executive branch of government and head of state, and as the focal point of public attention.
Audience: Undergraduate

2. Explore the sources of presidential power.
Audience: Undergraduate

3. Understand the factors that explain how presidents are elected.
Audience: Undergraduate

4. Examine how presidents govern.
Audience: Undergraduate

POLI SCI 411 – THE AMERICAN CONSTITUTION : POWERS AND STRUCTURES OF GOVERNMENT
4 credits.

This course undertakes an historical examination of the development of American constitutional thinking about powers and structures of government from the founding era to the present day. Issue that are considered include separation of powers, executive war powers, the powers of Congress, judicial review and the role of courts, and federalism. The course focuses on the development of constitutional law, constitutional politics, and American political development.
Requisites: Sophomore standing and (POLI SCI 104 or 184)
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Examine the historical development of American constitutionalism.
Audience: Undergraduate

2. Develop a broad knowledge of the historical constitutionalism and modern and historical constitutional debates.
Audience: Undergraduate

3. Explore how legal rules define constitutional rights and liberties, and how different ways of thinking about those rules prevailed during different historical periods.
Audience: Undergraduate

4. Recognize that in different periods, different approaches of interpreting and applying the Constitution have appeared or have been dominant, and these approaches often cut across doctrinal subject areas.
Audience: Undergraduate

POLI SCI 412 – THE AMERICAN CONSTITUTION: RIGHTS AND CIVIL LIBERTIES
4 credits.

This course undertakes an historical examination of the development of American constitutional thinking about individual rights and civil liberties from the founding era to the present day. Issue that are considered include freedoms guaranteed by the original Articles, the Bill of Rights, and the Civil War Amendments (XIII, XIV, and XV) as these issues appear in constitutional law, constitutional politics, and social and economic developments. The role of the federal courts, the nature and operation of principles of federalism, and the authority of Congress to protect constitutionally guaranteed rights are also major topics of consideration.
Requisites: Sophomore standing and (POLI SCI 104 or 184)
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Examine the historical development of American constitutional thinking about individual rights and civil liberties from the founding era to the present day.
Audience: Undergraduate

2. Examine freedoms guaranteed by the original Articles, the Bill of Rights, and the Civil War Amendments (XIII, XIV, and XV) as these issues appear in constitutional law, constitutional politics, and social and economic developments.
Audience: Undergraduate

3. Understand the role of the federal courts, the nature and operation of principles of federalism, and the authority of Congress to protect constitutionally guaranteed rights.
Audience: Undergraduate

POLI SCI 414 – THE SUPREME COURT AS A POLITICAL INSTITUTION
3 credits.

This course uses a social science approach to analyze theories of judicial decision making and to learn how law is made in a political context. Students will understand how the Supreme Court and justices operate in an interdependent political environment.
Requisites: Sophomore standing and (POLI SCI 104, 184, or LEGAL ST/ POLI SCI 217)
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze theories of judicial decision making.
Audience: Undergraduate

2. Understand how the Supreme Court and justices operate in a political environment.
Audience: Undergraduate

3. Explain how law is made in a political context.
Audience: Undergraduate

POLI SCI 416 – COMMUNITY POWER AND GRASS ROOTS POLITICS
3 credits.

Introduces students involved in volunteer or community activism in the Madison area to the literature on political power and community organizing. Conduct field research and write an analysis of activities.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Understand scholarly debates over the character and significance of political organizations and social movements.
Audience: Undergraduate

2. Analyze a local political organization or social movement.
Audience: Undergraduate

3. Examine social movement politics.
Audience: Undergraduate

POLI SCI 417 – THE AMERICAN JUDICIAL SYSTEM
3-4 credits.

Structure, process, and personnel of American courts; emphasis on the governmental and political consequences of court decisions for public policy-making.
Requisites: Sophomore standing and (POLI SCI 104, 184, or LEGAL ST/ POLI SCI 217)
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand the functioning of the American judicial system.
Audience: Undergraduate

2. Examine how courts interact with each other and with other branches of government.
Audience: Undergraduate

3. Understand the structure and function of the American court system and its historical development.
Audience: Undergraduate

4. Understand how court decision-making factors influence judicial outcomes.
Audience: Undergraduate

POLI SCI/PUB AFFR 419 – ADMINISTRATIVE LAW
3-4 credits.

Delegation of powers, elements of fair administrative procedure, judicial control over administrative determination. Not open to students with credit for POLI SCI 420 prior to fall 2017
Requisites: Sophomore standing and (POLI SCI 104, 184, or LEGAL ST/ POLI SCI 217)
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Examine the role that federal administrative agencies play in the U.S. political and legal system.
Audience: Undergraduate

2. Investigate the institutional context and ideological character of administrative law and agency practices.
Audience: Undergraduate

3. Examine classic debates over the origins of regulation.
Audience: Undergraduate

4. Understand competing legal philosophies about democratic administrative regulation.
Audience: Undergraduate

5. Examine political struggles to control the bureaucracy.
Audience: Undergraduate

6. Understand how agencies use adjudication and rulemaking to effectuate their policies.
Audience: Undergraduate

POLI SCI/CHICLA/HISTORY 422 – LATINO HISTORY AND POLITICS
3 credits.

Students will examine the historical, social, political, economic, and cultural experiences and conditions of Latinos, one of the largest US racial/ethnic minority groups. Course focus is on people who trace their origins to Mexico, the Caribbean, and countries of Latin America.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss the complexity of the Latino population and divergent political agendas of various subgroups.
Audience: Undergraduate

2. Develop an understanding of the historical origins of how Latino social/political movements have emerged and changed.
Audience: Undergraduate

3. Evaluate the role of movements and activists in policy reform and social/political change.
Audience: Undergraduate

4. Examine the impact of the Latino vote on contemporary politics.
Audience: Undergraduate

5. Explore contemporary policy issues affecting the Latino population.
Audience: Undergraduate

POLI SCI 425 – THE POLITICAL PSYCHOLOGY OF POLARIZATION
3 credits.

The content encourages critical thinking about societies and the larger global community through readings and assessments that explore questions about individual and community behaviors, group dynamics, and the rise of populist authoritarian appeals and policies in the United States and globally. It emphasizes the importance of understanding several psychological theoretical approaches and diverse research methods in political science. Additionally, it involves synthesizing and applying social science concepts from psychology, economics, political science, and sociology, requiring a multifaceted perspective on the issues examined.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Synthesize insights from psychological, political, and sociological perspectives to develop a nuanced understanding of polarization as a concept.
Audience: Undergraduate

2. Examine the role of individual and group identity in explaining political behavior and polarization in the US and around the world.
Audience: Undergraduate

3. Analyze the political and psychological origins and evolution of political, cultural, and economic divides in modern America, using evidence from primary and secondary sources.
Audience: Undergraduate

4. Compare and contrast the intersections of liberalism and conservatism, as well as the impact of extremism, on the American political landscape.
Audience: Undergraduate

5. Examine the shifting media environment and its role in reinforcing or mitigating partisan divides.
Audience: Undergraduate

6. Synthesize insights from psychological, political, and sociological perspectives to develop a nuanced understanding of polarization as a concept.
Audience: Undergraduate

7. Create a reflective analysis or research project that articulates a clear and evidence-based perspective on the state of polarization in the United States today.
Audience: Undergraduate

POLI SCI/GEN&WS 429 – GENDER AND POLITICS IN COMPARATIVE PERSPECTIVE
3-4 credits.

Examines the gendered nature of political institutions around the world, including implications of women's exclusions from public life in a global context; the obstacles to women's greater participation; how women have gained greater voice in political leadership in some countries; and the differences women make in the political arena. Not open to students with credit for POLI SCI 643 prior to fall 2017
Requisites: Sophomore standing; not open to special students
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023

POLI SCI/INTL ST 431 – CONTENTIOUS POLITICS
3-4 credits.

Social movements, revolutions, and riots continually shape and re-shape the world around us. The course will evaluate and apply dominant theoretical approaches to understanding contention through careful attention to empirical cases throughout the world.
Requisites: Sophomore standing and POLI SCI 140 or INTL ST 101 (or POLI SCI 103 taken prior to fall 2017) or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Examine how social movements, revolutions, and riots continually shape and re-shape the world around us.
Audience: Undergraduate

2. Evaluate and apply dominant theoretical approaches to understanding contention in politics.
Audience: Undergraduate

3. Study empirical cases of contentious politics throughout the world.
Audience: Undergraduate

4. Assess the state of a body of scholarly literature related to course themes, identify gaps in that literature, and formulate an original research question in the context of those gaps.
Audience: Graduate

POLI SCI/RELIG ST 433 – RELIGION AND POLITICS
3-4 credits.

Explores the relationships and interactions between religion and politics from a comparative perspective. Discuss the appropriate relationship between religion and state. Investigate the implications of the various ways in which the religion-state relationship have been involved in political conflict. Building on this, turn to several of the current issues in religion and politics asking: Why is religion apparently more important than ever despite an increasingly secular world? What is religious nationalism? What is fundamentalism? How can we explain the similarities and differences between religious fundamentalist movements across the globe? How should democratic states cope with the emergence of fundamentalist movements? In order to begin answering these questions, integrate the theoretical frameworks we develop with explorations of the historical and local context of relevant case-studies from around the world.
Requisites: Sophomore standing and (POLI SCI 140, 120, RELIG ST 101, 102, 103, or INTL ST 101) or (POLI SCI 103 or 106 prior to fall 2017)
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Examine the relationships and interactions between religion and politics from a comparative perspective.
Audience: Undergraduate

2. Analyze the appropriate relationship between religion and state.
Audience: Undergraduate

3. Discuss the implications of the various ways in which the religion-state relationship have been involved in political conflict.
Audience: Undergraduate

POLI SCI/INTL ST 434 – THE POLITICS OF HUMAN RIGHTS
3-4 credits.

Examines the origins and development of human rights in international politics. The course discusses what human rights are, international human rights movements, the international search for justice after mass crimes, and international humanitarian intervention. Not open to students with credit for POLI SCI 317 prior to fall 2017
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Analyze the meaning of human rights in international politics.
Audience: Undergraduate

2. Examine the origins and development of human rights in international politics.
Audience: Undergraduate

3. Explore international human rights movements.
Audience: Undergraduate

4. Discuss the international search for justice after mass crimes.
Audience: Undergraduate

5. Assess the state of a body of scholarly literature related to course themes, identify gaps in that literature, and formulate an original research question in the context of those gaps.
Audience: Graduate

POLI SCI/GEN&WS 435 – POLITICS OF GENDER AND WOMEN'S RIGHTS IN THE MIDDLE EAST
3 credits.

Explores the intertwined relationship between gender and politics in contemporary Middle East and North Africa. Situates the region's historical, socio-political, and cultural context that have particularly contributed to shaping the current discourse on gender in the Arab World. Explores - both theoretically and empirically - the role of Arab women in influencing the political processes across the Middle East. Examines real-world examples of Middle Eastern women from different parts of the region who have succeeded to challenge the status quo and push for genuine change.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop a concrete understanding of the history and politics of the Middle East and North Africa (MENA) and the ways they shape gender power relations across the region.
Audience: Both Grad & Undergrad

2. Apply comparative politics frameworks and feminist theories toward understanding patterns of female political participation and better understand current events and complexities of the region's politics and governance structures.
Audience: Both Grad & Undergrad

3. Sharpen critical and analytical skills through exposure to different, even contradictory, points of views and contemporary debates relating to the role of women in shaping MENA's politics post-Arab uprisings.
Audience: Both Grad & Undergrad

4. Develop and present ideas and arguments to audience with diverse interests and backgrounds.
Audience: Both Grad & Undergrad

5. Apply pertinent theoretical and empirical evidence necessary to make critical and analytical arguments about gender and politics in comparative perspective.
Audience: Graduate

POLI SCI 437 – NATIONALISM AND ETHNIC CONFLICT
3-4 credits.

Nationalist conflict and ethnic contestation remain major components of global politics. Drawing on cases from around the world, this course explores why this is the case. In the process, we will address a number of crucial questions: What are nations and ethnic groups? Where do they come from? Why do they pick particular territories? How do they define who can be part of the group? Why are they so successful in mobilizing people to kill and be killed? In the course of answering these questions, the course investigates the interactions between nations and states, religion and nationalism, globalization, citizenship and minority rights, and the causes and solutions for national and ethnic conflict.
Requisites: Sophomore standing and (POLI SCI 120 or 182) or (POLI SCI 106 or 186 prior to fall 2017)
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No

POLI SCI/INTL ST 439 – THE COMPARATIVE STUDY OF GENOCIDE
3-4 credits.

Examines the phenomenon of genocide in the modern world. The class covers the concept of genocide, theories of why genocide occurs, and particular cases in the 20th and 21st centuries. Not open to students with credit for POLI SCI 318 prior to fall 2017
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2021
Learning Outcomes: 1. Examine genocide in the modern world.
Audience: Undergraduate

2. Study theories of why genocide occurs.
Audience: Undergraduate

3. Examine particular cases in the 20th and 21st centuries.
Audience: Undergraduate

4. Assess the state of a body of scholarly literature related to course themes, identify gaps in that literature, and formulate an original research question in the context of those gaps.
Audience: Graduate

POLI SCI 442 – HONORS SEMINAR ON STATE-BUILDING
3 credits.

In-depth exploration of the origins, functions, and societal impacts of states from a global and historical perspective. Engage critically with theories of state formation, state capacity, and governance, analyzing how states are created, sustained, and challenged across various contexts. Special attention will be given to the role of states in shaping and responding to war, environmental challenges, and social dynamics. Draws on interdisciplinary sources from political science, history, economics, and anthropology. Develop and defend nuanced arguments on the state's role as an agent of both stability and change.
Requisites: Satisfied Quantitative Reasoning (QR) A Requirement, junior standing, and declared in an Honors program
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Evaluate and critique major theories of state formation, state capacity, and governance, identifying their strengths, limitations, and applicability across different historical and cultural contexts.
Audience: Undergraduate

2. Integrate perspectives from political science, history, economics, and anthropology to understand the multifaceted role of the state in societal development and change.
Audience: Undergraduate

3. Conduct comparative analyses of state structures, capacities, and policies, drawing on diverse case studies to identify patterns, variations, and underlying factors in state development and function.
Audience: Undergraduate

4. Synthesize course concepts and empirical evidence to construct and defend original, evidence-based arguments on the state’s role in society, demonstrating advanced critical thinking and academic writing skills.
Audience: Undergraduate

POLI SCI/LEGAL ST 445 – LEGAL WRITING, FROM COUNSELOR TO ADVOCATE
3 credits.

Introduction to legal reasoning, writing, and research. Draft memos and briefs based on fictional case files and independent legal research, simulating the practice of law. Topics include precedent, sources of law, reading and interpreting legal texts, objective legal analysis, persuasion, and oral argument.
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Read legal sources critically and accurately to identify relevant information.
Audience: Undergraduate

2. Recognize the weight and significance of legal authorities within the American legal system.
Audience: Undergraduate

3. Analyze and synthesize legal authorities to explain and formulate controlling rules.
Audience: Undergraduate

4. Apply legal rules to a set of facts—both to predict legal consequences and to advocate for a preferred result.
Audience: Undergraduate

5. Use research strategies to find controlling and persuasive legal authority.
Audience: Undergraduate

6. Write clearly and concisely about the law in different professional contexts, including objective office memoranda and persuasive legal briefs.
Audience: Undergraduate

7. Articulate legal analyses and argue legal positions via oral communication and advocacy.
Audience: Undergraduate

POLI SCI/ECON/ENVIR ST/URB R PL 449 – GOVERNMENT AND NATURAL RESOURCES
3-4 credits.

Problems of public policy and administration for development and use of natural resources.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

POLI SCI 460 – TOPICS IN POLITICAL PHILOSOPHY
3-4 credits.

Investigation at an advanced level of selected problems in political philosophy.
Requisites: Sophomore standing and (POLI SCI 160 or ILS 205) or (POLI SCI 209 taken prior to fall 2017) or graduate standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

POLI SCI 461 – INTERDISCIPLINARY SEMINAR IN POLITICAL ECONOMY, PHILOSOPHY, & POLITICS
3 credits.

An interdisciplinary seminar focusing on current policy debates designed to incorporate concepts and approaches from philosophy, political science, and economics.
Requisites: Consent of instructor
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Synthesize concepts and arguments from philosophy, politics, and economics.
Audience: Undergraduate

2. Apply concepts and arguments from philosophy, politics, and economics.
Audience: Undergraduate

3. Engage in written work incorporating an array of primary and secondary sources.
Audience: Undergraduate

POLI SCI/ILS 463 – DECEPTION AND POLITICS
3-4 credits.

Deception and truth telling as matters of fundamental political concern. Writers ranging from Plato to John Rawls have grappled with the problem of deception and truth-telling in politics. Flattery, hypocrisy, lying as a matter of state, lying as a matter of policy: philosophical explorations of these and related phenomena are the central focus.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explore deception – and truth telling – as matters of fundamental political concern.
Audience: Undergraduate

2. Examine flattery, hypocrisy, lying as a matter of state, and lying as a matter of policy: philosophical explorations of these and related phenomena are at the center of this course.
Audience: Undergraduate

3. Explore writers ranging from Plato to John Rawls and how they have grappled with the problem of deception and truth-telling in politics.
Audience: Undergraduate

POLI SCI/GEN&WS 469 – WOMEN AND POLITICS
3-4 credits.

Changing political roles, status, attitudes, and behaviors of women in contemporary society and of the political implications of changing female/male relationships.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Introduce students to concepts of sex, gender and sexuality and how they have been fundamental to the shape and function of political institutions, laws, and policies.
Audience: Undergraduate

2. Understand how women have participated in politics despite severe legal and political restrictions.
Audience: Undergraduate

3. Understand how social policies and institutional rules inhibit women's influence and participation.
Audience: Undergraduate

4. Explore how the media cover female candidates.
Audience: Undergraduate

5. Examine what barriers inhibit female candidates from running for office.

Audience: Undergraduate

POLI SCI 470 – THE FIRST AMENDMENT
3-4 credits.

An examination of the basic principles, purposes, and assumptions of First Amendment cases and literature, with attention to both historical and contemporary controversies.
Requisites: Sophomore standing and (POLI SCI 104, 184, or LEGAL ST/POLI SCI 217)
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

POLI SCI 481 – HONORS SEMINAR ON RACE AND POLITICS IN THE UNITED STATES
3 credits.

This course examines the sources and policy implications of racial division in American politics by analyzing a range of issues, such as affirmative action in the workplace and in higher education, the use of black majority districts as a means of enhancing representation of minority interests in Congress, differences in public opinion between whites and blacks, and issues concerning multi-racial and ethnic tensions. We will examine the historical background of race relations and the current policy debates, with a focus on trying to find common-ground solutions. The goal of this seminar is to stimulate critical thinking on this important issue, causing students to think about race and politics in new ways.
Requisites: Junior standing and declared in an Honors program
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze the sources and policy implications of racial division in American politics by analyzing a range of issues, such as affirmative action in the workplace and in higher education.
Audience: Undergraduate

2. Examine the historical background of race relations and the current policy debates.
Audience: Undergraduate

3. Explore differences in public opinion between whites and blacks, and issues concerning multi-racial and ethnic tensions.
Audience: Undergraduate

POLI SCI 490 – STUDY ABROAD TOPICS IN POLITICAL SCIENCE: AMERICAN GOVERNMENT
1-4 credits.

An umbrella course for variable credit American government courses taken on study abroad programs.
Requisites: None
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

POLI SCI 511 – CAMPAIGN FINANCE
3-4 credits.

Examination of campaign finance, including: the philosophical rationale behind campaign finance regulations, the history of regulatory frameworks, the influence of campaign contributions on decision making, campaign finance laws in other countries, and reform proposals. Not open to students with credit for POLI SCI 466 prior to fall 2017
Requisites: Sophomore standing and (POLI SCI 104, 184, or LEGAL ST/ POLI SCI 217)
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Understand and articulate the major philosophical and constitutional rationales and arguments for a more (or less) restrictive regulatory framework for campaign finance.
Audience: Undergraduate

2. Identify the connections between regulatory structures and the political consequences (both intended and unintended) of those structures.
Audience: Undergraduate

3. Understand the history of campaign finance regulation, the causes of major changes, and the current regulatory structure.
Audience: Undergraduate

4. Understand the jurisprudence and major Supreme Court decisions that have set the terms of campaign finance regulation.
Audience: Undergraduate

5. Connect controversies over campaign finance regulation to broader themes in Americanpolitics.
Audience: Undergraduate

POLI SCI 515 – PUBLIC OPINION
3-4 credits.

Formation of opinions within and among the political publics; their role in the development and practice of governmental policy. Not open to students with credit for POLI SCI 473 prior to fall 2017
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

POLI SCI/AFROAMER 519 – AFRICAN AMERICAN POLITICAL THEORY
3-4 credits.

Explores a range of theories that African Americans have drawn upon to cope with and ameliorate their political circumstances in the United States within the specific parameters of political theory.
Requisites: Sophomore standing and (POLI SCI 160 or AFROAMER 151) or (POLI SCI 209 taken prior to fall 2017) or graduate/professional standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Analyze how African American thinkers simultaneously reflect and complicate liberal, conservative, nationalist, and materialist political thought.
Audience: Undergraduate

2. Examine how African American thinkers understand sexism in African American political thought and racism in feminist thought.
Audience: Undergraduate

3. Interrogate contemporary debates in African American political theory including, but not limited to, the parameters of effective black leadership.
Audience: Undergraduate

4. Assess the state of a body of scholarly literature related to course themes, identify gaps in that literature, and formulate an original research question in the context of those gaps.
Audience: Graduate

POLI SCI 529 – ARAB-ISRAELI CONFLICT
3-4 credits.

Examines the political, social, and economic aspects of the evolution of the Arab-Israeli conflict over time, and the theoretical and policy issues it raises. Not open to students with credit for POLI SCI 631 prior to fall 2017
Requisites: Sophomore standing and (POLI SCI 120, 140, 182 or INTL ST 101) or (POLI SCI 103, 106, or 186 taken prior to fall 2017) or graduate standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Articulate an in-depth understanding of the Arab-Israeli conflict and it's evolution over time.
Audience: Undergraduate

2. Develop an appreciation of the complexities and dynamism of this conflict through an examination of its origins, the actors involved, and the key historical and political factors that have shaped it.
Audience: Undergraduate

3. Examine the political, social, and economic aspects of the evolution of the Arab-Israeli conflict.
Audience: Undergraduate

4. Assess the state of a body of scholarly literature related to course themes, identify gaps in that literature, and formulate an original research question in the context of those gaps.
Audience: Graduate

POLI SCI 590 – STUDY ABROAD TOPICS IN POLITICAL SCIENCE: POLITICAL THEORY
1-4 credits.

An umbrella course for variable credit political theory courses taken on study abroad programs.
Requisites: None
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

POLI SCI 601 – PROSEMINAR: TOPICS IN POLITICAL SCIENCE
3 credits.

Intensive study and research in selected problems within the constituent fields of political science.
Requisites: Consent of instructor
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

POLI SCI 602 – WISCONSIN IN WASHINGTON ADVANCED PUBLIC POLICY COURSE
4 credits.

The public policy process is structured argument and decision making within institutional contexts. This class introduces students to analytic frameworks for thinking about various aspects of this process. We do not study a single context or policy, but, rather, seek to understand how policies might succeed (or fail) in one context or another. The principal framework is institutional analysis, or the way in which formal and informal rules shape policies and their outcomes. Students will learn to perform institutional analysis as well as write a memorandum presenting such an analysis to a policymaker. Students will align their final projects to their personal and professional activities and/or their internship. The course will help students understand how policies can achieve durable impact, and how progress made through policies can be defended amid institutional pitfalls.
Requisites: None
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Analyze frameworks for thinking about various aspects of the policy making process.
Audience: Undergraduate

2. Discuss the ways in which formal and informal rules shape policies and their outcomes.
Audience: Undergraduate

3. Perform institutional analysis as well as write a memorandum presenting such an analysis to a policymaker.
Audience: Undergraduate

POLI SCI 635 – COMPARATIVE POLITICS OF SPORT
3-4 credits.

Covers the political economy, political culture, and the politics of identity (nationalism, race, ethnicity, social class, religion, and gender) that is usually associated with sport at both the highest and lowest levels of competition. Not open to students with credit for POLI SCI 616 prior to fall 2017
Requisites: Sophomore standing and (POLI SCI 120 or 182) or (POLI SCI 106 or 186 taken prior to fall 2017) or graduate standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Examine the political economy of sport in a global context.
Audience: Undergraduate

2. Study the political culture of sport.
Audience: Undergraduate

3. Discuss the politics of identity (nationalism, race, ethnicity, social class, religion, and gender) that is usually associated with sport.
Audience: Undergraduate

4. Assess the state of a body of scholarly literature related to course themes, identify gaps in that literature, and formulate an original research question in the context of those gaps.
Audience: Graduate

POLI SCI 659 – POLITICS AND SOCIETY: CONTEMPORARY EASTERN EUROPE
3-4 credits.

Comparative analysis of the countries of contemporary Eastern Europe, including issues of democratization, economic transition, and social change; political crises and institutional adjustments; interactions between regimes and domestic social forces; prospect for future systemic change.
Requisites: Sophomore standing and (POLI SCI 120 or 182) or (POLI SCI 106 or 186 taken prior to fall 2017) or graduate standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019
Learning Outcomes: 1. Analyze issues of democratization, economic transition, and social change in contemporary Eastern Europe.
Audience: Undergraduate

2. Examine political crises and institutional adjustments in Eastern Europe.

Audience: Undergraduate

3. Discuss interactions between regimes and domestic social forces.
Audience: Undergraduate

4. Analyze prospect for future systemic change.
Audience: Undergraduate

5. Assess the state of a body of scholarly literature related to course themes, identify gaps in that literature, and formulate an original research question in the context of those gaps.
Audience: Graduate

POLI SCI 681 – SENIOR HONORS THESIS
3-4 credits.

Honors in the major in Political Science thesis research and writing.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025

POLI SCI 682 – SENIOR HONORS THESIS
3-4 credits.

Honors in the Major in Political Science thesis research and writing (continuation of POLI SCI 681).
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2025

POLI SCI 683 – SENIOR HONORS THESIS SEMINAR
3 credits.

A class for honors students writing their senior honors thesis within a seminar format. Focus is on conceptualization, research design, writing of the thesis, and relevant issues of political science. Only senior majors writing honor thesis.
Requisites: Junior standing and declared in an Honors program
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025

POLI SCI 684 – SENIOR HONORS THESIS SEMINAR
3 credits.

A class for honors students writing their senior honors thesis within a seminar format. Focus is on conceptualization, research design, writing of the thesis, and relevant issues of political science. Continuation of 683. Seniors only.
Requisites: POLI SCI 683, senior standing only, and declared in an Honors program
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2025

POLI SCI 690 – STUDY ABROAD TOPICS IN POLITICAL SCIENCE: COMPARATIVE POLITICS
1-4 credits.

An umbrella course for variable credit comparative politics courses taken on study abroad programs.
Requisites: None
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2001

POLI SCI 691 – SENIOR THESIS
3 credits.

For students writing a thesis in consultation with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

POLI SCI 692 – SENIOR THESIS
3 credits.

For students writing a thesis in consultation with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023

POLI SCI 698 – DIRECTED STUDY
1-4 credits.

Directed study projects for juniors and seniors as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

POLI SCI 699 – DIRECTED STUDY
1-4 credits.

Directed study projects for juniors and seniors as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

POLI SCI 799 – DIRECTED STUDY
1-4 credits.

Directed Study restricted to graduate students. Intended for master's level students.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2021

POLI SCI 800 – POLITICAL SCIENCE AS A DISCIPLINE AND PROFESSION
1 credit.

Describes and evaluates major approaches used in political science. Explores issues related to professional development and political science careers.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate an understanding of political science as a discipline and profession.
Audience: Graduate

2. Recognize major approaches used in the discipline of political science and the “hidden curriculum” of the profession.
Audience: Graduate

3. Identify a broad cross-section of the faculty and their research in the political science department.
Audience: Graduate

POLI SCI 801 – DISSERTATION PROPOSAL RESEARCH AND WRITING SEMINAR
3 credits.

Provides structured support and mentorship for political science dissertation proposal writing. Includes topics such as defining relevant research questions, incorporating existing scholarship, developing a theory and research design and drafting a full prospectus.
Requisites: Declared in Political Science doctoral program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Fully form their dissertation committee.
Audience: Graduate

2. Produce a draft of their dissertation prospectus.
Audience: Graduate

POLI SCI/FRENCH/GERMAN/HISTORY/SOC 804 – INTERDISCIPLINARY WESTERN EUROPEAN AREA STUDIES SEMINAR
3 credits.

Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

POLI SCI 811 – INTRODUCTION TO STATISTICAL COMPUTING IN POLITICAL SCIENCE
1-3 credits.

Introduction to the issues of statistical computing in political science using statistical packages such as STATA and R with emphasis on developing sound practices for organizing data, protocols, and results in empirical research. Not open to students with credit for POLI SCI 553 prior to fall 2017
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023

POLI SCI 812 – INTRODUCTION TO STATISTICAL METHODS IN POLITICAL SCIENCE
4 credits.

Introductory statistics course for Ph.D. students. Emphasis on probability theory, inference, and the foundations of multivariate least squares and maximum likelihood.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Critically read, interpret and replicate the quantitative content of many articles in the quantitative social sciences
Audience: Graduate

2. Conduct, interpret, and communicate results from analysis using multiple regression
Audience: Graduate

3. Explain the limitations of observational data for making causal claims, and begin to use existing strategies for attempting to make causal claims from observational data
Audience: Graduate

4. Write clean, reusable, and reliable R code
Audience: Graduate

5. Feel empowered working with data
Audience: Graduate

POLI SCI 813 – MULTIVARIABLE STATISTICAL INFERENCE FOR POLITICAL RESEARCH
3 credits.

Extensive treatment of multiple regression and its variants.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

POLI SCI 814 – SOCIAL IDENTITIES: DEFINITION AND MEASUREMENT
3 credits.

Analyzes the concept of social identities with a focus on definition, comparison, and measurement. Explores a range of theories as well as methodological techniques for measurement. Examines classic works on race, ethnic, national, class, gender, and religious identities.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020

POLI SCI 817 – EMPIRICAL METHODS OF POLITICAL INQUIRY
3 credits.

Acquaints students with a wide variety of research methods used to analyze political phenomena, emphasizing both quantitative and qualitative approaches.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

POLI SCI 818 – MAXIMUM LIKELIHOOD ESTIMATION
3 credits.

Develops the theory of maximum likelihood estimation and applies it to models for discrete and limited dependent variables common to political and social science data.
Requisites: POLI SCI 812 and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

POLI SCI 820 – EXPERIMENTAL METHODS
3 credits.

Experimental methods in the social sciences, with specific application to political science. Covers the logic of experimentation and how experiments can be used to investigate social phenomena. Interpret, design, execute and analyze experiments.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 3 number of completions
Learning Outcomes: 1. Explain important concepts and arguments made by prominent scholars in causal inference and experimental methods
Audience: Graduate

2. Design, analyze and field experiments suited to your own particular research question
Audience: Graduate

3. Understand and explain the ethical debates that surround experimental research
Audience: Graduate

4. Assess varied types of experimental designs on several dimensions
Audience: Graduate

5. Apply course concepts to analysis of current research and contemporary social scientific debates
Audience: Graduate

POLI SCI 821 – MASS POLITICAL BEHAVIOR
3 credits.

An empirical analysis of the role of mass publics in political life and the factors which determine the formation and expression of political beliefs and attitudes.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

POLI SCI 825 – RACE AND POLITICS IN THE UNITED STATES
3 credits.

Analysis of the role of race, class and ethnicity in the political process. Evaluation of theories from political science, economics and sociology. Topics may include policy analysis, political organizations, immigration, political behavior and culture.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2020

POLI SCI 826 – THE LEGISLATIVE PROCESS
3 credits.

Analysis of legislative process and the role of the legislature in the political system, emphasizing current research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

POLI SCI 828 – THE CONTEMPORARY PRESIDENCY: ISSUES AND APPROACHES
3 credits.

Current topics of research interest on the American presidency. Alternative approaches and methods for the study of the presidency.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022

POLI SCI/JOURN 829 – POLITICAL COMMUNICATION
3 credits.

This course examines the role of communication in American politics. Topics covered include the communication of politics (e.g., communication by politics elites, effects of mass media and interpersonal communication on political attitudes) as well as the politics of communications (regulation of political communication, policy issues, etc.).
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

POLI SCI/CLASSICS 834 – ROMAN POLITICAL THOUGHT
3 credits.

In depth study of key works of Roman political thought, along with recent and classic scholarship in political theory, history, philosophy, classics, and literature.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2020
Learning Outcomes: 1. Master the state of existing research on Roman political thought through the study of primary and secondary sources.
Audience: Graduate

2. Develop expertise in methods of political inquiry, specifically the study of the history of political thought.
Audience: Graduate

3. Design, conduct, and complete original research dealing with Roman political thought.
Audience: Graduate

4. Communicate effectively, in both speech and writing, complex concepts and arguments related to Roman political thought to multiple audiences.
Audience: Graduate

POLI SCI/A A E 835 – GAME THEORY AND POLITICAL ANALYSIS
3 credits.

An introduction to the tools of game theoretic analysis, with reference to the use of game theory in political science. Intended for those desiring a basic familiarity with the theory, and for those planning further work in formal modeling.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

POLI SCI 836 – FORMAL MODELS OF DOMESTIC POLITICS
3 credits.

Provides an overview of formal, i.e., game-theoretic, models of domestic politics. This course builds directly upon the material presented in Political Science 835.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022

POLI SCI 837 – FORMAL MODELS OF INTERNATIONAL RELATIONS
3 credits.

Provides an overview of the formal theory literature in international relations, including international security and international political economy.
Requisites: POLI SCI/A A E 835
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021

POLI SCI 839 – FIELD SEMINAR IN POLITICAL THEORY
3 credits.

An overview of approaches to interpreting, teaching, and writing about political theory.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Analyze different understandings of political theory as a subfield of political science
Audience: Graduate

2. Analyze different methods and schools of studying political theory
Audience: Graduate

3. Analyze different approaches to teaching works of political thought
Audience: Graduate

POLI SCI 840 – COMPARATIVE POLITICAL ECONOMY
3 credits.

Survey of field of comparative political economy and in-depth study of political economy of democratic and non-democratic capitalist systems. Key themes include: business and labor relations, globalization and its impact on domestic political economies, rise of emergent powers.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

POLI SCI 843 – THE POLITICAL ECONOMY OF DEVELOPMENT
3 credits.

We examine why some countries are rich, and others are poor. Selected topics include the role of institutions, regime type, corruption, the resource curse, ethnic differences and state capacity. We focus on the cutting edge of the empirical literature on development, and pay close attention to measurement and causal inference.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop theoretically grounded and testable hypotheses about the political economy of development.
Audience: Graduate

2. Formulate and implement clear research designs to evaluate hypotheses.
Audience: Graduate

POLI SCI 844 – DEMOCRATIC IMPERFECTIONS
3 credits.

Democracies frequently depart from their ideal type. We focus on select problems with democracy, and examine their causes and effects, and remedies for them. Topics vary from year-to-year, and include inequalities in political representation and participation, a lack of accountability and ethnic voting.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Develop theoretically grounded and testable hypotheses about the causes and effects of, and remedies for, inequalities in political representation and participation.
Audience: Graduate

2. Formulate and implement clear research designs to evaluate hypotheses.
Audience: Graduate

POLI SCI 846 – RACIAL AND ETHNIC DIVERSITY: CAUSES AND EFFECTS
3 credits.

Focuses on the causes and effects of racial and ethnic diversity in a range of contexts across different countries. Includes the following topics: 1) definitions of diversity and how ethnic and racial diversity is measured; 2) the causes of diversity including migrations and state actions such as ethnic cleansing and colonialism, and later processes of immigration and segregation; 3) the effects of diversity or segregation, including on social relations, conflict, public good provision, and political behavior; and the effects of ethnic and racial diversity in organizations; and 4) considers ways of increasing diversity including affirmative action and quotas, and the effectiveness of diversity training. Readings will include cases studies from different countries and different time periods and will include a range of different racial and ethnic groups around the world.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Gain an understanding of the meaning and measurement of racial and ethnic diversity.
Audience: Graduate

2. Become familiar with the social science literature on the causes and effects of ethnic and racial diversity and segregation.
Audience: Graduate

3. Identify and learn about research methods used in the study of racial and ethnic diversity.
Audience: Graduate

4. Develop critical reading, writing, collaboration, and presentation skills.
Audience: Graduate

POLI SCI 850 – RELIGION AND POLITICS
3 credits.

Examines the meanings of, and interactions between, religion and politics in comparative politics, international relations, and American politics. Explores the impact religion has on wide range of politically relevant outcomes and the mechanisms through which religion shapes those outcomes. Provides an overview of the main theoretical, conceptual, and empirical studies of religion and politics.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Comprehension of selected theories related to religion and politics
Audience: Graduate

2. Critical assessment of theories related to religion and politics
Audience: Graduate

3. Application of theories related to religion and politics to general questions in political science
Audience: Graduate

POLI SCI 851 – CONTENTIOUS POLITICS
3 credits.

Why do people mobilize outside of routine political channels or institutions to pursue political change? How do we explain moments when people take to the streets or take up arms to accomplish their political goals? At the heart of these questions is one that has long formed a core of social science inquiry: how do scholars explain collective action, particularly in the face of often serious risks. Examine these questions through exploring leading theoretical themes in the study of social movements, revolutions, and riots. Explore how a variety of factors affect the where's, why's and how's of movement dynamics.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Understand, analyze, explain, and critique theoretical approaches to contention.
Audience: Graduate

2. Understand, analyze, explain, and critique explanations for the emergence of social mobilizations, including revolutions and riots.
Audience: Graduate

3. Understand, analyze, explain, and critique explanations for a variety of dynamics of contention.
Audience: Graduate

4. Explain the role of culture and emotions as well as social and political structures in processes of contention.
Audience: Graduate

5. Understand and critique various methodological approaches to studying contention including which methods are best suited for which questions.
Audience: Graduate

6. Apply methodological and theoretical approaches to contention through independent research.
Audience: Graduate

POLI SCI 853 – COMPARATIVE POLITICAL INSTITUTIONS
3 credits.

Comparative theoretical and empirical analysis of political institutions, including electoral systems, legislatures, executives, executive-legislative relationships, political parties, party systems, federalism, economic governance, and link between institutions and internationalization.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

POLI SCI 854 – NATIONALISM AND ETHNIC CONFLICT
3 credits.

Comparative analysis of nationalism, national identity, and ethnicity and their impact on domestic and international conflict. Examines relationship between nationality, citizenship, and minority rights; territoriality and identity, contemporary religious nationalism; relationship between globalization and nationalism.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022

POLI SCI 856 – FIELD SEMINAR IN COMPARATIVE POLITICS
3 credits.

Introduction to leading concepts and theories in the field of comparative politics, including those relating to states, nations, regimes and development. Includes work on many different regions and countries employing a range of research strategies and methodologies.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand, analyze and evaluate concepts and theories in Comparative Politics
Audience: Graduate

2. Identify and understand research methods and strategies and their implications
Audience: Graduate

3. Identify political science publication norms in top journals and university presses
Audience: Graduate

4. Develop critical reading, writing, collaboration, and presentation skills
Audience: Graduate

5. Become acquainted with UW-Madison faculty in Comparative Politics
Audience: Graduate

POLI SCI 857 – INTERNATIONAL RELATIONS THEORIES
3 credits.

Analysis of the major theories on the functioning of the international political system and the behavior of nations within it.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

POLI SCI 862 – STATE AND SOCIETY IN COMPARATIVE PERSPECTIVE
3 credits.

Reviews a range of approaches that focus on civil society, social movements, ethnic and religious based mobilization, as well as gender and class based approaches to state-society relations.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

POLI SCI 864 – INTERNATIONAL POLITICAL ECONOMY
3 credits.

Analysis of key classical and contemporary theories in international political economy.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022

POLI SCI/ENVIR ST/PUB AFFR 866 – GLOBAL ENVIRONMENTAL GOVERNANCE
3 credits.

In-depth examination of the political and policy challenges posed by global environmental degradation. Analysis of international institutions for managing the global environment.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

POLI SCI/PUB AFFR 871 – PUBLIC PROGRAM EVALUATION
3 credits.

Compares the conceptual, statistical, and ethical issues of experimental, quasi-experimental and non-experimental designs for program evaluation. Definitions of outcomes, sample size issues, statistical biases in measuring causal effects of programs, and the reliability of findings will be emphasized using case studies selected from current public programs.
Requisites: PUB AFFR 818
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

POLI SCI 873 – AMERICAN POLITICAL PARTIES
3 credits.

Reviews major approaches to analyzing political parties and understanding their developmental changes. Examines the parties in operation and the relationship of parties to the state and society.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

POLI SCI/PUB AFFR/URB R PL 874 – POLICY-MAKING PROCESS
3 credits.

Examines the political, social, and economic contexts that shape and are shaped by policy making processes. Though the focus is on the US, international comparisons will be made, and students are encouraged to think about the American context through comparative and international perspectives. Familiarizes students with dominant theories and models of policymaking process and policy change, starting with the model of the policy cycle. Focuses in on key topics and issues in policy making, specifically, agenda setting, implementation, and the relationships between policymaking and democracy. Reflects on contemporary and emerging issues and dilemmas of the politics of policy making.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify important contextual aspects of policy making processes, of dominant theories, models and conceptual frameworks of policy processes, and of key issues and topics in policy making.
Audience: Graduate

2. Critically analyze theories and evidence presented in readings and describe debates, past and present, surrounding public policy making processes.
Audience: Graduate

3. Read and comprehend academic research, data, and writing as well as journalistic writings on relevant issues of public policy processes and politics.
Audience: Graduate

4. Communicate summaries and analyses of topics, issues and key readings in class discussions, presentations, and writing assignments. Use clear written language and draw on theories, concepts, and evidence to support their arguments and ideas.
Audience: Graduate

5. Maintain fidelity to objective social science-based research methods.
Audience: Graduate

6. Prepare a high-quality presentation and communicate effectively as a speaker.
Audience: Graduate

POLI SCI/PUB AFFR/URB R PL 878 – PUBLIC MANAGEMENT
3 credits.

Role of administration in American government; problems of organization, bureaucracy and control; public policy as the output of the administrative process.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

POLI SCI/PUB AFFR 885 – ADVANCED PUBLIC MANAGEMENT: CRAFT, CONSTRAINTS AND ACCOUNTABILITY
3 credits.

Examines how managers in public and not-for-profit agencies can secure and utilize legal authority, human resources, and funds to accomplish organizational goals. Includes strategies for establishing and maintaining effective external relations and for working through other organizations to accomplish objectives.
Requisites: URB R PL/POLI SCI/PUB AFFR 878
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023

POLI SCI 900 – TOPICS IN POLITICAL SCIENCE
1-3 credits.

An umbrella course for variable credit topic courses, such as colloquia series, workshops, intensive summer courses, half-semester courses, etc.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

POLI SCI 904 – SEMINAR-AMERICAN POLITICS
3 credits.

In-depth examination of selected topics on American politics and governmental institutions.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

POLI SCI 917 – TIME SERIES ANALYSIS
3 credits.

This course introduces students to time series methods and applications, including ARMA models, error corrections models and reduced form specifications. Course also discusses co-integration and fractional integration.
Requisites: POLI SCI 812 and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

POLI SCI 919 – SEMINAR-ADVANCED METHODOLOGY
3 credits.

Design of research and adaptation of advanced methods to solve particular methodological problems in original analyses of political data.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

POLI SCI 930 – SEMINAR IN MODERN POLITICAL THOUGHT
3 credits.

Exploration of themes from modern political thought.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Explain important concepts and arguments made by thinkers in the history of modern political thought
Audience: Graduate

2. Analyze modern political and ethical theories
Audience: Graduate

3. Assess political and ethical theories made by thinkers in the history of modern political thought
Audience: Graduate

4. Apply course concepts to analysis of contemporary political and ethical debates
Audience: Graduate

POLI SCI 931 – SEMINAR-POLITICAL THEORY
3 credits.

Analysis of and research on problems of theorizing in and about political life.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

POLI SCI 932 – SEMINAR IN EARLY MODERN POLITICAL THEORY
3 credits.

Study of selected topics or themes in early modern (c. 1500-1750 CE) political thought.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024
Learning Outcomes: 1. Master the state of existing research on a topic in early modern political theory through the study of primary and secondary sources.
Audience: Graduate

2. Develop expertise in methods of political inquiry, specifically the study of the history of political thought.
Audience: Graduate

3. Design, conduct, and complete original research dealing with early modern political theory.
Audience: Graduate

4. Communicate effectively, in both speech and writing, complex concepts and arguments related to early modern political theory to multiple audiences.
Audience: Graduate

POLI SCI/GEN&WS 933 – FEMINIST POLITICAL THEORY
3 credits.

Focuses on how specific schools of feminist thought redefine the political, spanning historical and contemporary feminist political theory.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021

POLI SCI 935 – SEMINAR IN CONTEMPORARY POLITICAL THEORY
3 credits.

Exploration of themes in contemporary political theory.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Explain important concepts and arguments made by thinkers in the history of political thought
Audience: Graduate

2. Analyze political and ethical theories, both historical and contemporary
Audience: Graduate

3. Assess political and ethical theories made by thinkers in the history of political thought
Audience: Graduate

4. Apply course concepts to analysis of contemporary political and ethical debates
Audience: Graduate

POLI SCI 936 – SEMINAR IN CONTINENTAL POLITICAL THOUGHT
3 credits.

Exploration of themes central to study of continental political thought.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Explain important concepts and arguments made by thinkers in continental political thought
Audience: Graduate

2. Analyze continental political and ethical theories, both historical and contemporary
Audience: Graduate

3. Assess political and ethical theories made by continental thinkers
Audience: Graduate

4. Apply course concepts to analysis of contemporary political and ethical debates
Audience: Graduate

POLI SCI 937 – SEMINAR IN LEGAL AND CONSTITUTIONAL THEORY
3 credits.

Exploration of themes in legal and/or constitutional theory.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Explain important concepts and arguments in legal and/or constitutional theory
Audience: Graduate

2. Analyze legal and/or constitutional theories.
Audience: Graduate

3. Assess legal and/or constitutional theories.
Audience: Graduate

4. Apply course concepts to analysis of contemporary legal and/or constitutional debates.
Audience: Graduate

POLI SCI 940 – DOMESTIC POLITICS OF INTERNATIONAL RELATIONS
3 credits.

Examines how domestic institutions and processes influence the international system. Also examines how international forces influence domestic politics in the areas of foreign policy, international political economy and security.
Requisites: POLI SCI 857
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

POLI SCI 945 – SEMINAR-NATIONAL SECURITY AFFAIRS
3 credits.

Contemporary military strategy, the interaction of military and political factors in international politics, and the processes and content of defense policies, with emphasis on the United States.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

POLI SCI 948 – SEMINAR: TOPICS IN COMPARATIVE POLITICS
3 credits.

Research seminar on specific topics in comparative politics.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

POLI SCI 950 – PSYCHOLOGICAL APPROACHES TO INTERNATIONAL RELATIONS
3 credits.

Designed around substantive topic areas, including reputation, personality, and emotions. Covers the broad patterns of scholarship in political psychology over the last 50 years. The larger methodological issues around political psychology and International Relations (IR) (how do you study this? what tradeoffs do the various approaches entail?) will form a backdrop to most of our discussions.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Explain important concepts and arguments made by prominent scholars in political psychology and international relations
Audience: Graduate

2. Assess a variety of research designs on several dimensions
Audience: Graduate

3. Apply course concepts to analysis of current research and contemporary social scientific debates
Audience: Graduate

POLI SCI 959 – SEMINAR-INTERNATIONAL ORGANIZATION
3 credits.

Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

POLI SCI 960 – SEMINAR-INTERNATIONAL RELATIONS
3 credits.

Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2021

POLI SCI 978 – AUTHORITARIAN POLITICS AND INSTITUTIONS
3 credits.

Introduction to scholarship on authoritarian regimes and institutions, the most prevalent type of government throughout history. Deals with the conceptual and operational differences between authoritarian and democratic regimes. Discusses autocrats' 'menu of manipulation' to maintain power and minimize both external and internal threats. Focuses on tools such as establishing legislatures, holding elections, controlling the dissemination of information, and power-sharing with political opponents as well as the regime allies. Discusses dictators' strategies to alienate the opposition and to hold power while minimizing external threats from the public, the military, and/or disgruntled political elites. Discusses how and under what conditions autocrats instrumentalize women's rights and on democratic backsliding and the future of global governance.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Differentiate between democratic and authoritarian regimes and become familiar with the different types of authoritarian rule.
Audience: Graduate

2. Recognize how authoritarian governments exercise and maintain power.

Audience: Graduate

3. Review sophisticated analytical frameworks and methodologies. Critique cutting-edge research in comparative politics and identify gaps in existing research.
Audience: Graduate

4. Identify the intersection of authoritarianism and gender and the role of women in shaping political outcomes from a comparative perspective.
Audience: Graduate

POLI SCI/A A E/ANTHRO/C&E SOC/GEOG/HISTORY/LACIS/PORTUG/SOC/SPANISH 982 – INTERDEPARTMENTAL SEMINAR IN THE LATIN-AMERICAN AREA
1-3 credits.

Interdisciplinary inquiry in Latin American society and culture.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

POLI SCI/AFRICAN/ANTHRO/ECON/GEOG/HISTORY 983 – INTERDEPARTMENTAL SEMINAR IN AFRICAN STUDIES TOPICS
3 credits.

Interdisciplinary inquiry in African societies and cultures.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Develop in-depth knowledge in a sub-field of specialization within African studies
Audience: Graduate

2. Acquire and demonstrate understanding of major theories, approaches, concepts, currently informing African studies
Audience: Graduate

3. Understand your process of learning and possess the capacity to intentionally seek, evaluate, and learn from information, and to recognize and reduce bias in thinking.
Audience: Graduate

4. Gain firm knowledge of existing research in African studies
Audience: Graduate

5. Develop and improve speaking, readings, listening, and writing skills
Audience: Graduate

6. Write and speak across disciplinary boundaries
Audience: Graduate

7. Analyze texts from various theoretical and critical perspectives
Audience: Graduate

POLI SCI 986 – POLITICAL THEORY WORKSHOP
1-3 credits.

Presentation and evaluation of political theory research in progress by members of the workshop and invited speakers.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

POLI SCI 987 – COMPARATIVE POLITICS COLLOQUIUM
1-3 credits.

Presentation and evaluation of comparative politics research in progress by members of the workshop and invited speakers.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

POLI SCI 988 – INTERNATIONAL RELATIONS COLLOQUIUM
1-3 credits.

Presentation and evaluation of International Relations research in progress by members of the workshop and invited speakers.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024
Learning Outcomes: 1. Explain important concepts and arguments made by prominent scholars in political psychology and international relations
Audience: Graduate

2. Assess a variety of research designs on several dimensions
Audience: Graduate

3. Apply course concepts to analysis of current research and contemporary social scientific debates
Audience: Graduate

4. Provide apt, concise and helpful feedback to works in progress
Audience: Graduate

POLI SCI 989 – AMERICAN POLITICS WORKSHOP
1 credit.

Presentation and evaluation of American politics research in progress by members of the workshop and invited speakers.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. gain an awareness of cutting-edge research in American politics
Audience: Graduate

2. learn and practice how to constructively critique research in American politics
Audience: Graduate

3. gain experience in how to present research in professional settings
Audience: Graduate

4. practice how to receive constructive criticism and engage with criticism of one's work
Audience: Graduate

POLI SCI 990 – RESEARCH AND THESIS
1-3 credits.

Under the direction of faculty.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

POLI SCI 999 – INDEPENDENT WORK
2-3 credits.

Under the direction of a staff member.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

POPULATION HEALTH SCIENCES (POP HLTH)

POP HLTH/C&E SOC 370 – INTRODUCTION TO PUBLIC HEALTH
3 credits.

Introduction to the principles of public health. Using local and global health problems as examples, introduces epidemiology, evidence-based public health practice, evaluation, and communication. Covers the major subject domains of public health including infectious and chronic disease, environmental health, injuries and accidents, and health care systems. Key theoretical models and empirical approaches of public health are discussed.
Requisites: Sophomore standing
Course Designation: Breadth - Either Social Science or Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Define public health and its core functions
Audience: Undergraduate

2. Describe the difference between individual- and population-based strategies for improving health, including primary, secondary, and tertiary prevention approaches
Audience: Undergraduate

3. Describe major causes and trends in morbidity and mortality in the U.S. and globally
Audience: Undergraduate

4. Demonstrate knowledge of the 5-step public health approach (define the problem, find the causes, develop effective programs, implement programs, and evaluate impact)
Audience: Undergraduate

5. Describe the challenges and opportunities for evidence-based public health practice, focusing on health equity and social justice
Audience: Undergraduate

POP HLTH/B M I 451 – INTRODUCTION TO SAS PROGRAMMING FOR POPULATION HEALTH
2 credits.

Use of the SAS programming language for the management and analysis of biomedical data.
Requisites: Declared in the Population Health, Epidemiology or Clinical Investigation graduate program.
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Create and modify SAS datasets using programming structures within the SAS Data Step (e.g. Do loops, If/Then/Else, Functions, and Arrays).
Audience: Graduate

2. Utilize various SAS Procedures to explore SAS datasets, to summarize information in SAS datasets, and to perform basic statistical analyses.
Audience: Graduate

3. Recognize common SAS program errors, identify strategies for debugging SAS programs, and implement general techniques to check and verify your coding.
Audience: Graduate

POP HLTH/ENVIR ST 471 – INTRODUCTION TO ENVIRONMENTAL HEALTH
3 credits.

Impact of environmental problems on human health; biological hazards to human health from air and water pollution; radiation; pesticides; noise; problems related to food, occupation and environment of the work place; accidents. Physical and chemical factors involved.
Requisites: Junior standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the principles and practice of environmental health.
Audience: Undergraduate

2. Describe environmental health and its history as a crucial aspect of the history of public health
Audience: Undergraduate

3. Describe the U.S. and world health status and issues as background framework to environmental health.
Audience: Undergraduate

4. Describe a brief introduction to the public health research methodologies including epidemiology and toxicology.
Audience: Undergraduate

5. Describe crucial infectious and non-infectious disease principles as necessary to understand issues in environmental health.
Audience: Undergraduate

POP HLTH/ENVIR ST 502 – AIR POLLUTION AND HUMAN HEALTH
3 credits.

Toxicologic, controlled and epidemiologic studies on major air pollutants. Overview of study methods, lung physiology and pathology; air pollution sources, types, meteorology, sampling methods, controls and regulations.
Requisites: Junior standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the health science of air pollution's effect on human health.
Audience: Both Grad & Undergrad

2. Describe air pollution and its history as a crucial aspect of the history of environmental health.
Audience: Both Grad & Undergrad

3. Describe the U.S. and world health status and issues from air pollution.
Audience: Both Grad & Undergrad

4. Describe a brief introduction to the public health research methodologies and science including epidemiology and toxicology, risk assessment and the lungs.
Audience: Both Grad & Undergrad

5. Describe the detailed scientific and policy information on indoor and outdoor air pollutants.
Audience: Both Grad & Undergrad

6. Describe the science and policy solutions for air pollution and human health issues.
Audience: Graduate

POP HLTH/ECON/PUB AFFR 548 – THE ECONOMICS OF HEALTH CARE
3-4 credits.

Analysis of the health care industry. Markets for hospitals and physicians' care, markets for health manpower, and the role of health insurance.
Requisites: ECON 301, ECON 311, or PUB AFFR 880
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Specify the types of economic decisions health care players make in different markets.
Audience: Both Grad & Undergrad

2. Apply micro economic models and tools to study economic decisions in the healthcare system and understand their implications.
Audience: Both Grad & Undergrad

3. Evaluate empirical evidence from health care literature that involves cost, access, and quality of care considerations for the different health care players.
Audience: Both Grad & Undergrad

4. Describe the basic institutional structure of the US healthcare market and how it compares to markets in other countries.
Audience: Both Grad & Undergrad

5. Identify types of data necessary for testing specific hypotheses involving health care player behavior.
Audience: Graduate

POP HLTH/B M I 551 – INTRODUCTION TO BIOSTATISTICS FOR POPULATION HEALTH
4 credits.

Designed for population health researcher. Topics include descriptive statistics, elementary probability, probability distributions, one- and two-sample normal inference (point estimation, hypothesis testing, confidence intervals), power and sample size calculations, one- and two-sample binomial inference, underlying assumptions and diagnostic work.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and recognize statistical and probability terminology, symbols, definitions, and formulas
Audience: Graduate

2. Explain the meaning, assumptions, and interrelationships of statistical and probability concepts and formulas
Audience: Graduate

3. Execute probability and statistical calculations from information provided
Audience: Graduate

4. State assumptions, conclusions and interpretation in terms of statistical and probability computations
Audience: Graduate

POP HLTH/B M I 552 – REGRESSION METHODS FOR POPULATION HEALTH
4 credits.

Introduction to the primary statistical tools used in epidemiology and health services research: logistic regression for binary outcomes, multiple linear regression for continuous outcomes, multinomial regression models for categorical outcomes, and Poisson and negative binomial regression models for count outcomes.
Requisites: STAT/B M I 541 or POP HLTH/B M I 551
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. State the assumptions underlying linear, logistic, multinomial and Poisson regression models, recognize and address violations of those assumptions, and estimate and interpret regression models to answer epidemiologic and public health research questions.
Audience: Graduate

2. Critique uses of linear, logistic, multinomial and Poisson regression models in the epidemiologic and public health literature.
Audience: Graduate

3. Translate epidemiologic concepts into statistical modeling assumptions, and explain statistical modeling assumptions in epidemiologic terms.
Audience: Graduate

4. Recognize applications that require methods beyond their expertise, and identify resources to learn about more advanced techniques.
Audience: Graduate

POP HLTH/HIST SCI/MED HIST 553 – INTERNATIONAL HEALTH AND GLOBAL SOCIETY
3 credits.

Major problems in international health from 1750 to the present. Focus on disease epidemiology and ecology; political economy of health; migration; quarantine; race, ethnicity, and health care; international health research; cross-cultural healing; mental and maternal health; growth of international health organizations.
Requisites: Junior standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Recognize the utility of humanistic methods for the study of modern international health
Audience: Undergraduate

2. Develop critical thinking skills through techniques of close reading and written analysis
Audience: Undergraduate

3. Understand essential developments in the evolving relationship between global history, politics, and public health on a global scale.
Audience: Undergraduate

POP HLTH/NUTR SCI 621 – INTRODUCTION TO NUTRITIONAL EPIDEMIOLOGY
1 credit.

Techniques used to evaluate relationships of diet to health and disease in human populations; integration of knowledge gained with results of animal and clinical studies toward understanding dietary risk or protective factors for disease. Includes advanced diet assessment and basic epidemiologic approaches.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

POP HLTH/M&ENVTOX/ONCOLOGY/PHM SCI/PHMCOL-M 625 – TOXICOLOGY I
3 credits.

Basic principles of toxicology and biochemical mechanisms of toxicity in mammalian species and man. Correlation between morphological and functional changes caused by toxicants in different organs of the body.
Requisites: (BIOCHEM 501 or 508) and (ANAT&PHY 335, 435, or (BIOCORE 485 and 486)) and PATH 404; or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss the physiology and pathology of toxicology, understanding the basicfundamentals of toxicology and toxic agents
Audience: Both Grad & Undergrad

2. Demonstrate metabolism and breakdown of toxicants using a given dataset
Audience: Both Grad & Undergrad

3. Recognize various experimental models to obtain scientific results
Audience: Both Grad & Undergrad

4. Implement knowledge to design experiments applicable to one’s own research
Audience: Both Grad & Undergrad

5. Critique an example of toxicology in media and develop a presentation of this example
Audience: Both Grad & Undergrad

6. Explore new areas to assist in career development via journal club
Audience: Graduate

POP HLTH/M&ENVTOX/PATH/PHM SCI/PHMCOL-M 626 – TOXICOLOGY II
3 credits.

Survey of the basic methods and fundamental biochemical mechanisms of toxicity. Toxicity in mammalian organ systems, techniques for evaluating toxicity, as well as mechanisms of species specificity, and environmental interactions (with toxicant examples) are presented.
Requisites: POP HLTH/M&ENVTOX/ONCOLOGY/PHM SCI/PHMCOL-M 625
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain and identify the effects of toxicants on specific organs within the human body
Audience: Both Grad & Undergrad

2. Demonstrate metabolism and reactions of toxicants within organ systems using a given dataset
Audience: Both Grad & Undergrad

3. Classify different means of risk assessment and the conceptual rationale behind these methods
Audience: Both Grad & Undergrad

4. Implement knowledge to design experiments applicable to one's own research
Audience: Both Grad & Undergrad

5. Relate specific organ concepts with conceptual examples from M&ENVTOX 625 to enhance scientific understanding
Audience: Undergraduate

6. Appraise concepts to research to identify future research concepts.
Audience: Graduate

POP HLTH/GENETICS/MD GENET 636 – PUBLIC HEALTH GENOMICS
1 credit.

Provides an introduction to public health genomics through a review of fundamental principles of genetics, the use of genetic information in clinical and research settings, and its implications for disease management and prevention, and health promotion. Explores policies that guide public health and discusses current ethical, legal, and social implications of these policies.
Requisites: (Junior standing and ZOOLOGY/BIOLOGY/BOTANY 151) or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Discuss the impact of genetics on clinical care and public health practice
Audience: Both Grad & Undergrad

2. Critically discuss genetic/genomic policies and the relevant ethical, legal, and social implications (ELSI) of these policies
Audience: Both Grad & Undergrad

3. Read, summarize, critique, and relate current news articles to key concepts in public health genomics
Audience: Graduate

POP HLTH 640 – FOUNDATIONS IN GLOBAL HEALTH PRACTICE
1 credit.

An interdisciplinary course designed to prepare students for specific global health field experiences.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2021
Learning Outcomes: 1. Define and describe the evolution of foundational concepts related to of global health - including tropical medical, international health, global public health, one health and planetary health.
Audience: Both Grad & Undergrad

2. Describe and review global health competencies and develop a personalized assessment and roadmap identifying current skills and skill levels and goals for acquiring additional desired competencies needed to carry out research and implement programs in a global context.
Audience: Both Grad & Undergrad

3. Identify and use information from inter-disciplinary sources, including quantitative and qualitative data, as well as historical and cultural information, to gain a place-based understanding of the health status and health care system, as well as the overall socio-cultural context in which the project takes place.
Audience: Both Grad & Undergrad

4. Carry out topical placed-based study (retrospective or prospective) individually, or in pairs or small groups.
Audience: Graduate

POP HLTH 644 – INTERDISCIPLINARY PERSPECTIVES ON GLOBAL HEALTH AND DISEASE
1 credit.

Addresses a variety of global health topics through study of a specific country. Consider health data, health systems, historical and cultural information, and concepts of cultural competence and cultural humility.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2020
Learning Outcomes: 1. Explain the global burden of diseases, the health transition, and the triple burden of disease as it relates to the country/region studies
Audience: Both Grad & Undergrad

2. Describe how country-specific environmental, cultural, economic, and social factors influence health.
Audience: Both Grad & Undergrad

3. Review the structure of the health system in the country studied, the role of primary health care, public health, and non-governmental organizations in the health sector.
Audience: Both Grad & Undergrad

4. Explore public health approaches for maintaining health and preventing and treating illness in community settings, including surveillance, diagnostic activities, and interventions. This should include basic health needs such as maternal and child health and nutrition, as well as transnational health challenges such as avian flu, HIV/AIDS and other acute and chronic emerging issues.
Audience: Both Grad & Undergrad

5. Utilize principles and strategies for interdisciplinary team work (communication, negotiation, respect for group dynamics, and conflict resolution).
Audience: Both Grad & Undergrad

6. Explore concepts related to cultural competence and cultural humility, as well participatory community approaches to health.
Audience: Both Grad & Undergrad

7. Examine ethical issues related to global health.
Audience: Both Grad & Undergrad

8. Describe diseases commonly found in the country studied and explain the etiology, epidemiology, clinical presentation in humans and animals, public health implications, and prevention and treatment strategies.
Audience: Graduate

POP HLTH 650 – SPECIAL TOPICS
1-6 credits.

Variable content course.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

POP HLTH/B M I 651 – ADVANCED REGRESSION METHODS FOR POPULATION HEALTH
3 credits.

Extension of regression analysis to observational data with unequal variance, unequal sampling and propensity weights, clusters and longitudinal measurements, using different variance structures, mixed linear models, generalized linear models and GEE. Matrix notation will be introduced and underlying mathematical and statistical principles will be explained. Examples use data sets from ongoing population health research.
Requisites: POP HLTH/B M I 552
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Extend the knowledge of regression analysis beyond ordinary linear models
Audience: Graduate

2. Describe the features of correlated data and their implications in drawing inference
Audience: Graduate

3. Construct proper linear and generalized linear models for longitudinal and clustered data
Audience: Graduate

4. Describe the assumptions needed for estimation and inference
Audience: Graduate

5. Implement the inference procedures to solve real-world problems using statistical packages such as SAS and R
Audience: Graduate

6. Use diagnostic tools to assess model fit
Audience: Graduate

7. Interpret and present the analytic results to answer substantive questions
Audience: Graduate

POP HLTH/B M I 694 – APPLIED BIOMEDICAL INFORMATICS & REAL-WORLD DATA FOR PRECISION MEDICINE & POPULATION HEALTH
2 credits.

Provides an introduction to key concepts, methods, and tools of biomedical and health informatics used in precision medicine and population health, with emphasis on collection, management, and analysis of real-world data.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Demonstrate understanding of biomedical informatics concepts, methods, and tools used in precision medicine and population health.
Audience: Graduate

2. Demonstrate understanding of real-world data (patient-generated, clinical, and genomic) and data standards used in biomedical research.
Audience: Graduate

3. Demonstrate understanding of FAIR Guiding Principles for scientific data management and stewardship.
Audience: Graduate

4. Demonstrate understanding of regulations for using protected health information (PHI) data in health research, and ability to recognize potential ethical and compliance issues.
Audience: Graduate

POP HLTH 699 – INDEPENDENT READING
1-5 credits.

To gain additional information on specific research problems or advanced training in the areas covered by department staff.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply concepts learned in coursework to real life situations
Audience: Both Grad & Undergrad

2. Read and effectively search scientific literature
Audience: Both Grad & Undergrad

3. Develop critical, analytical, and independent thinking skills
Audience: Graduate

POP HLTH/I SY E 703 – QUALITY OF HEALTH CARE: EVALUATION AND ASSURANCE
1-3 credits.

Implementation, oversight, and management of quality-oriented activities in health care settings. Overview of current and historical activities, approaches, and issues confronting health care related to quality assessment, assurance, and improvement.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2018
Learning Outcomes: 1. Understand and communicate the conceptualization and measurement of quality of healthcare and patient safety.
Audience: Graduate

2. Illustrate basic concepts and methods in quality improvement as applied to current issues in healthcare.
Audience: Graduate

3. Demonstrate an understanding of the diverse perspectives that can be used to address quality and safety issues in different healthcare organizations.
Audience: Graduate

POP HLTH/MEDICINE/NURSING 705 – SEMINAR IN INTERDISCIPLINARY CLINICAL RESEARCH EVIDENCE
2-3 credits.

Exploration of interdisciplinary clinical research questions including strategies for assessing the evidence and methodology for conducting various types of literature reviews. Emphasizes an interdisciplinary perspective.
Requisites: SOC/POP HLTH 797 and STAT/B M I 542
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop an answerable clinical research question.
Audience: Graduate

2. Search relevant scientific literature using several electronic databases and other sources of evidence (published and unpublished) across disciplines.
Audience: Graduate

3. Manage sources of evidence with reference management software.
Audience: Graduate

4. Critically review published clinical research on a chosen topic.
Audience: Graduate

5. Develop a search strategy and conduct a systematic review or other form of evidence review.
Audience: Graduate

6. Present a planned or actual evidence review to interdisciplinary peers.
Audience: Graduate

7. Describe the implications for translation of the proposed evidence review from an interdisciplinary perspective.
Audience: Graduate

POP HLTH 709 – TRANSLATIONAL AND OUTCOMES RESEARCH IN HEALTH AND HEALTH CARE
3 credits.

Seeks to review the conceptualization of translational and outcomes research in health and health care settings; to illustrate basic concepts and methods in research as applied to current issues in health and health care settings; and to understand the diverse perspectives that can be used to inform translational and outcomes research in different organizations, including those based within communities.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand and communicate the conceptualization of translational and outcomes research in health and health care.
Audience: Graduate

2. Illustrate basic concepts and methods in translational and outcomes research as applied to current issues in health and health care through creating a proposed study.
Audience: Graduate

3. Demonstrate an understanding of the diverse perspectives on health and health care that can be used to inform translational and outcomes research in different organizations, including those within community settings.
Audience: Graduate

POP HLTH 712 – INTEGRATING MEDICINE AND PUBLIC HEALTH
1 credit.

Provides an introduction to public health and opportunities to meet and discuss key concepts with an exciting variety of physician leaders who have integrated medicine public health in their careers.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand the scope of public health activities practiced by physicians today.
Audience: Graduate

2. Identify common themes in the career paths of physicians who have integrated medicine and public health.
Audience: Graduate

3. Describe common approaches that physicians use to improve the health of the public, including communication, advocacy, professionalism, and systems-based approaches.
Audience: Graduate

4. Identify opportunities for further work in public health with physicians with diverse backgrounds.
Audience: Graduate

5. Create your own plan for a "path of distinction" in public health
Audience: Graduate

POP HLTH 713 – EPIDEMIOLOGY OF HIV/AIDS
1 credit.

Provides an overview of the AIDS pandemic in the United States and worldwide. Topics covered include a review of the epidemiology of AIDS, the natural history of HIV disease, strategies to prevent and treat HIV, and local and global health impact with a focus on historically significant milestones as well as promising current and future research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2019
Learning Outcomes: 1. Describe the changing epidemiology and impact of HIV/AIDS in the U.S. and worldwide
Audience: Graduate

2. List co-factors of and strategies to prevent HIV transmission
Audience: Graduate

3. Identify how HIV progresses to AIDS and strategies to manage HIV disease
Audience: Graduate

4. Describe current and future areas of research that aim to prevent transmission of HIV
Audience: Graduate

POP HLTH 718 – PRINCIPLES OF GLOBAL HEALTH CARE SYSTEMS
2 credits.

Addresses and analyzes differences in health status and methods of organizing and providing health services in countries with varying levels of development and types of socio-political systems. Develops an understanding of the various avenues of international cooperation in health.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2020
Learning Outcomes: 1. Describe differences in systems of providing health services among countries at different levels of development and with varying socio-political systems.
Audience: Graduate

2. Critically analyze selected global health issues, such as: health and human rights, health disparities, and the global health workforce
Audience: Graduate

3. Describe the role of major health organizations.
Audience: Graduate

4. Examine and clarify values and ethics in global health issues.
Audience: Graduate

POP HLTH 721 – CONSPIRACIES IN PUBLIC HEALTH
2 credits.

Skepticism and conspiracism can be barriers to successful implementation of public health and medical interventions such as vaccination, fluoridation of water, and HIV treatment. Conversations between people with opposing viewpoints, whether face-to- face or via social media, often devolve to disparagement and dismissal. Awareness of or experience with such exchanges causes us to avoid tackling such "hot button" topics with friends, colleagues, and members of our communities. While it is all too easy to believe people who adopt conspiracy theories to be members of the fringe, research has shown that medical conspiracy theories are widely known, broadly endorsed, and highly predictive of many common health behaviors. Prepares health professionals to educate communities about important public health and medical interventions.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe popular and less popular conspiracy theories related to biomedical and public health interventions and their origins.
Audience: Graduate

2. Explain the psychological and psychosocial basis of conspiracy theory adoption and perpetuation.
Audience: Graduate

3. Implement techniques to change individual and public opinion and behaviors related to public health and medical interventions.
Audience: Graduate

POP HLTH 728 – CLIMATE CHANGE MEDICINE
2 credits.

Climate change threatens human health through multiple exposure pathways, from heatwaves, storms and air pollution episodes,to influences on infectious diseases, nutrition and mental health. Gain thorough and up to date review of these health links and learn present strategies for preparedness and prevention. Medical students will be introduced to a "Health in all Policies" approach that is essential to optimize the potential for medical interventions to address the health risks from climate change, as well as potential health benefits from mitigating the root causes of climate change.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate key concepts in environmental health risk assessment.
Audience: Graduate

2. Recognize the linkages between climate change and human health and well-being, as well as exposure pathways through which impacts occur.
Audience: Graduate

3. Learn and recognize the value in using a “Health in all Policies” approach to prevention.
Audience: Graduate

4. Recognize the main ways that actions to mitigate climate change has offer large benefits to health, especially in reducing chronic diseases
Audience: Graduate

5. Develop effective risk communication strategies related to climate change and health.
Audience: Graduate

6. Demonstrate ability to construct a Message Box to effectively prepare for interviews with the media, and to write an effective Op-Ed.
Audience: Graduate

POP HLTH 729 – PREPAREDNESS IN PUBLIC HEALTH
2 credits.

Provides an overview of various types of public health emergencies and disasters including the organizations and disciplines that prepare and respond to natural and unnatural emergencies. Gain an understanding of how public health officials, public health practitioners, state and local health department staff, health care personnel and emergency responders plan for and respond to public health emergencies. The role of the physician will specifically be explored.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020
Learning Outcomes: 1. Describe involved organizations and disciplines as well as current methods for disaster planning, preparedness and response; public health threats and contingency plans.
Audience: Graduate

2. Examine the impacts of emergencies and disasters to our systems, health and society.
Audience: Graduate

3. Describe the role of the physician as provider and partner in disaster planning, preparedness and response.
Audience: Graduate

4. Incorporate reflection and self-assessment regarding ethical challenges and considerations in public health emergency and response.
Audience: Graduate

POP HLTH/ENVIR ST 739 – CLIMATE CHANGE, HUMAN AND PLANETARY HEALTH
2 credits.

Provide tools to identify and address real-world global environmental health issues, stemming from climate change, habitat destruction leading to disease spillover events, food insecurity, and urban design.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize unique environmental public health challenges posed by climate change.
Audience: Graduate

2. Define the planetary boundaries and describe their links to human health.
Audience: Graduate

3. Define and Understand the Planetary Health framework and principles for systems-based approaches to risk management and health promotion.
Audience: Graduate

4. Learn and apply a Health in All Policies strategy to demonstrate the value of more comprehensive, cross-sector disease prevention programs.
Audience: Graduate

5. Critically analyze the linkages between physical and ecological conditions with human health and well-being, as well as exposure pathways through which impacts occur.
Audience: Graduate

6. Develop and exhibit effective risk and/or science communication strategies related to environmental health.
Audience: Graduate

POP HLTH 750 – CANCER EPIDEMIOLOGY
2 credits.

Covers current knowledge on cancer occurrence and control in human populations. Design and analysis approaches appropriate for cancer epidemiology will also be discussed.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the unequal burden of cancer among populations and variations across time and geography.
Audience: Graduate

2. Describe the distinctive features of the biology of cancer and carcinogenesis that have implications for epidemiologic research.
Audience: Graduate

3. Demonstrate knowledge about the major determinants for several common and emerging cancer sites, both for risk and survivorship.
Audience: Graduate

4. Critique epidemiologic study designs for strengths and weaknesses in answering research questions related to cancer risk and survivorship.
Audience: Graduate

POP HLTH 752 – PRINCIPLES OF POPULATION HEALTH: DETERMINANTS OF HEALTH AND HEALTH DISPARITIES
2 credits.

An introduction to the field of "Population Health Science" - the multidisciplinary study of why populations are healthy (or not) and how our limited resources can be allocated across the multiple determinants of health to improve population health.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply principles of population health sciences to understand the multiple determinants of health and what it means for such determinants to produce health and health disparities.
Audience: Graduate

2. Apply principles of population health sciences to understand the optimal allocation of resources across health determinants for the improvement of health and reduction of health disparities and to understand how such resource allocation relates to fundamental economic principles.
Audience: Graduate

3. Apply principles of population health sciences to understand the roles of socioeconomic status, behavior, medical care, and community on the production of health at individual and population levels and to appreciate the broad range of social determinants of health.
Audience: Graduate

4. Demonstrate understanding of the different ways in which individual health and population health are conceived and measured, and how particular subpopulations often have special health considerations.
Audience: Graduate

POP HLTH 753 – PRINCIPLES OF POPULATION HEALTH: POPULATION HEALTH AND HEALTHCARE SYSTEMS
2 credits.

Considers the roles of healthcare systems in improving population health, focusing on the importance of considering healthcare as one among multiple determinants of health.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Apply principles of population health sciences to understand the major dilemmas and tradeoffs involved in attempts to improve healthcare delivery, utilization, outcomes, and quality.
Audience: Graduate

2. Apply principles of population health sciences to understand the role of health care as one of many determinants of population health
Audience: Graduate

3. Apply principles of population health sciences to understand how efficient delivery of healthcare services is hindered by different forms of market failure and how the attainment of value-based cost-effective health care depends on the reimbursement and insurance incentives designed to encourage it.
Audience: Graduate

4. Demonstrate understanding of policy and program evaluation and its role in research dissemination, and understanding of the use and misuse of data in the development of evidence health policy.
Audience: Graduate

POP HLTH 784 – PUBLIC HEALTH SURVEILLANCE AND ANALYTICS
3 credits.

Learn applied techniques for community health assessment and surveillance. Population health data (including census, natality, mortality, hospital discharge, behavioral risk factor) are retrieved for analysis and interpretation.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020
Learning Outcomes: 1. Understand the purpose and role of monitoring population health.
Audience: Graduate

2. Name, describe in detail and use some of the existing data systems that are used to monitor population health in Wisconsin, the U.S. and globally.
Audience: Graduate

3. Understand and use methods for gathering and analyzing existing population health data.
Audience: Graduate

4. Complete and present a final project and brief report to monitor a health priority.
Audience: Graduate

POP HLTH/M&ENVTOX 789 – PRINCIPLES OF ENVIRONMENTAL HEALTH: A SYSTEMS THINKING APPROACH
3 credits.

Provides an overview of the field of environmental health, using a systems thinking approach. Systems thinking recognizes that environmental health problem solving is complex and that solutions in one area may have positive or negative impacts on other areas. An introduction to the history of environmental health within the field of public health from the local to the federal and global level. Introduces multiple disciplines, methods and approaches to numerous environmental health topics. Includes introduction to methods and tools necessary for assessing human health risks from a variety of environmental hazards and exposures found in air, land, and water with a focus on physical and chemical risks. Additional details regarding specific hazard, exposure and health outcome data and their relationship to environmental health risk assessment, environmental health decision-making and management form a public health practice perspective will be discussed.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019
Learning Outcomes: 1. Summarize the history of environmental health sciences as a crucial aspect of public health and environmental justice.
Audience: Graduate

2. Discuss and predict why a systems thinking approach is appropriate for addressing environmental health problems and environmental justice.
Audience: Graduate

3. Explain differences in types and classes of environmental hazards (e.g., metals), their sources (e.g. air pollution, land use), how people are exposed and health effects.
Audience: Graduate

4. Understand core principles in toxicology (e.g., toxicokinetics, dose-response) pertain to the environmental health sciences.
Audience: Graduate

5. Analyze an environmental health issue using an environmental health sciences and systems thinking framework and make policy recommendations.
Audience: Graduate

POP HLTH/KINES 791 – PHYSICAL ACTIVITY EPIDEMIOLOGY
3 credits.

Recommendations for and surveillance of physical activity in the U.S., and associations with health and disease at the population level. Emphasis on measurement techniques, study design and research considerations.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify the strengths and weaknesses of epidemiological study designs and critical issues in the analysis of physical activity-related research.
Audience: Graduate

2. Compare and contrast the specific measurement tools used in physical activity surveillance and research and identify the errors associated with these tools.
Audience: Graduate

3. Identify current public health recommendations for physical activity and describe how they have evolved.
Audience: Graduate

4. Describe the contemporary trends in physical activity in the United States and know how they have been measured.
Audience: Graduate

5. Identify the relationships between physical activity and various health conditions/diseases.
Audience: Graduate

6. Review and analyze the epidemiologic evidence for a link between physical activity and a specified outcome of interest (e.g. physical activity and depression), and present a review of the evidence
Audience: Graduate

POP HLTH 794 – BIOLOGICAL BASIS OF POPULATION HEALTH
2 credits.

Covers the physiology, biology and biochemistry of selected disease processes deemed to be important in population health sciences by virtue of their clinical significance including incidence, mortality and morbidity.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2019
Learning Outcomes: 1. Present the biological principles needed to understand the basicphysiological/anatomical/histological/biochemical processes of a normal human.
Audience: Graduate

2. Present the biological principles needed to understand the basic mechanisms of disease processes involving infection, cancer and toxic substances.
Audience: Graduate

3. Exercise the skills needed to be familiar with the terminology pertinent to the above processes.
Audience: Graduate

4. Exercise the skills needed to be able to find, access and understand literature pertinent to the above processes.
Audience: Graduate

5. Foster an increased level of comfort in the communication of these health care professionals in training and clinicians and basic scientists.
Audience: Graduate

POP HLTH 795 – PRINCIPLES OF POPULATION HEALTH SCIENCES
1-3 credits.

Introduction to multiple determinants of health including medical care, socioeconomic status, the physical environment and individual behavior, and their interactions. Also covered will be the definition and measurement of population health, economic concepts in population health, and ethical and managerial issues in population health improvement.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate basic understanding and application of principles of Population Health Sciences in characterizing the multiple determinants of health and the optimal allocation of resources across those determinants for the improvement of health and reduction of disparities
Audience: Graduate

2. Demonstrate basic understanding and application, at a basic level, of the principles of microeconomic theory relating to human and institutional decisions in the allocation of scarce resources for the production of health at individual, system and population levels
Audience: Graduate

3. Demonstrate basic understanding of the role of socioeconomic status, behavior, and community on the production of health at individual and population levels
Audience: Graduate

4. Demonstrate basic understanding of the historical and current financing and provision of health care services in the United States and its shaping by the political and policy processes
Audience: Graduate

5. Demonstrate basic understanding and application of the principles of health measurement and its role in the design of health services, policy, intervention and evaluation
Audience: Graduate

6. Demonstrate basic understanding of policy and program evaluation and its role in research dissemination
Audience: Graduate

POP HLTH 796 – INTRODUCTION TO HEALTH SERVICES RESEARCH
3 credits.

Introduces students to a variety of perspectives, substantive areas and methodological approaches to health services research that provide the foundation for understanding the structure, process and outcomes of the U.S. health care system.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the broad aims and the major content areas of health services research.
Audience: Graduate

2. Identify a study's research questions, hypotheses, theoretical framework, study design, methodological approaches, and conclusions.
Audience: Graduate

3. Identify the strengths and limitations of prominent experimental and quasi-experimental designs as implemented in HSR, the assumptions each relies upon, and specific methods to assess plausibility of each assumption.
Audience: Graduate

4. Assess, and identify feasible methods to improve, the internal and external validity of a specific research study.
Audience: Graduate

5. Gain facility with key methods of professional communication about health services research studies (conference presentation, discussion, and referee report).
Audience: Graduate

POP HLTH/SOC 797 – INTRODUCTION TO EPIDEMIOLOGY
3 credits.

Design, implementation and interpretation of epidemiologic studies; emphasis on methodologic problems in the measurement of disease frequency, natural history and risk factors.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Calculate and interpret measures of health used to characterize morbidity and mortality in populations.
Audience: Graduate

2. Identify features of epidemiologic study designs, their strengths and limitations, and measures of association used to determine the relation between exposures and outcomes of interest.
Audience: Graduate

3. Describe major sources of bias and confounding in epidemiologic research, and how they can be addressed.
Audience: Graduate

4. Evaluate causal inferences between risk factors and health.
Audience: Graduate

5. Identify and interpret the presence of interaction between multiple risk factors in relation to an outcome.
Audience: Graduate

POP HLTH 798 – EPIDEMIOLOGIC METHODS
3 credits.

The main emphasis is the design and interpretation of epidemiologic studies. Includes hands-on experience in the evaluation of epidemiologic evidence, the analysis of epidemiologic data, and the discussion of strategies aimed to improve study validity and efficiency.
Requisites: SOC/POP HLTH 797
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Select, calculate and interpret measures of frequency and measures of effect used in different types of epidemiologic studies
Audience: Graduate

2. Demonstrate understanding of the rationale behind the design of epidemiologic studies
Audience: Graduate

3. Identify sources and types of bias in epidemiologic studies
Audience: Graduate

4. Explain common strategies to prevent and correct for bias in epidemiologic studies
Audience: Graduate

5. Evaluate the validity and extrapolability of results from epidemiologic studies
Audience: Graduate

POP HLTH 801 – EPIDEMIOLOGY OF INFECTIOUS DISEASES
2 credits.

Introduces basic methods to studying the epidemiology of infectious diseases and reviews infectious diseases of major public health importance. Covers the basics of microbiology, immunology, and laboratory-based methods and the principles of disease surveillance, outbreak investigation, mathematical models of disease transmission, and prevention strategies. The etiology, epidemiology, prevention, and treatment of ancient, modern, and emerging infectious diseases will be examined.
Requisites: SOC/POP HLTH 797
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe how factors related to the host, organism, and environment interrelate to cause and mitigate the spread of infectious diseases.
Audience: Graduate

2. Apply the tools of infectious disease epidemiology that are used in surveillance, outbreak investigation, and research studies.
Audience: Graduate

3. Characterize the impact of infectious diseases on populations and communities locally and globally.
Audience: Graduate

POP HLTH 805 – ADVANCED EPIDEMIOLOGY: CAUSAL INFERENCE IN EPIDEMIOLOGICAL STUDIES
3 credits.

Focuses on the use of viewpoints and design/analytical tools to render possible the estimation of causal effects in epidemiologic studies. Students learn about the rationale and use of study designs/analytic tools that build upon but are substantially different from the most common approaches used in epidemiologic research (experimental studies, case-control studies, and cohort studies).
Requisites: SOC/POP HLTH 797 and POP HLTH 798
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate a good understanding of the main features of the counterfactual model as a base for causal inferences in epidemiological research.
Audience: Graduate

2. Identify assumptions needed for causal inference and assess whether they are sufficient to allow the estimation of causal effects from available data.
Audience: Graduate

3. Understand and use design and analytic strategies that help in the estimation of causal effects.
Audience: Graduate

4. Demonstrate a good understanding of the main features of the counterfactual model as a base for causal inferences in epidemiological research.
Audience: Graduate

5. Identify assumptions needed for causal inference and assess whether they are sufficient to allow the estimation of causal effects from available data.
Audience: Graduate

6. Understand and use design and analytic strategies that help in the estimation of causal effects.
Audience: Graduate

POP HLTH 806 – ADVANCED EPIDEMIOLOGY: PRACTICE OF EPIDEMIOLOGY
2 credits.

Apply and extend methodologic knowledge learned in the epidemiology methods sequence to selected key activities of a practicing epidemiologic researcher, including: study implementation; scientific writing and presentation; manuscript peer-reviewing; measurement validation; and commonly used epidemiology field instruments and methods.
Requisites: SOC/POP HLTH 797
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Design and implement epidemiology studies with a multi-disciplinary team
Audience: Graduate

2. Design and interpret epidemiology validation studies
Audience: Graduate

3. Assess a wide range of specific health factors with commonly used epidemiology field instruments and methods
Audience: Graduate

4. Serve as a peer reviewer to participate in scientific discussion
Audience: Graduate

POP HLTH 810 – EPIDEMIOLOGY AND GLOBAL ONE HEALTH
2 credits.

Examines the intersection of human, animal, and environmental health within the context of the Anthropocene. Drawing on the One Health framework, explore how globalization, ecological change, and human activity contribute to health disparities, the emergence of infectious diseases, and shifts in global public health priorities. Explore the epidemiology of infectious diseases, health determinants across diverse populations, and the ecological, social, and economic factors that facilitate disease transmission and emergence. Engage with case studies on zoonotic diseases, historical and modern pandemics, and management responses to infectious disease outbreaks. Integrates perspectives from veterinary science, human medicine, public health, ecology, entomology, and epidemiology, emphasizing the need for cross-disciplinary approaches to address complex, modern global health issues.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Utilize global health data to identify public health disparities, monitor trends in emerging infectious diseases (EIDs), and assess the ecological and environmental conditions that promote disease emergence, particularly under the forces of climate change and demographic shifts.
Audience: Graduate

2. Define and apply key concepts related to EIDs (e.g., hosts, vectors, reservoirs, and transmission cycles), differentiate between EIDs and endemic diseases, and use epidemiological principles to improve population health and reduce disparities
Audience: Graduate

3. Quantitatively and qualitatively assess past infectious disease outbreaks (e.g., Zika, Ebola, West Nile virus, and malaria) to understand successes and failures in management, intervention strategies, and quantitative models of disease transmission, including R 0 and compartmental modeling.
Audience: Graduate

4. Examine the roles of public health, veterinary, and agricultural agencies in managing and preventing EIDs and propose strategies to address the impacts of global environmental changes on disease emergence through interdisciplinary collaboration.
Audience: Graduate

5. Investigate ethical and practical considerations in global health research, with a focus on One Health principles, and explore how interdisciplinary approaches can address emerging public health challenges in the Anthropocene.
Audience: Graduate

POP HLTH 819 – SOCIAL NETWORK ANALYSIS AND HEALTH
3 credits.

Provides an overview and synthesis of research utilizing social network analysis in relation to health, drawing on studies by sociologists, economists, computer scientists, physicians and health services researchers. Enables students to understand how social network data are collected and processed; how to calculate appropriate network measures; how to apply statistical modeling of social network effects on health behavior. Surveys social network studies related to substance use, smoking, contraception, AIDS, obesity and many other health conditions. Also looks at the social networks of health organizations in relation to patient outcomes. Prior coursework in data analysis and statistical methods is recommended.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Formulate research questions relevant to social network analysis.
Audience: Graduate

2. Describe the sources, advantages, and disadvantages of alternative types of social network data.
Audience: Graduate

3. Describe a social network and compare attributes across different social networks.
Audience: Graduate

4. Describe theoretical and empirical issues in current research on social network analysis and health.
Audience: Graduate

POP HLTH 820 – GRADUATE RESEARCH SEMINAR
1 credit.

Presentations by graduate students, professors, public health professionals and experts designed to cover the depth and breadth of research in the field of population health.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Gain skills in making professional presentations
Audience: Graduate

2. Gain skills in commenting on other scholars' work
Audience: Graduate

3. Describe the importance of Individual Development Plans (IDPs)
Audience: Graduate

POP HLTH 830 – GRANT WRITING FOR POPULATION HEALTH SCIENCES
2 credits.

Write an R36/F30/F31-style grant proposal related to Population Health Sciences that can be the starting point for an external grant submission or a preliminary exam proposal. Present developing proposal and provide oral feedback to peers. Review and critique written proposals from peers.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Write a draft of the Specific Aims page for an NIH R36 dissertation award or F30/F31 predoctoral fellowship.
Audience: Graduate

2. Write a draft of the Significance sub-section of the Research Strategy for an NIH R36 dissertation award or F30/F31 predoctoral fellowship.
Audience: Graduate

3. Write a draft of the Approach sub-section of the Research Strategy for an NIH R36 award or F30/F31 predoctoral fellowship.
Audience: Graduate

4. Demonstrate the ability to receive critical feedback and iteratively improve written drafts of grant application sections in response to that feedback.
Audience: Graduate

5. Demonstrate the ability to provide written and oral constructive and critical feedback to peers about their research ideas and draft grant application sections.
Audience: Graduate

POP HLTH 847 – CARDIOVASCULAR EPIDEMIOLOGY
2 credits.

Discussion of the population distribution, health impact, risk factors, treatment, and prevention of cardiovascular diseases.
Requisites: SOC/POP HLTH 797
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the major types of cardiovascular disease and their distributions in the population.
Audience: Graduate

2. Describe the general pathophysiology underlying each major type of cardiovascular disease.
Audience: Graduate

3. Identify the primary risk factors for each major type of cardiovascular disease.
Audience: Graduate

4. Describe how each major type of cardiovascular disease is assessed in clinical practice and in epidemiological studies.
Audience: Graduate

5. Describe the major epidemiological studies that have provided the foundation of knowledge in this field.
Audience: Graduate

POP HLTH/ECON 848 – HEALTH ECONOMICS
1-3 credits.

Health economics issues including demand, supply and pricing, market structure, medical malpractice, technological change, value of life, role of insurance, and other aspects of uncertainty.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Describe the breadth of themes in health economics, organized under three main topic areas (the production of health; the value of health and health care; and the use of evidence to make decisions in health and healthcare contexts), and to develop appropriate analytical and methodological skills
Audience: Graduate

2. Enhance analytical and writing skills by producing several short papers
Audience: Graduate

3. Enhance scholarly oral presentation skills
Audience: Graduate

POP HLTH/AN SCI/GENETICS 849 – GENOMIC EPIDEMIOLOGY
2 credits.

An introduction to genomic epidemiology, including a general overview of genetics and Mendelian and complex inheritance, as well as various elements of study design, such as participant ascertainment; phenotype definition; biologic sample selection; genotyping, sequencing, and quality control; measurement of covariates; and choice of analytic methods. Briefly covers original study designs; focuses on current study designs.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Evaluate and discuss genetic/genomic epidemiological literature.
Audience: Graduate

2. Design simple genetic/genomic epidemiological studies.
Audience: Graduate

3. Identify and apply appropriate tests of association between genetic variants and both qualitative and quantitative outcomes using either unrelated individuals or families.
Audience: Graduate

4. Summarize and interpret the results of genetic/genomic tests of association.
Audience: Graduate

POP HLTH/I SY E 875 – COST EFFECTIVENESS ANALYSIS IN HEALTH AND HEALTHCARE
3 credits.

Basic ideas and tools of cost effectiveness analysis as applied in evaluating medical technologies. Addresses special problems and methods in assessing diagnostic technologies, including ROC analysis, and in measuring health for technology assessment. Uses "classical" and current journal literature.
Requisites: SOC/POP HLTH 797 and POP HLTH/B M I 552
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply basic concepts of economic analysis to the assessment of medical technologies and healthcare interventions more broadly
Audience: Graduate

2. Examine health outcomes on a range from objective measures of physical systems to subjective preference-based measures of health utility and describe the benefits and limitations of using quality-adjusted life years (QALYs) as a health outcome measure
Audience: Graduate

3. Explain why we seek to obtain estimates of the “opportunity cost” of using health care resources, describe the process of “costing” in economic assessments of medical technologies and identify useful sources of information for obtaining cost information (and their limitations)
Audience: Graduate

4. Describe how primary data from randomized controlled trials and observational studies can be designed to assess medical technologies and explain the advantages and disadvantages of different designs in terms of their internal and external validity and decision-relevance
Audience: Graduate

5. Describe how evidence from secondary data can be integrated using meta-analysis and decision-analytic modeling methods to assess medical technologies and demonstrate basic ability to design and execute simple decision tree and Markov models for cost-effectiveness analysis
Audience: Graduate

POP HLTH 876 – MEASURING HEALTH OUTCOMES
3 credits.

Provides a comprehensive understanding of health outcome measures, including generic health status measures, disease-specific measures, and consumer reports of the quality of care.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Understand key measurement issues involved in health, healthcare quality, and health policy
Audience: Graduate

2. Appreciate and describe the application of these measurement issues to practical problems and research
Audience: Graduate

3. Appreciate and describe the importance of concise oral and written scholarly communication through several writing exercises and oral presentations
Audience: Graduate

POP HLTH/A A E/ENVIR ST/PUB AFFR 881 – BENEFIT-COST ANALYSIS
3 credits.

Presents the welfare economics underpinnings for evaluating the social benefits and costs of government activities. Issues such as uncertainty, the social discount rate, and welfare weights will be discussed; case studies from the environmental, social policy, and agricultural areas will be studied.
Requisites: Graduate/professional standing and (PUB AFFR 818 and 880), or POP HLTH/I SY E 875, or A A E 635
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the basic mechanics of performing a Cost Benefit Analysis, including methods for valuing costs and benefits, aggregating over time, and analyzing uncertainties.
Audience: Graduate

2. Evaluate the strengths and weaknesses of different CBAs and propose strategies to address any shortcomings.
Audience: Graduate

3. Debate the advantages and limitations of CBA for public policy and compare it to other approaches.
Audience: Graduate

4. Create a CBA for a real-world client from beginning to end, including scoping, background research, valuation of costs and benefits, uncertainty analysis, and interpretation.
Audience: Graduate

POP HLTH 890 – SUBSTANCE USE RESEARCH: PREVALENCE, POLICY, TREATMENT
3 credits.

Provides an overview of substance use health services research topics, study designs, data sources, and sufficient knowledge of one substantive topic to support the development of a research proposal.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Describe trends in substance use in the United States.
Audience: Graduate

2. Demonstrate understanding of the U.S. health care infrastructure to treat and mitigate the harms associated with substance use.
Audience: Graduate

3. Describe clinical, health systems, and policy interventions to prevent, treat, and mitigate the harms associated with substance use, and evidence of their effectiveness.
Audience: Graduate

4. Summarize strengths and limitations of datasets available for substance use health services research
Audience: Graduate

5. Formulate a substance use health services research question and summarize the relevant evidence in a concise literature review.
Audience: Graduate

POP HLTH 904 – SPECIAL TOPICS IN EPIDEMIOLOGY
1-3 credits.

In-depth focus on current areas of epidemiologic investigation. Each semester one or more modules (e.g., cardiovascular, cancer, infectious diseases, women's health, international, etc.) will be offered.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2018
Learning Outcomes: 1. Apply, analyze, and evaluate advanced theories, concepts, and methods in epidemiology
Audience: Graduate

POP HLTH 915 – INTERNATIONAL HEALTH SYSTEMS AND POLICY
2 credits.

Designed as an independent study with four modules: International Health System Performance; Health Systems in the Context of Global Health Needs; Health Systems in High Income Countries; and the Politics of Health System Development and Reform.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Evaluate the contributions of health care to population health outcomes
Audience: Graduate

2. Identify a set of broad criteria to evaluate health system performance
Audience: Graduate

3. Evaluate the current performance of the U.S. health care system in comparison with other national health systems
Audience: Graduate

4. Identify the key challenges in global health governance
Audience: Graduate

5. Analyze the social values and political interests that shape health systems development and reform efforts
Audience: Graduate

6. Explain how action outside the health sector is essential for preventing noncommunicable diseases, reducing health care costs, and improving population health and well-being
Audience: Graduate

POP HLTH 917 – GENERAL PREVENTIVE MEDICINE AND PUBLIC HEALTH ELECTIVE
4 credits.

Introduction to the role of physicians working in various fields of general preventive medicine and public health. Engage with preventive medicine faculty and residents to learn foundational knowledge and skills central to the discipline. Opportunity to select a health issue in Wisconsin and work on a short term project to describe, analyze or address the issue.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply the steps that are necessary to complete a public health investigation
Audience: Graduate

2. Describe the importance of engaging appropriate stakeholders in completing a public health investigation
Audience: Graduate

3. Effectively communicate findings to public health and healthcare audiences
Audience: Graduate

4. Discuss the role of applied and academic public health in maintaining the health of a community
Audience: Graduate

POP HLTH 918 – ENVIRONMENTAL HEALTH AND ADVOCACY
2 credits.

Unique opportunity to gain insight into the role of environmental toxins while honing skills to advocate for patients and vulnerable populations. Learn to take environmental histories and understand how environmental medicine is applied in the clinical setting and community. Use the socio-ecological model to frame advocacy. Gain practical experience through online didactic lectures, reading materials, class discussion, reflections and a class presentation
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Describe how various categories of environmental toxicants (including carcinogens, mutagens, teratogens, neurotoxins, and endocrine disrupters) affect human health
Audience: Graduate

2. Demonstrate skill in taking a robust patient history by understanding the potential toxicants in a patient's environment
Audience: Graduate

3. Practice risk communication strategies, simulating patient and population encounters
Audience: Graduate

4. Describe why certain populations, including children, pregnant women, the elderly and marginalized populations are more vulnerable to environmental exposure
Audience: Graduate

5. Discuss the role and approaches to engaging key stakeholders in environmental justice issues, including consumer/advocacy groups, community organizations, governmental organizations, corporations, and various industries/professions
Audience: Graduate

6. Identify credible evidence and appraise scientific literature to address both patient and population-level environmental health issues
Audience: Graduate

7. Identify the positive and negative impact of various public policies on environmental justice
Audience: Graduate

8. Discuss opportunities for physician advocacy across the social ecological framework to address environmental issues incorporating a systems-thinking lens
Audience: Graduate

POP HLTH/KINES 955 – SEMINAR - PHYSICAL ACTIVITY EPIDEMIOLOGY
1 credit.

Current research developments in physical activity epidemiology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Name and explain the basic concepts of physical activity epidemiology, including study designs, public health guidelines, surveillance, and physical activity measures
Audience: Graduate

2. Critically evaluate current research on physical activity and health topics
Audience: Graduate

3. Prepare a presentation and lead a group in an in-depth discussion of the methods, interpretation, and implications of recent scientific articles
Audience: Graduate

POP HLTH 990 – RESEARCH
1-8 credits.

Research supervised by individual faculty members.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Exhibit a broad understanding of general population health sciences (including population health and epidemiology principles.
Audience: Graduate

2. Conduct independent research using a variety of approaches.
Audience: Graduate

3. Think critically to address research challenges.
Audience: Graduate

4. Exhibit and foster professional and ethical conduct in their research.
Audience: Graduate

5. Collaborate with other investigators within or outside the thesis/dissertation lab.
Audience: Graduate

PORTUGUESE (SPANISH AND PORTUGUESE) (PORTUG)

PORTUG 101 – FIRST SEMESTER PORTUGUESE
4 credits.

First-semester elementary-level Portuguese language practice: grammar, conversation, and reading. Requires no previous knowledge of Portuguese.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PORTUG 102 – SECOND SEMESTER PORTUGUESE
4 credits.

Second-semester elementary-level Portuguese language practice: grammar, conversation, and reading.
Requisites: PORTUG 101
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

PORTUG 201 – THIRD SEMESTER PORTUGUESE
4 credits.

First-semester intermediate-level Portuguese language review: readings, culture, and patterns of conversation.
Requisites: PORTUG 102 or 301
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PORTUG 202 – FOURTH SEMESTER PORTUGUESE
4 credits.

Second-semester intermediate-level Portuguese language review: readings, culture, and patterns of conversation.
Requisites: PORTUG 201
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

PORTUG 221 – INTRODUCTION TO LUSO-BRAZILIAN LITERATURES
4 credits.

Reading, discussion, and literary history of the sixteenth, nineteenth, and twentieth centuries.
Requisites: PORTUG 202
Course Designation: Breadth - Literature. Counts toward the Humanities req
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

PORTUG 225 – THIRD YEAR CONVERSATION AND COMPOSITION
3 credits.

First-semester Intermediate High intensive practice in reading, writing, and grammar.
Requisites: PORTUG 202
Course Designation: Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2021

PORTUG 226 – THIRD YEAR CONVERSATION AND COMPOSITION
3 credits.

Second-semester Intermediate High intensive practice in reading, writing, and grammar.
Requisites: PORTUG 202 or 225
Course Designation: Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

PORTUG 299 – DIRECTED STUDY
1-3 credits.

Directed study projects for freshmen and sophomores as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2004

PORTUG 301 – INTENSIVE PORTUGUESE
4 credits.

Grammar, conversation, and reading. Equivalent of PORTUG 101 and 102.
Requisites: SPANISH 226, FRENCH 228, or ITALIAN 311. Not open to students with credit for PORTUG 101 and 102
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PORTUG 302 – INTENSIVE PORTUGUESE
4 credits.

Equivalent of the third and fourth college semesters of Portuguese. Readings, culture, and patterns of conversation.
Requisites: PORTUG 102 or 301. Not open to students with credit for PORTUG 201 and 202
Course Designation: Frgn Lang - 4th semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025

PORTUG 311 – FOURTH YEAR COMPOSITION AND CONVERSATION
3 credits.

Fourth-year first-semester advanced oral practice and writing.
Requisites: PORTUG 202, 225, 226, or 301
Course Designation: Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PORTUG 312 – FOURTH YEAR COMPOSITION AND CONVERSATION
3 credits.

Fourth-year second-semester advanced oral practice and writing.
Requisites: PORTUG 202, 225, 226, or 301
Course Designation: Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

PORTUG 330 – HISTORY OF THE PORTUGUESE LANGUAGE
3 credits.

Introduction to the linguistic sources and the historical and political factors that contributed to the formation of Portuguese and the current status of Portuguese in the world today.
Requisites: PORTUG 225 or 226
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2020

PORTUG 361 – PORTUGUESE CIVILIZATION
3 credits.

Cultural evolution from the medieval period through the twentieth century. Conducted in English.
Requisites: Satisfied Communications A requirement
Course Designation: Gen Ed - Communication Part B
Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PORTUG 362 – BRAZILIAN CIVILIZATION
3 credits.

Cultural evolution of Brazil from 1500 through the present. Conducted in English.
Requisites: Satisfied Communications A requirement
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2018

PORTUG 411 – SURVEY OF PORTUGUESE LITERATURE BEFORE 1825
3 credits.

Advanced survey of Portuguese literature from 1140 to 1825.
Requisites: PORTUG 221 or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PORTUG/FRENCH/ITALIAN/SPANISH 429 – INTRODUCTION TO THE ROMANCE LANGUAGES
3 credits.

Introduction to structural similarities and differences apparent in major Romance languages (French, Italian, Portuguese, Spanish) and to their historical developments, with reference to basic linguistic features of each language: phonology, morphology, syntax, and lexicon.
Requisites: SPANISH 226, FRENCH 228, ITALIAN 311, or PORTUG 226
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023

PORTUG/GEN&WS 450 – BRAZILLIAN WOMEN WRITERS
3 credits.

A survey of representative writing by contemporary Brazillian women writers in relation to representations of nationality, race, class, ethnicity, gender and sexualities.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

PORTUG/AFRICAN 451 – LUSOPHONE AFRICAN LITERATURE
3 credits.

Chronological and thematic survey of major trends, authors, and works of Lusophone Africa since 1936.
Requisites: PORTUG 221 and 312
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022

PORTUG/GEN&WS 460 – CARMEN MIRANDA
3 credits.

Examines the work, representation and interpretation of Carmen Miranda from her early days as a radio star in Brazil to a film actress and entertainer in Hollywood in the 1940s and 50s.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

PORTUG 467 – SURVEY OF PORTUGUESE LITERATURE SINCE 1825
3 credits.

Advanced survey of Portuguese literature since 1825.
Requisites: PORTUG 221 or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

PORTUG 468 – SURVEY OF BRAZILIAN LITERATURE SINCE 1890
3 credits.

Advanced survey of Brazilian literature since 1890.
Requisites: PORTUG 221 or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020

PORTUG 573 – TOPICS IN PORTUGUESE: STUDY ABROAD
1-6 credits.

A course carried with a UW-Madison resident study abroad program that has no equivalent on this campus. Current enrollment in a UW-Madison study abroad program required.
Requisites: None
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2001

PORTUG 640 – TOPICS IN LUSO-BRAZILIAN LITERATURE
3 credits.

Examination of a variety of literary genres or periods in relation to Portuguese-speaking countries.
Requisites: PORTUG 221 or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Develop written and analytical skills in Portuguese and integrate these skills to exchange and assess ideas effectively and with advanced accuracy in written and spoken Portuguese.
Audience: Both Grad & Undergrad

2. Demonstrate familiarity with and apply basic methods of literary analysis, including interpretation of written texts and other forms of artistic/cultural creation.
Audience: Undergraduate

3. Demonstrate familiarity with and apply basic methods of literary analysis, including interpretation of written texts and other forms of artistic/cultural creation in and of themselves and in the context of contemporary Portuguese Memory Studies.
Audience: Graduate

PORTUG 642 – TOPICS IN LUSO-BRAZILIAN CULTURE
3 credits.

Examines a variety of cultural topics in relation to Portuguese-speaking countries.
Requisites: PORTUG 225, 226, 311, 312 or graduate/professional standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

PORTUG 681 – SENIOR HONORS THESIS
3 credits.

First-semester independent study with the goal of completing the preliminary research to write a senior honors thesis in Portuguese.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No

PORTUG 682 – SENIOR HONORS THESIS
3 credits.

Second-semester independent study with the goal of completing the preliminary research to write a senior honors thesis in Portuguese. Continuation of PORTUG 681.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No

PORTUG 699 – DIRECTED STUDY
1-6 credits.

Directed study projects for juniors and seniors as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

PORTUG 751 – SEMINAR: BRAZILIAN LITERATURE
3 credits.

Seminar focusing on literature, literary criticism, culture, or theory relevant to Brazilian Literature.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2019

PORTUG 772 – SEMINAR: PORTUGUESE LITERATURE
3 credits.

Seminar focusing on literature, literary criticism, culture, or theory relevant to Portuguese Literature.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2019

PORTUG 899 – INDEPENDENT READING
1-3 credits.

Directed study projects for graduate students as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

PORTUG/A A E/ANTHRO/C&E SOC/GEOG/HISTORY/LACIS/POLI SCI/SOC/SPANISH 982 – INTERDEPARTMENTAL SEMINAR IN THE LATIN-AMERICAN AREA
1-3 credits.

Interdisciplinary inquiry in Latin American society and culture.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PORTUG 990 – THESIS
1-12 credits.

Independent research and writing for graduate students under the supervision of a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PSYCHIATRY (PSYCHIAT)

PSYCHIAT 699 – INDEPENDENT STUDY
0-5 credits.

Self-directed work under the supervision and guidance of a faculty member or instructional staff, and often in conjunction with a day-to-day mentor that is a graduate student or postdoc researcher in the faculty member's or instructor's group. Students normally participate in aspects of ongoing research projects.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Participate in the development, implementation, analysis, or dissemination of a research study in basic or clinical neuroscience.
Audience: Undergraduate

PSYCHIAT 712 – FOUNDATIONS IN INFANT, EARLY CHILDHOOD AND FAMILY MENTAL HEALTH: DEV, SCREENING, ASSESSMENT AND DIAG
3 credits.

Provides a comprehensive understanding of the underpinnings of Infant, Early Childhood and Family Mental Health. Learn about pregnancy, transition to parenthood and typical/atypical development and attachment relationships. Become familiar with reliable and valid screening and assessment tools of social, emotional, cognitive, communication, motor and regulatory capacities in infants and young children in the context of their caregiving relationships; developmentally appropriate diagnostic nosologies; methods of conceptualizing risk and protective factors; and planning for therapeutic interventions that build on strengths and address vulnerabilities. Unique features include assessment of early parent-child relationships and the use of video replay to engage parents in assessing their relationship with their child and the benefit of faculty from multiple departments at UW and luminary national guest instructors.
Requisites: Declared in Infant, Early Childhood, and Family Mental Health Capstone Certificate
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify concepts of Parent-Infant/Early Childhood Mental Health informed by developmental neuroscience, developmental psychology, attachment theory, trauma research, systems theory and the Diversity-Informed Tenets for Work with Infants, Children and Families to support the social and emotional functioning of young children and families as demonstrated by the Pre/Post Content Assessment
Audience: Graduate

2. Develop skills in observation of social-emotional and communication development in infants and young children (birth to 6 years) and the affective and behavioral quality of parent-child relationships as demonstrated by the Parent-Child Early Relationship and Developmental Assessment Assignment
Audience: Graduate

3. Apply specialized knowledge and skills related to family engagement; assessment of the parent-child relationship, sensory profile, child development, social-emotional functioning and mental health; diagnostic and case conceptualization; and service planning aligned with nationally recognized competencies demonstrated by the Parent-Child Early Relationship and Developmental Assessment Assignment
Audience: Graduate

4. Identify and apply strategies to support the development of parental reflective functioning as demonstrated by the Parent-Child Early Relationship and Developmental Assessment Assignment
Audience: Graduate

5. Deepen awareness of the needs of underserved populations of young children and families when there are concerns about parenting capacities or increased psychosocial stressors due to trauma, poverty, historical and systemic racism, oppression, health care disparities and mental health as demonstrated by Pre/Post Content Assessment
Audience: Graduate

PSYCHIAT 713 – SEMINAR IN REFLECTIVE PRACTICES AND MINDFULNESS IN INFANT, EARLY CHILDHOOD & FAMILY MENTAL HEALTH I
2 credits.

Provides a foundation in reflective practices through discussion of cases, infant and family observations and mindfulness experiences as applied to students' work with infants, young children and families. Explore and experience ways in which reflective practices may be applied to parent-infant/early childhood mental health. Learn mindfulness strategies for developing self-awareness and regulation that may be brought to their work with families of infants and young children. In small Reflective Mentoring Groups, students will experience both descriptive and in-vivo examples of reflective practice through case based presentations, deeper introspection and supportive discussion to increase clarity and engagement in work with families of young children. Consider boundaries and ethical decision making related to the dilemmas faced by professionals working with families during the perinatal period and in early childhood, especially those in high risk and challenging circumstances.
Requisites: Declared in Infant, Early Childhood, and Family Mental Health Capstone Certificate
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply skills in informal and formal Mindfulness and Self-Compassion Practices as demonstrated by active participation in the Mindfulness Class and recording of regular practice with Mindfulness Practice Logs
Audience: Graduate

2. Contribute to reflective space through deep listening, mindful pauses, self-awareness, journaling and reflective questions as demonstrated in the larger class and small Reflective Mentoring Group participation
Audience: Graduate

3. Become more mindful, observant, and reflective and identify and appreciate the parallel process in their work with infants, young children and families as demonstrated by case presentations and discussion in the small Reflective Mentoring Groups, Infant Observation journaling and discussion as well as the Five-Facet Mindfulness Questionnaire pre/post assessment
Audience: Graduate

4. Increase awareness of one’s own cultural lens, social location and implicit bias and how this relates to their work as demonstrated by reading discussions, case discussions, Infant Observation journaling and discussion

Audience: Graduate

5. Increase compassion for self and others in their work as demonstrated by The Compassion Scale pre/post assessment
Audience: Graduate

PSYCHIAT 714 – CONSULTATION IN INFANT, EARLY CHILDHOOD AND FAMILY MENTAL HEALTH: ADVANCED CLINICAL PRACTICE I
1 credit.

This small group and individualized course offers students an opportunity to reflect upon their work with mothers and partners in the prenatal and postpartum period, infants, young children and their families. Course faculty and a senior, clinical consultant will guide students in exploring their individual responses to the literature, course content and issues raised in their work including personal experience and reactions as well reflecting on the parallel process. The intent is to support the student's professional development in ways that broaden and deepen the effectiveness of their work.
Requisites: Declared in Infant, Early Childhood, and Family Mental Health Capstone Certificate
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify parallel process and ways in which this may guide their work, as demonstrated during individual consultation sessions
Audience: Graduate

2. Consider and hold multiple perspectives (e.g. parent(s), child, other family members or providers) as demonstrated during individual consultation sessions
Audience: Graduate

3. Identify what is arising in oneself in the work and increase capacity for reflection and self-regulation as demonstrated during discussions in individual consultation sessions
Audience: Graduate

4. Enhance knowledge and skills for conducting clinical assessments with children birth to six years in the context of their primary caregiving relationships, using the Diagnostic Classification of Mental Health and Developmental Disorders of Infancy and Early Childhood, developing case conceptualization and treatment planning as demonstrated through case discussions during individual consultations
Audience: Graduate

5. Use evidence-based therapeutic interventions with infants and young children evidencing emotional and/or behavioral disturbances and their parents as demonstrated through case discussions during individual consultation sessions
Audience: Graduate

6. Identify strategies for self-care in their work as shared during individual consultation sessions
Audience: Graduate

PSYCHIAT 715 – THERAPEUTIC INTERVENTIONS, PRACTICES AND POLICY IN INFANT, EARLY CHILDHOOD AND FAMILY MENTAL HEALTH
3 credits.

Offers students the opportunity to apply knowledge of Infant, Early Childhood and Family Mental Health concepts, assessment and diagnosis to planning and implementation of relationship-based and individual treatment approaches as well as to program development and policy. Students will be introduced to best practices and evidence based multi-disciplinary treatment approaches to address a range of presenting issues, settings, and cultural contexts for vulnerable children who are evidencing social, emotional, behavioral or attentional disturbances and parents with psychiatric disorders. Implications for informing policy across systems of care will be addressed. During the course of the semester, students will benefit from invited state and national speakers and guest faculty and instructors from the UW speaking on their areas of expertise.
Requisites: Declared in Infant, Early Childhood, and Family Mental Health Capstone Certificate
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Conduct supportive and therapeutic interventions with young children and their parent to reduce the impact of early-life trauma, loss, relational concerns, developmental delays, historical and systemic racism, poverty, medical conditions, mental health concerns and/or other adversities dependent on their scope of practice as demonstrated by the description provided in the Intervention Assignment
Audience: Graduate

2. Provide evidence based or promising supportive or therapeutic interventions that are culturally sensitive, trauma-informed, relationship-based, reflective, mindful and aligned with national standards as demonstrated by the Newborn Behavioral Observation System (NBO) Recording Forms, NBO Parent Questionnaires and Integrative Final Project Abstract and PowerPoint Presentation
Audience: Graduate

3. Develop confidence and competence in screening and intervention for Perinatal Mood and Anxiety Disorders and consideration of other parental mental health disorders and substance abuse disorders as demonstrated by practice and reflection in the course screening and discussion roleplay activity using the Edinburgh Postnatal Depression Scale (EPDS)
Audience: Graduate

4. Develop observational skills and ability to come alongside families during the postnatal period to engage them in looking together at their newborn's amazing capacities, behavior as communication and unique personhood to promote parental attunement and strengthen parent-infant relationships as demonstrated by the Newborn Behavioral Observations System Recording Forms and Parent Questionnaires
Audience: Graduate

5. Increase awareness of ethical considerations in working with persons during the perinatal period and in work with very young children and their families as demonstrated by case-based ethical decision-making activities and class participation
Audience: Graduate

PSYCHIAT 716 – SEMINAR IN REFLECTIVE PRACTICES AND MINDFULNESS IN INFANT, EARLY CHILDHOOD AND FAM MENTAL HEALTH II
2 credits.

Continued advancement in reflective practices through case discussion, infant and family observations, mindfulness and self-compassion experiences as applied to their work with infants, young children and families. Additional strategies and in-depth opportunities for introspection and self-awareness. Discussion of relationship-based therapeutic consultation and interventions and attention to the parallel process between the nature of their relationship with a parent and the parent's relationship with their child. Focus will be on underserved populations and contribution of maternal depression, substance abuse disorders and trauma on the parent-child relationship and the child's development. Complex ethical decision making and policy issues will be addressed. Inclusion of a self-assessment process that will support students in appraising their competencies and readiness to apply for the WI Alliance for Infant Mental Health Endorsement.
Requisites: Declared in Infant, Early Childhood, and Family Mental Health Capstone Certificate
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply more advanced skills in informal and formal Mindfulness and Self-Compassion Practices as demonstrated by active participation in the Mindfulness Class and recording of regular practice with Mindfulness Practice Logs
Audience: Graduate

2. Facilitate reflective space through deeper listening, self-awareness, mindful pauses, journaling and reflective questions as demonstrated in the larger class and small Reflective Mentoring Group participation
Audience: Graduate

3. Become increasingly mindful, observant, and reflective and identify and appreciate the parallel process in their work with infants, young children and families as demonstrated by case presentations and discussion in the small Reflective Mentoring Groups, Infant Observation journaling and discussion as well as the Five-Facet Mindfulness Scale pre/post assessment
Audience: Graduate

4. Continue to develop cultural humility and sensitivity and reflect on one's own cultural lens, social location and implicit bias in their work as demonstrated by Case Presentations and discussion and Infant Observation journaling and discussion
Audience: Graduate

5. Continue to increase compassion for self and others in their work as demonstrated by The Compassion Scale pre/post assessment
Audience: Graduate

PSYCHIAT 717 – CONSULTATION IN INFANT, EARLY CHILDHOOD AND FAMILY MENTAL HEALTH: ADVANCED CLINICAL PRACTICE II
1 credit.

This small group and individualized course offers students an opportunity to reflect upon their work with mothers and partners in the prenatal and postpartum period, infants, young children and their families. Course faculty and a senior, clinical consultant will guide students in exploring their individual responses to the literature, course content and issues raised in their work including personal experience and reactions as well reflecting on the parallel process. The intent is to support the student's professional development in ways that broaden and deepen the effectiveness of their work.
Requisites: Declared in Infant, Early Childhood, and Family Mental Health Capstone Certificate
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Use diagnostic nosologies for infants and young children and their parents, as demonstrated during case discussions in individual consultation sessions
Audience: Graduate

2. Expand use of evidence-based and promising therapeutic interventions with infants and young children evidencing emotional and/or behavioral disturbances and their parents as demonstrated through case discussions during individual consultation session
Audience: Graduate

3. Apply skills for evaluation and treatment of Perinatal Mood and Anxiety Disorders, other parental mental health disorders and substance use disorders as demonstrated during individual consultation sessions
Audience: Graduate

4. Describe and have the skills to provide Infant/Early Childhood Mental Health Consultation, as demonstrated through discussion during individual consultation sessions
Audience: Graduate

5. Increase self-awareness, reflective capacity and self-care strategies, as shared during individual consultation meetings
Audience: Graduate

PSYCHIAT 901 – SPORTS PSYCHIATRY: IMPROVING THE MENTAL HEALTH OF ATHLETES AT THE INDIVIDUAL AND SYSTEMS LEVELS
2 credits.

Improve skills in providing psychiatric health care to athlete populations. Sports psychiatry as a sub-specialty within psychiatry focuses on diagnosis and treatment of psychiatric illness in athletes. While utilization of psychological approaches to enhance performance can be part of the work of the sports psychiatrist, the emphasis is more on addressing actual mental illness in this population. Sports psychiatry may also involve the use of exercise as a therapeutic or preventative intervention for mental illness. Sports psychiatry typically focuses on mental health care for individual athletes, but systems-wide initiatives (e.g., at the level of the team or university) are also often important.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate understanding of the epidemiology of, risk factors for, and unique manifestations of a variety of psychiatric disorders and psychosocial stressors in athletes.
Audience: Graduate

2. Compare mechanisms of how treatments for psychiatric disorders in athletes may be similar to and different from treatments for psychiatric disorders in the general population.
Audience: Graduate

3. Distinguish between individual level treatments as well as system wide interventions to address mental illness in athletes.
Audience: Graduate

4. Demonstrate skill accessing the medical literature on a variety of topics related to sports psychiatry.
Audience: Graduate

PSYCHIAT 902 – THE BASIC SCIENCE OF SLEEP AND CONSCIOUSNESS
2 credits.

Sleep occupies a third of our life, and is found in all animal species. Loss of sleep has both acute and long-term negative consequences on the brain and the body. Still, why we sleep remains unclear, and hypotheses on the role of sleep for synaptic homeostasis, learning and memory, cardiovascular and metabolic health, are being tested in humans and animal models. Learn how the sleeping brain can either support vivid conscious experiences (dreaming) or not (deep slow wave sleep); brain structures involved in wake and sleep; how sleep pressure increases during waking; effects of sleep deprivation; causes of narcolepsy and other sleep disorders. How to study sleep in genetic models like flies; electron microscopy to assess effects of sleep loss on synapses; enhancement of sleep slow waves in humans; development and testing of theoretical models; methods to assess levels of consciousness in humans. During time at the WI Sleep Clinic, learn how sleep disorders are diagnosed and treated.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022
Learning Outcomes: 1. Explain definitions used for sleep and wake
Audience: Graduate

2. Detail the brain structures and systems involved in the control of sleep and wake
Audience: Graduate

3. Explain recent evidence linking sleep, memory, and synaptic plasticity
Audience: Graduate

4. Identify animal models used to study sleep
Audience: Graduate

5. Explain molecular and genetic approaches to the study of sleep
Audience: Graduate

6. Explain how sleep affects cardiovascular, metabolic, and cognitive functions
Audience: Graduate

7. Explain the importance of sleep for the individual and society, including negative consequences of sleep deprivation and some sleep disorders
Audience: Graduate

8. Detail the brain structures crucial to support consciousness
Audience: Graduate

9. Describe how dreaming research can advance consciousness research
Audience: Graduate

10. Explain theoretical approaches to study consciousness and how they can lead to new ways of assessing consciousness in healthy and patient populations
Audience: Graduate

11. Present recent studies on sleep and consciousness research (selected for daily assigned readings) at journal clubs
Audience: Graduate

12. Describe how to design a sleep/dreaming/consciousness experiment and recognize possible confounding factors
Audience: Graduate

PSYCHIAT 910 – PSYCHIATRY INDEPENDENT READING AND RESEARCH ELECTIVE
1-12 credits.

Independent exposure to research methodology as it pertains to psychiatry and/or affective neuroscience.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Individualized outcomes to be developed by student and faculty supervisor. See Appendix B below.
Audience: Graduate

PSYCHIAT 919 – PSYCHIATRY INDIVIDUALIZED CLINICAL ELECTIVE
1-12 credits.

Develop a customized experience with relevant faculty not offered by our already established electives.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Review, interpret and present current literature to support patient care
Audience: Graduate

2. Develop clinically relevant questions to advance learning
Audience: Graduate

3. Communicate effectively with patients, families, physicians and non-physician team members
Audience: Graduate

PSYCHIAT 921 – BEHAVIORAL HEALTH CLINICAL ELECTIVE
1-12 credits.

Behavioral medicine clinical patient care, under faculty supervision. All members of the department interact with the student who is typically assigned primarily to one member, depending upon the student's interests. Spend time with the Psychiatric Unit nursing staff to learn how the Unit itself is used as a treatment modality.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate knowledge of behavioral medicine as it is practiced in a multi-specialty group setting
Audience: Graduate

2. Demonstrate knowledge and performance of clinical interviews and mental status exams, in formulating diagnoses and planning treatment and disposition
Audience: Graduate

3. Demonstrate knowledge of psychiatric practice with children, adolescents, and adults, covering a wide range of diagnoses and treatment methods
Audience: Graduate

PSYCHIAT 922 – PSYCHIATRY CONSULTATION AND LIAISON ADVANCED CLINICAL EXPERIENCE
4 credits.

Psychiatric assessment of patients admitted to University Hospital medical and surgical floors (including burn unit, trauma service and transplant services). Emergency psychiatric assessment through consultation to the University Hospital emergency department.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Assess suicide risk and levels of psychiatric care.
Audience: Graduate

2. Assess and manage mood, psychotic, and neurobehavioral disorders in the hospitalized setting.
Audience: Graduate

3. Independently perform a hypothesis-driven history and mental status examination.
Audience: Graduate

4. Develop and present a weighted differential diagnosis.
Audience: Graduate

5. Present a diagnostic and/or treatment plan
Audience: Graduate

6. Plan and implement biopsychosocial treatment plans for patients with psychiatric illness.
Audience: Graduate

7. Complete written documentation.
Audience: Graduate

8. Assist with safety planning for patients presenting with suicide risk factors.
Audience: Graduate

9. Communicate independently with patients, families, physicians, and non-physician team members.
Audience: Graduate

10. Provide psycho-education to patients and their families.
Audience: Graduate

11. Assist in coordinating care with other providers.
Audience: Graduate

PSYCHIAT 925 – COMMUNITY PSYCHIATRY ELECTIVE
2-4 credits.

Immersive experience in community mental health while embedded within a community support team, either at Gateway or Community Treatment Alternatives (CTA). Gateway is an assertive community treatment team serving Dane County residents who have severe mental illness and substance abuse issues. CTA is an assertive community treatment team that works exclusively with adults involved in the criminal justice system. Patients must be either diverted from the Dane County Jail or be conditionally released after being found "not guilty by reason of mental disease or defect" (NGI).
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 6 number of completions
Last Taught: Fall 2023
Learning Outcomes: 1. Define "recovery" in the context of schizophrenia.
Audience: Graduate

2. Describe the assertive community treatment (ACT) model of caring for people with severe, persistent mental illness.
Audience: Graduate

3. List three ways that community support teams can assist people with schizophrenia.
Audience: Graduate

4. Explain how a community support team functions, including how roles are shared and how influence is felt within teams.
Audience: Graduate

5. Demonstrate cultural sensitivity and humility in care of people with severe, persistent mental illness in the community.
Audience: Graduate

PSYCHIAT 930 – PSYCHIATRY GERIATRIC CLINICAL ELECTIVE
1-12 credits.

Care of older adults with mental illness, including late-life depression and anxiety, suicidality, dementia, and substance use disorders. Under the supervision of clinicians with extensive experience in the care of older adults, help care for patients in inpatient, outpatient and long-term care settings. Have the opportunity to experience public health approaches to improving the mental health of older adults, for example, by attending caregiver support groups.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge of impact of mental illness on the quality of life and functioning of older adults and their caregivers.
Audience: Graduate

2. Describe the pathophysiology, clinical presentation and course, and treatment of late-life depression and anxiety.
Audience: Graduate

3. Describe suicide risk assessment in older adults.
Audience: Graduate

4. List the behavioral and psychological symptoms of dementia.
Audience: Graduate

5. Explain the geriatric psychopharmacology principle of "start low, go slow."
Audience: Graduate

PSYCHIAT 931 – DEMENTIA AND PUBLIC HEALTH
2-4 credits.

Clinical care of persons living with dementia and their caregivers. Public health approaches to assisting persons living with dementia in the community via Wisconsin Alzheimer's Institute. Assessment and management of dementia, including behavioral and psychological symptoms.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define mild cognitive impairment and dementia
Audience: Graduate

2. Contrast cognitive changes found in normal aging with dementia
Audience: Graduate

3. Describe the pathophysiology, risk factors, and presentation of the most common causes of dementia
Audience: Graduate

4. List the expected clinical findings at each stage of dementia
Audience: Graduate

5. List potentially reversible causes of dementia
Audience: Graduate

6. Contrast dementia with delirium
Audience: Graduate

7. Describe how a psychiatric interview should be modified when assessing a patient for dementia
Audience: Graduate

8. List what questions are important to ask when interviewing a patient for dementia
Audience: Graduate

9. Summarize when to use cognitive screening tools
Audience: Graduate

10. List available bedside cognitive screening tools
Audience: Graduate

11. Describe when a full neuropsychological eval may be indicated
Audience: Graduate

12. Develop a treatment plan for persons living with dementia
Audience: Graduate

13. List medications that have been FDA-approved for treatment of dementia, including risks and benefits
Audience: Graduate

14. List evidence-based psychosocial and educational interventions for persons living with dementia and their caregivers
Audience: Graduate

15. Explain how persons living with dementia and their family members can plan for the future
Audience: Graduate

16. List the behavioral and psychological symptoms of dementia (BPSD), and their associations with various causes of dementia

PSYCHIAT 932 – PSYCHIATRY ADDICTION CLINICAL ELECTIVE
1-12 credits.

Etiology, assessment, and treatment of substance use disorders and psychiatric co-morbidity.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Demonstrate awareness of epidemiology of substance use disorders and biopsychosocial risk factors and determents.
Audience: Graduate

2. Demonstrate awareness of the prevalence and treatment of psychiatric comorbidities.
Audience: Graduate

3. Demonstrate awareness of pharmacologic and psychosocial treatment modalities important to detoxification, maintenance, and relapse prevention in substance use disorders.
Audience: Graduate

4. Demonstrate awareness of family dynamic factors, self-help recovery, community treatment resources, and primary care integration of substance abuse treatment.
Audience: Graduate

5. Demonstrate proficiency in interviewing patients with substance abuse and psychiatric disorders and formulating a treatment plan within the context of a multidisciplinary treatment plan.
Audience: Graduate

PSYCHIAT 933 – PUBLIC HEALTH ADVOCACY AND SERVICE IN PSYCHIATRY
2 credits.

Broad set of experiences in public health service and public health advocacy, and exposure to a number of community resources and organizations. Spend time within a mental health integrated care setting under faculty supervision. These models of care have been shown to be cost-effective ways of delivering mental health care to large numbers of patients, thereby addressing a public health need given the serious shortage of Psychiatrists. Work with the Wisconsin Medical Society to receive media training and write and record a public service announcement on a Psychiatric public health issue. Receive Advocacy training. Attend meetings of local professional advocacy organizations (e.g., the Wisconsin Medical Society, Dane County Medical Society) with the Course Director, dependent on time of enrollment.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Discuss the role of socioeconomic, environmental, and cultural determinants of health on the mental health status and mental health care of individuals and populations.
Audience: Graduate

2. Design and record a public service announcement on a Psychiatric public health issue.
Audience: Graduate

3. Appraise the quality of the evidence of peer reviewed medical and public health literature in developing a brief blog on a specific topic related to preventive or public health care in psychiatry
Audience: Graduate

4. List and describe a variety of community resources available to improve the mental health of individuals and populations, especially those who are underserved
Audience: Graduate

5. Engage effectively with Legislators and/or members of professional medical advocacy organizations in discussing Psychiatric public health issues.
Audience: Graduate

PSYCHIAT 934 – PSYCHIATRY INPATIENT ADVANCED CLINICAL EXPERIENCE
2-4 credits.

Introduction to common psychiatric diagnoses (mood disorders, psychotic disorders and personality disorders) in the hospital setting. Active participation in patient care under the supervision of 2 Inpatient Attending Faculty and 3 Psychiatry Residents. During daily multidisciplinary rounds, present detailed clinical information about new patients. Provide daily updates on assigned patients. Participate in all aspects of patients' care, and conduct in-depth patient interviews. Attend family meetings and play an integral role in obtaining collateral information from family or outside sources. Write daily progress notes. Present a brief topic review at the end of the rotation.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate awareness of the impact of mental illness on the quality of life and functioning in the adult population
Audience: Graduate

2. Demonstrate knowledge of clinical presentation and the treatment of common psychiatric illnesses in the hospital setting
Audience: Graduate

3. Demonstrate familiarity with and ability to evaluate suicide risk in adults
Audience: Graduate

4. Conduct comprehensive psychiatric interviews and mental status examinations.
Audience: Graduate

5. Plan and implement biopsychosocial treatment plans for patients with psychiatric illness.
Audience: Graduate

PSYCHIAT 946 – CHILD AND ADOLESCENT PSYCHIATRY CLINICAL ELECTIVE
1-12 credits.

Introduction to core knowledge and skills in child and adolescent psychiatry including assessment, diagnoses, and treatment of children and adolescents through exposure to inpatient, outpatient, and consultation/liaison settings. Exposure to the intricacies of working with families and systems providing care to child and adolescent patients. Designed for students considering careers in psychiatry, pediatrics, and family practice.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate clinical knowledge and skills in providing psychiatric care to child and adolescent patients, including: psychotherapeutic and medication management treatment strategies, diagnostic interviewing techniques, working in multidisciplinary teams, and documentation
Audience: Graduate

2. Demonstrate ability to recognize and diagnose common psychiatric conditions in child and adolescent patients
Audience: Graduate

3. Demonstrate the ability to develop a biopsychosocial formulation.
Audience: Graduate

4. Participate in and display an understanding of the differences between a range of child and adolescent psychiatry practice settings, including inpatient, outpatient, and consultation/liaison.
Audience: Graduate

PSYCHIAT 947 – PSYCHIATRY ASSESSMENT & TREATMENT IN A FORENSIC HOSPITAL SETTING
4 credits.

Interact with and learn from multiple staff at Mendota Mental Health Institute (MMHI), including forensic psychiatrists, psychologists, nurses, and occupational therapists. Interact with patients who have been committed to MMHI usually for forensic purposes- the patient has been found not guilty by reason of insanity, they are incompetent to stand trial, and/or their conditional release in the community has been revoked. Opportunity to see patients who have been civilly committed. Rotate with multiple psychiatrists, some of whom are specially trained in forensic psychiatry. Learn more about the forensic/legal system, the structure of medium and maximum security forensic psychiatry units, treatment of refractory psychotic and mood disorders, and the basics of forensic assessments. The student is given as much autonomy as possible with individual supervision and discussion.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 3 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate basic knowledge of forensic psychiatry
Audience: Graduate

2. Demonstrate knowledge of the treatment and assessment of patients who are incompetent to stand trial
Audience: Graduate

3. Demonstrate knowledge and performance of clinical interviews and mental status exams, in formulating diagnoses and planning treatment
Audience: Graduate

4. Demonstrate knowledge in documenting a complete psychiatric history and physical
Audience: Graduate

PSYCHOLOGY (PSYCH)

PSYCH/ASIAN/COUN PSY/ED PSYCH 120 – THE ART AND SCIENCE OF HUMAN FLOURISHING
3 credits.

Explore perspectives related to human flourishing from the sciences and humanities; investigate themes such as transformation, resilience, compassion, diversity, gratitude, community; expand self-awareness, enhanced social connectivity, and ability to change; formulate a sense of what it means to lead a flourishing life that sustains meaningful and fulfilling engagement with studies, relationships, community, and career.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze and describe the relevant concepts and theories on the nature and cultivation of human flourishing from multiple intellectual fields including psychology, neuroscience, anthropology, philosophy, and religious studies.
Audience: Undergraduate

2. Describe and engage with the many dimensions of flourishing, and the various extrinsic and intrinsic factors influencing them.
Audience: Undergraduate

3. Formulate an account of human flourishing.
Audience: Undergraduate

4. Employ contemplative practices in an inquiry that cultivates qualities of human flourishing from within.
Audience: Undergraduate

5. Integrate contemplative practice and knowledge of course materials in order to establish a foundation for flourishing in your life and the communities in which you live.
Audience: Undergraduate

PSYCH/SOC 160 – HUMAN SEXUALITY: SOCIAL AND PSYCHOLOGICAL ISSUES
3-4 credits.

Biological, psychological and sociological aspects of sexual relationships and behavior. Presents theoretical and empirical materials on sexuality throughout the life-course, including childhood, adolescence, adulthood, and later life. Attention is given to gender, religion, education and the law as they relate to sexual expression in society.
Requisites: Not open to students with credit for SOC/PSYCH 453.
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PSYCH 202 – INTRODUCTION TO PSYCHOLOGY
3-4 credits.

Behavior, including its development, motivation, frustrations, emotion, intelligence, learning, forgetting, personality, language, thinking, and social behavior.
Requisites: Not open to students with credit for PSYCH 201 or 281
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe and discuss the inferences that are allowed by major methodological approaches in psychology, including correlational studies, experimental studies, and case studies.
Audience: Undergraduate

2. Describe major theoretical perspectives, concepts, hypotheses, and empirical findings in a wide variety of core domains of psychology, including learning, memory, perception, intelligence, decision making, social behavior, health and well-being, and psychological disorders.
Audience: Undergraduate

3. Apply the psychological concepts discussed above to real-world practical situations and current events.
Audience: Undergraduate

4. Identify and describe the functionality (in terms of their role in human behavior and/or subjective experience) of major brain areas.
Audience: Undergraduate

5. Discuss the relative contribution of nature (i.e., genetics) and nurture (i.e., experience) in multiple psychological phenomena.
Audience: Undergraduate

6. Describe the changes that occur in various psychological phenomena across the lifespan
Audience: Undergraduate

PSYCH 205 – EXPLORING RESEARCH IN PSYCHOLOGY
1 credit.

Focuses on a wide range of research in psychology at UW-Madison, such as child development, clinical psychology, perception, biological psychology, cognition, and psychological neuroscience.
Requisites: PSYCH 202
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Identify how psychologists study both universals and differences observed across individuals, cultures, and species, spanning all levels of analysis (neurons to neighborhoods).
Audience: Undergraduate

2. Apply critical thinking skills to determine how conclusions are drawn from research questions.
Audience: Undergraduate

3. Evaluate how data can provide insight into important societal issues.
Audience: Undergraduate

4. Recognize opportunities available in the Psychology major.
Audience: Undergraduate

5. Evaluate psychological science through multiple lenses, including such issues as social justice, poverty, psychopathology, and disabilities.
Audience: Undergraduate

6. Analyze research across all of the major subareas of psychology, and address intersections with myriad disciplines (e.g., zoology, philosophy, genetics, linguistics, economics, public policy, art, pediatrics, and music).
Audience: Undergraduate

PSYCH 210 – BASIC STATISTICS FOR PSYCHOLOGY
3 credits.

Measures of central tendency, variability; probability, sampling distributions; hypothesis testing, confidence intervals; t-tests; Chi-square; regression and correlation (linear) and introduction to analysis of variance (1-way).
Requisites: Satisfied Quantitative Reasoning (QR) A requirement and (PSYCH 202 or concurrent enrollment)
Course Designation: Gen Ed - Quantitative Reasoning Part B
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain why data beat anecdotes.
Audience: Undergraduate

2. Understand why association is not causation
Audience: Undergraduate

3. Explain the fundamental concepts and apply the basic procedures that underlie descriptive and inferential statistics
Audience: Undergraduate

4. Interpret and draw conclusions from graphical displays and standard output from statistical software packages.
Audience: Undergraduate

5. Understand why statistical significance does not necessarily imply practical importance.
Audience: Undergraduate

6. Demonstrate an awareness of ethical issues associated with sound statistical practice.
Audience: Undergraduate

PSYCH 212 – SOCIAL SCIENCE TOPICS IN PSYCHOLOGY
3 credits.

Consider how researchers approach classic and current research findings and controversies related to a specific topic, with a social science emphasis. Popular misconceptions will be addressed through discussions of relevant scientific research. Primary focus on behavioral research approaches, though neuroscientific or computational approaches may be integrated.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, for 2 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Think critically about an important topic in psychology with an emphasis in the social science.
Audience: Undergraduate

2. Acquire knowledge about the methods used to study that topic.
Audience: Undergraduate

3. Consider controversies in the field and their impact on theoretical development.
Audience: Undergraduate

4. Compare classic and contemporary theories.
Audience: Undergraduate

5. Write scientifically about issues in psychological science.
Audience: Undergraduate

6. Consider the differences between popular press and scientific approaches to issues in psychology.
Audience: Undergraduate

PSYCH 225 – RESEARCH METHODS
4 credits.

General characteristics of scientific method; use of experimental, observational, and correlational research designs; research methods used in psychological science; illustration of core issues in research methods taken from several areas of psychology; lecture, demonstration, and experiments.
Requisites: Satisfied Communications A requirement, grade of C in PSYCH 202, and grade of C in (PSYCH 210, STAT 302, STAT 324 or STAT 371)
Course Designation: Gen Ed - Communication Part B
Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop skills to find, read, and understand scientific articles and to synthesize scientific literature
Audience: Undergraduate

2. Through an iterative process, learn how to effectively communicate research in multiple modalities
Audience: Undergraduate

3. Develop critical thinking skills, examine linkages between method and results, consider alternative explanations, and become more knowledgeable consumers of research
Audience: Undergraduate

4. Generate and test hypotheses; design psychological research using different approaches, data collection tools, and analysis techniques
Audience: Undergraduate

5. Correctly interpret and convey statistical results via text, tables, and figures
Audience: Undergraduate

6. Learn key principles of science, including use of evidence, how to evaluate scientific reliability and validity, and how to fairly and thoroughly evaluate research inside and outside the classroom.
Audience: Undergraduate

7. Learn that ethical principles, behavior, and decision-making pertain to all aspects of the research process
Audience: Undergraduate

8. Identify how psychological science can inform societal practices and policies. Review and apply what you learned.
Audience: Undergraduate

PSYCH 310 – TOPICS IN PSYCHOLOGY: STUDY ABROAD
1-6 credits.

A course carried with a UW-Madison Study Abroad Program which has no equivalent on this campus. Current enrollment in a UW-Madison study abroad program
Requisites: None
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 1999

PSYCH 311 – ISSUES IN PSYCHOLOGY
1-4 credits.

Topics vary with the instructor. Survey of topical issues.
Requisites: PSYCH 202
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Explore current issues in psychological science.
Audience: Undergraduate

2. Evaluate conclusions drawn from research in psychological science.
Audience: Undergraduate

3. Apply psychological concepts, theories, and research findings to issues in psychology.
Audience: Undergraduate

PSYCH/GEN&WS 322 – SEXUAL & RELATIONSHIP VIOLENCE RESEARCH & ACTIVISM
3 credits.

Examine sexual and relationship violence and how they intersect with various aspects of identity (race, gender, sexual orientation, disability, poverty, etc.) in the general community as well as within particular populations (college, military, incarcerated) with a heavy focus on college populations (some of the applied parts of the course will focus here). Learn about power and oppression, as well as ways that both research and practice in these arenas have been marginalized and underfunded. Additional focus on community and campus responses to sexual and relationship violence through a series of speakers as well as about anti-violence activism through course activities and group projects.
Requisites: Junior standing and 3 credits in PSYCH or GEN&WS
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand the prevalence of sexual and relationship violence, whom it impacts, how it can affect survivors, and service seeking options for survivors.
Audience: Undergraduate

2. Understand the role of identity and intersectional identities in the experience and impact of violence as well as service seeking.
Audience: Undergraduate

3. Understand the role of alcohol and other drugs in sexual and relationship violence and their intersections with personal and social identities.
Audience: Undergraduate

4. Understand the history and practice of advocacy.
Audience: Undergraduate

5. Apply knowledge in determining the medical, mental health, legal, and other options for survivors
Audience: Undergraduate

6. Analyze and apply fourth-wave feminism to anti-violence activism.
Audience: Undergraduate

PSYCH/I SY E 349 – INTRODUCTION TO HUMAN FACTORS
3 credits.

Conveys the importance of considering human capabilities and limits in system design and operation. This includes understanding human characteristics from the cognitive, physical, and psychosocial perspectives. Implications of these characteristics are explored through understanding the needs of people, designing to support these needs, and evaluating systems to ensure they serve the intended purpose. Case studies are used to identify the human role in accidents and to identify design improvements. Application domains include consumer product design, human-computer interaction, workplace safety, and complex systems such as healthcare delivery.
Requisites: (I SY E 210, E C E 331, MATH/STAT 309, 431, STAT 311, 324, 371, MATH 531, PSYCH 210, or C&E SOC/SOC 360, or concurrent registration), graduate/professional standing, or member of Engineering Guest Students
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize the strengths and limits of human perceptual, cognitive and physical abilities and their implications for system design
Audience: Undergraduate

2. Describe human factors tools, techniques and methods commonly used to design and improve system performance
Audience: Undergraduate

3. Evaluate and recommend work and task designs based on human factors and ergonomic principles
Audience: Undergraduate

4. Define the ethical application of human factors in designing products and processes
Audience: Undergraduate

PSYCH 380 – JUNIOR HONORS SEMINAR
1 credit.

Discusses the process of research, provide guidance and feedback about writing about research, and offer opportunities to present research issues and findings. The broader goal is to prepare students to conduct a Senior Honors Thesis.
Requisites: PSYCH 225 and declared in a College of Letters and Science Honors in the Liberal Arts program or Psychology Honors in the Major
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Respond adaptively to questions about, and feedback on, one's own research.
Audience: Undergraduate

2. Ask incisive questions about, and provide feedback on, other people's research.
Audience: Undergraduate

3. Produce high-quality public presentations about research.
Audience: Undergraduate

4. Develop an independent research project based on the existing literature and, in most cases, based on the ongoing research of a faculty mentor
Audience: Undergraduate

5. Write a research fellowship proposal
Audience: Undergraduate

PSYCH 399 – SERVICE LEARNING IN PSYCHOLOGY
1-4 credits.

An independent opportunity to provide experience in community service work relevant to psychology.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

PSYCH 401 – PSYCHOLOGY, LAW, AND SOCIAL POLICY
3 credits.

Focuses on the role that psychological principles, research evidence and social science play in the laws of U.S. society, especially in the policies and mechanisms of social control of human behavior. Topics include: the ways society defines membership; the role of psychology determining who should be excluded or restricted from open society; how selected processes work in the legal and social context; students' own roles as citizens in supporting or changing these social processes; clinical-legal processes used to determine the disposition of individuals considered marginal in society; mechanisms used to exclude individuals from open society through criminal and civil court processes; the role of psychology as a science; and the role of psychologists as behavioral experts in criminal and civil courts, and in shaping social policies.
Requisites: PSYCH 202
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the ways that psychological science interfaces with social policy and the criminal justice system.
Audience: Undergraduate

2. Explain how psychological science can inform police and prosecution procedures.
Audience: Undergraduate

3. Summarize the ways that mechanisms of social control are applied to mentally ill individuals.
Audience: Undergraduate

4. Describe psychosocial factors that distort or interfere with the goals of the criminal justice system.
Audience: Undergraduate

PSYCH 403 – PSYCHOLOGY OF PERSONALITY
3 credits.

Organization and development of the personality.
Requisites: PSYCH 202
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Define personality as it relates to the field of Psychology.
Audience: Undergraduate

2. Examine and summarize different theories, ideologies, and origins of different views of personality.
Audience: Undergraduate

3. Compare and contrast the variety of approaches to understanding personality development, assessment, and research methods.
Audience: Undergraduate

4. Examine the implications of personality research on our broader society as well as cross-culturally.
Audience: Undergraduate

PSYCH 405 – ADULT PSYCHOPATHOLOGY
3-4 credits.

Introduces diagnosis and treatment of major mental disorders. Considers current thinking regarding the biological, psychological, and sociocultural factors that play contributing roles in the etiology and maintenance of these disorders. Historical trends as well as advances in neuroscience will be considered in terms of how they have affected our understanding of psychopathology.
Requisites: PSYCH 202
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand the main defining features of different major forms of adult psychopathology.
Audience: Undergraduate

2. Differentiate between different types of related disorders.
Audience: Undergraduate

3. Understand the relationship between the different paradigms and ways of conceptualizing psychopathology, assessing and treating mental illness.
Audience: Undergraduate

4. Understand the different research methods used in the study of psychopathology.
Audience: Undergraduate

5. Recognize the continuum between mental health and mental illness.
Audience: Undergraduate

6. Identify different types of stigma that people with severe mental illness may face.
Audience: Undergraduate

PSYCH 406 – PSYCHOLOGY OF PERCEPTION
3-4 credits.

Survey the current knowledge about how the brain creates our conscious experience of a surrounding world and of our own bodies. Consider contributions from various approaches, including neurophysiology, psychophysics, computer simulations, perceptual illusions, and patient studies.
Requisites: PSYCH 202, (ZOOLOGY/BIOLOGY 101 and 102), ZOOLOGY/BIOLOGY/BOTANY 151, or (BIOCORE 381 and 382)
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2024
Learning Outcomes: 1. Describe the physical and chemical properties of the world (e.g. light, soundwaves, pressure, chemicals) that stimulate sensory systems.
Audience: Undergraduate

2. Explain how sensory systems in each modality (vision, hearing, touch, smell, taste) convert input from the world into neural signals.
Audience: Undergraduate

3. Explain how perceptual systems enable observers to acquire knowledge about objects and events in the world around them.
Audience: Undergraduate

4. Evaluate past and current theories of sensation and perception.
Audience: Undergraduate

5. Interpret the methods and key findings of foundational and modern experiments in sensation and perception.
Audience: Undergraduate

6. Compare and contrast sensory and perceptual systems across modalities.
Audience: Undergraduate

PSYCH 414 – COGNITIVE PSYCHOLOGY
3-4 credits.

How people perceive, learn, remember, plan, solve problems, make decisions, and communicate. The main approach is psychological but will also consider contributions from computer science, linguistics, and neurobiology.
Requisites: PSYCH 202, (ZOOLOGY/BIOLOGY 101 and 102), ZOOLOGY/BIOLOGY/BOTANY 151, or (BIOCORE 381 and 382)
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the anatomical structures associated with the following major classes of cognition: perception, attention, motor control, memory, and cognitive control.
Audience: Undergraduate

2. Explain the process of the transduction of information from the outside world into a neural code, and the brain's representation of that information on any of multiple mental codes.
Audience: Undergraduate

3. Interpret graphical depictions of experimental data, including accuracy and reaction time.
Audience: Undergraduate

4. Critically evaluate claims about cognitive psychology and cognitive neuroscience as the appear in popular press.
Audience: Undergraduate

PSYCH 449 – ANIMAL BEHAVIOR
3-4 credits.

Evolutionary and physiological mechanisms of animal behavior including aggressive, reproductive, communicative, and social behaviors, behavioral development.
Requisites: PSYCH 202, (ZOOLOGY/BIOLOGY 101 and 102), ZOOLOGY/BIOLOGY/BOTANY 151, or (BIOCORE 381 and 382)
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop hypotheses and test predictions about animal behavior.
Audience: Undergraduate

2. Describe how animal behavior evolves through natural and sexual selection.
Audience: Undergraduate

3. Explain functions of cultural transmission.
Audience: Undergraduate

4. Summarize neural, hormonal and genetic control of animal behavior.
Audience: Undergraduate

5. Explain why kin may be treated differently in animal groups.
Audience: Undergraduate

6. Describe functions of communication, play, aggressive and affiliative behaviors between animals.
Audience: Undergraduate

7. Describe how animal behavior is important for conservation.
Audience: Undergraduate

8. Explain why individuals express different personalities.
Audience: Undergraduate

PSYCH 450 – PRIMATE PSYCHOLOGY: INSIGHTS INTO HUMAN BEHAVIOR
3-4 credits.

Explore the psychology and biology of our closest living ancestors and how it can provide insights into human behavior and cognition. Learn how a variety of factors (ecological, evolutionary, developmental, and experiential) shape the variation we see across and within primate species. Topics include investigation of similarities and differences across taxa in development, learning, memory, evolution of the brain, spatial navigation, tool-use, social behavior, parental behavior, communication, self-recognition, and theory of mind, as well as ethical issues and conservation.
Requisites: PSYCH 202, ZOOLOGY/BIOLOGY 101, ZOOLOGY/BIOLOGY/BOTANY 151, or (BIOCORE 381 and 382)
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Understand more than 650+ species that comprise the Order Primates.
Audience: Undergraduate

2. Understand how studying nonhuman primates has helped to inform our knowledge about human behavior and physiology, psychological processes, and environmental factors that influence both other animals and us.
Audience: Undergraduate

3. Apply different levels of analysis (proximate, developmental, evolutionary, and phylogenetic) when asking and answering questions about primates and to understand that these levels of analysis offer complementary insights into primate psychology
Audience: Undergraduate

4. Identify how variation in experience, environments, and development shape individual variation within and across primate species.
Audience: Undergraduate

5. Critically evaluate empirical evidence about primate psychological processes as presented in popular media and scientific research articles.
Audience: Undergraduate

6. Recognize the various methods used to study primates in captive and natural settings, including behavioral, cognitive, physiological, and neuroscience methods.
Audience: Undergraduate

7. Reflect on ethical and animal welfare considerations for nonhuman primates across the settings in which they live.
Audience: Undergraduate

PSYCH/SOC 453 – HUMAN SEXUALITY
4 credits.

Provides an interdisciplinary introduction to biological, psychological, and sociological aspects of human sexuality.
Requisites: PSYCH 202 or Sophomore standing. Not open to student with credit for SOC/PSYCH 160
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain information about the biological, psychological, and social aspects of sexuality. Much of this is practical information that people need to know for daily living – e.g., information about contraception and sexually transmitted infections.
Audience: Undergraduate

2. Evaluate methods used in the scientific study of sexuality, to gain a better understanding of existing data and evaluate studies that will be published in the future.
Audience: Undergraduate

3. Describe the fabulous diversity of human sexuality along many dimensions, including age, sexual orientation, ethnicity within the United States, and cultures around the world.
Audience: Undergraduate

4. Develop comfort with the topic of sex to make more rational decisions about it, by using accurate terminology and evidence-based reasoning.
Audience: Undergraduate

5. Discuss sensitive topics with respect and clarity, particularly with individuals who have perspectives different from yours.
Audience: Undergraduate

PSYCH 454 – BEHAVIORAL NEUROSCIENCE
3-4 credits.

Biological basis of human and animal behaviors, including perception, action, cognition, social interaction and disease. Weekly themes from "Cracking the Neural Code" to "Love and War". Learn, develop and use neural mechanisms to explain and (attempt to) predict what they and others think and do in all facets of life.
Requisites: PSYCH 202, (ZOOLOGY/BIOLOGY 101 and 102), ZOOLOGY/BIOLOGY/BOTANY 151, or (BIOCORE 381 and 382)
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe how neurons code information.
Audience: Undergraduate

2. Characterize how the brain is organized at the cellular, circuit and systems levels.
Audience: Undergraduate

3. Interpret plots of neural activity.
Audience: Undergraduate

4. Explain neural mechanisms which enable us to perceive and navigate our environment.
Audience: Undergraduate

5. Explain neural mechanisms which enable cognition and memory.
Audience: Undergraduate

6. Explain neural mechanisms which enable us to interact with others.
Audience: Undergraduate

PSYCH 456 – SOCIAL PSYCHOLOGY
3-4 credits.

Introduce classic and contemporary theories and research in the field, with an emphasis on experimental methodology. Examine the psychological study of the individual in the social world, including social interaction, motivation, attitudes, conformity, communication, leadership, personal relationships, and behavior in small groups.
Requisites: PSYCH 202
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand the kinds of questions that social psychologists ask and why these questions matter.
Audience: Undergraduate

2. Become an effective consumer of science – i.e., understand the methods that social psychologists use to test their research questions and be able to draw appropriate conclusions from study findings.
Audience: Undergraduate

3. Evaluate whether research evidence provides a good test of theory.
Audience: Undergraduate

4. View everyday social behavior through a social psychological lens.
Audience: Undergraduate

5. Think about how research findings can be used to create interventions to address real-world problems.
Audience: Undergraduate

PSYCH 460 – CHILD DEVELOPMENT
3-4 credits.

Biological and behavioral foundations of human development, with an emphasis on experiments and data-driven approaches. Topics will include prenatal development, behavior genetics, motor development, perceptual development, language development, cognitive development, emotional development, social development, and atypical development.
Requisites: PSYCH 202
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. identify and summarize major theories in the area of child development
Audience: Undergraduate

2. interpret commonly-used research designs in developmental psychology
Audience: Undergraduate

3. critique conclusions drawn from research studies
Audience: Undergraduate

4. Collect and analyze data related to real-world child research
Audience: Undergraduate

5. link research on child development to policy and practice
Audience: Undergraduate

PSYCH 462 – ADOLESCENT DEVELOPMENT
3-4 credits.

Examines research on biological, cognitive, social, and emotional development during the second decade of life. Covers topics most relevant to teenagers, such as pubertal development and its social consequences, changing relationships with parents, self and identity development, the increasingly important role of peers, school adjustment, and high risk behaviors.
Requisites: PSYCH 202
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify major subfields of developmental psychology and recognize how each of these areas of research contribute to our understanding of the mind, brain, and behavior in teenagers.
Audience: Undergraduate

2. Understand how various different methodologies (e.g., magnetic resonance imaging, ecological momentary assessment, etc.) are applied with the scientific methods to use in research studies involving teenagers.
Audience: Undergraduate

3. Critically evaluate research claims heard in everyday life (e.g., popular media, educational settings, academia, civic discourse, etc.).
Audience: Undergraduate

4. Differentiate between myths and contemporary scientific evidence regarding teenage development.
Audience: Undergraduate

PSYCH 464 – ADULT DEVELOPMENT AND AGING
3 credits.

Physical, cognitive, social, and personality development during the adult years.
Requisites: PSYCH 202
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Identify and dispel myths and stereotypes about aging.
Audience: Undergraduate

2. Summarize the major psychological theories and methodologies in aging research.
Audience: Undergraduate

3. Identify how and why older adults differ from younger adults and the heterogeneity of aging.
Audience: Undergraduate

4. Explain the necessity and importance of studying aging in an interdisciplinary context.
Audience: Undergraduate

PSYCH 501 – DEPTH TOPIC IN SOCIAL SCIENCE
4 credits.

Provides an in-depth treatment of a specific topic in psychology.
Requisites: PSYCH 202
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025
Learning Outcomes: 1. Think critically about an important topic with an emphasis in the social sciences.
Audience: Undergraduate

2. Evaluate the main research questions of that topic.
Audience: Undergraduate

3. Analyze the theoretical approaches to studying that topic.
Audience: Undergraduate

4. Discuss the research literature and generate new ideas related to the topic.
Audience: Undergraduate

PSYCH 502 – COGNITIVE DEVELOPMENT
4 credits.

Covers the basics of cognitive development during childhood. Topics include theoretical approaches to cognitive development; perceptual, language, memory, and conceptual development; social cognition; problem solving, and academic performance.
Requisites: PSYCH 406, 413, 414, 460, 462, or 464
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Describe the basic tenents of major theories of cognitive development and highlight points of similarity and differences among them.
Audience: Undergraduate

2. Identify and explain the major methodological approaches used in the field of cognitive development by researchers who adopt different theoretical perspectives.
Audience: Undergraduate

3. Interpret children's behaviors from different theoretical perspectives and in light of existing knowledge about the development of perception, language, memory, concepts, social cognition, problem solving, and academic skills.
Audience: Undergraduate

4. Describe basic phenomena and theoretical accounts of perceptual development, language development, memory development, concept development, the development of social cognition, the development of problem solving, and the development of academic skills.
Audience: Undergraduate

5. Practice identifying claims about cognitive development in popular press, evaluating those claims based on evidence in the scientific literature, and evaluating popular press articles in light of the alignment between claims and evidence.
Audience: Undergraduate

PSYCH 503 – SOCIAL DEVELOPMENT
4 credits.

Explores how infants and children perceive, think about, and interact with the social world. Topics include theory of mind, emotions, early social relationships, peer influences, morality and pro-social behavior, aggression, and social categorization.
Requisites: PSYCH 403, 414, 428, 449, 450, 456, 460, 462, or 464
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Discuss historical and contemporary theories of social development
Audience: Undergraduate

2. Read, understand, and evaluate empirical literature on children's social development across a range of topics
Audience: Undergraduate

3. Evaluate a popular press article about a topic related to the course material
Audience: Undergraduate

4. Compose polished writing about a follow-up study related to the course material
Audience: Undergraduate

5. Discuss contemporary theories of social development with others in the course
Audience: Undergraduate

6. Articulate cross-cultural and evolutionary perspectives on infants' and children's social development
Audience: Undergraduate

7. Evaluate major methodologies used to assess infants' and children's social development
Audience: Undergraduate

PSYCH 505 – DEPTH TOPIC IN BIOLOGICAL SCIENCE
3-4 credits.

Provides an in-depth treatment of a specific topic in psychology and biology.
Requisites: PSYCH 202, (ZOOLOGY/BIOLOGY 101 and 102), ZOOLOGY/BIOLOGY/BOTANY 151, or (BIOCORE 381 and 382)
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Think critically about an important topic with an emphasis in the biological sciences.
Audience: Undergraduate

2. Evaluate the main research questions of that topic.
Audience: Undergraduate

3. Analyze the theoretical approaches to studying that topic.
Audience: Undergraduate

4. Discuss the research literature and generate new ideas related to the topic.
Audience: Undergraduate

PSYCH 507 – INTRODUCTION TO CLINICAL PSYCHOLOGY
4 credits.

Interdisciplinary introduction to clinical psychology including history, theories, and treatment modalities.
Requisites: PSYCH 405
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Differentiate the multiple degree programs associated with clinical psychology.
Audience: Undergraduate

2. Differentiate career options afforded to those with a degree in clinical psychology.
Audience: Undergraduate

3. Identify of a variety of approaches intervention and treatment of psychological disorders.
Audience: Undergraduate

4. Identify the social, legal, ethical, clinical, and political issues surrounding the identification and treatment of disorders.
Audience: Undergraduate

5. Identify abnormality and mental illness from a more positive standpoint through person-first language.
Audience: Undergraduate

6. Analyze into the significance of cultural competencies within clinical psychology.
Audience: Undergraduate

PSYCH 508 – PSYCHOLOGY OF HUMAN EMOTIONS: FROM BIOLOGY TO CULTURE
4 credits.

Emotional experience affects and defines every facet of our life, but it seems mysterious and unsuitable for scientific inquiry. Explore how and why emotion is not unsuited to scientific research and provides an in-depth examination of research from all sub-disciplines of the field of Psychology. This includes neuroscience and the biological bases of behavior, questions of the developmental curve for emotional phenomena and the relationship between feeling and thinking, and the study of social groups and culture.
Requisites: PSYCH 403, 428, 456, 460, 462, 464, SOC/PSYCH 453, or PSYCH/GEN&WS 522
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Explain the theoretical approaches to emotion and current debates in the psychology of emotion
Audience: Undergraduate

2. Analyze the main questions addressed in research on emotion, and how that research is conducted
Audience: Undergraduate

3. Explore the functioning of numerous components of emotion in addition to subjective experience (feelings) such as bodily and facial expression, physiology, and processes of the brain
Audience: Undergraduate

PSYCH 510 – CRITICAL ISSUES IN CHILD PSYCHOPATHOLOGY
4 credits.

Provides in-depth coverage on the study of common mental disorders of childhood and adolescence. Uses a scientific lens to dive into some of the more controversial issues in the field, rather than focusing on basic definitions and classifications, instead. For instance, what factors have led to the rise in ADHD diagnosis in this country, and around the world? Why aren't evidenced-based treatments more widely used in mental health settings? Are antidepressants safe for adolescents, and do they actually work?
Requisites: PSYCH 405, 460, or 462
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2022
Learning Outcomes: 1. Identify and explore how cultural factors affect our conceptualization of mental disorders, while learning about individual differences in mental disorders by exploring how they are influenced by the interplay between both biology and environments.
Audience: Undergraduate

2. Refine critical thinking skills and question how conclusions are drawn from the data and to make connections between scientific studies and their applications to the real world.
Audience: Undergraduate

3. Apply research as a tool for affecting change for all people, and not just for selective populations. Explore the tension between science and clinical practice in the field and develop the foundations and skills for bridging this gap (as opposed to widening it by only focusing on one aspect).
Audience: Undergraduate

4. Integrate an array of material from within the psychological sciences (clinical psychology, developmental psychology) as well as from disciplines outside of psychology, including in anthropology, sociology, public health, epidemiology, neuroscience, and genetics.
Audience: Undergraduate

PSYCH 513 – HORMONES, BRAIN, AND BEHAVIOR
4 credits.

Complex social behavior emerges from the interplay of hormones, the brain and environmental signals. Introduces how hormones and neurotransmitters shape brain and behavior in animals and humans. Review the mechanisms by which hormones shape brain sex differences and its consequences on juvenile (i.e. play) and adult behavior. Examine how hormones influence sexual behavior using basic animal models, and extend this to human sex differences, including sexual orientation. Additional topics include how hormones shape competitive and affiliative behaviors, eating disorders, and stress and mental health, as well as how individual variation occurs in response to the changing environment and genetic landscape, including epigenetics at an introductory level.
Requisites: PSYCH 406, 413, 414, 449, 450, 454, or ZOOLOGY/ PSYCH 523
Course Designation: Breadth - Either Biological Science or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe sex differences in structure and function of the brain.
Audience: Undergraduate

2. Summarize how early exposure to hormones shapes lasting differences in the brain.
Audience: Undergraduate

3. Describe how sex differences contribute to risk for mental health disorders.
Audience: Undergraduate

4. Discuss why some individuals express different types of social behavior.
Audience: Undergraduate

5. Discuss how hormones influence how much we eat.
Audience: Undergraduate

6. Differentiate how hormones shape juvenile and adult behavior.
Audience: Undergraduate

7. Explain how endocrine disruptors can influence health.
Audience: Undergraduate

PSYCH 515 – ANIMAL COGNITION
4 credits.

With intricate cultures, impressive technology, and layered social lives, humans seem to stand apart from their animal kin. However, humans and non-human animals share many aspects of their mental lives, and, upon closer inspection, some animals even reveal cognitive abilities far beyond the capacities of humans. Through comparing and contrasting human and non-human cognition, learn about human psychological uniqueness and its evolutionary origins, and fundamental properties of cognitive processes in general.
Requisites: PSYCH 406, 414, 449, 450, 454, 460, 462, or 464
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe and and discuss the fundamentals of cognitive science through the lens of comparative cognition
Audience: Undergraduate

2. Analyze the evolutionary process and how human and animal minds are the product of it
Audience: Undergraduate

3. Analyze methods of experimentation in animal cognition and cognitive science
Audience: Undergraduate

4. Read and interpret data from graphs
Audience: Undergraduate

5. Critically evaluate primary research articles, secondary news articles about science, and observations of animal cognition and "intelligence"
Audience: Undergraduate

PSYCH/GEN&WS 522 – PSYCHOLOGY OF WOMEN AND GENDER
3 credits.

Examination of theories and research on the psychology of women and gender. Explores topics such as sex bias in psychological research; psychological aspects of female sexuality and reproduction; gender-based violence; female achievement and power; lifestyle choices of women; women and mental health; and psychological research with transgender individuals.
Requisites: Sophomore standing, a course in PSYCH and (GEN&WS 102 or 103) or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Describe a variety of feminist perspectives on psychology and psychological research.
Audience: Both Grad & Undergrad

2. Analyze the ways in which theorists and researchers address issues of sexism and other forms of discrimination that affect people's psychological experiences.
Audience: Both Grad & Undergrad

3. Apply class content and knowledge by evaluating personal experiences and the world around you in line with theories and concepts learned in class.
Audience: Both Grad & Undergrad

4. Apply a global perspective to the study of psychology of gender and articulate how class topics and concepts operate across culture.
Audience: Both Grad & Undergrad

5. Summarize how the study of psychology of gender contributes to social justice.
Audience: Graduate

PSYCH/ZOOLOGY 523 – NEUROBIOLOGY
3 credits.

Basic mechanisms in cellular neurophysiology: electrophysiology and chemistry of nerve signals, mechanisms in integration, simple nervous pathways and their behavioral correlates.
Requisites: (ZOOLOGY/BIOLOGY/BOTANY 151, ZOOLOGY/BIOLOGY 101, or BIOCORE 383) and (CHEM 104, CHEM 109, or CHEM 116)
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand the molecular mechanisms of cellular neurophysiology, including the ionic basis of the resting membrane potential and action potential, and mechanisms of synaptic transmission.
Audience: Undergraduate

2. Understand the basis of sensory perception at the receptor level.
Audience: Undergraduate

3. Demonstrate how neuronal signaling is integrated into simple nervous pathways and their behavioral correlates.
Audience: Undergraduate

4. Apply principles of neuronal function to activity-dependent changes in rhythmic neuronal activity, neuronal plasticity, and memory.
Audience: Undergraduate

5. Understand some of the state-of-the-art approaches to neuronal function.
Audience: Undergraduate

6. Understand key steps in the development of the nervous system and explain and apply the experimental approaches underpinning that understanding.
Audience: Undergraduate

7. Elucidate connections between genetics, pharmacology, and the functioning of the nervous system.
Audience: Undergraduate

8. Understand the mechanisms underlying a subset of disorders of the nervous system and the bases of current treatments.
Audience: Undergraduate

PSYCH 526 – THE CRIMINAL MIND: FORENSIC AND PSYCHOBIOLOGICAL PERSPECTIVES
4 credits.

Criminal behavior is an extremely common and costly problem for society. Provides an overview of criminal psychology and the relevant forensic and psychobiological processes in the field.
Requisites: PSYCH 401, 403, 405, or 456
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Critically review and analyze research in the field of forensic psychology.
Audience: Undergraduate

2. Review personality and crime with an emphasis on psychopathy assessment, case examples, causal theories, and neurobiological factors
Audience: Undergraduate

3. Examine the connection between mental illness and crime with an emphasis on Not Guilty by Reason of Mental Disease or Defect and Competency to Proceed psychological evaluations
Audience: Undergraduate

4. Consider general theories of causes of crime
Audience: Undergraduate

5. Characterize typologies of people who have committed sexual offenses, causes of sexual offenses, and risk assessment and typologies of people who have committed violent offenses, with a focus on domestic
Audience: Undergraduate

6. Analyze social psychological influences on crime and criminal justice system
Audience: Undergraduate

7. Critique treatment and intervention approaches, with emphasis on what works and why.
Audience: Undergraduate

PSYCH 528 – CULTURAL PSYCHOLOGY
4 credits.

Societies are shaped by the people, places, and environments that surround us. Examine the ways that culture and individual psychology make each other up, including how we think about ourselves, how we attend to and reason about the world, how we think about those like us and unlike us, and how these beliefs, attitudes, and cognitions are shared and maintained across groups.
Requisites: PSYCH 403, 406, 413, 414, or 456. Not open to students with credit in PSYCH 428.
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Examine naive realism and its associated problems.
Audience: Undergraduate

2. Identify and summarize cultural variation in thinking about what a self is, what responsibilities we have to each other, how we think about groups in society, what is right and wrong, how we should feel, what the world is like, and what the nature of the good life.
Audience: Undergraduate

3. Explain how historical, ecological, and societal factors help to shape cultural variation.
Audience: Undergraduate

4. Understand cultural variation that exists within our own society.
Audience: Undergraduate

5. Hypothesize about factors underlying cultural change and make predictions about the future.
Audience: Undergraduate

PSYCH 532 – PSYCHOLOGICAL EFFECTS OF THE INTERNET
4 credits.

Googling the question, "How is the Internet changing the way we think?," renders no shortage of opinions - or fears. Examine empirical evidence for whether the Internet is changing the way we learn, communicate, socialize, attend, develop, and age. Read and synthesize original research literature, which will be augmented with readings and videos from the popular press.
Requisites: PSYCH 401, 403, 405, 406, 413, 414, 428, 449, 450, 454, 456, 460, 462, 464, SOC/PSYCH 453, PSYCH/GEN&WS 522, or ZOOLOGY/PSYCH 523
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify nine previous technologies or past-times that were previously feared - and appraise how those fears parallel fears about the internet.
Audience: Undergraduate

2. Assess five principles of learning on which Internet based higher education capitalizes.
Audience: Undergraduate

3. Evaluate five challenges that college students face today and how Internet based education can tackle each challenge.
Audience: Undergraduate

4. Critique the claim that the Internet is making interpersonal communication briefer and less formal.
Audience: Undergraduate

5. Illustrate four intentional and four unintentional incidents in which the Internet has amplified mass communication.
Audience: Undergraduate

6. Connect the social psychological principle of similarity attraction to the popularity of online dating apps; connect interpersonal aggression to the phenomena of online bullying and trolling.
Audience: Undergraduate

7. Interpret how and why emotional contagion spreads through the Internet; hypothesize why there are so many photos, gifs, and videos of cats on the Internet.
Audience: Undergraduate

8. Identify how each of the six sources of motivation can affect Internet use; describe five reasons why people bing watch (TV shows or movies).
Audience: Undergraduate

9. Adjudicate four reasons why the Internet is not changing our attention spans.
Audience: Undergraduate

10. Descriminate three primary decision making heuristics and generate an example of how each applies to internet use
Audience: Undergraduate

11. Relate two positive effects of Internet use on agin and two on child development.
Audience: Undergraduate

12. Explain how much variance in Internet activities is accounted for by personality factors; describe four famous selfies made prior to the Internet.

PSYCH/I SY E 549 – HUMAN FACTORS ENGINEERING
3 credits.

Analysis and design of man-machine systems using human performance models and data. Emphasis on systems involving communication and control. Projects using digital and analog computer simulation techniques for system design.
Requisites: I SY E/PSYCH 349, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Explain the topics involved in cognitive human factors and design implications of these concepts
Audience: Both Grad & Undergrad

2. Describe the interactions between human operators and system components including the environment, technology, and organizations
Audience: Both Grad & Undergrad

3. Discuss different human factors perspectives regarding human error and limitations of human performance, especially as these relate to memory, decision-making, action selection, and workload and stress
Audience: Both Grad & Undergrad

4. Identify barriers and limitations to memory and how these must be accounted for in design of systems and displays
Audience: Both Grad & Undergrad

5. Articulate the role of simulation and modeling in system design involving human operators
Audience: Both Grad & Undergrad

6. Use cognitive engineering analysis methods to complete a detailed analysis of a real incident or accident including outlining each layer and component of system failure and proposing possible redesign solutions
Audience: Graduate

PSYCH 601 – CURRENT TOPICS IN PSYCHOLOGY
3 credits.

Special topics in Psychology at the advanced undergraduate level. May be repeated for credit with different titles.
Requisites: PSYCH 225
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Evaluate research findings in the current topic of psychology.
Audience: Undergraduate

2. Explore and explain key research findings in the current topic of psychology.
Audience: Undergraduate

3. Generate and present new research ideas relevant to the current topic of psychology.
Audience: Undergraduate

PSYCH 602 – INTERMEDIATE STATISTICS FOR PSYCHOLOGY
3 credits.

Principles of psychological measurement and test theory, including reliability, validity, and test construction. Introduction to correlation, multiple regression, factor analysis, and other data analytic principles.
Requisites: PSYCH 210, SOC/C&E SOC 360, STAT 371, or GEN BUS 303
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2019

PSYCH 603 – EPIGENETICS AND THE BRAIN
3 credits.

Explore nature versus nurture by understanding gene by environmental interactions. Study how the environment and our behavior can modify our genome (epigenetics). Focus on how our behavior and overall health can be shaped by markings on our DNA, and how these markings may be passed onto future generations.
Requisites: (PSYCH 454 or ZOOLOGY/PSYCH 523) and BOTANY/BIOLOGY/ZOOLOGY 152, PSYCH 225, or (BIOCORE 383 and 384)
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand the basics of gene x environmental interactions.
Audience: Undergraduate

2. Understand the biological mechanisms of epigenetics.
Audience: Undergraduate

3. Understand multigenerational and transgenerational outcomes of epigenetics.
Audience: Undergraduate

4. Understand epigenetic contributions to disease and mental health.
Audience: Undergraduate

5. Critically read and discuss assigned readings.
Audience: Undergraduate

6. Present a relevant topic of interest to the class and answer questions.
Audience: Undergraduate

7. Design a research project that will answer a specific question and present the project as an oral proposal and a written research proposal.
Audience: Undergraduate

PSYCH 607 – INTRODUCTION TO PSYCHOTHERAPY
3 credits.

Theoretical and applied foundations of psychotherapy. Consider issues of ethics, diversity/inclusivity, and research directions related to psychotherapy. Explore basic and theoretical considerations relevant to therapy including transference and countertransference, emotion, defense mechanisms, boundaries, resistance and early development. Discuss aspects of psychotherapy practice including trauma work, parenting issues, play therapy, family therapy, and couples therapy.
Requisites: PSYCH 225
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate understanding of interpersonal dynamics relevant to psychotherapy.
Audience: Undergraduate

2. Communicate effectively through written assignments, oral presentations and discussion.
Audience: Undergraduate

3. Develop proficiency in mastering primary sources and critically evaluating research.
Audience: Undergraduate

PSYCH 610 – DESIGN AND ANALYSIS OF PSYCHOLOGICAL EXPERIMENTS I
4 credits.

Reliability, validity, one-sample t-test, independent-samples t-test, simple and multiple regression, effect size indicators, analysis of variance (ANOVA), analysis of covariance (ANCOVA), case analysis, model assumptions, transformations, polynomial regression, simple mediation, and moderated mediation.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Master reliability and validity in empirical research
Audience: Graduate

2. Master inferences about a single mean (t-test)
Audience: Graduate

3. Master analysis of single and multiple dichotomous predictors (ANOVA)

Audience: Graduate

4. Master analysis of single and multiple continuous predictors (regression)
Audience: Graduate

5. Master analysis of indirect effects (mediation)
Audience: Graduate

6. Master analysis of non-linear relationships (polynomial regression)
Audience: Graduate

7. Generate publication-level graphs
Audience: Graduate

PSYCH/NEURODPT/NTP 611 – SYSTEMS NEUROSCIENCE
4 credits.

Introduction to the anatomy and physiology of the mammalian nervous system. Lectures will cover the neuroanatomy of the major subdivisions of the human brain, the major sensory and motor systems, and higher order functions. Lab/discussion sections will emphasize readings from the primary literature and hands-on dissections.
Requisites: NEURODPT/NTP 610 or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the organization and structure of mammalian nervous system, including the spinal cord, brainstem, thalamus, cerebral cortex, cerebellum, basal ganglia, limbic system, and their interconnections on a systems leve
Audience: Both Grad & Undergrad

2. Demonstrate a solid understanding of the functions of the sensory and motor systems that underlie perception and action
Audience: Both Grad & Undergrad

3. Demonstrate a solid understanding of higher brain functions and behavior, including learning and memory and executive function
Audience: Both Grad & Undergrad

4. Demonstrate knowledge about approaches of modern neuroscience research including neuroanatomy, neurophysiology, functional brain imaging, behavioral assays, and quantitative data analysis methods
Audience: Both Grad & Undergrad

5. Develop and apply critical thinking to evaluate original neuroscience research
Audience: Graduate

6. Develop ability to formulate hypotheses and to apply knowledge learned from the course to design experiments for hypothesis testing
Audience: Graduate

PSYCH 612 – NEUROPHARMACOLOGY
3 credits.

Comprehensive review of the field of behavioral neuropharmacology, focusing on methodology, major neurotransmitter systems, critical evaluation of experimental evidence regarding behavioral functions of these transmitter systems and drugs used to treat mental illness.
Requisites: (PSYCH 454 or ZOOLOGY/PSYCH 523) and BOTANY/BIOLOGY/ZOOLOGY 152, PSYCH 225, or (BIOCORE 383 and 384)
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand the strengths and limitations of the primary methods used in neuropharmacology.
Audience: Undergraduate

2. Understand the basic principles of drug action as applied to neurotransmitters.
Audience: Undergraduate

3. Identify the major neurotransmitter systems, including the location of the synthesizing neurons, and the different receptors and their second messengers for a given neurotransmitter.
Audience: Undergraduate

4. Recognize evidence arguing for specific behavioral actions of select neurotransmitter systems and the limitations associated with this evidence.
Audience: Undergraduate

5. Think critically about data and hypotheses related to neurotransmitter regulation of behavior.
Audience: Undergraduate

6. Develop/refine skills for efficiently extracting key information from technical literature.
Audience: Undergraduate

PSYCH/ANTHRO/ZOOLOGY 619 – BIOLOGY OF MIND
3 credits.

Origins and structures of mind, brain, and consciousness. Transitions from early mammalian through primate to hominid intelligence. Genetics and plasticity in brain development. Modern studies of human brain mechanisms and consciousness.
Requisites: Junior standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023

PSYCH 621 – MENTORED RESEARCH AND SEMINAR
1-6 credits.

Develop an understanding of primary research in a topic area and participate in designing and conducting research that challenges and/or extends current understanding of the topic. Course reading will include published research studies relevant to the selected topic.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the steps involved in the research process (i.e., data collection, recruitment, coding) and gain skills in conducting research in psychology.
Audience: Undergraduate

2. Critically evaluate research psychology (i.e., research design, methodological issues, ethical issues, etc.).
Audience: Undergraduate

3. Explain important theories and methods related to the objectives of the lab.
Audience: Undergraduate

4. Asses and communicate ideas regarding lab-driven research.
Audience: Undergraduate

PSYCH 626 – ISSUES IN PRISONER REENTRY
3 credits.

Provides a multi-systemic understanding of evidence-based prisoner reentry issues and solutions while including community-based learning experiences. Considers the needs of formerly incarcerated individuals reentering our communities, including meeting the ultimate goal of decreasing recidivism and increasing positive psychological adjustment for former inmates, their families, and all the staff and community members working in various stages of the justice system.
Requisites: PSYCH 225 and (PSYCH 401 or concurrent enrollment or PSYCH 526 or concurrent enrollment)
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop community-based research and engagement skills
Audience: Undergraduate

2. Effectively translate psychological research for a community audience.
Audience: Undergraduate

3. Consider reentry issues from a multisystemic perspective.
Audience: Undergraduate

PSYCH/I SY E 653 – ORGANIZATION AND JOB DESIGN
3 credits.

Design of productive organizations and people's roles within them. Issues including boundary location, organizational decision levels, autonomous work groups, implementation and diffusion. Roles of the union. Case studies.
Requisites: I SY E/PSYCH 349, graduate/professional standing, or member of Engineering Guest Students
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Apply the work system model
Audience: Both Grad & Undergrad

2. Apply a variety of models and theories of job and organization design to answer questions such as, "What makes for a good job?" and "What makes for a bad job?"
Audience: Both Grad & Undergrad

3. Apply interview and survey methods for analyzing jobs
Audience: Both Grad & Undergrad

4. Identify approaches to implement job redesign
Audience: Both Grad & Undergrad

5. Identify societal trends related to job design
Audience: Both Grad & Undergrad

6. Identify similarities and differences between various models and theories of job and organization design
Audience: Graduate

PSYCH/NEURODPT/ZOOLOGY 674 – BEHAVIORAL NEUROENDOCRINOLOGY SEMINAR
2 credits.

Behavior results from a complex interplay among hormones, the brain, and environmental factors. Behaviors and their underlying neural substrates have evolved in response to specific environmental conditions, resulting in vast species diversity in behavioral and neuroendocrine solutions to environmental problems. Designed to explore the primary literature on the neuroendocrine underpinnings of behavior spanning from feeding to sex differences in complex social behaviors. A range of taxonomic groups will be discussed, including (but not limited to) mammals, birds, and fish.
Requisites: ZOOLOGY/BIOLOGY 101, ZOOLOGY/BIOLOGY/BOTANY 151, BIOCORE 383 or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify how behaviors and their underlying neural substrates have evolved in response to specific environmental conditions
Audience: Both Grad & Undergrad

2. Discuss and explore the primary literature on the neuroendocrine underpinnings of behavior spanning from feeding to sex differences in complex social behaviors
Audience: Both Grad & Undergrad

3. Identify and discuss hormones, the brain, and environmental factors as they relate to behavioral evolution and biological diversity
Audience: Both Grad & Undergrad

4. Develop and apply critical thinking to evaluate neuroendocrinological research
Audience: Graduate

5. Communicate effectively about concepts, theories and approaches of neuroendocrinology and behavioral research
Audience: Graduate

PSYCH 681 – SENIOR HONORS THESIS
3 credits.

Individual study for students completing senior honors theses as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025

PSYCH 682 – SENIOR HONORS THESIS
3 credits.

Individual study for students completing senior honors theses as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2025

PSYCH 686 – SENIOR THESIS SEMINAR IN PSYCHOLOGY
1 credit.

Focus on the process of conducting, writing, and presenting a senior or honors thesis in Psychology. Discuss the process of research, provide guidance and feedback about writing about research, and offer opportunities to present research issues and findings.
Requisites: Concurrent enrollment in PSYCH 681, 682, 691, or 692
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Accelerated Honors (!)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Acquire information and skills necessary to complete a senior honors project successfully (e.g., managing one's role in research, presenting one's research to an audience)
Audience: Undergraduate

2. Learn from others conducting senior honors research -- about other topics, methods, and theories in psychology
Audience: Undergraduate

3. Gain skills relevant to the three main arenas of scientific communication: written papers, talks, and poster presentations
Audience: Undergraduate

4. Learn to ask incisive questions about others' research and to critique others' work
Audience: Undergraduate

5. Learn to respond well to questions about or critiques of your research
Audience: Undergraduate

6. Produce a polished and professional report of your senior thesis.
Audience: Undergraduate

PSYCH 691 – UNDERGRADUATE THESIS
1-6 credits.

Undergraduate research including completion of a thesis. Recommended for those intending to do graduate work in psychology.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PSYCH 692 – UNDERGRADUATE THESIS
1-6 credits.

Undergraduate research including completion of a thesis. Recommended for those intending to do graduate work in psychology.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PSYCH 699 – DIRECTED STUDY
1-3 credits.

Independent mentored study with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PSYCH 701 – PROSEMINAR IN PERCEPTION, COGNITION, AND COGNITIVE NEUROSCIENCE
1 credit.

Discussion of current topics in perception, cognition, and cognitive neuroscience, especially as illustrated by the planned and ongoing research of the graduate students, postdoctoral researchers, and faculty in these areas. Recent journal articles will also be discussed.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Present research and navigate questions from the group
Audience: Graduate

2. Formulate concise questions about research
Audience: Graduate

3. Evaluate and discuss broader topics in the area of perception, cognitive, and cognitive neuroscience
Audience: Graduate

4. Identify strategies to support their professional development
Audience: Graduate

5. Foster an inclusive community by providing constructive feedback with kindness and a growth mindset
Audience: Graduate

PSYCH 703 – PROSEMINAR IN SOCIAL PSYCHOLOGY
1 credit.

Discussion of current topics in social psychology, especially as illustrated by the planned and ongoing research of the graduate students and faculty in social psychology. Recent journal articles will also be discussed.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Present research and navigate questions from the group
Audience: Graduate

2. Formulate questions to ask of other speakers
Audience: Graduate

3. Evaluate and discuss broad topics across the field of social psychology
Audience: Graduate

4. Identify strategies to support their professional development
Audience: Graduate

5. Foster an inclusive community by providing constructive feedback with kindness and a growth mindset
Audience: Graduate

PSYCH 704 – PROSEMINAR IN CLINICAL PSYCHOLOGY
1 credit.

Discussion of current topics in clinical psychology, especially as illustrated by the planned and ongoing research of the graduate students and faculty in clinical psychology. Recent journal articles will also be discussed.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Present research and navigate questions from the group
Audience: Graduate

2. Formulate questions to ask of other speakers
Audience: Graduate

3. Evaluate and discuss broad topics across the field of clinical psychology

Audience: Graduate

4. Identify strategies to support their professional development
Audience: Graduate

5. Foster an inclusive community by providing constructive feedback with kindness and a growth mindset
Audience: Graduate

6. Apply clinical psychology training models and accreditation practices
Audience: Graduate

7. Analyze and evaluate cutting edge clinical psychology research methods
Audience: Graduate

PSYCH 706 – PROSEMINAR IN DEVELOPMENTAL PSYCHOLOGY
1 credit.

Discussion of current topics in developmental psychology, especially as illustrated by the planned and ongoing research of the graduate students and faculty in developmental psychology. Recent journal articles will also be discussed.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Present research and navigate questions from the group
Audience: Graduate

2. Formulate questions to ask of other speakers
Audience: Graduate

3. Evaluate and discuss broad topics across the field of developmental psychology
Audience: Graduate

4. Identify strategies to support their professional development
Audience: Graduate

5. Foster an inclusive community by providing constructive feedback with kindness and a growth mindset
Audience: Graduate

PSYCH 707 – PROSEMINAR IN BIOLOGICAL PSYCHOLOGY
1 credit.

Discussion of current topics in biological psychology, especially as illustrated by the planned and ongoing research of the graduate students and faculty in clinical psychology. Recent journal articles will also be discussed.
Requisites: Declared in Psychology PhD program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Present research and navigate questions from the group
Audience: Graduate

2. Formulate questions to ask of other speakers
Audience: Graduate

3. Evaluate and discuss broad topics across the field of biological psychology
Audience: Graduate

4. Identify strategies to support their professional development
Audience: Graduate

5. Foster an inclusive community by providing constructive feedback with kindness and a growth mindset
Audience: Graduate

PSYCH 709 – PROSEMINAR IN DATA SCIENCE IN HUMAN BEHAVIOR
1 credit.

Discussion of current topics in human behavioral data science, including discussion of planned capstone projects, discussion of recent journal articles, training and practice in scientific communication to various stakeholders, and professional development activities.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Understand how central concepts in data science get applied to problems from industry, government, and nonprofit sectors.
Audience: Graduate

2. Develop skills for pitching your ideas to employers, funding agencies, other professionals, and the public.
Audience: Graduate

3. Understand different potential career pathways and how to prepare for each.
Audience: Graduate

4. Learn best practices for effectively communicating complex scientific ideas and outcomes.
Audience: Graduate

PSYCH 710 – DESIGN AND ANALYSIS OF PSYCHOLOGICAL EXPERIMENTS II
4 credits.

Statistical power, paired-samples t-test, within-subjects ANOVA, mixed models, mediation in within-subjects designs, contrast analysis (= the analysis of categorical predictors with 3 or more levels), multilevel modeling, linear mixed-effects models, restricted maximum likelihood, signal detection theory, logistic regression, exploratory factor analysis, missing data.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Master analysis of a single and multiple dichotomous within-subject predictors (within-subjects ANOVA)
Audience: Graduate

2. Master analysis of a single and multiple continuous within-subject predictors (mixed models)
Audience: Graduate

3. Master analysis of indirect effects in within-subjects designs (mediation)
Audience: Graduate

4. Master analysis of categorical predictors with 3 or more levels (contrast analysis)
Audience: Graduate

5. Master power analysis
Audience: Graduate

6. Master analysis of dichotomous outcome variables (logistic regression
Audience: Graduate

PSYCH 711 – CURRENT TOPICS IN PSYCHOLOGY
2-3 credits.

Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Evaluate and appropriately critique, implement, and/or defend research findings in the current topic of psychology.
Audience: Graduate

2. Explore and be able to explain key research findings in multiple areas associated with the current topic of psychology that are outside of their major research focus.
Audience: Graduate

3. Generate and present new research ideas relevant to the current topic of psychology via formal presentations, class discussions, discussion board posts, and/or question periods.
Audience: Graduate

PSYCH 720 – ESSENTIALS OF COGNITIVE NEUROSCIENCE
3 credits.

Provides a broad overview of principles that underlie our understanding of how the structure and function of the brain give rise to cognition and intelligent behavior, and of the methods with which cognitive neuroscience research is carried out. The content covered can be summarized as neuroscience with direct implications for understanding the neural bases of human behavior, and will include anatomical, cellular, systems, behavioral, neuropsychological, and computational levels of analysis. The emphasis will be on domains of behavior traditionally covered by cognitive psychology and neurology, but with explicit consideration, when applicable, of implications for understanding affect, social behavior, and psychopathology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

PSYCH 728 – CLASSIC ISSUES IN SOCIAL PSYCHOLOGY
3 credits.

A broad survey of theories and research from the field of social psychology. Areas may include: attitudes and attitude change, conformity and compliance, altruism, attribution theory.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

PSYCH/COUN PSY/RP & SE 729 – ADVANCED SOCIAL PSYCHOLOGY
3 credits.

Intensive examination of theoretical conceptions in contemporary social psychology, including learning-theoretic, reinforcement, incentive, cognitive, and psychodynamic approaches, and research in selected topic areas reflecting these approaches, such as aggression, attitude formation and change, conformity, limitation and modeling, interpersonal attraction, perception of others, prosocial behavior, and social influence.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

PSYCH 733 – PERCEPTUAL AND COGNITIVE SCIENCES
2 credits.

Current approaches to perceptual and cognitive sciences.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023

PSYCH 740 – CLINICAL I: ASSESSMENT, ETIOLOGY, AND TREATMENT
1 credit.

Current approaches to assessment, etiology, and treatment of topic material.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

PSYCH 741 – CLINICAL II: ASSESSMENT, ETIOLOGY, AND TREATMENT
1 credit.

Current approaches to assessment, etiology and treatment of topic material.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PSYCH 750 – PROGRAMMING FOR HUMAN BEHAVIORAL DATA SCIENCE
3 credits.

Foundations in programming fundamentals, emphasizing tools and techniques as utilized in human behavioral data science.
Requisites: Declared in Psychology: Human Behavioral Data Science MS or Psychology PhD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. learn Python and best-practices for writing efficient and understandable code, as informed by psychological research and methods for evaluating human behavior
Audience: Graduate

2. learn data wrangling in Python and R
Audience: Graduate

3. learn how to use ggplot to create effective visualizations of complex datasets
Audience: Graduate

4. learn how to scrape data, manage complex data structures, and perform basicanalyses using machine vision
Audience: Graduate

5. learn techniques for automating repetitive tasks.
Audience: Graduate

6. learn how to track and analyze mouse movements
Audience: Graduate

7. be able to efficiently use and build on existing open-source APIs
Audience: Graduate

PSYCH 752 – APPLIED MACHINE LEARNING FOR BEHAVIORAL DATA SCIENCE
3 credits.

Introduction to computational approaches in machine learning for the behavioral sciences.
Requisites: PSYCH 610 and graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. develop and refine best practices for data wrangling, general programming, and analysis in R.
Audience: Graduate

2. distinguish among a variety of learning settings: supervised learning vs. unsupervised learning, regression vs. classification
Audience: Graduate

3. implement a broad toolbox of well-supported machine-learning methods: decision trees, nearest neighbor, general and generalized linear models, penalized models including ridge, lasso, and elastic-nets, neural nets, support vector machines
Audience: Graduate

4. develop expertise with common feature extraction techniques for quantitative and categorical predictors
Audience: Graduate

5. use natural language processing approaches to extract meaningful features from text data
Audience: Graduate

6. know how to characterize how well their regression and classification models perform and they will employ appropriate methodology for evaluating their: cross validation, ROC and PR curves, hypothesis testing
Audience: Graduate

7. learn to apply their skills to common learning problems in psychology and behavioral sciences more generally
Audience: Graduate

PSYCH 755 – ENVIRONMENTS AND TOOLS FOR LARGE-SCALE BEHAVIORAL DATA SCIENCE
3 credits.

Provides students with knowledge and experience conducting large-scale behavioral data science projects, independently and in collaboration with others, using a variety of contemporary software tools and environments.
Requisites: PSYCH 750 and 752
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Use online crowd-sourcing platforms for collecting behavioral data, such as Amazon Mechanical Turk, and understand issues of design, sampling, and interpretation associated with such platforms.
Audience: Graduate

2. Use integrated tools for conducting, documenting, and publishing complex behavioral data analyses, including JuPyTeR notebooks and R Markdown.
Audience: Graduate

3. Use the GitHub platform to conduct collaborative behavioral data science, including documentation, analysis development, versioning, forking and merging.
Audience: Graduate

4. Use the SQL database management system to manage large behavioral datasets
Audience: Graduate

5. Use docker containers and related tools for ensuring fully transparent and replicable behavioral data science
Audience: Graduate

6. Understand how to access and use high-throughput and high-performance infrastructure for computationally expensive jobs, and when use of these platforms is warranted.
Audience: Graduate

PSYCH/COMP SCI/ED PSYCH 770 – HUMAN-COMPUTER INTERACTION
3 credits.

Principles of human-computer interaction (HCI); human subjects research methods and procedures, qualitative and quantitative data analysis; and semester-long research project situated in critical domains of HCI, including applications in ubiquitous, affective, assistive, social, and embodied computing.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PSYCH 790 – CAPSTONE I
5 credits.

Preparation for the applied capstone project, including identifying the project primary literature, relevant tools, and software and communicating these ideas and plans to relevant stakeholders.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Conduct a literature review to understand the current state of the art in a specific problem domain
Audience: Graduate

2. Connect in-class learning experiences to real world datasets and problems.
Audience: Graduate

3. Use online resources to acquire as-needed libraries, toolsets, and knowledge for solving data-science problems in the study of human behavior.
Audience: Graduate

4. Present a concise overview of an important problem and a proposed solution to different audiences.
Audience: Graduate

5. Write a scope-of-work proposal for partners in industry and government.
Audience: Graduate

6. Develop code implementing a data-science workflow relevant to a specific problem.
Audience: Graduate

PSYCH 791 – CAPSTONE II
3 credits.

Conduct applied capstone project, including identifying the project primary literature, relevant tools, and software and communicating these ideas and plans to relevant stakeholders.
Requisites: PSYCH 790
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Direct hands-on experience working in a data-science and human behavior setting
Audience: Graduate

2. Understand how data-science tools and concepts from class get applied to large-scale real-world problems
Audience: Graduate

3. Communicate about science with workers and managers in industry, government, nonprofit or lab-based settings
Audience: Graduate

4. Complete a project from conception through design to execution
Audience: Graduate

5. Pitch ideas for solutions to non-experts
Audience: Graduate

6. Prepare for a diverse set of career paths
Audience: Graduate

PSYCH 799 – INDEPENDENT READING
2-3 credits.

Directed study projects for graduate students as arranged with faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2018

PSYCH 800 – COGNITIVE & NEUROPSYCHOLOGICAL ASSESSMENT FOR DIAGNOSIS
2 credits.

Introduction to the major approaches and techniques used in the psychological assessment of cognitive functioning of children, adolescents, and adults, with special emphasis on intellectual evaluation. Other cognitive areas to receive focus include; attention, memory, executive function, language, and academic achievement.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PSYCH 802 – ASSESSMENT OF PSYCHOPATHOLOGY & PERSONALITY
2 credits.

Introduces the use of structured and semi-structured interviews typically used in psychodiagnostic settings, including research. The assessment of major/common psychopathologies and personality diagnosis will be covered. Additionally, several of the most commonly used clinical self-report and personality measures will be introduced (e.g., PAI, MMPI, BASC).
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PSYCH 803 – ADVANCED TECHNIQUES IN PSYCHOTHERAPY
3 credits.

An overview of empirically supported psychotherapeutic movements and their associated history, philosophical underpinnings, and techniques. Oriented toward the theoretical perspective, basic tenets, and the practical techniques/skills of each psychotherapy.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

PSYCH 805 – FIELD WORK IN CLINICAL PSYCHOLOGY
1-3 credits.

Supervised field work in practical clinical situations.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PSYCH 806 – PRINCIPLES OF PSYCHOTHERAPY RESEARCH
2 credits.

Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

PSYCH 807 – INTRODUCTION TO CONDUCTING PSYCHOTHERAPY
3 credits.

Introduces and allows practice with the skills needed to conduct individual psychotherapy using a cognitive behavioral approach. Includes interviewing skills, planning and initiating CBT interventions, and the administrative demands of clinical practice. Also includes conducting psychotherapy and participating in individual and group supervision of those therapeutic contacts. During supervision, the client's issues, goals, and progress, will be discussed, as well as the clinician's professional presentation, therapeutic approach and techniques, and communication skills.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

PSYCH 808 – CULTURE & DIVERSITY IN CLINICAL PRACTICE
3 credits.

Becoming competent in working with diverse populations in psychotherapy is a complex interaction of many dimensions that involve broad theoretical, conceptual, research, and practice issues. Build multicultural competencies by increasing knowledge of ethnic, race, gender, sexual identity, religious affiliation, and age differences that contribute to each individual course of therapy. Applied examples of this "knowledge in practice" will be presented. Focuses on introducing the concepts of multicultural counseling and assessment, and more specifically on the diversity characteristics of race, ethnicity, and sexual orientation.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Recognize the importance of sensitivity, responsiveness, knowledge, and understanding about ethnicity, sexual orientation, gender identification, social class, age, ability and other characteristics to the ethical practice of clinical psychology.
Audience: Graduate

2. Understand how socio-political forces define and influence identity-based groups; and how these in turn influence the perception, definition, presentation, and treatment of mental health issues and psychological disorders.
Audience: Graduate

3. Demonstrate increased knowledge of current theories and models of individual development within different identity groups.
Audience: Graduate

4. Use culturally-appropriate interventions in clinical and other applied psychological practice.
Audience: Graduate

5. Self-reflect on their ability for self-reflection and awareness of their own attitudes and beliefs that can bias, both positively and negatively, their perceptions of and interactions with individuals who identify as members of specific groups.
Audience: Graduate

PSYCH 809 – ETHICAL AND LEGAL ISSUES IN CLINICAL PRACTICE
3 credits.

An introduction to the legal and ethical issues inherent to the conduct and process of professional clinical psychology. Reviews selected theories of moral philosophy, the American Psychological Association (APA) Ethical Principles and Codes of Conduct for Psychologists, other APA Standards and Guidelines and Wisconsin legal statutes governing the practice of psychology. Integrated with group case discussions and students. Use this as a forum to discuss ethical and legal issues pertinent to their ongoing clinical cases. Focuses on introducing ethical principles; Wisconsin statutes; ethics and legal obligations when clients report suicidal or homicidal thoughts/actions; reporting of neglect and abuse; and record keeping.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Use the process of active ethical acculturation by learning how to read, discuss, and appreciate the ethical dimensions of professional activities and behaviors, and how they fit with your personal values and background.
Audience: Graduate

2. Develop a working knowledge of the ethical principles, practice standards, regulations and laws governing the historical and current practice of clinical psychology.
Audience: Graduate

3. Develop awareness and understanding of the multiplicity of roles, responsibilities, and involvements of the professional clinical psychologist.
Audience: Graduate

4. Engage in ethical reflection and an appreciation of biases, attitudes, values, and beliefs, as part of a greater strategy for maintaining high levels of professional and ethical conduct.
Audience: Graduate

5. Engage in ethical decision making, including a systematic method of applying guidelines evaluating and resolving ethical dilemmas.
Audience: Graduate

6. Document the ethical decision-making process in order to defend professional decisions and actions.
Audience: Graduate

PSYCH 810 – CLINICAL SUPERVISION, CONSULTATION, & COMMUNITY PSYCHOLOGY
3 credits.

Introduction to supervision and consultation as unique practices. Focuses on purposes of clinical supervision and consultation, theoretical frameworks and models of supervision and consultation, the roles and relationships related to clinical supervision and consultation, and legal, ethical and multicultural issues associated with clinical supervision and consultation. Also includes skill development in building a working alliance with a supervisee; providing developmentally appropriate performance feedback; planning and communicating strategies to develop rapport and motivation to solve problems in clients; negotiation and mediation to reach consensus and move past barriers; understanding and appreciating the diverse cognitive, behavioral, and effective characteristics of supervisees; applying theoretical material to case presentations and related experiential activities.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Understand the purpose and practice of clinical supervision in different settings and have knowledge of, and be able to describe common theoretical frameworks and models of clinical supervision.
Audience: Graduate

2. Understand the roles and relationships related to clinical supervision and a developing awareness of how personal attitudes and values impact supervision.
Audience: Graduate

3. Identify factors impacting the interpersonal relationship between supervisor and supervisee, and describe steps to promote development of an effective supervisory relationship.
Audience: Graduate

4. Describe various supervision techniques and select appropriate techniques for use in different supervision situations.
Audience: Graduate

5. Assess the needs of therapists in training and develop techniques to help students develop into competent clinical psychologists.
Audience: Graduate

6. Understand the role and process of evaluation in the supervisory process, and be able to select or develop tools for evaluation.
Audience: Graduate

7. Understand the legal, ethical, and multicultural issues associated with clinical supervision, and be able to apply ethical reasoning when presented with dilemmas in practice.
Audience: Graduate

8. Understand of the theory and practice of community psychology.
Audience: Graduate

9. Understand of the theory and practice of consulting psychology
Audience: Graduate

PSYCH 811 – COGNITIVE BEHAVIOR THERAPY
1 credit.

Examines the theory and practice of Cognitive-Behavior Therapy (CBT). Focuses on core issues of CBT from both theoretical and applied perspectives through case conceptualization exercises, role-plays, and application of CBT exercises to themselves.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022

PSYCH/B M I/COMP SCI 841 – COMPUTATIONAL COGNITIVE SCIENCE
3 credits.

Studies the biological and computational basis of intelligence, by combining methods from cognitive science, artificial intelligence, machine learning, computational biology, and cognitive neuroscience. Requires ability to program.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

PSYCH/I SY E 854 – SPECIAL TOPICS IN ORGANIZATION DESIGN
1-3 credits.

Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2020
Learning Outcomes: 1. Apply advanced organizational design tools to solve a variety of industrial engineering problems
Audience: Graduate

2. Analyze rigorously the methods used in organizational design
Audience: Graduate

PSYCH/I SY E 859 – SPECIAL TOPICS IN HUMAN FACTORS ENGINEERING
1-3 credits.

Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PSYCH 901 – MENTORING IN BEHAVIORAL DATA SCIENCE
1-2 credits.

Learn how to mentor in the field of behavioral data science. Apply mentoring skills to a more junior student.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Explore multiple strategies for effective mentoring
Audience: Graduate

2. Understand how to apply key areas of mentoring (aligning expectations, effective communication, ethical behavior, active listening, assessing understanding, constructive feedback, time management, etc.)
Audience: Graduate

3. Develop skills for mentoring in behavioral data science
Audience: Graduate

4. Collaborate and problem-solve with peers
Audience: Graduate

5. Articulate mentor philosophy and personal development goals
Audience: Graduate

PSYCH/ANTHRO 906 – METHODS AND HYPOTHESIS-TESTING FOR BEHAVIORAL ECOLOGISTS
1-3 credits.

A detailed overview of field methods for behavioral ecologists, focusing specifically on behavioral and ecological sampling techniques. It addresses the challenging process of situating an empirical study within the context of theoretical paradigms.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2020

PSYCH 910 – PSYCHOMETRICS
2 credits.

Focus on the construction, analysis, and interpretation of psychometric assessments, with an emphasis on concepts relevant to clinical psychology. Covers evolving issues in test theory. Extends beyond basic measurement concepts (scales, reliability, validity, bias, etc.) and critiques much of common practice from statistical and philosophical perspectives. Emphasizes that assessment always occurs in a societal context, which sometimes threatens validity.
Requisites: PSYCH 610 and declared in Psychology PhD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Learn the tenants of test theories (classical, IRT), with a focus on psychological tests.
Audience: Graduate

2. Learn to write good test items.
Audience: Graduate

3. Use factor analysis and reliability analysis to construct a scale.
Audience: Graduate

4. Evaluate different types of validity.
Audience: Graduate

5. Learn methods of evaluating bias and fairness of tests. Understand the impact of societal forces, such as racial discrimination, in evaluating test bias and fairness.
Audience: Graduate

6. Understand the use of tests for screening, including the roles of specificity, sensitivity, and base rates.
Audience: Graduate

7. Show the ability to engage in scholarly analysis with peers and the instructor by engagement on the discussion boards.
Audience: Graduate

8. Gain experience making narrated video presentations with Powerpoint or Keynote. By doing so, become responsible for part of the course content.
Audience: Graduate

PSYCH 918 – SEMINAR-GENERAL PSYCHOLOGY
1-3 credits.

Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023

PSYCH 930 – SEMINAR-SOCIAL PSYCHOLOGY
2-3 credits.

Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023

PSYCH/GEN&WS 932 – PSYCHOLOGY OF WOMEN AND GENDER
3 credits.

Examines research and theory in psychology of women and gender. Topics include feminist approaches to research methods, psychological gender differences and similarities, women of color, mental health and feminist therapy, rape, sexual harassment, transgender issues and research, and public policy issues.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Understand psychological research and theories on women and gender, at a level of proficiency to be qualified to teach an undergraduate course on the psychology of women and gender, and/or begin to conduct psychological research on gender, and/or conduct more gender-sensitive therapy.
Audience: Graduate

2. Apply feminist approaches and critiques in psychology.
Audience: Graduate

3. Understand the enormous diversity among women and trans folks along dimensions of ethnicity, social class, and sexual orientation.
Audience: Graduate

PSYCH 954 – SEMINAR-PHYSIOLOGICAL PSYCHOLOGY
2-3 credits.

Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2020

PSYCH 990 – RESEARCH
1-12 credits.

Independent experimental, observational, or statistical investigation under the supervision of a staff member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PSYCH/COUN PSY/ED PSYCH 995 – PREDOCTORAL INTERNSHIP
0 credits.

Registration for Ph.D. students who have successfully defended the dissertation and are in the process of completing the required predoctoral internship.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PUBLIC AFFAIRS AND PUBLIC POLICY (PUB AFFR)

PUB AFFR 200 – CONTEMPORARY PUBLIC POLICY ISSUES
3 credits.

Offers a general primer on large-scale policies directed by US federal and state governments, with specific examples in pressing policy areas. Takes existing policies and the policy process as a given, explains them in detail, and puts a policy focus on very specific contemporary questions of concern to policymakers. Gain a broad overall knowledge of how the majority of state and federal funding is spent and the policy outcomes associated with that spending.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate understanding of how the US federal budget is spent and US domestic policies.
Audience: Undergraduate

2. Gain knowledge and demonstrate application of methodological tools utilized in the public policy arena (e.g., policy memo writing,).
Audience: Undergraduate

3. Demonstrate understanding and application of knowledge regarding the policy, being able to apply basic policy concepts to practical cases drawn from the real-world.
Audience: Undergraduate

4. Engage in knowledgeable discussions about policy with researchers and policy experts.
Audience: Undergraduate

5. Assess and interpret empirical analyses of policies, and understand the effect of policy changes.
Audience: Undergraduate

6. Persuasively advocate for a proposed policy change.
Audience: Undergraduate

PUB AFFR 201 – INTRODUCTION TO HEALTH POLICY IN THE UNITED STATES
3 credits.

Offers an introduction to health policy in the United States. Examines the ways in which government plays a role in the provision and regulation of health care. Explores key aspects of health policy including the economics of health care (e.g., paying for and access to health care; the health care workforce; the role of markets and consequences of market/government failures, public policy that supports or promotes health; health care outcomes, quality, and disparities; and tools for evaluation) and special topics of interest such as policy addressing risky health behaviors, aging, mental health, and the Affordable Care Act. Think critically about public and private health issues using the policy analysis process, including policy interventions and their justifications, and gain skills in articulating and communicating policy positions.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the basic organization and financing of the US public health and health care systems.
Audience: Undergraduate

2. Explain the biological, social, environmental, and economic determinants of population health.
Audience: Undergraduate

3. Discuss factors behind rising costs and approaches to health reform.
Audience: Undergraduate

4. Begin to develop skills in the policy analysis process as it relates to health policy.
Audience: Undergraduate

5. Analyze the effects of health policy at the local, state, and national level.
Audience: Undergraduate

6. Analyze special topics in health policy.
Audience: Undergraduate

PUB AFFR 230 – ADVANCING PUBLIC POLICY IN A DIVIDED AMERICA
3 credits.

America is divided: at home, at work, and even in the media. This is true politically, as well. Given this, public policy conflict is all around us. Seek to understand and contextualize the partisan conflict present in modern American politics and policymaking today and explore individual-level tactics that public policy leaders, practitioners, and advocates may use that acknowledge conflict and attempt to move public policymaking forward. Explore ways in which policy conflict can be understood, managed, and channeled for the betterment of public policy decision-making in a divided America.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe methods for navigating, interpreting, and contributing to effective public policy decision-making.
Audience: Undergraduate

2. Apply several strategies for advancing public policy debates and discussions, including civility in dialogue and non-partisan policy analysis tactics.
Audience: Undergraduate

3. Persuasively advocate for a proposed policy change using writing, analytic, and communication skills.
Audience: Undergraduate

PUB AFFR 240 – EVIDENCE-BASED POLICY MAKING
3 credits.

Facilitates skill-building to answer questions such as how policymakers use research and evidence in their jobs, how researchers can make their work useful to policymakers, and how legislative support staff and other stakeholders use research and evidence to shape policy. Explore the definition of "evidence-based", learn about different kinds of evidence and how it is used, and learn strategies for judging the rigor of research evidence. Also explore the difference between an education-based approach to working with policymakers versus an advocacy-based approach, learn strategies for communicating research to policy makers (including written and oral presentations and data visualizations), research examples of successful evidence-based policymaking efforts, and understand the limits of using research in policymaking.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and utilize high quality sources of policy research information
Audience: Undergraduate

2. Engage in discussions of policy issues with researchers and policymakers using an education (vs. advocacy) approach
Audience: Undergraduate

3. Translate policy research into accessible written deliverables for policymakers (e.g., issue briefs)
Audience: Undergraduate

4. Develop accessible, useful verbal presentations of policy research for policymakers.
Audience: Undergraduate

PUB AFFR 242 – FOUNDATIONS OF DATA ANALYSIS FOR HEALTH POLICY
3 credits.

We have entered a new era of "big data." It is now possible to collect and analyze genetic information, digital health records, and many other types of data quickly, cheaply, and non-invasively from large numbers of people. This new wealth of information creates exciting opportunities for more targeted, individualized approaches to health care and better management of public health risks such as age-related diseases or pandemics. However, it also creates policy challenges such as privacy, discrimination, equality, and fairness. Covers what types of health-relevant data exist, how such data is typically analyzed and used, and discuss what types of applications this enables, what type of policy challenges this brings about, and which options policy makers have to deal with these challenges. Analytic methods will include regression, principal component and cluster analysis, statistical approaches for prediction, how to interpret the results of such analyses and their limitations.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Identify data sources and data usage that have relevance for public health
Audience: Undergraduate

2. Know and understand basic statistical methods that are frequently used in this context and their limitations
Audience: Undergraduate

3. Understand ethical and policy challenges that different data sources and applications create in the realm of public health
Audience: Undergraduate

4. Understand how to apply policy analysis and policy research to key debates
Audience: Undergraduate

5. Use critical analysis, practical problem-solving, and work inter-professionally
Audience: Undergraduate

PUB AFFR 270 – THE PRIVATE AND PUBLIC SECTORS IN POLICYMAKING
3 credits.

In domestic and international policymaking, stark differences between the private sector (the market) and the public sector (the state) are dissolving. The private sector is being pushed to help achieve public policy goals, while the public sector is being pushed to be customer-oriented. Overall focus on the interplay of the public and private sectors in policymaking. Develops an analytic framework and historical context for understanding how the roles and interactions of states and markets have fluctuated across time. Examines how the policymaking "division of labor" between states and markets has differed across countries. Examines energy, health, telecommunications, finance, transportation, or other policy areas in which governments are wary about letting markets function without state intervention. Apply concepts from political science, economics, public administration, business, sociology, and other fields in order to understand actual policy choices for various policy issues.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2022
Learning Outcomes: 1. Understand the history, context, complexity, and limitations of business/government relations in the U.S. and elsewhere
Audience: Undergraduate

2. Draw on concepts from political science, economics, public administration, business, and other fields to explain why business/government relations fluctuate (both across time and across countries)
Audience: Undergraduate

3. Use their knowledge of specific policy areas to engage in rational public discourse about the appropriate policymaking “division of labor” between the private sector and the public sector
Audience: Undergraduate

PUB AFFR 274 – TOPICS IN PUBLIC POLICY
3 credits.

Intensive study of selected topics in public policy.
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024
Learning Outcomes: 1. Demonstrate understanding of a public policy issue or question.
Audience: Undergraduate

2. Think critically about solutions to public policy issues.
Audience: Undergraduate

3. Utilize knowledge of social, demographic, economic, and political contexts to analyze policies.
Audience: Undergraduate

PUB AFFR 278 – PUBLIC LEADERSHIP
3 credits.

Aims to demystify the role of leadership in a public setting. Draw on research from public management, psychology and organization studies to help students learn how leadership manifests itself in the public sector. This means understanding how to set goals, the motivation of those around you, how to engage and negotiate with stakeholders, managing change, making decisions, and exhibiting ethical behavior. Mix research with practical examples. Starts with the assumption that while there are some general traits relevant across public, private and non-profit sectors, the nature of these sectors is different, and this affects how these traits function in practice.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Demonstrate understanding of how leadership matters in current and past public policy debates
Audience: Undergraduate

2. Demonstrate application of methodological tools utilized in the public policy arena (e.g., policy memo writing,).
Audience: Undergraduate

3. Demonstrate understanding and application of knowledge regarding the leadership, but being able to apply basic concepts of leadership research to practical cases drawn from the real-world.
Audience: Undergraduate

4. Are able to reflect upon their own leadership skills, including areas to improve.
Audience: Undergraduate

PUB AFFR 281 – DISCOVERING WHAT WORKS IN HEALTH POLICY
3 credits.

Introduces the key conceptual and methodological tools used in public program evaluation, with an emphasis on understanding the forces that shape health and disease as well as various policy solutions. Introduces the Potential Outcomes Framework, also known as the Rubin Causal Model. Establishes the distinction between causation from correlation using counterfactual thinking. Explores a wide variety of experimental and quasi-experimental research methods used to estimate causal effects, including randomized experiments, regression, matching, instrumental variables, fixed effects, regression discontinuity, difference-in-differences, and synthetic control. Many of the causal inference methods that we discuss require statistical and computational training in order to implement. Focuses on the nontechnical conceptual, theoretical, and intuitive underpinnings of these methods that are most salient to policymakers.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Gain an understanding of relevant frameworks for counterfactual thinking, including the Potential Outcomes framework
Audience: Undergraduate

2. Evaluate the strength of evidence in press, policy and academic accounts related to health and health policy, especially correlation vs. causation
Audience: Undergraduate

3. Conceptually apply counterfactual methods to health and health policy issues
Audience: Undergraduate

4. Communicate and synthesize the strengths and weaknesses of current evidence for health and health policy interventions
Audience: Undergraduate

PUB AFFR 285 – STRATEGIC PUBLIC MANAGEMENT
3 credits.

Designed to teach the role that strategy plays in maximizing the effectiveness and efficiency of a public organization. Work in a collaborative environment to learn how to design and implement strategic management plans with a specific focus on measurable goal setting through analytics, how to identify and mitigate organizational risks, motivate employees to execute strategy, and finally how to mobilize adequate financial resources through dynamic budgeting to ultimately achieve success. Learn about careers in the public sector and understand how strategic management will enhance individual performance and that of the public organization.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Learn the basic theory of strategic management in the public sector.
Audience: Undergraduate

2. Build and apply targeted strategies to meet operational goals.
Audience: Undergraduate

3. Measure and analyze the effectiveness of strategic management in the public sector.
Audience: Undergraduate

PUB AFFR 299 – DIRECTED STUDY
1-3 credits.

Program of study devised by a student in collaboration with an instructor.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, for 3 number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate understanding of a public policy issue or question.
Audience: Undergraduate

2. Apply knowledge of public policy issue to think critically about solutions to public policy issues.
Audience: Undergraduate

3. Analyze policies through knowledge of social, demographic, economic, and political contexts.
Audience: Undergraduate

PUB AFFR 327 – ADMINISTRATIVE INTERNSHIP
3 credits.

Provides opportunities for learning and working in organizations that integrate knowledge and theory learned in the classroom with practical application and skills development in a professional setting. Gain valuable applied experience and make professional connections in the field of public policy, apply concepts and practice problem solving-skills learned during the Certificate in Public Policy experience, build a network of contacts, and explore possible career choices. Engage with a wide range of people about their jobs, views, backgrounds, and experiences. Encourages active reflection on this experience and self-assessment through written assignments, reflections, and readings to help students make the most of their internships.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Workplace - Workplace Experience Course
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Gain practical professional experience in a public policy work setting and actively reflect on that experience.
Audience: Undergraduate

2. Improve understanding of public policy settings debates, and how to approach questions and research through the lens of public policy analysis.

Audience: Undergraduate

3. Demonstrate understanding and application of knowledge in a policy area of their choice.
Audience: Undergraduate

4. Engage fellow classmates in discussion about types of professional work and skills.
Audience: Undergraduate

5. Hone writing in the form of professional interviews, memos, and other papers.
Audience: Undergraduate

6. Examine experiences in and observations of the internship and to share and reflect on these insights.
Audience: Undergraduate

PUB AFFR 335 – POLICY ACTORS, INSTITUTIONS, AND THE POLICY PROCESS
3 credits.

Provides an overview of the variety of political actors (bureaucrats, elected politicians, courts, interest groups, media outlets, the public) involved in the policy process, and what's distinct about policymaking today; a focus on policy implementation, drawing on concepts, tools and theory from public administration, public management, and organizational behavior. Learn concepts and skills through hands-on activities such as case studies, simulations, policy writing, and debates.
Requisites: POLI SCI 104 and sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Describe the nature and origins of public policy.
Audience: Undergraduate

2. Identify the key institutions that govern public policy in the United States and how those institutions shape processes and outcomes.
Audience: Undergraduate

3. Articulate strategies for effective development and implementation of public policy.
Audience: Undergraduate

PUB AFFR 340 – INTERMEDIATE EVIDENCE-BASED POLICYMAKING AND COMMUNICATION
3 credits.

Many types of evidence can be incorporated into the policy process. Evidence is interpreted while considering quality and ethics, and effectively translated from scientific sources into useful communications and data visualizations. Evidence is examined from across a wide range of policy areas including healthcare, poverty, climate change, among others - all while considering the current reality of big data and algorithmic information environments. A broad understanding is required to translate evidence meaningfully and ethically into the design, implementation, and evaluation of public policy.
Requisites: (ECON 101, 111, A A E 101, or 215 prior to Fall 2024) and (ECON 310, PSYCH 210, SOC/C&E SOC 360, STAT 240, 301, 324, or 371)
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Identify different types of evidence and evaluate their appropriateness for policy problems, with a focus on research design, data quality, and ethics.
Audience: Undergraduate

2. Critique the ways that evidence is used (or not used) in the policy process, including analyzing real world cases and decision-making under uncertainty.
Audience: Undergraduate

3. Engage with researchers, policymakers, and the public in informed policy discussions using evidence and strategic communication approaches.
Audience: Undergraduate

4. Synthesize evidence about complex policy problems into professional written and visual communications tailored to different audiences.
Audience: Undergraduate

PUB AFFR 352 – WOMEN, GENDER, AND PUBLIC POLICY
3 credits.

Examine women, gender, and sex and their interactions with public policy. Learn about equality, liberty, feminism, and intersectionality, whether these concepts should be incorporated into policymaking, and if so, how that can be accomplished through gender mainstreaming and gender policy analysis. Examine specific policy areas focused on women's social, economic, and political citizenship to understand the causes and consequences of gender discrimination. These specific policy areas include poverty, women's labor market participation, immigration, reproductive rights, sexuality, gender-based violence, climate change, transportation, and peace and security. Understand how gender is embedded in the politics of policymaking, and what strategies have been successful in achieving more gender-equitable policies across the globe.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify the extent to which gender influences political and policy interests.
Audience: Undergraduate

2. Illustrate the causes and consequences of current and historical inequities based on gender and sex, and how policymakers have tried to address them.
Audience: Undergraduate

3. Compare similar gendered policy problems across diverse global contexts.
Audience: Undergraduate

4. Apply concepts integral to intersectional gender policy analysis and critique current methods of policy analysis.
Audience: Undergraduate

5. Summarize the role of equity and inclusion in the public policymaking process.
Audience: Undergraduate

PUB AFFR 360 – WORKSHOP IN HEALTH POLICY
3 credits.

Provides opportunities to engage in research on health policy issues and possible solutions.
Requisites: PUB AFFR 201 and sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Navigate, interpret, and contribute to effective health policy through an applied project
Audience: Undergraduate

2. Apply analytical and methodological tools used in the health sector
Audience: Undergraduate

3. Write and present information with the goal of inspiring evidence based policymaking
Audience: Undergraduate

PUB AFFR 366 – U.S. ENVIRONMENTAL POLITICS AND PUBLIC POLICY
3 credits.

Public policies to protect natural resources and the environment are among the most important and controversial issues in local, state, and national government. Social science theories and methods help explain why and how American governments regulate the environment.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Understand how public opinion and political institutions shape American environmental policy.
Audience: Undergraduate

2. Identify the governance regimes that regulate air pollution, water quality, hazardous waste, endangered species, and greenhouse gasses in the United States.
Audience: Undergraduate

3. Advocate effectively for sound governance of environmental quality.
Audience: Undergraduate

PUB AFFR 369 – WORKSHOP IN PUBLIC POLICY
3 credits.

Provides opportunities to engage in research on public policy issues and possible solutions.
Requisites: PUB AFFR 200 and sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Navigate, interpret, and contribute to effective public policy through an applied project
Audience: Undergraduate

2. Apply analytical and methodological tools used in the public sector
Audience: Undergraduate

3. Write and present information with the goal of inspiring evidence based policymaking
Audience: Undergraduate

PUB AFFR 380 – ANALYTIC TOOLS FOR PUBLIC POLICY
3 credits.

Provides training in the analytical skills and tools needed to comprehend, assess, and address complex public policy decisions. Overview of the theory and application of quantitative and qualitative analysis methods relevant to public policy decision-making and policy analysis.
Requisites: ECON 101 or A A E 101 (215 prior to Fall 2024)
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Summarize foundational concepts in public policy analysis, including stakeholders, policy instruments, and evaluation techniques.
Audience: Undergraduate

2. Identify and apply methods for evaluating policy effectiveness, efficiency, and equity.
Audience: Undergraduate

3. Illustrate rationales for and limitations to collective action and public policy.
Audience: Undergraduate

4. Be proficient in critically analyzing examples of cost benefit analysis within the context of public policy.
Audience: Undergraduate

5. Communicate complex analyses and policy recommendations clearly through professional writing and presentations.
Audience: Undergraduate

PUB AFFR/POLI SCI 419 – ADMINISTRATIVE LAW
3-4 credits.

Delegation of powers, elements of fair administrative procedure, judicial control over administrative determination. Not open to students with credit for POLI SCI 420 prior to fall 2017
Requisites: Sophomore standing and (POLI SCI 104, 184, or LEGAL ST/ POLI SCI 217)
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Examine the role that federal administrative agencies play in the U.S. political and legal system.
Audience: Undergraduate

2. Investigate the institutional context and ideological character of administrative law and agency practices.
Audience: Undergraduate

3. Examine classic debates over the origins of regulation.
Audience: Undergraduate

4. Understand competing legal philosophies about democratic administrative regulation.
Audience: Undergraduate

5. Examine political struggles to control the bureaucracy.
Audience: Undergraduate

6. Understand how agencies use adjudication and rulemaking to effectuate their policies.
Audience: Undergraduate

PUB AFFR 520 – INEQUALITY, RACE AND PUBLIC POLICY
3 credits.

Explore the impact of public policies and programs on the distribution of income, wealth and opportunity in the United States. Examines inequalities across various social dimensions with a focus on disparities across racial and ethnic groups. Begin with an introduction to key concepts in the measurement of inequality and poverty and an overview of recent trends. Systematically examine how public policy shapes inequality across a range of topical areas including labor markets, education, taxation, health, housing and criminal justice.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

PUB AFFR 523 – POLICY, PRIVACY, AND PERSONAL IDENTITY IN THE POSTGENOMICS ERA
3 credits.

Social genomics integrates theories and methods in the genomic, social, and population health sciences to answer questions relevant to public health and social well-being. Research topics in social genomics and their implications for social and public policy are covered in this course. Key concepts in human genetics, population genetics, and statistical genetics are introduced, as well as historical and contemporary policy debates surrounding scientific advances in genomics. Fundamental questions include social repercussions of genomics research, the rationale for government intervention, and how to approach policy analysis in an era where the genomic revolution is changing how we think about privacy and personal identity.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2021
Learning Outcomes: 1. Use knowledge of human genetics to engage in rational public discourse on policy issues surrounding genetic discoveries.
Audience: Undergraduate

2. Consider the history, social context, limits, and complexity of genomics research when framing policy problems or making policy recommendations.
Audience: Undergraduate

3. Understand how and to what extent social forces influence the interpretation of scientific findings and policy recommendations.
Audience: Undergraduate

PUB AFFR/ECON/POP HLTH 548 – THE ECONOMICS OF HEALTH CARE
3-4 credits.

Analysis of the health care industry. Markets for hospitals and physicians' care, markets for health manpower, and the role of health insurance.
Requisites: ECON 301, ECON 311, or PUB AFFR 880
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Specify the types of economic decisions health care players make in different markets.
Audience: Both Grad & Undergrad

2. Apply micro economic models and tools to study economic decisions in the healthcare system and understand their implications.
Audience: Both Grad & Undergrad

3. Evaluate empirical evidence from health care literature that involves cost, access, and quality of care considerations for the different health care players.
Audience: Both Grad & Undergrad

4. Describe the basic institutional structure of the US healthcare market and how it compares to markets in other countries.
Audience: Both Grad & Undergrad

5. Identify types of data necessary for testing specific hypotheses involving health care player behavior.
Audience: Graduate

PUB AFFR/CIV ENGR 694 – MANAGEMENT OF CIVIL INFRASTRUCTURE SYSTEMS
3 credits.

Comprehensive systems approach to civil infrastructure and asset management with emphasis on transportation facilities. Social, political, economic factors that influence transportation planning, design, construction, maintenance and operation. Needs assessment, information management, performance measurement, life cycle cost and benefits analysis, prioritization and optimization, budgeting and finance.
Requisites: CIV ENGR 494, or graduate/professional standing, or member of Engineering Guest Students
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019

PUB AFFR/ECON/URB R PL 734 – REGIONAL ECONOMIC PROBLEM ANALYSIS
3 credits.

Examination of major theories of regional economic development, with special emphasis upon the evolution and amelioration of regional economic problems. Selected techniques of regional analysis, including economic base multipliers, input/output models, and shift-share analysis are used in the context of setting regional development goals.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Explain regional economic theory, empirical justification/application, and relevant impacts of planning in the context of addressing local economic, social, and environmental problems.
Audience: Graduate

2. Understand the theoretical basis of regional science.
Audience: Graduate

3. Describe and apply basic empirical tools.
Audience: Graduate

4. Explain relevant consequences of regional policies that target economic, social, and environmental change.
Audience: Graduate

PUB AFFR/ED POL/ELPA 765 – ISSUES IN EDUCATIONAL POLICY ANALYSIS
3 credits.

Theory, research, and practical experience in educational policy analysis, including the social construction of policy problems in education; the design, implementation, and evaluation of policy responses; and the practical and ethical dilemmas of the policy analyst.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

PUB AFFR 799 – INDEPENDENT READING
1-3 credits.

Program of study devised by a student in collaboration with an instructor.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

PUB AFFR 800 – PUBLIC AFFAIRS PROFESSIONAL DEVELOPMENT WORKSHOP
1 credit.

Includes sessions on professional writing, presentations, and job search skills training related to policy internships and jobs. Includes presentations from practitioners from the public, private, and non-profit sectors.
Requisites: Declared in Public Affairs MPA or International Public Affairs MIPA
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PUB AFFR 802 – PUBLIC AFFAIRS SEMINAR SERIES
1-2 credits.

Provides an opportunity to cross disciplinary boundaries to review and discuss the latest research by top public management, policy, and poverty scholars from on and off campus. The seminar series provides new and unpublished research on these issues as well as practitioner insight.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

PUB AFFR/ED POL/GEN&WS 805 – GENDER ISSUES IN INTERNATIONAL EDUCATIONAL POLICY
3 credits.

Exploration and analysis of recent debates related to gender issues in international educational policy, including the intersection of education and demographic processes, the play of history and culture, and the social construction of gender.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

PUB AFFR/ENVIR ST/URB R PL 809 – INTRODUCTION TO ENERGY ANALYSIS AND POLICY
3 credits.

Strategy and policy problems in energy policy, both national and international.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PUB AFFR/ENVIR ST/URB R PL 810 – ENERGY ANALYSIS AND POLICY CAPSTONE
3 credits.

Interdisciplinary application of energy knowledge to an analysis project for a real-world client. Integrate and apply technical, economic, political, and social factors in energy decision-making.
Requisites: Declared in Energy Analysis and Policy Graduate/Professional Certificate or Doctoral Minor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Conduct an original analysis by collecting and interpreting data on an energy-related issue for areal-world client.
Audience: Graduate

2. Integrate and apply multiple disciplinary perspectives such as technical, economic, socio-political, and environmental factors in the context of complex energy problems.
Audience: Graduate

3. Prepare for energy-related careers by: planning and managing a project over multiple months; interacting professionally with client; working effectively in multidisciplinary teams; and producing professional-quality deliverables such as presentations and reports in accordance with scope of work.
Audience: Graduate

4. Analyze the causes and solutions for the sustainability challenge of affordable and clean energy.
Audience: Graduate

5. Analyze sustainability issues and/or practices using a systems-based approach.
Audience: Graduate

PUB AFFR 818 – INTRODUCTION TO STATISTICAL METHODS FOR PUBLIC POLICY ANALYSIS
3 credits.

An introduction to the statistical methods used in public policy. Covers the basics of probability, statistics, and quantitative methods in public policy analysis. Stresses interpretation and presentation of data as well as theory.
Requisites: Declared in Public Affairs MPA or International Public Affairs MIPA
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PUB AFFR 819 – ADVANCED STATISTICAL METHODS FOR PUBLIC POLICY ANALYSIS
3 credits.

A review of intermediate statistics, and an introduction to analytical, quantitative and computer techniques applicable to the analysis of public policy.
Requisites: PUB AFFR 818
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

PUB AFFR 820 – COMMUNITY ECONOMIC ANALYSIS
3 credits.

Economic theory (location and growth) applicable to community economic development; the role of private and public sector in local economic development, and techniques for economic analysis of community.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

PUB AFFR 827 – ADMINISTRATIVE INTERNSHIP
1-3 credits.

Provides opportunities for learning and working in organizations that integrate knowledge and theory learned in the classroom with practical application and skills development in a professional setting.
Requisites: Declared in Public Affairs MPA or International Public Affairs MIPA
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PUB AFFR 850 – INTERNATIONAL GOVERNANCE
3 credits.

Examines influences arising from international environment on policy makers and those seeking to influence policymaking. Considers role of global economic forces, international and regional organizations, international civil society reflected in non-governmental organizations, and flow of policies across borders.
Requisites: Declared in Public Affairs MPA or International Public Affairs MIPA
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PUB AFFR 854 – MACROECONOMIC POLICY AND INTERNATIONAL FINANCIAL REGULATION
3 credits.

An introduction to international macroeconomic and financial policies with an emphasis on the interaction between domestic policies, and international financial markets, regulations and institutions.
Requisites: PUB AFFR 880 and declared in International Public Affairs MIPA
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

PUB AFFR 856 – TRADE, COMPETITION, AND GOVERNANCE IN A GLOBAL ECONOMY
3 credits.

Policy oriented course in international micro-economics and trade theory; including economic and institutional analysis of U.S. trade policy and the world trading system; issues covered include regional trading average; labor standards, income distribution and the environment.
Requisites: PUB AFFR 818 and 880
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022

PUB AFFR 857 – POLITICAL ECONOMY OF CORRUPTION AND GOOD GOVERNANCE
3 credits.

Surveys wide range of multidisciplinary research on causes and consequences of widespread corruption and experiences of anticorruption reform strategies, with focus on developing countries. Considers role of international organizations, multinational companies, and regional agreements in building good governance globally.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023

PUB AFFR 860 – WORKSHOP IN INTERNATIONAL PUBLIC AFFAIRS
3 credits.

Workshop in program evaluation and policy analysis taught through student teams working on real-world international issues for agencies in the public, private, and non-profit sectors. Teaches analytical skills, report preparation and writing, and presentation of results.
Requisites: PUB AFFR 873 and declared in International Public Affairs MIPA
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

PUB AFFR 863 – HEALTH SYSTEMS AND POLICY
3 credits.

Explore factors that influence health outcomes in the United States. Review policies that affect the organization and financing of health care and public health systems. Apply systems approaches to evaluate health policy and health outcomes in the United States. Apply practical strategies to understand and communicate about health challenges and policy approaches to improve population health within complex, dynamic systems.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Describe key historical patterns, events, and groups that have shaped medical care and public health organization, financing and delivery in the US.
Audience: Graduate

2. Identify key factors that influence population health outcomes, and compare those to other industrialized countries.
Audience: Graduate

3. Understand how policy analysis can contribute to advancing approaches to key debates in health policy.
Audience: Graduate

4. Gain skills to approach problems that emerge out of complex, dynamic systems.
Audience: Graduate

5. Build skills in critical analysis, communication, and working interprofessionally.
Audience: Graduate

PUB AFFR 864 – HEALTH POLICY AND POLICY DESIGN
3 credits.

Survey health care policy in the United States, including examination of the design of health policy and the politics of health care reform.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019

PUB AFFR/ENVIR ST/POLI SCI 866 – GLOBAL ENVIRONMENTAL GOVERNANCE
3 credits.

In-depth examination of the political and policy challenges posed by global environmental degradation. Analysis of international institutions for managing the global environment.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

PUB AFFR 869 – WORKSHOP IN PUBLIC AFFAIRS
3 credits.

Workshop in program and policy analysis taught through student teams working on real problems for public agencies and organizations; teaches analytical skills, report preparation and writing; and presentations of results.
Requisites: PUB AFFR 873 and declared in Public Affairs MPA
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate critical thinking skills by examining strengths and weakness of public policy literature, evaluating evidence for and against hypotheses, synthesizing knowledge, and developing conclusions.
Audience: Graduate

2. Effectively summarize and clearly communicate data, real world policy problems, and policy literature for a general audience or policy audience.
Audience: Graduate

3. Apply tools of policy analysis to investigate a policy problem and provide advice to a client audience to mitigate the problem while maintaining fidelity to objective social science-based research methods.
Audience: Graduate

4. Identify and appropriately respond to scenarios involving the ethical and professional responsibilities of public administration and adhere to high levels of professional conduct, ethical decision making and legal and regulatory compliance.
Audience: Graduate

5. Demonstrate the ability to maintain human subject protections when designing studies, collecting data and reporting results.
Audience: Graduate

6. Demonstrate effective project management and teamwork.
Audience: Graduate

PUB AFFR/POLI SCI 871 – PUBLIC PROGRAM EVALUATION
3 credits.

Compares the conceptual, statistical, and ethical issues of experimental, quasi-experimental and non-experimental designs for program evaluation. Definitions of outcomes, sample size issues, statistical biases in measuring causal effects of programs, and the reliability of findings will be emphasized using case studies selected from current public programs.
Requisites: PUB AFFR 818
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PUB AFFR 873 – INTRODUCTION TO POLICY ANALYSIS
3 credits.

Develops skills in policy analysis in two ways. First, sets out the conceptual foundations for understanding the role of policy analysis in democratic politics. Second, provides training and experience in policy analysis craft.
Requisites: PUB AFFR 880 and declared in Public Affairs MPA or International Public Affairs MIPA
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

PUB AFFR/POLI SCI/URB R PL 874 – POLICY-MAKING PROCESS
3 credits.

Examines the political, social, and economic contexts that shape and are shaped by policy making processes. Though the focus is on the US, international comparisons will be made, and students are encouraged to think about the American context through comparative and international perspectives. Familiarizes students with dominant theories and models of policymaking process and policy change, starting with the model of the policy cycle. Focuses in on key topics and issues in policy making, specifically, agenda setting, implementation, and the relationships between policymaking and democracy. Reflects on contemporary and emerging issues and dilemmas of the politics of policy making.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify important contextual aspects of policy making processes, of dominant theories, models and conceptual frameworks of policy processes, and of key issues and topics in policy making.
Audience: Graduate

2. Critically analyze theories and evidence presented in readings and describe debates, past and present, surrounding public policy making processes.
Audience: Graduate

3. Read and comprehend academic research, data, and writing as well as journalistic writings on relevant issues of public policy processes and politics.
Audience: Graduate

4. Communicate summaries and analyses of topics, issues and key readings in class discussions, presentations, and writing assignments. Use clear written language and draw on theories, concepts, and evidence to support their arguments and ideas.
Audience: Graduate

5. Maintain fidelity to objective social science-based research methods.
Audience: Graduate

6. Prepare a high-quality presentation and communicate effectively as a speaker.
Audience: Graduate

PUB AFFR/POLI SCI/URB R PL 878 – PUBLIC MANAGEMENT
3 credits.

Role of administration in American government; problems of organization, bureaucracy and control; public policy as the output of the administrative process.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

PUB AFFR 880 – MICROECONOMIC POLICY ANALYSIS
3 credits.

The tools and techniques used in the economic approach to policy analysis. Emphasis is on applying these methodological tools to evaluating existing public policies and policy alternatives, as well as providing a deeper understanding of how the economy operates.
Requisites: Declared in Public Affairs MPA or International Public Affairs MIPA
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PUB AFFR/A A E/ENVIR ST/POP HLTH 881 – BENEFIT-COST ANALYSIS
3 credits.

Presents the welfare economics underpinnings for evaluating the social benefits and costs of government activities. Issues such as uncertainty, the social discount rate, and welfare weights will be discussed; case studies from the environmental, social policy, and agricultural areas will be studied.
Requisites: Graduate/professional standing and (PUB AFFR 818 and 880), or POP HLTH/I SY E 875, or A A E 635
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the basic mechanics of performing a Cost Benefit Analysis, including methods for valuing costs and benefits, aggregating over time, and analyzing uncertainties.
Audience: Graduate

2. Evaluate the strengths and weaknesses of different CBAs and propose strategies to address any shortcomings.
Audience: Graduate

3. Debate the advantages and limitations of CBA for public policy and compare it to other approaches.
Audience: Graduate

4. Create a CBA for a real-world client from beginning to end, including scoping, background research, valuation of costs and benefits, uncertainty analysis, and interpretation.
Audience: Graduate

PUB AFFR/POLI SCI 885 – ADVANCED PUBLIC MANAGEMENT: CRAFT, CONSTRAINTS AND ACCOUNTABILITY
3 credits.

Examines how managers in public and not-for-profit agencies can secure and utilize legal authority, human resources, and funds to accomplish organizational goals. Includes strategies for establishing and maintaining effective external relations and for working through other organizations to accomplish objectives.
Requisites: URB R PL/POLI SCI/PUB AFFR 878
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023

PUB AFFR 888 – COMPARATIVE AND NATIONAL SOCIAL POLICY
3 credits.

An overview of the American system of public policy toward human resources, with an emphasis on how the American system compares with other nations' approaches to social welfare policy. Other nations include OECD nations as well as emerging middle income countries in Asia and Latin America. Social welfare policy is analyzed as three major branches: health, education and welfare.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PUB AFFR 891 – STATE AND LOCAL GOVERNMENT FINANCE
3 credits.

Explores the spending and tax policies of state and local governments. Focus on factors influencing the mix and level of public spending and the choice of revenue sources. Issues to be studied include the fiscal relations between governments and property tax.
Requisites: PUB AFFR 880
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

PUB AFFR 892 – PUBLIC BUDGETING
3 credits.

Provides an understanding of budget preparation, adoption and execution; proposed reforms of the budget process; and competing theories of the politics of budgeting. Focuses on the expenditure aspect of budgeting.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

PUB AFFR 974 – TOPICS IN PUBLIC AFFAIRS
3 credits.

Current issues in the formulation, implementation, and analysis of public policy.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

PUBLIC HEALTH (PUBLHLTH)

PUBLHLTH 700 – TOPICS IN PUBLIC HEALTH
1-3 credits.

Special topics in public health.
Requisites: Declared in Master of Public Health program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023
Learning Outcomes: 1. Apply, analyze, or evaluate advanced theories, concepts, or methods in public health
Audience: Graduate

PUBLHLTH 710 – INTRODUCTION TO GLOBAL HEALTH: HISTORY, CURRENT ISSUES, AND HEALTH STATISTICS
2 credits.

Provides opportunities that facilitate learning in the areas of global health history and contemporary issues; global health frameworks, policies, and assessing and critically evaluating data; the socioecological model for global health, health equity and disparities; and, global health communication. Presumes some background and understanding of basic principles of health and addresses topics at a graduate level.
Requisites: Graduate/professional standing, or declared in the Capstone Certificate in Global Health Online
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Compare and contrast the current definitions of "global health" from both historical perspectives and usefulness in addressing today's major global health challenges.
Audience: Graduate

2. Critique the concept that global-local-global continuum thinking can positively impact contemporary problems that affect populations both locally and abroad.
Audience: Graduate

3. Evaluate commonly used global health frameworks (e.g., Alma Atta, MDGs/SDGs) for the likelihood that they will positively impact health in the next 20 years.
Audience: Graduate

4. Debate whether 'Health as a Human Right' should be explicitly present in the Sustainable Development Goals.
Audience: Graduate

5. Analyze the intersections of data and policy for their impacts on health outcomes.
Audience: Graduate

6. Assess the importance and challenges of accurate surveillance data in designing policy interventions.
Audience: Graduate

7. Explain social determinates of health and health equity obstacles within global health trends (e.g. urbanization, globalization) and outcomes (global health disparities).
Audience: Graduate

8. Defend the opinion that the Social Ecological Model of well-being can be applied to the field of global health.
Audience: Graduate

9. Evaluate the roles of at least three organizations in maximizing health security and effective health communications.
Audience: Graduate

10. Analyze whether social marketing can not only communicate health information but also improve outcomes.
Audience: Graduate

PUBLHLTH 711 – GLOBAL PUBLIC HEALTH AND HEALTHCARE SYSTEMS: ORGANIZATIONS, GOVERNANCE, FINANCING, AND WORKFORCE
2 credits.

Provides opportunities that facilitate learning in the areas of global health systems, organizations, governance, and financing; global health security; emergency medical services and injury epidemiology; health in complex emergencies, and, health issues in refugee, immigrant, and internally-displaced persons. Presumes some background and understanding of basic principles of health and addresses topics at a graduate level.
Requisites: Graduate/professional standing, or declared in the Capstone Certificate in Global Health Online
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze successful and unsuccessful global public health systems using at least five key components
Audience: Graduate

2. Discuss the overlapping roles and governance structures of global health development and oversight organizations (e.g. World Health Organization, World Bank), NGOs (e.g. MSF: Médicins San Frontières) and governments (e.g. Ministries of Health, USAID: United States Agency for International Development)
Audience: Graduate

3. Evaluate the ten action packages established by the Global Health Security Agenda (GHSA) for their potential abilities to enhance health and well-being around the world
Audience: Graduate

4. Prioritize the ten action core principles of the Global Health Security Agenda 2024 framework for their role in addressing one global health issue of your choosing
Audience: Graduate

5. Compare and contrast the abilities of different Global Emergency Medical Services and Emergency Health Systems to decrease the burden of disease of injury worldwide
Audience: Graduate

6. Defend the concept that conflict, terrorism and natural disasters have a greater impact on the health of immigrant and displaced people than on more stable populations
Audience: Graduate

7. Explain the challenges to the successful implementation of disaster management planning and response
Audience: Graduate

8. Recommend and defend at least three ways that "brain drain" in global health workforce could be reduced
Audience: Graduate

9. Explain how interprofessional collaboration impacts global workforce development
Audience: Graduate

PUBLHLTH 712 – GLOBAL HEALTH: INFECTIOUS DISEASES, ONE HEALTH, AND PREVENTION STRATEGIES
2 credits.

Provides opportunities that facilitate learning in the areas of communicable disease surveillance, prevention strategies, and management, including AIDS, tuberculosis, malaria; dengue and other vectorborne diseases; neglected tropical diseases; vaccine preventable diseases; One Health and zoonotic diseases; novel disease emergence; WASH programs (water, sanitation, and hygiene); and bioterrorism. Presumes some background and understanding of basic principles of health and addresses topics at a graduate level.
Requisites: Graduate/professional standing, or declared in the Capstone Certificate in Global Health Online
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Examine how the epidemiology of HIV/TB/malaria and challenges in the management of these diseases impact the effectiveness of control strategies.
Audience: Graduate

2. Analyze how the unique features of vector borne diseases and parameters of climate change impact control strategies.
Audience: Graduate

3. Evaluate the historical and current impacts of immunizations on the epidemiology of vaccine preventable diseases.
Audience: Graduate

4. Analyze the historical factors and current drivers of vaccine hesitancy and evaluate potential strategies to manage this public health challenge.
Audience: Graduate

5. Debate the concept that disparities in resources are the primary driver of the epidemiology of Neglected Tropical Diseases.
Audience: Graduate

6. Differentiate the roles of animals in the primary patterns of "zoonotic diseases" transmission between humans and animals.
Audience: Graduate

7. Compare and contrast the different communicable disease surveillance methodologies.
Audience: Graduate

8. Explain the characteristics of pathogens that are needed to make them bioterrorism weapons.
Audience: Graduate

9. Evaluate the factors that have led to the rise of antimicrobial resistance and the role of antimicrobial stewardship and infection control techniques for prevention.
Audience: Graduate

10. Explain how the following communicable disease transmission patterns differ from one another: "endemic," "epidemic," "pandemic," and "outbreak."
Audience: Graduate

11. Defend the role of one of the following in the origins of emerging and novel pathogens: pathogen evolution; human behavior; inadequate public health infrastructure; or, ecological factors.
Audience: Graduate

PUBLHLTH 713 – GLOBAL HEALTH: NON-COMMUNICABLE DISEASES, POVERTY, ENVIRONMENTAL HEALTH, AND FOOD SECURITY
2 credits.

Provides opportunities that facilitate learning in the areas of globally important non-communicable diseases, including but not limited to type 2 diabetes, hypertension, and developmental and acquired disabilities; the global epidemiology of non-communicable diseases; health determinants and indigenous health beliefs and practices; mental health and wellness, including interpersonal violence and opioid abuse; and, food security, nutrition, and obesity. Presumes some background and understanding of basic principles of health and addresses topics at a graduate level.
Requisites: Graduate/professional standing, or declared in the Capstone Certificate in Global Health Online
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Compare and contrast the principles of demographic transition, epidemiologic transition and nutrition transition.
Audience: Graduate

2. Analyze the role of five categories of social determinants of health in the development and successful management of non-communicable diseases.
Audience: Graduate

3. Predict ways in which traditional medical beliefs/practices could positively and negatively affect health outcomes for a non-communicable disease.
Audience: Graduate

4. Categorize how the challenges of prevention, diagnosis, management and cure are the same or different for communicable and non-communicable diseases.
Audience: Graduate

5. Defend the statement that the "dual burden of disease" reduces the capacity of low-resource health systems to improve public health outcomes.
Audience: Graduate

6. Assess the challenges that both types of malnutrition (over-nutrition, under-nutrition) pose for the health and well-being of individuals, communities and nations.
Audience: Graduate

7. Justify the fundamental relationship between mental health and overall wellbeing, including an evaluation of how societal norms, the legal system and the pharmaceutical supply chain affect the management of mental health.
Audience: Graduate

PUBLHLTH 714 – GLOBAL HEALTH FIELD WORK FUNDAMENTALS: ENGAGEMENT, ETHICS, POLICY, AND METHODS
2 credits.

Provides opportunities that facilitate learning in the areas of global health studies, engagement, and health data; ethics of global health engagement and international aid; global health research and quality improvement, including human subjects research and the IRB processes; and, international travel planning. Presumes some background and understanding of basic principles of health and addresses topics at a graduate level.
Requisites: Graduate/professional standing, or declared in the Capstone Certificate in Global Health Online
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Examine how international health statistics can be used to effectively describe the wellbeing of communities.
Audience: Graduate

2. Develop a framework of ethical considerations for grants and partnerships between HICs and LMICs.
Audience: Graduate

3. Analyze the relationship that power disparities can have in promoting inequalities.
Audience: Graduate

4. Evaluate the impact of systems, research methods and regulations in the complex framework of global health.
Audience: Graduate

5. Recommend and prioritize components of pre-travel planning for international work, including considerations for how to avoid common problems while abroad.
Audience: Graduate

6. Justify the concepts that culture is a very significant factor for effectively working in a global setting and that biases can negatively impact effective communication.
Audience: Graduate

PUBLHLTH 715 – GLOBAL HEALTH ISSUE ANALYSIS
1 credit.

A structured independent study experience to research a major global health issue, including interviews with local key informants, integrating previous educational experiences in global health.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Design and execute a professional literature review
Audience: Graduate

2. Find and organize data from global health databases to justify the importance of a chosen global health issue
Audience: Graduate

3. Develop key informant questions and interview key informants to gain meaningful information
Audience: Graduate

4. Analyze key informant data (qualitative analysis) and integrate the information into summary statements
Audience: Graduate

5. Create health intervention plans and policy briefs
Audience: Graduate

6. Defend conclusions and ideas in oral and written communications
Audience: Graduate

PUBLHLTH 716 – STUDY ABROAD GLOBAL HEALTH FIELD EXPERIENCE
1-4 credits.

A course carried with a UW-Madison study abroad program which has no equivalent on this campus. Current enrollment in a UW-Madison study abroad program.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Identify and analyze key theories, core concepts, and their application in global health
Audience: Graduate

PUBLHLTH/NURSING/PHARMACY/PHY ASST/PHY THER 758 – INTERPROFESSIONAL PUBLIC HEALTH LEADERSHIP
1 credit.

Build skills in collaboration, problem solving, and reflection to approach complex community-based public health problems contribute to becoming a public leader. Explore the six levels of public health leadership through the practices of current and past public health leaders, case studies, and personal experience.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019
Learning Outcomes: 1. Describe the roles and responsibilities of their profession with all participating health professional students, while examining the roles and responsibilities of all other health professions.
Audience: Graduate

2. Compare and contrast the diversity of expertise among participating health professions.
Audience: Graduate

3. Apply their profession's roles and responsibilities to case studies that address complex public health issues.
Audience: Graduate

4. Describe what it means to be part of an interprofessional team and illustrate how the different professions and systems can complement and facilitate one another in addressing public health issues.
Audience: Graduate

5. Apply the principles of public health leadership via reflective exercises, case studies and facilitated discussion.
Audience: Graduate

6. Promote a public health cause or principle through legislative advocacy.

Audience: Graduate

7. Elucidate the importance of reflection as a life-long learning and leadership tool.
Audience: Graduate

PUBLHLTH 777 – CLINICAL MEDICINE AND PUBLIC HEALTH
2 credits.

Addresses the interface between the practice of clinical medicine and evidence-based approaches to public health needs and issues and community health improvement. A focus on emerging issues and opportunities to work with community-based public health practitioners while exploring career goals and the intersection between clinical medicine and public health.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Articulate the importance of a comprehensive approach to public health and clinical medicine
Audience: Graduate

2. Compare different career paths available to clinical professionals with public health training
Audience: Graduate

3. Analyze the healthcare system, function and structures
Audience: Graduate

4. Evaluate points of synergy between clinical and public health work, especially leveraging both partnering and professional organizations
Audience: Graduate

5. Develop and apply strategies to work collaboratively in interprofessional groups within the class and with communities
Audience: Graduate

6. Develop expertise in messaging and framing techniques for clinical medicine and public health advocacy.
Audience: Graduate

PUBLHLTH 780 – EVIDENCE-BASED DECISION-MAKING
3 credits.

An interprofessional course addressing evidence-based approaches to public health needs and issues and community health improvement. Features problem-based learning with a focus on emerging issues and opportunities to work with community-based public health practitioners.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define the basic concepts of evidence-based decision-making.
Audience: Graduate

2. Demonstrate how to locate information on evidence-based approaches in the literature.
Audience: Graduate

3. Describe the importance of interdisciplinary approaches to public health.
Audience: Graduate

4. Describe several applications within public health practice that are based on evidence.
Audience: Graduate

5. Define barriers to evidence-based decision-making in public health settings
Audience: Graduate

6. Discuss emerging public health issues in the context of evidence-based decision-making.
Audience: Graduate

7. Develop and apply strategies to work collaboratively in small groups.
Audience: Graduate

PUBLHLTH 781 – COMMUNICATING PUBLIC HEALTH EFFECTIVELY I
1 credit.

Exploration of current public health issues, interprofessional approaches and modes of communication within the MPH Program and the public health practice community. Content will advance students' analytic assessment, communication, and systems-thinking skills.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022
Learning Outcomes: 1. Identify key issues and problems in public health within the context of the public health foundational competencies.
Audience: Graduate

2. Lead and facillitate group discussions.
Audience: Graduate

3. Communicate public health content appropriately based on the MPH Program's standards in writing and orally.
Audience: Graduate

4. Describe the importance of interdisciplinary approaches to public health practice.
Audience: Graduate

5. Demonstrate knowledge about public health and other resources on the UW campus.
Audience: Graduate

PUBLHLTH 782 – DETERMINANTS OF HEALTH AND HEALTH EQUITY: A SYSTEMS APPROACH
3 credits.

The social determinants of health, determined by deep rooted and inequitably distributed resources via institutions and systems that shape our communities and the world that we live in, are the key factors that shape ill health and exacerbate inequities in the health and well being of populations. Provides grounding in the social determinants of health through a health equity framework. Students will learn about health equity frameworks and how to integrate them into their public health practice and research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Critically analyze the social and structural determinants of health for populations.
Audience: Graduate

2. Explain the relationship between health disparities and health inequity.
Audience: Graduate

3. Explain how power structures the conditions that shape health
Audience: Graduate

4. Identify the mechanisms by which structural racism shapes everyone's health across the lifespan
Audience: Graduate

5. Reflect on how your own health has been shaped by structural and social determinants
Audience: Graduate

6. Explain the value of systems thinking using a health equity lens to public health research and practice.
Audience: Graduate

7. Describe the rationale for community involvement in public health actions and the key principles of community-based approaches to public health.
Audience: Graduate

PUBLHLTH 783 – QUANTITATIVE APPROACHES TO PUBLIC HEALTH
4 credits.

Gain the fundamental principles of epidemiology and biostatistics with an emphasis on those elements most relevant to applied public health practice. Provides training in epidemiology and biostatistical theory and methods through applied case examples that blend epidemiology principles with foundational statistical knowledge needed to collect and analyze public health data.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand methods to describe patterns of health and disease according to person, place, and time.
Audience: Graduate

2. Apply techniques to analyze data from a variety of sources to determine how risk factors are related to health outcomes.
Audience: Graduate

3. Identify the features of epidemiologic and biostatistical study designs, and describe their strengths and limitations in public health research and practice.
Audience: Graduate

4. Read and critically review scientific and public health literature and interpret findings to inform public health research, intervention, and practice.
Audience: Graduate

5. Link biostatistics, epidemiology and public health as data is collected and distributed to individuals and diverse population groups.
Audience: Graduate

6. Identify ways in which biostatistical and epidemiologic techniques relate more broadly to the practice of public health and population health sciences.
Audience: Graduate

PUBLHLTH 784 – QUANTITATIVE APPROACHES TO PUBLIC HEALTH II
3 credits.

Gain an understanding of the fundamental principles of epidemiology and biostatistics with an emphasis on essential aspects in applied public health practice. Case studies provide training in epidemiology and biostatistical theory and methods that blend epidemiology principles with foundational statistical knowledge needed to collect and analyze public health data.
Requisites: PUBLHLTH 783
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply common statistical methods for inference.
Audience: Graduate

2. Interpret results of statistical analyses found in public health studies.
Audience: Graduate

3. Apply statistical software to analyze health-related data.
Audience: Graduate

4. Perform univariate data analysis for continuous and categorical variables.
Audience: Graduate

5. Apply descriptive and inferential methodologies according to the type of study design for answering specific research questions.
Audience: Graduate

6. Evaluate the strengths and limitations of epidemiologic reports.
Audience: Graduate

7. Define and discuss the relationship of random error, selection and information bias, and systematic error.
Audience: Graduate

8. Define and explain numerous examples of confounding and effect modification and understand how they differ from each other.
Audience: Graduate

9. Apply knowledge from the entire course to make epidemiologic decisions on varied public health issues, even if given conflicting research results, exercising critical judgment.
Audience: Graduate

10. Describe historical ethical failures in public health research and best practices to perform ethical investigations in public health.
Audience: Graduate

PUBLHLTH 785 – PUBLIC HEALTH AND HEALTH CARE SYSTEMS
3 credits.

Focuses on the fundamental characteristics of the public health and health care systems, including key factors in performance, organization, financing, and delivery of services in major sectors of the U.S. health care system.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Compare and contrast the public health and health care systems.
Audience: Graduate

2. Recognize important concepts and measures for evaluating the performance of health systems.
Audience: Graduate

3. Develop knowledge of sectors within the health care system.
Audience: Graduate

4. Identify key management and policy issues in contemporary health systems.
Audience: Graduate

5. Analyze strategies for health system improvement.
Audience: Graduate

6. Advance skills in written and oral analysis.
Audience: Graduate

PUBLHLTH 786 – PLANNING AND MANAGEMENT TO PROMOTE HEALTH
3 credits.

Gain knowledge about theory, concepts, and methods of program planning and evaluation in the context of health care and community health organizations. Covers content and case studies on planning, designing, and implementing health services and quality improvement projects. Basic principles of tools for budget development and resource management related to grants or projects are included. Class projects provide the opportunity to collaborate in the creation of program plans, logic models, and grant proposals.
Requisites: PUBLHLTH 780 (or POP HLTH 780 prior to Fall 2019)
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Examine the critical elements of health program planning and evaluation models.
Audience: Graduate

2. Analyze strengths and weaknesses of proposed health programs.
Audience: Graduate

3. Construct a program plan that demonstrates ability to conduct needs assessment, create measurable objectives, design interventions, develop a budget, and conduct process and outcome evaluation.
Audience: Graduate

4. Write a grant.
Audience: Graduate

5. Examine the critical elements of quality process improvement history, methods, and practice.
Audience: Graduate

6. Apply basic quality improvement methodologies to a process in a health care or community health organization.
Audience: Graduate

7. Develop and apply strategies to work collaboratively in small teams.
Audience: Graduate

PUBLHLTH 787 – MPH APPLIED PRACTICE EXPERIENCE SEMINAR
1 credit.

Prepares Master of Public Health students for applied practice experience in a community setting.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand the applied practice experience process, from identifying a project to reporting the project findings/outcomes
Audience: Graduate

2. Identify and apply strategies/methods that appropriately address a specific project or goals of the applied practice experience
Audience: Graduate

3. Develop the components needed for the completion of the Applied Practice Experience Learning Agreement
Audience: Graduate

4. Be able to plan, conduct, and evaluate an applied practice learning placement and/or Integrated Learning Experience Project
Audience: Graduate

PUBLHLTH 788 – APPLIED PRACTICE EXPERIENCE
1-6 credits.

Master of Public Health students gain practical experience in a public health setting as outlined in their learning agreement.
Requisites: PUBLHLTH 787
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025
Learning Outcomes: 1. Integrate public health theory, knowledge, and skills in a community or public health practice setting;
Audience: Graduate

2. Engage with a community public health practice organization to fully understand organizational structure, local and organizational politics, program administration, community relationships, and program coordination;
Audience: Graduate

3. Demonstrate mastery of at least five public health competencies;
Audience: Graduate

4. Contribute to the MPH Practice Portfolio with at least two products for each competency identified;
Audience: Graduate

5. Complete defined projects in an area of public health practice such as needs assessment, program planning, program evaluation, policy development, educational campaign, or applied research project;
Audience: Graduate

6. Gain/expand/develop skills and knowledge in an area of interest not covered in depth elsewhere in the educational plan
Audience: Graduate

PUBLHLTH 790 – PUBLIC HEALTH AND SOCIAL JUSTICE: TOOLS AND MODELS
2 credits.

Integrate public health knowledge, skills and practice acquired through didactic and experiential courses to find solutions to complex public health issues using public health tools and models that apply systems thinking, cultural humility and evidence-based decision making, framed within a social justice perspective.
Requisites: Declared in Public Health MPH
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Integrate public health theory, knowledge and skills to address current public health problems within a social justice perspective.
Audience: Graduate

2. Describe the historical and current state of structural racism as a cause of health inequities in the US for various populations.
Audience: Graduate

3. Describe the historical and ongoing social inequities and biases leading to discrimination against various disadvantaged populations leading to poor health and reduced quality of life.
Audience: Graduate

4. Demonstrate proficiency in the use of specific public health tools and frameworks to address social justice issues.
Audience: Graduate

5. Demonstrate the ability to develop and deliver written and oral presentations to convey information about the development, effectiveness and outcomes generated from various public health programs and policies for different audiences.
Audience: Graduate

6. Develop skills in facilitating community conversations, gathering and analyzing and reporting on qualitative data and using qualitative data analysis tools.
Audience: Graduate

7. Work efficiently and effectively in teams.
Audience: Graduate

PUBLHLTH 791 – STRATEGIC HEALTH COMMUNICATION- THEORY AND PRACTICE
3 credits.

Effective health information communication strategy. Using a theoretical foundation for communication, better understand the factors that influence how individuals form attitudes and beliefs about health topics. Strategically plan health messaging for diverse audiences. Lead small group discussions and provide constructive peer feedback.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the theoretical foundations for attitude formation and information processing.
Audience: Graduate

2. Identify the role of heuristics in perceptions of health information.
Audience: Graduate

3. Research a target population to understand attitudes and beliefs, as well as motivators and barriers related to health.
Audience: Graduate

4. Analyze the impact of policy and programs on effective health communication.
Audience: Graduate

5. Develop key messages and message strategies that speak to population needs.
Audience: Graduate

6. Recognize strategic partnerships in developing health communication campaigns.
Audience: Graduate

7. Describe the role of visual communication in effective messaging.
Audience: Graduate

8. Develop an informed campaign timeline, factoring in stakeholder engagement, deliverables, and evaluation criteria.
Audience: Graduate

PUBLHLTH 792 – PUBLIC HEALTH POLICY AND POLITICS
3 credits.

Gain an understanding of the process of public policy development and an understanding of how and why health policies reflect the political system in which they are developed and implemented.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze the current and historical role of government in health policy, primarily focusing on the United States.
Audience: Graduate

2. Present important concepts, theories, and evidence concerning the impact of politics on public policy and population health.
Audience: Graduate

3. Explain the roles, resources, and strategies of key participants, both inside and outside of government, who influence health policy development and implementation.
Audience: Graduate

4. Compare and contrast how political determinants influence different types of health policy issues (e.g., access to insurance and health services, cost containment, disease and injury prevention).
Audience: Graduate

5. Translate knowledge of health politics and the policy process into more effective strategies for public health advocacy.
Audience: Graduate

6. Gain skills in communication, leadership, and systems thinking through formal and informal analysis of key issues in health politics and policy.
Audience: Graduate

PUBLHLTH 793 – PUBLIC HEALTH LEADERSHIP
2 credits.

Gain knowledge and skills in public health leadership attributes and style, communication, collaboration, negotiation, and advocacy, and a framework for advancing population health improvement within and across organizations. Explore the theories and principles of leadership, leadership styles and practices, and the skills and knowledge needed to be a public health leader.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify key attributes of successful leaders, across disciplines, working to address complex social problems.
Audience: Graduate

2. Explore the vision of public health leaders and leadership strategies that have motivated others for collaboration, decision-making and evaluation.
Audience: Graduate

3. Develop a personal statement of core values and vision.
Audience: Graduate

4. Develop essential leadership skills and utilize existing tools based on strengths and areas for growth.
Audience: Graduate

5. Build competency in leading organizations to influence difficult social problems, including health related problems
Audience: Graduate

6. Develop strategies for working across organizational boundaries, including in complex multi-sector partnerships, to advance population health improvement
Audience: Graduate

7. Describe how effective interprofessional teams lead to improved team health outcomes
Audience: Graduate

PUBLHLTH 910 – INDEPENDENT RESEARCH AND APPLIED PRACTICE IN PUBLIC HEALTH
1-3 credits.

Independent study or research on an individualized research or applied community-oriented project under the direction of a public health teaching faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Conduct public health research and applied practice under the guidance of a public health mentor.
Audience: Graduate

2. Create and follow an independent study plan while demonstrating integrity, accountability, and professionalism for all deliverables.
Audience: Graduate

3. Develop an understanding of public health research design by working collaboratively on research or grant proposals.
Audience: Graduate

4. Apply core public health skills and competency in understanding public health system and issues, including qualitative and quantitative data.
Audience: Graduate

5. Prepare and present study/research findings to public health mentor or teaching faculty.
Audience: Graduate

6. Interpret research results in the context of literature and public health practice.
Audience: Graduate

RADIOLOGY (RADIOL)

RADIOL/B M E/MED PHYS/PHMCOL-M/PHYSICS 619 – MICROSCOPY OF LIFE
3 credits.

Survey of state of the art microscopic, cellular and molecular imaging techniques, beginning with subcellular microscopy and finishing with whole animal imaging.
Requisites: PHYSICS 104, 202, 208, or 248 or PHYSICS/MED PHYS 265
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

RADIOL 910 – INDEPENDENT READING AND RESEARCH IN RADIOLOGY
2-8 credits.

Independent research under the supervision of faculty in the Department of Radiology. Student's research projects are individualized to meet individual student research goals within the context of faculty research needs.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Formulate a hypothesis or specific objective if study does not involve hypothesis generating research
Audience: Graduate

2. Conduct a thorough literature review of the specific research question
Audience: Graduate

3. Select and apply statistical methodologies appropriate for the proposed analyses
Audience: Graduate

4. Interpret results correctly and in context of previous findings from literature review
Audience: Graduate

RADIOL 911 – IMAGING AND EMBRYOLOGY: THE BASIC SCIENCE OF FETAL DYSMORPHOGENESIS
2 credits.

The diagnosis and management of congenital abnormality requires an understanding of the basic principles of embryology, imaging, and genetics. Replicating how patients enter the medical system, the didactic path begins with ultrasound diagnosis of fetal abnormality. The embryological basis of the fetal malformations will be examined. From this center, exposure to advanced diagnostics, such as fetal echocardiography, fetal MRI, and genetic testing and counseling. Topics extend to early postnatal care (pediatric genetics and pediatric radiology). Participate in the Meriter Perinatal Conference, learn about genetic approaches to the diagnosis of fetal malformation syndromes, and learn the rudiments of an obstetrical sonogram.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Demonstrate understanding of basic concepts of human dysmorphogenesis
Audience: Graduate

2. Describe various diagnostic approaches to human birth defects
Audience: Graduate

3. Apply basic concepts of embryology and genetics to developmental malformations
Audience: Graduate

4. Explain fundamentals of imaging diagnosis, with an emphasis on prenatal ultrasound
Audience: Graduate

5. Model logical thinking process to organize scientific discussion and presentation
Audience: Graduate

RADIOL 912 – INTENSIVE TRAINING IN CLINICAL ULTRASOUND: PHYSICS, ANATOMY, SKILLS, TRANSLATION TO PRACTICE
2 credits.

Intensive training in clinical ultrasound scanning, including the physical basis of the image generation, the resulting opportunities and limitations of this technique, and ultrasound anatomy and physiology. Practice scanning skills on classmates and phantoms in daily lab sessions and at the UW Simulation Center. Observe and work with expert ultrasound practitioners at clinical sites.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 2 number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Describe ultrasound physics and how these physical principles create opportunities, limitations, and artifacts in clinical imaging.
Audience: Graduate

2. Operate ultrasound machines, and acquire and archive different types of ultrasound images (grayscale, color Doppler, and spectral Doppler).
Audience: Graduate

3. Explain anatomy and physiology as presented in ultrasound images.
Audience: Graduate

4. Become proficient in performing and interpreting ultrasound examinations, including basic abdomen, female pelvis, lower extremity arterial/venous, aorta, FAST scan for trauma, basic echocardiography, lung, thyroid/anterior neck, and musculoskeletal (muscle, tendon).
Audience: Graduate

5. Correlate normal and pathologic findings from ultrasound examinations with expected findings from the physical examination. Explain how these techniques complement each other.
Audience: Graduate

6. Identify how ultrasound techniques can be used to solve particular clinical problems.
Audience: Graduate

7. Summarize how the ultrasound examination can be modified to answer unresolved questions.
Audience: Graduate

RADIOL 914 – PHYSICIAN FINANCIAL WELLNESS
1 credit.

Graduating medical students are faced with a wide array of financial planning and wellness challenges. The median medical student debt has continued to increase, and there is a corresponding proliferation of federal repayment and forgiveness options. Other financial planning needs, such as budgeting and insurance, also arise during this time of transition. A unique opportunity to learn key concepts around budgeting, investing, insurance, and negotiation through independent and group learning experiences. This format allows for better analysis on financial decisions and to understand the impact of these decisions on both current and future financial health and wellness.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Define budgeting and its role in the trainees' life
Audience: Graduate

2. Explore different budgeting techniques
Audience: Graduate

3. Create an income-adjusted and -appropriate budget for both trainees and physicians early in practice
Audience: Graduate

4. Describe how federal income-driven repayment programs work and how they interact with public service loan forgiveness
Audience: Graduate

5. Describe the requirements for public student loan forgiveness
Audience: Graduate

6. Demonstrate awareness of the NIH loan repayment programs for biomedical or biobehavioral research careers
Audience: Graduate

7. Identify the options in loan repayment (IDR and PSLF, refinancing, and forbearance and deferment)
Audience: Graduate

8. Discern the types of insurance relevant to physicians and evaluate best practices for purchasing insurance
Audience: Graduate

9. Explore basic negotiation theory and how it applies to career and salary negotiations
Audience: Graduate

10. Explore the types of retirement savings accounts and their relative utility during different stages in a physician's career
Audience: Graduate

11. Gain an overview on how to plan for financial wellness
Audience: Graduate

12. Apply all the financial tools to real-life scenarios
Audience: Graduate

13. Identify key terms in financial literacy
Audience: Graduate

RADIOL 920 – DIAGNOSTIC RADIOLOGY ELECTIVE
2 credits.

Familiarizes the student with the various imaging and therapeutic procedures that are performed in radiology. In addition to learning about the strengths and limitations of different imaging studies, the student should attempt to relate abnormal radiologic findings to pathophysiology with logic and confidence. Students will be given the opportunity to rotate through the section of their choice for 2 weeks in the Radiology department and are able to tailor their reading room experiences to their interests. They will engage in hands on learning activities, interactive assignments, and learn to communicate in interdisciplinary conversations about patient care when it comes to best practices with radiology.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify how to apply ACR Appropriateness Criteria to all imaging and treatment decisions
Audience: Graduate

2. Communicates effectively with the Radiology team and participates in interdisciplinary conversations about patient care
Audience: Graduate

3. Identify core can't miss diagnoses on imaging
Audience: Graduate

4. Counsel hypothetical patients on the details of relevant imaging tests, including descriptions of risks and benefits
Audience: Graduate

RADIOL 923 – CLINICAL NUCLEAR MEDICINE ELECTIVE
2 credits.

Work directly with faculty in the Nuclear Medicine section of the Department of Radiology. Broad-based experience in a variety of procedures routinely performed by the nuclear medicine service, including nuclear cardiology. Practice in building and presenting a case report.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge of Nuclear Medicine and the overall role of this specific field in the world of Radiology
Audience: Graduate

2. Apply knowledge learned to participate in group discussions
Audience: Graduate

3. Complete a case report according to the guidelines laid out under direction the course directors
Audience: Graduate

RADIOL 924 – GENERAL RADIOLOGY ELECTIVE
2-4 credits.

Elective opportunity to study basic radiological studies and modalities. Gain proficiency in identifying normal structures and can't miss diagnoses on a chest radiograph and abdominal films as well as determining indications for advanced studies (computed tomography CT, magnetic resonance imaging MRI, ultrasound US, angiograms). Practice in building and presenting a case report.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge of basic radiologic studies and modalities and pathology presentation within those studies
Audience: Graduate

2. Apply knowledge learned to participate in diagnostic workup of radiologic images
Audience: Graduate

3. Complete a case report according to the guidelines laid out under direction the course directors
Audience: Graduate

RADIOL 926 – INTERVENTIONAL RADIOLOGY ELECTIVE
2-4 credits.

High-level procedural experience on a clinical interventional radiology service. Interventional radiology uniquely blends the concepts of imaging anatomy and pathophysiology to provide minimally invasive solutions to patients. Hone clinical and procedural skills while being exposed to a rich background curriculum with the goal of case report publication.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize indications and contraindications for basic IR procedures.
Audience: Graduate

2. Demonstrate interventional radiology table management skills.
Audience: Graduate

3. Perform basic steps needed to obtain central venous access.
Audience: Graduate

4. Describe basics of conscious sedation including reversal medications and doses
Audience: Graduate

5. Demonstrate how to obtain informed consent.
Audience: Graduate

6. Practice skills needed for manuscript submission, review, and discussion.
Audience: Graduate

RADIOL 928 – SCREENING IN RADIOLOGY
2 credits.

Clinical experience on diagnostic radiology service. Apply population health and epidemiology principles to screening exam selection in radiology. Participate in interdisciplinary conversations surrounding patient care. Practice in patient-centered communication and in creating a case report.
Requisites: MED SC-M 810, 812, 813, and 911
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define and describe the basic elements of a screening test
Audience: Graduate

2. Explain common misconceptions of screening tests and epidemiology
Audience: Graduate

3. Present factors that explain varying rates of screening in different countries and factors that influence decision-making in these regions
Audience: Graduate

4. List the pros and cons of different screening options and compare them to those for invasive alternatives
Audience: Graduate

5. Explain the advantages and disadvantages of screening outcomes to a hypothetical patient
Audience: Graduate

6. Predict and explain potential outcomes and associated next steps after screening to a hypothetical patient
Audience: Graduate

7. Determine the actual costs of screening to patients based on insurance coverage or lack thereof
Audience: Graduate

8. Describe potential sources of bias in screening tests including lead time bias, length time bias, and selection bias. Explain how appropriate study design for screening program evaluation can overcome these sources of bias.
Audience: Graduate

9. Calculate and define sensitivity, specificity, positive predictive value, and negative predictive value of a screening test. Describe how these values will or will not be altered as the disease prevalence changes.
Audience: Graduate

10. Discuss an example of healthcare disparities related to imaging screening
Audience: Graduate

REAL ESTATE AND URBAN LAND ECONOMICS (REAL EST)

REAL EST/A A E/ECON/URB R PL 306 – THE REAL ESTATE PROCESS
3 credits.

Introductory overview focused on the key aspects of the real estate process: developing real estate, permitting real estate, buying and selling real estate, understanding the economics of real estate, financing real estate, valuing real estate, leasing real estate, and managing real estate.
Requisites: (ECON 101, 111, A A E 101, or 215 prior to Fall 2024) or declared in undergraduate Business Exchange program
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop a working knowledge of the real estate process, including the roles of the various key real estate professionals and the unique challenges associated with the real estate asset class.
Audience: Undergraduate

2. Explain the characteristics, advantages, and disadvantages of the primary commercial real estate property types.
Audience: Undergraduate

3. Discuss the role of debt and equity in a real estate transaction as well as the fundamental terms, conditions, and requirements of commercial real estate financing.
Audience: Undergraduate

4. Navigate the basic regulatory framework governing the real estate process, including land use planning, zoning and the required project approvals.
Audience: Undergraduate

5. Describe the role of leasing in the commercial real estate transaction, including the critical terms and conditions of commercial leases.
Audience: Undergraduate

REAL EST 365 – CONTEMPORARY TOPICS
1-3 credits.

Exploration of subject areas possibly to be introduced into the business curriculum.
Requisites: Sophomore standing or declared in undergraduate Business Exchange program
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

REAL EST 399 – READING AND RESEARCH-URBAN LAND ECONOMICS
1-6 credits.

Individual work suited to the needs of undergraduate students.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2021

REAL EST 410 – REAL ESTATE FINANCE
3 credits.

Fundamentals of real estate finance and investment. Qualitative and quantitative characteristics of commercial real estate. Developing and analyzing commercial property cash flow projections. Introduction to three approaches to valuation with emphasis on investing in commercial real estate. In-depth exposure to debt and equity investor returns.
Requisites: URB R PL/A A E/ECON/REAL EST 306 and (ECON/FINANCE 300 or concurrent enrollment)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze the basic financial aspects of multifamily and commercial real estate.
Audience: Undergraduate

2. Construct and analyze multifamily and commercial real estate pro forma cash flow statements and property valuations.
Audience: Undergraduate

3. Apply the abstracting process of the income elements and critical operational components of multifamily and commercial property leases to quantify the financial impact to the property pro forma cash flow statement.
Audience: Undergraduate

4. Analyze the financial aspects of multifamily and commercial debt and equity capital returns.
Audience: Undergraduate

5. Articulate multifamily and commercial real estate property and market characteristics, supply and demand drivers, and differences between the various property types.
Audience: Undergraduate

REAL EST 411 – REAL ESTATE EXCEL MODELING
1 credit.

Introduction to real estate modeling. Building a real estate model for acquisition and development transactions for residential and commercial real estate using Excel. How to source market data, draw assumptions from market data, input assumptions, make decisions using reports, perform sensitivity analysis on model inputs, and explain terminology used in residential and commercial real estate.
Requisites: REAL EST 410 or (REAL EST 710 or concurrent enrollment)
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate key components required to model a real estate transaction program summary, sources and uses of funds, income statement, debt and equity waterfall.
Audience: Both Grad & Undergrad

2. Demonstrate key functions in excel that are used in the real estate profession including, PMT (payment), PV (present value), NPV (net present value), IRR (internal rate of return), EM (equity multiple), Sumproduct, Round, Solver, Data Table, named Ranges, charts, error bars and circular references.
Audience: Both Grad & Undergrad

3. Model acquisition and development transactions for residential and commercial real estate.
Audience: Both Grad & Undergrad

4. Perform management reporting and sensitivity analysis on PV (present value) and IRR (internal rate of return) for various debt and occupancy metrics.
Audience: Graduate

REAL EST 412 – REAL ESTATE ARGUS MODELING
1 credit.

Introduction to real estate modeling using ARGUS. ARGUS will be used to build a real estate model for acquisition transactions for office and retail mall properties. Learn how to input assumptions, make decisions using reports, perform sensitivity analysis on model inputs and explain terminology used in Office and Retail real estate.
Requisites: REAL EST 410 or (REAL EST 710 or concurrent enrollment)
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate key components required to model a real estate transaction including, program summary, sources and uses of funds, income statement, debt waterfall, and reporting.
Audience: Both Grad & Undergrad

2. Demonstrate key calculations in ARGUS that are used in the real estate profession including effective gross income, net operating income, tenant improvements, present value, levered and unlevered returns and internal rate of return.
Audience: Both Grad & Undergrad

3. Model acquisition transactions for office and mall.
Audience: Both Grad & Undergrad

4. Perform management reporting and sensitivity analysis on present value and internal rate of return for various leasing scenarios.
Audience: Graduate

REAL EST 415 – VALUATION OF REAL ESTATE
3 credits.

Techniques of real estate valuation. Property analysis, market analysis, legal and political analysis, and highest and best use analysis; in-depth exposure to the three approaches to valuation; sales comparison, income, and cost; application to main commercial property types; the role of valuation in real estate investment.
Requisites: REAL EST 410, (REAL EST 411 or concurrent enrollment), and (REAL EST 412 or concurrent enrollment)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply the concepts, tools, techniques for evaluating individual real estate assets, based on the application of economic theory and principles of urban economics, for the purpose of real estate valuation.
Audience: Undergraduate

2. Analyze commercial real estate market data and forecast rents and vacancy for a commercial property.
Audience: Undergraduate

3. Create a valuation analysis and a compelling appraisal report for a commercial property.
Audience: Undergraduate

4. Demonstrate the technical skills of appraisal, including but not limited to data gathering, market analysis, and cash flow modeling.
Audience: Undergraduate

5. Describe how market dynamics, constrained by the geographic, physical and legal parameters, determine values of individual assets in the market.
Audience: Undergraduate

6. Explain the economic forces that drive real estate value in the market.
Audience: Undergraduate

REAL EST/ECON/URB R PL 420 – URBAN AND REGIONAL ECONOMICS
3 credits.

Focuses on the study of the allocation of scarce resources across space. Uses economic methods to analyze urban real estate. Topics covered include the determinants of real estate values, the location decisions of households and firms, land use, urban growth and agglomeration, real estate pricing, cycles, development, housing market and policies, and sustainable development.
Requisites: (ECON 101 or 111) or declared in undergraduate Business Exchange program
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the economic forces that drive urban growth and regional development.
Audience: Undergraduate

2. Analyze how business and residential location decisions are made and how these decisions impact housing prices, land use, labor market, and many other aspects of cities.
Audience: Undergraduate

3. Apply the spatial equilibrium concepts to urban development and real estate analysis.
Audience: Undergraduate

4. Develop statistical models to assess residential and commercial real estate and perform sensible business and policy analysis.
Audience: Undergraduate

5. Apply the economic decision-making framework to real estate development decisions.
Audience: Undergraduate

6. Demonstrate understanding of cycles, risks and bubbles in residential and commercial real estate markets.
Audience: Undergraduate

7. Evaluate the challenges in economic, social and environmental sustainability in urban development around the world.
Audience: Undergraduate

8. Apply urban and regional economics to real estate business decisions and policy analysis.
Audience: Undergraduate

REAL EST 425 – REAL ESTATE LAW
3 credits.

Analyzes current issues in real estate law with a focus on the acquisition, leasing, financing, and development of real estate projects. Includes a big picture view of these topics as well as analyzing them in the specific context of various development deals underway across the United States.
Requisites: (REAL EST 410) and (URB R PL/ECON/REAL EST 420 or concurrent enrollment), or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop and apply a foundational understanding of the common tools, concepts, and terminology of real estate law.
Audience: Both Grad & Undergrad

2. Develop an understanding of the site selection and site control process through an evaluation of the interplay between the business and legal decisions involved in the property acquisition process.
Audience: Both Grad & Undergrad

3. Evaluate the role of leasing in the context of different real estate transactions and learn how to prepare a lease abstract.
Audience: Both Grad & Undergrad

4. Explore the various options for financing real estate projects, both public and private, including traditional bank financing, TIF and tax credit financing.
Audience: Both Grad & Undergrad

5. Analyze how land use and zoning approvals are negotiated and obtained during the development process and learn the importance of working effectively with the staff of federal, state and local governments.
Audience: Both Grad & Undergrad

6. Analyze risks and rewards associated with various real estate transactional decisions.
Audience: Graduate

REAL EST 435 – FAIR HOUSING STUDIES
3 credits.

Explore the causes and consequences of inequities in the housing market. Inequities can be the result of discriminatory behavior by individuals or institutions, market forces, and government policy. Address these issues from both historical and present-day perspectives.
Requisites: Satisfied Quantitative Reasoning (QR) A requirement or GEN BUS 106
Repeatable for Credit: No
Learning Outcomes: 1. Recognize how the role of government can shape urban form and create systemic biases in the functioning of housing markets
Audience: Undergraduate

2. Recognize how private sector actors navigate the policy landscape and utilize fair housing regulations and other available tools to address issues of systemic bias and inequality
Audience: Undergraduate

3. Articulate the causes of housing market inequities, including the historical context and the role of modern-day discrimination and other systemic biases
Audience: Undergraduate

4. Describe the consequences of inequality in housing markets, including housing insecurity, segregation, energy insecurity, health impacts, educational attainment, and economic outcome
Audience: Undergraduate

5. Analyze and interpret housing data, connect to actual policy environments, and present findings in written and presentation formats.
Audience: Undergraduate

REAL EST/A A E/URB R PL 520 – COMMUNITY ECONOMIC ANALYSIS
3 credits.

Economic theory (location and growth) applicable to community economic development; the role of private and public sector in local economic development, and techniques for economic analysis of community.
Requisites: ECON 301 or 311 or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Synthesize an overview of economic theory as applied to small open economies.
Audience: Both Grad & Undergrad

2. Identify the strengths and weaknesses of the community's economy.
Audience: Both Grad & Undergrad

3. Implement alternative processes for affecting change at the community level.
Audience: Both Grad & Undergrad

4. Demonstrate literacy of economic factors affecting change at the local level.
Audience: Both Grad & Undergrad

5. Describe the community within a sustainable systems thinking approach.
Audience: Both Grad & Undergrad

6. Identify appropriate roles for community economic development practitioners in a variety of community settings.
Audience: Graduate

REAL EST 530 – REAL ESTATE INVESTMENT ANALYSIS
3 credits.

A capstone focused on comprehensively underwriting commercial real estate. Investment analysis will be performed for a variety of real estate property types from the perspective of various real estate professionals, such as the property/asset manager, finance professional, leasing broker, acquisitions specialist, portfolio manager, and investment legal/risk team. The investment analysis will emphasize the importance of value-creation through capital investment and effective income and expense management.
Requisites: REAL EST 415 and (REAL EST 425 or current enrollment), or graduate/professional standing
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Know the primary elements of professional roles within the real estate industry including asset management, property management, risk management, leasing, and capital markets
Audience: Undergraduate

2. Know the nuances of investing in various commercial real estate property types to analyze the merits of each
Audience: Undergraduate

3. Evaluate the property income stream durability and risk profile through the incorporation of a budget/variance analysis
Audience: Undergraduate

4. Develop an asset management plan to analyze value-add strategies designed to grow property income and value
Audience: Undergraduate

5. Manage and mitigate commercial property investment risk through active property and asset management strategies and processes
Audience: Undergraduate

6. Demonstrate professional presentation skills
Audience: Undergraduate

REAL EST 540 – PUBLIC REAL ESTATE EQUITY INVESTMENT
3 credits.

Understanding and applying both investment and real estate concepts to the Real Estate Investment Trust (REIT) market. Emphasis is on applying investment and real estate concepts to a specific REIT.
Requisites: (REAL EST 410 or 710) and (FINANCE/ECON 300 or 700)
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Analyze company and sector performance in a portfolio investment context.
Audience: Both Grad & Undergrad

2. Demonstrate effective written and oral communication skills to present course concepts.
Audience: Both Grad & Undergrad

3. Demonstrate how macroeconomic conditions affect the commercial property sector and individual company performance.
Audience: Both Grad & Undergrad

4. Explain how firms finance investment and why they source particular kinds of financing.
Audience: Both Grad & Undergrad

5. Explain the internal and external drivers of REIT value, including the impact of capital structure.
Audience: Both Grad & Undergrad

6. Explain what REITs are and how their risk, return, and liquidity characteristics fit in the broader class of real estate assets.
Audience: Both Grad & Undergrad

7. Understand and know how to describe the legal/tax context in which REITs operate.
Audience: Both Grad & Undergrad

8. Utilize a framework to analyze the operating and financial performance of a chosen REIT from a variety of perspectives.
Audience: Both Grad & Undergrad

9. Demonstrate a deeper understanding of capital markets and the pricing of real estate in the public markets.
Audience: Graduate

REAL EST 550 – PRIVATE REAL ESTATE EQUITY INVESTMENT I: ANALYSIS AND STRUCTURES
3 credits.

Introduction to real estate private equity investment focused on the analysis, terms, return metrics, and structures used to make real estate private equity investment decisions.
Requisites: REAL EST 415, declared in Business: Real Estate and Urban Land Economics graduate programs, or the Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Analyze real estate private equity investment structures
Audience: Both Grad & Undergrad

2. Determine property market growth fundamentals
Audience: Both Grad & Undergrad

3. Generate and evaluate comparable property lease and sale comparables
Audience: Both Grad & Undergrad

4. Model property income and investment waterfalls
Audience: Both Grad & Undergrad

5. Assess private equity investment and sponsor risk
Audience: Both Grad & Undergrad

6. Communicate audience-appropriate analysis of findings
Audience: Both Grad & Undergrad

7. Demonstrate small group leadership skills
Audience: Graduate

REAL EST 560 – AFFORDABLE HOUSING
3 credits.

Gain foundational knowledge on the affordable housing development sector. Includes examination of the political and bureaucratic context and technical and analytical skills necessary to compete for and employ available financial tools to create and preserve affordable housing. Emphasis is placed on the Low-Income Housing Tax Credit (LIHTC) and common challenges including local resistance.
Requisites: Satisfied Quantitative Reasoning (QR) A requirement, GEN BUS 106, or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Describe the role of affordable housing development in the United States including its impact on vulnerable communities, its challenges, and common criticisms.
Audience: Both Grad & Undergrad

2. Demonstrate knowledge of Low-Income Housing Tax Credit (LIHTC) transactions through financial models, professional memos, and development project plans.
Audience: Both Grad & Undergrad

3. Utilize knowledge of affordable development goals, project fundamentals, and community context to build cases in support of projects and present results in written and presentation format, adjusted for the specific audience.
Audience: Both Grad & Undergrad

4. Evaluate and interpret academic papers, trade publications, and mainstream news sources on and engage in classroom discussions.
Audience: Both Grad & Undergrad

5. Demonstrate aptitude in customizing affordable housing financial models to assume specific funding underwriting rules and scoring criteria.
Audience: Graduate

REAL EST 611 – RESIDENTIAL PROPERTY DEVELOPMENT
3 credits.

A capstone course. In-depth exposure to the world of the residential builder/developer/subdivider and the necessary tools of analysis--market analysis, zoning/environmental and other entitlements, site planning and design, infrastructure/construction cost analysis, financing, feasibility analysis, deal structuring, renovation/rehabilitation, special needs housing.
Requisites: (REAL EST 410 and 415) or declared in the Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify features of the built environment that distinguish real estate from other asset classes.
Audience: Both Grad & Undergrad

2. Summarize the development process from project conception and financing to asset disposition, with a particular focus on the role of the developer as the strategic coordinator of many disciplines and manager of risk analysis.
Audience: Both Grad & Undergrad

3. Identify and illustrate the "Land Ethic", and that real estate is a social enterprise as well as private business and, therefore, that external benefits, ethical considerations, and sustainability are important criteria for real estate decisions alongside traditional measures of profitability.
Audience: Both Grad & Undergrad

4. Analyze how to network and cooperate with local, state, and national professionals to obtain insights and information needed for the development process, share market data and, perspectives, discuss investment ideas and identify sources of material and financial resources.
Audience: Both Grad & Undergrad

5. Differentiate and apply market, linkage, and macroeconomic data for the purpose of forecasting real estate trends, appraising value, and making prudent and sustainable investment decisions, and prepare a real estate development analysis, financing, and valuation principles.
Audience: Graduate

REAL EST 640 – REAL ESTATE CAPITAL MARKETS
3 credits.

Thorough discussion of how public real estate investment products such as Mortgage-Backed Securities (MBS) and Real Estate Investment Trusts (REIT) are structured and how investors price them. Exploration of key strategic considerations for institutional investors in their real estate investments. Analysis of the equity side of real estate, review of mortgage math, analysis of MBS and real estate equity investments by looking at specific REITs.
Requisites: REAL EST 410
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze real estate from multiple perspectives (e.g. REIT, insurance company, pension funds).
Audience: Undergraduate

2. Conduct advanced analysis of MBS.
Audience: Undergraduate

3. Demonstrate the primary skills of a real estate security analyst (e.g., REIT and MBS valuation).
Audience: Undergraduate

4. Access resources to deepen knowledge and continually learn about real estate capital markets beyond what was learned in this course.
Audience: Undergraduate

5. Broaden network of professional colleagues via interactions with each other, guest speakers, and conferences.
Audience: Undergraduate

REAL EST 651 – GREEN - SUSTAINABLE DEVELOPMENT
3 credits.

Intended for students who have an interest in Green and Sustainable aspects of housing and commercial property development and operation, the re-use and/or rehabilitation of existing structures, redevelopment of historic buildings into housing or commercial space and related special topics such as financing sources, tax issues, financial structuring, legal issues and energy cost management.
Requisites: Sophomore standing or declared in the Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

REAL EST 661 – REAL ESTATE INVESTMENT ANALYSIS AND PRESENTATION
3 credits.

Real-world capstone experience of the real estate investment process from project conception to asset disposition with particular focus on analysis and presentation. Provides exposure to best known methods and practices that private equity and development firms use to conduct market research, project selection, financial feasibility, regulatory review, design considerations, construction management, debt financing, equity placements, equity waterfalls, property management, asset management and disposition. Develop an interdisciplinary understanding of the many facets of the acquisition and development process in the U.S. and have an insightful understanding of the risks and rewards along each step of the process.
Requisites: (REAL EST 410 or 415) and (REAL EST 411 or concurrent enrollment or REAL EST 631 prior to Fall 2023)
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Model acquisition and development transactions for real estate.
Audience: Undergraduate

2. Create a preliminary site design for new construction, allowing for zoning limits, setbacks, storm water, open space, parking and circulation.
Audience: Undergraduate

3. Articulate the role of the developer or fund manager in the development or acquisition process as a catalyst, capital source and risk mitigator.
Audience: Undergraduate

4. Differentiate the risk/reward trade-offs and the gamut of risk mitigation techniques in Real Estate development making and acquisition.
Audience: Undergraduate

5. Demonstrate the effective oral and written communication protocols, skills and techniques necessary for real estate deal- and project assessment.
Audience: Undergraduate

REAL EST 701 – THE REAL ESTATE PROCESS
2 credits.

Introduction to the survey of institutional context, economics of urbanization, historical pattern and structure of city growth, and public policy issues regarding urban environment and business management. Decision-making processes for the manufacture, marketing, management, and financing of real estate space.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the function and operation of various real estate markets and the impact of government in those markets.
Audience: Graduate

2. Explain the key aspects of various commercial real estate transactions and the roles of the various real estate professionals involved in those transactions.
Audience: Graduate

3. Describe the fundamental terms, conditions and requirements of commercial real estate financing.
Audience: Graduate

4. Develop a working knowledge of the development process, including the unique challenges associated with real estate development.
Audience: Graduate

REAL EST 702 – COMMERCIAL PROPERTY ANALYSIS
2 credits.

Introduction to various techniques to analyze commercial real estate value and investment risks. Analysis of real property through an understanding of the legal, physical, and economic characteristics of a site and building. Analyze real estate markets to forecast future rental income and vacancies. Develop an operating pro forma and basic investment model, forecast future cash flows, and learn to estimate the market value of commercial properties.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Apply the concepts, tools, techniques for evaluating individual real estate assets, for the purpose of real estate valuation and investment analysis.
Audience: Graduate

2. Analyze commercial real estate assets from an investment and valuation perspective, including understanding basic property rights, site characteristics and building characteristics.
Audience: Graduate

3. Analyze commercial real estate market data and forecast rents, vacancy and other income for a commercial property.
Audience: Graduate

4. Construct and analyze a commercial real estate operating pro forma considering commercial lease structures.
Audience: Graduate

REAL EST 703 – REAL ESTATE INVESTMENT ANALYSIS
2 credits.

Introduction to static property income proforma and dynamic property discounted cash flow analysis. Applied learning from active real estate private equity offering memoranda. Analyze capital investments across the real estate risk spectrum from low-risk core income-producing properties to value-add opportunities to high-risk development and redevelopment investments.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Understand real estate private equity investment analysis and structures
Audience: Graduate

2. Analyze property market fundamentals and evaluate lease comparables

Audience: Graduate

3. Model and present property investment returns and risk
Audience: Graduate

REAL EST 706 – THE REAL ESTATE PROCESS
3 credits.

Institutional background of real property; economics of urbanization, supply and demand; building industry, real estate credit, cyclical fluctuation, rents and prices, real estate market analysis; city growth, structure and planning, land use control, urban redevelopment and real estate investment analysis.
Requisites: Graduate/professional standing and (ECON 301 or 311)
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022

REAL EST 710 – REAL ESTATE FINANCE
3 credits.

Evaluating the role of financing and leverage in real estate investment analysis; identifying alternative types of financing; valuation of financial structure; sources of equity financing for real estate; mortgage securitization and the operation of secondary mortgage markets.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze the basic financial aspects of multifamily and commercial real estate.
Audience: Graduate

2. Construct and analyze multifamily and commercial real estate pro forma cash flow statements and property valuations.
Audience: Graduate

3. Apply the abstracting process of the income elements and critical operational components of multifamily and commercial property leases to quantify the financial impact to the property pro forma cash flow statement.
Audience: Graduate

4. Analyze the financial aspects of multifamily and commercial debt and equity capital returns.
Audience: Graduate

5. Articulate multifamily and commercial real estate property and market characteristics, supply and demand drivers, and differences between the various property types.
Audience: Graduate

REAL EST 712 – REAL ESTATE LAW
3 credits.

Advanced principles of real estate law related to ownership rights, negotiations, brokering, transfers, condominium law, financing, income tax law, real estate property taxation, bankruptcy law, construction and development contracts, and residential and commercial leases, and an overview of international legal systems.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021

REAL EST 715 – TECHNIQUES OF REAL ESTATE VALUATION
3 credits.

Topics include highest and best use and most probable use analysis, statistical methods for developing adjustment factors and comparable selection for the market comparison approach, discounted cash flow analysis and income capitalization, and cost approach methods. Issues in appraisal ethics and federal requirements for appraisal practice.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply the concepts, tools, techniques for evaluating individual real estate assets, based on the application of economic theory and principles of urban economics, for the purpose of real estate valuation.
Audience: Graduate

2. Create a valuation analysis and a compelling appraisal report for a commercial property.
Audience: Graduate

3. Demonstrate the technical skills of appraisal, including but not limited to data gathering market analysis, and cash flow modeling.
Audience: Graduate

4. Describe how market dynamics, constrained by the geographic, physical and legal parameters, determine values of individual assets in the market.
Audience: Graduate

5. Explain the economic forces that drive real estate value in the market.
Audience: Graduate

REAL EST/URB R PL 720 – URBAN ECONOMICS
3 credits.

Analysis of spatial relationships in the urban economy, including urban land, labor and housing markets; urban transport; city governance and finance; and regional models. Historical and applied focus. Interdisciplinary approach emphasizing economics, geography, and planning.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze how urban environmental issues impact real estate markets and development
Audience: Graduate

2. Apply an evidenced-based framework to analyze the different types and roles of cities
Audience: Graduate

3. Demonstrate effective oral and written communication skills in individual and group projects as a means to present course concepts and market analyses
Audience: Graduate

4. Understand the role of urban public policy, particularly land use controls, and evaluate its impact on real estate markets
Audience: Graduate

5. Explain the fundamental determinants of location across and within cities, as well as rents and prices of land and real estate
Audience: Graduate

6. Explain how real estate markets affect, and are affected by, national and regional economic events and processes.
Audience: Graduate

REAL EST 750 – COMMERCIAL PROPERTY DEVELOPMENT
3 credits.

Creating industrial real estate, office space, shopping centers, and hotel/recreation facilities, including strategy, market and feasibility analysis, site planning/design, capital cost analysis, construction, and financial structuring. Emphasis on case studies and project analysis.
Requisites: (REAL EST 710 or concurrent enrollment) and (REAL EST 715 or concurrent enrollment)
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain and apply the key components of a commercial real estate development analysis.
Audience: Graduate

2. Articulate the role of the developer in the development process as a catalyst, capital source and risk mitigating agent.
Audience: Graduate

3. Consider the risk/reward trade-offs and the gamut of risk mitigation techniques in real estate.
Audience: Graduate

4. Demonstrate the effective oral and written communication protocols, skills and techniques necessary for real estate deal-making and project assessment.
Audience: Graduate

5. Create a preliminary site design for new construction, allowing for zoning limits, setbacks, storm water, open space, parking and circulation
Audience: Graduate

REAL EST 760 – LAWYERING THE DEVELOPMENT DEAL: A PRACTICAL GUIDE TO REAL ESTATE LAW
3 credits.

Analyze current issues in real estate law with respect to the acquisition, leasing, financing, and development of real estate projects. Explore topics in the context of specific development projects across the US.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop an understanding of the site selection and site control process through an evaluation of the interplay between the business and legal decisions involved in the property acquisition process.
Audience: Graduate

2. Evaluate the role of leasing in the context of different real estate transactions and learn how to prepare a lease abstract.
Audience: Graduate

3. Explore the various options for financing real estate projects, both public and private, including traditional bank financing, TIF and tax credit financing.
Audience: Graduate

4. Analyze how land use and zoning approvals are negotiated and obtained during the development process and learn the importance of working effectively with the staff of federal, state and local governments.
Audience: Graduate

REAL EST 765 – CONTEMPORARY TOPICS
1-4 credits.

Exploration of advanced subject areas possibly to be introduced into the business curriculum.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

REAL EST 770 – COMMERCIAL REAL ESTATE FINANCE
3 credits.

A capstone focused on advanced topics in commercial real estate finance. The course is broken into three parts: 1) Financial Derivatives, 2) Risk Management, and 3) Structured Finance. Lectures will address relevant topic areas and develop methodological skills. Industry professionals will provide real world markets perspective. case studies will be used to reinforce material presented in class.
Requisites: Graduate standing and REAL EST 710
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022

REAL EST 799 – READING AND RESEARCH-URBAN LAND ECONOMICS
1-6 credits.

Individual work suited to the needs of graduate students may be arranged both during regular sessions and the intersession periods.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

REAL EST 841 – APPLIED REAL ESTATE INVESTMENT TRACK (AREIT) I
6 credits.

Focuses on investment processes, guidelines, governance, underwriting, company valuation, sector analysis and portfolio analysis. Allows selected students to function as portfolio managers by investing real money (endowment to the real estate program) in listed real estate companies, primarily real estate investment trusts (REITs).
Requisites: Graduate/professional standing, (REAL EST 410 or 710), and REAL EST 540, or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Know the various property sectors deeply enough to be able to make stock and sector recommendations
Audience: Graduate

2. Create an economic, capital markets and real estate outlook
Audience: Graduate

3. Create an investment philosophy, process, and strategy
Audience: Graduate

4. Demonstrate audience-appropriate presentation skills (e.g. stock pitches, portfolios, strategy updates, summary reports for external AREIT Board)
Audience: Graduate

5. Manage a portfolio which includes adjusting holdings based on variety of factors
Audience: Graduate

6. Analyze investment performance
Audience: Graduate

7. Demonstrate constructive and productive teamwork skills
Audience: Graduate

REAL EST 842 – APPLIED REAL ESTATE INVESTMENT TRACK (AREIT) II
3 credits.

An additional experiential learning in the areas of investment processes, guidelines, governance, underwriting, and portfolio analysis. Selected students will function as portfolio managers by investing real money (endowment to the real estate program) in listed real estate companies, primarily real estate investment trusts (REITs).
Requisites: REAL EST 841
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Know the various property sectors deeply enough to be able to make stock and sector recommendations
Audience: Graduate

2. Create an economic, capital markets and real estate outlook
Audience: Graduate

3. Create an investment philosophy, process, and strategy
Audience: Graduate

4. Demonstrate audience-appropriate presentation skills (e.g. stock pitches, portfolios, strategy updates, summary reports for external AREIT Board)
Audience: Graduate

5. Manage a portfolio which includes adjusting holdings based on variety of factors
Audience: Graduate

6. Analyze investment performance
Audience: Graduate

7. Demonstrate constructive and productive teamwork skills
Audience: Graduate

REAL EST 851 – PRIVATE REAL ESTATE EQUITY INVESTMENT II: UNDERWRITING AND INVESTMENT PROCESSES
6 credits.

Focuses on the real estate private equity organization through constructing investment criteria statements, vetting investment opportunities, implementing investment processes, and presenting the opportunities to the WREAA Fund Investment Committee.
Requisites: Graduate/professional standing and REAL EST 550, or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Construct an investment criteria sheet
Audience: Graduate

2. Build a pipeline of potential investment opportunities
Audience: Graduate

3. Underwrite private equity offering memoranda
Audience: Graduate

4. Evaluate the viability of the real estate investment manager (sponsor)
Audience: Graduate

5. Present offering memoranda analysis and underwriting to the Fund Investment Board
Audience: Graduate

REAL EST 852 – PRIVATE REAL ESTATE EQUITY INVESTMENT III: GUIDELINES, GOVERNANCE, AND PORTFOLIOS
3 credits.

Focuses heavily on building the investment pipeline, analyzing and underwriting new real estate private placement investments, understanding the governance structures, and benchmarking Fund investment returns to industry standards. Investments opportunities that meet investment criteria expectations will be presented to an external Investment Committee of the Wisconsin Real Estate Alumni Association.
Requisites: REAL EST 851
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Build a pipeline of potential investment opportunities
Audience: Graduate

2. Underwrite private equity offering equity memoranda
Audience: Graduate

3. Evaluate the viability of the real estate investment manager (sponsor)
Audience: Graduate

4. Present offering memoranda analysis and underwriting to the Fund Investment Board
Audience: Graduate

5. Benchmark Fund investments against industry standards
Audience: Graduate

6. Understand the private equity organization's roles and responsibilities, the investment guidelines, and governance structures
Audience: Graduate

REAL EST 870 – ADVANCED REAL ESTATE FINANCE THEORY
3 credits.

An overview of theoretical and empirical research on real estate, with a focus on real estate finance. The topics covered are intended to expose some of the major contributions in real estate research as well as a consideration of the current trends and methodological advances in recent papers.
Requisites: Declared in Business PHD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate the ability to read and critique theoretical and empirical papers in real estate and urban land economics
Audience: Graduate

2. Demonstrate skills needed to undertake and present theoretical and empirical research appropriate for the intended audience
Audience: Graduate

3. Demonstrate knowledge of some of the main econometric tools and theoretical modeling strategies used in recent papers
Audience: Graduate

REAL EST 875 – ADVANCED URBAN LAND ECONOMICS
3 credits.

Provides an overview of theoretical and empirical research on real estate and urban economics, with a focus on asset liquidity and place-based policies.
Requisites: Declared in Business PHD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and articulate a research question
Audience: Graduate

2. Summarize literature for a research proposal
Audience: Graduate

3. Assess the strengths and weaknesses of a research paper
Audience: Graduate

4. Describe an empirical and/or theoretical model appropriate to address a research question
Audience: Graduate

5. Effectively present a research paper to an academic audience
Audience: Graduate

6. Write a research proposal
Audience: Graduate

REAL EST 978 – RESEARCH SEMINAR IN REAL ESTATE AND URBAN LAND ECONOMICS
1 credit.

Explore cutting-edge research on urban economics and real estate being conducted across different universities. Invited speakers will describe current or past research, identify challenges involved in their work, and highlight research conceptualization, approaches, methods, and/or data analysis, to better understand how to execute a research project.
Requisites: Declared in Business PHD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 5 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify a good research question.
Audience: Graduate

2. Articulate the state-of-the-art empirical methods in empirical research, the pros and cons for each empirical strategy, and how to choose between different empirical strategies.
Audience: Graduate

3. Analyze the workhorse theoretical models in urban economics and real estate.
Audience: Graduate

4. Summarize the current state of the real estate and urban economics literature to recognize potential contributions to the literature.
Audience: Graduate

5. Apply cutting-edge research methodologies to their own research projects.
Audience: Graduate

6. Demonstrate oral presentation skills in presenting their own research projects to an academic audience.
Audience: Graduate

7. Expand networks within and beyond the Wisconsin School of Business to serve as a springboard for their careers.
Audience: Graduate

REAL EST 990 – REAL ESTATE INDEPENDENT RESEARCH PHD THESIS
1-12 credits.

Individual work to complete dissertation requirement of Ph.D. program.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

REAL EST 999 – READING AND RESEARCH-REAL ESTATE PHD
1-6 credits.

Individual work suited to the needs of Ph.D. students may be arranged both during regular sessions and during the intersession periods.
Requisites: Declared in Business PHD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

REHABILITATION MEDICINE (RHAB MED)

RHAB MED 699 – INDEPENDENT STUDY
0-5 credits.

Independent study projects as arranged with faculty or instructional staff.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Develop critical, analytical, and independent thinking skills
Audience: Undergraduate

RHAB MED 910 – INDEPENDENT READING AND RESEARCH IN ORTHOPEDICS
2-8 credits.

Independent research under the direct supervision of Surgery, Orthopedics, or Urology faculty. Projects are individualized to meet research goals within the context of faculty research needs.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Formulate a hypothesis or specific objective if study does not involve hypothesis generating research.
Audience: Graduate

2. Conduct a thorough literature review of the specific research question
Audience: Graduate

3. Select and apply statistical knowledge methodologies appropriate for the proposed analyses
Audience: Graduate

4. Interpret results correctly and in context of previous findings from literature review
Audience: Graduate

RHAB MED 915 – INDIVIDUALIZED PHASE 3 CLINICAL ELECTIVE IN ORTHOPEDICS
2-4 credits.

Provide direct care for hospitalized orthopedic patients on general surgery or surgical specialty services under the supervision of house staff and attending physicians. Admit new patients, round on previously admitted patients, participate in multidisciplinary rounds, and work to transition patients to the next level of care. Evaluate and manage patient with both common inpatient conditions and medically complex patients requiring collaboration with consulting specialties. Participate in scheduled orthopedic operative procedures.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Perform a hypothesis-driven history and complete a targeted exam
Audience: Graduate

2. Develop and present a weighted differential diagnosis for medical and surgical conditions
Audience: Graduate

3. Using clinical evidence, adapt and justify the working diagnosis
Audience: Graduate

4. Present a diagnostic plan, including laboratory and imaging modalities
Audience: Graduate

5. Correctly interpret imaging and laboratory findings and communicate results to patients and team members
Audience: Graduate

6. Develop and implement effective patient management plans
Audience: Graduate

7. Complete written documentation in a comprehensive, concise, accurate, and timely manner
Audience: Graduate

8. Review, interpret, and present current literature to support patient care
Audience: Graduate

9. Communicate effectively with patients, families, physicians, and non-physicians team members
Audience: Graduate

10. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care
Audience: Graduate

11. Engage patients in shared decision making regarding tests, orders, and procedures
Audience: Graduate

12. Communicate effectively with patients and families while avoiding medical jargon.
Audience: Graduate

13. Recognize limitations and seek assistance as appropriate
Audience: Graduate

14. Observe the process of obtaining informed consent prior to surgical intervention
Audience: Graduate

RHAB MED 919 – INDIVIDUALIZED FOURTH YEAR CLINICAL CLERKSHIP
1-12 credits.

Individually arranged fourth year clinical clerkships. (Student must have Fourth Year Committee approval to count for fourth year credit.)
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

RHAB MED 920 – REHABILITATION MEDICINE CLINICAL ELECTIVE
2-4 credits.

Inpatient hospital setting and outpatient clinical setting. Direct supervision by attending physicians and residents. Inpatient activities include rounding on rehabilitation medicine service patients, observing patient therapy sessions, discussing patient cases. Outpatient activities includes seeing clinic patients, participating in procedures like joint injections and fluoroscopic-guided spinal injections, performing electromyography (EMG), discussing patient cases. Evaluate and manage a full spectrum of patients with neurologic and musculoskeletal issues. Exposure to multiple disciplines involved in the rehabilitation process. Inpatient diagnoses commonly encountered include stroke, brain injury, spinal cord injury, orthopedic injuries, debility, amputations. Outpatient diagnoses commonly encountered include developmental disabilities, spine disorders, chronic pain, arthritis, myofascial pain and fibromyalgia, spasticity, and chronic conditions from prior neurologic injuries.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 2 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a hypothesis-driven history and musculoskeletal and neurologic exams.
Audience: Graduate

2. Develop and present a weighted differential diagnosis.
Audience: Graduate

3. Using clinical evidence, adapt and justify the working diagnosis.
Audience: Graduate

4. Present a diagnostic plan including laboratory and imaging modalities.
Audience: Graduate

5. Correctly interpret imaging and laboratory findings and communicate results to patients and team members.
Audience: Graduate

6. Complete written documentation in a comprehensive, concise, accurate and timely manner.
Audience: Graduate

7. Review, interpret, and present current literature to support patient care.
Audience: Graduate

8. Develop clinically relevant questions to advance learning.
Audience: Graduate

9. Communicate effectively with patients, families, physicians and non-physician team members.
Audience: Graduate

10. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care.
Audience: Graduate

11. Engage patients in shared decision-making regarding tests, orders and procedures.
Audience: Graduate

12. Avoid medical jargon when communicating with patients and families.
Audience: Graduate

13. Recognize limitations and seek assistance as appropriate.

RHAB MED 923 – PHYSICAL MEDICINE AND REHABILITATION-MARSHFIELD
2-12 credits.

Clinical elective for fourth year medical students.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

RHAB MED 938 – INPATIENT ACTING INTERNSHIP - ORTHOPEDICS
4 credits.

This acting internship will provide medical students with an in-depth exposure to inpatient and operative management of complicated orthopedic surgical patients. The student will work under the direct supervision of a senior resident, fellows, and faculty. This rotation will provide the student with the opportunity to function at the intern level and play an active role in inpatient management of surgical patients.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Perform complete admission or pre-operative history and physicals, and document these in themedical chart.
Audience: Graduate

2. Formulate a differential diagnosis and develop a diagnostic plan, including laboratory and imaging modalities
Audience: Graduate

3. Analyze and interpret imaging and laboratory findings in context of patient presentation
Audience: Graduate

4. Present patients to healthcare team in a well-organized manner that highlights pertinent positives and negatives, gives justification to diagnostic plan, and provides interpretation of results.
Audience: Graduate

5. Write post-operative, admitting, and daily progress notes in the standard format on patients you are rounding on.
Audience: Graduate

6. Write and justify orders based on working diagnosis and cost-effectivenes
Audience: Graduate

7. Adjust home medications for preoperative and immediate post-operative situations.
Audience: Graduate

8. Summarize patient's hospital course during rounds and manage day-to-day care.
Audience: Graduate

9. Research and present current literature to support patient care.
Audience: Graduate

10. Conduct a detailed preoperative assessment of assigned patients
Audience: Graduate

11. Monitor and evaluate patients for common post-operative complications, develop treatment plansand present these to the team
Audience: Graduate

12. Based on case load, develop clinically relevant questions to further your and your colleagues' learning.
Audience: Graduate

13. Give and receive patient handovers.
Audience: Graduate

14. Write succinct yet thorough transfer notes and discharge summaries
Audience: Graduate

RHAB MED 939 – ADULT ORTHOPEDICS FOR THE FUTURE ORTHOPEDIST ELECTIVE
2-4 credits.

Direct patient care involving a spectrum of orthopedic conditions in inpatient and ambulatory settings, with supervision by orthopedic surgery senior residents, fellows, and attending physicians. Participate in regularly scheduled supervisor-student meetings, which involve some or all the following: rounding on service patients, participating in scheduled operative procedures, presenting cases and teaching topics, and discussing patient cases. As needed, engage in independent reading about patient conditions and prepare for direct patient. Present a case of interest the student was involved in and a brief literature review on the treatment or condition. Other patient care-related learning activities as assigned by instructors; these are dependent on the individual student, the patients under the student's care, and the location.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a hypothesis-driven history and complete a targeted limb and spinal exam
Audience: Graduate

2. Develop and present a diagnosis and treatment plan and/or surgical indications for common orthopedic conditions/injuries
Audience: Graduate

3. Read and interpret plain radiographs of the limbs an spine
Audience: Graduate

4. Correctly interpret imaging and laboratory findings and communicate results to patients and team members
Audience: Graduate

5. Develop and implement effective patient management plans
Audience: Graduate

6. Complete written documentation in a comprehensive, concise, accurate and timely manner
Audience: Graduate

7. Review, interpret, and present current literature to support patient care
Audience: Graduate

8. Communicate effectively with patients, families, physicians, and non-physician team members
Audience: Graduate

9. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care
Audience: Graduate

10. Engage patients in shared decision making regarding tests, orders, and procedures
Audience: Graduate

11. Avoid medical jargon when communicating with patients and families
Audience: Graduate

12. Recognize limitations and seek assistance as appropriate
Audience: Graduate

13. Understand the process of obtaining informed consent prior to surgical intervention

RHAB MED 940 – ADULT ORTHOPEDICS FOR THE NON-ORTHOPEDIST ELECTIVE
2-4 credits.

Direct patient care involving a spectrum of orthopedic conditions in an ambulatory setting with appropriate supervision by community orthopedic senior residents, fellows, and attending physicians. Participate in regularly scheduled supervisor-student meetings, which involve some or all of the following: rounding on service patients, participating in scheduled operative procedures, presenting cases and teaching topics, and discussing patient cases. Assess patients and generate weighted differential diagnoses, initial work-ups, and management plans. Independently read about patient conditions and prepare for direct patient care, as needed. Attend conferences associated with the assigned orthopedic surgery service. Complete other patient care-related learning activities as assigned by instructors; these are dependent on the individual student, the patients under the student's care, and the location.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a hypothesis-driven history and complete a targeted exam
Audience: Graduate

2. Develop and present a weighted differential diagnosis for medical and surgical conditions
Audience: Graduate

3. Using clinical evidence, adapt and justify the working diagnosis
Audience: Graduate

4. Present a diagnostic plan including laboratory and imaging modalities
Audience: Graduate

5. Correctly interpret imaging and laboratory findings and communicate results to patients and team members
Audience: Graduate

6. Develop and implement effective patient management plans
Audience: Graduate

7. Complete written documentation in a comprehensive, concise, accurate, and timely manner
Audience: Graduate

8. Review, interpret, and present current literature to support patient care
Audience: Graduate

9. Communicate effectively with patients, families, physicians and non-physician team members
Audience: Graduate

10. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care
Audience: Graduate

11. Engage patients in shared decision making regarding tests, orders, and procedures
Audience: Graduate

12. Avoid medical jargon when communicating with patients and families
Audience: Graduate

13. Recognize limitations and seek assistance as appropriate

REHABILITATION PSYCHOLOGY AND SPECIAL EDUCATION (RP & SE)

RP & SE 100 — DISABILITY AND SOCIETY
3 credits.

Provides introductory and interdisciplinary life-span perspectives on disability, relevant for both education and non-education majors. Introduces theoretical, cultural, and political models of disability and explores the lived experiences of persons with disabilities (or people who are perceived to have disabilities) in society.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

RP & SE 121 — DISABILITY AND SUBSTANCE ABUSE
3 credits.

Designed to provide an entry-level overview of disability under federal legislation and regulation, substance use and abuse among persons with disabilities as either a primary or secondary disability, the physical, psychological, and socio-cultural effects of drugs, and the impact substance abuse or dependence has on the capacity of individuals with disabilities to live independently, work, and otherwise engage in a full range of life activities.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the variability of definitions of disability in federal legislation or regulations such as the Americans with Disabilities Act, Social Security Act, Individuals with Disabilities Education Act, and the Rehabilitation Act.
Audience: Undergraduate

2. Identify the physiological, psychosocial, cultural, and other factors associated with substance abuse or dependence among persons with disability as a primary or co-morbid impairment.
Audience: Undergraduate

3. Identify the impact on major life areas, such as independent living, work, and leisure associated with substance abuse or dependence.
Audience: Undergraduate

4. Identify and classify major categories of licit and illicit drugs.
Audience: Undergraduate

5. Demonstrate an understanding of the multi-faceted nature and controversy related to substance use and abuse.
Audience: Undergraduate

6. Describe the physical effects of substance use on various body systems (including tolerance, addiction, and withdrawal symptoms) and the capacity of these effects to aggravate or diminish symptoms associated with specific disabilities.
Audience: Undergraduate

7. Develop an understanding of the methods and models used to assess, diagnose, treat, and prevent substance use and abuse across an individual's lifespan among persons with a disability.
Audience: Undergraduate

8. Increase understanding of social and cultural issues in regard to disability and substance use, prevention, public policy, and law.
Audience: Undergraduate

9. Expand knowledge and understanding of current research findings related to disability and substance use, abuse, and current laws.
Audience: Undergraduate

10. Analyze controversial issues surrounding disability and substance abuse.
Audience: Undergraduate

RP & SE 125 – HEALTH AND REHABILITATION PROFESSIONS
3 credits.

An exploration of various health and rehabilitation professions within the United States health care system, including educational requirements, professional expectations, and practice sites. Consideration is given to career planning in health and rehabilitation professions with review of current employment opportunities and workforce trends.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe roles of professionals in various health and rehabilitation professions.
Audience: Undergraduate

2. Assess current employment opportunities in the health and rehabilitation professions.
Audience: Undergraduate

3. Find and share current literature relating to current issues in the health and rehabilitation professions.
Audience: Undergraduate

4. Using established university career exploration resources, assess interests and aptitudes for various health and rehabilitation professions.
Audience: Undergraduate

5. Summarize similarities and differences between the various health and rehabilitation professions, including their educational requirements and practice settings.
Audience: Undergraduate

6. Assess readiness for a particular health and rehabilitation professional education program and establish a plan to address areas of need.
Audience: Undergraduate

7. Complete an interview with a professional in the area of interest.
Audience: Undergraduate

8. Complete a group project on a current health and rehabilitation professions issue, including a paper and a class presentation.
Audience: Undergraduate

RP & SE/LEGAL ST 135 – DISABILITY AND THE CRIMINAL JUSTICE SYSTEM
3 credits.

Explores the interaction between the criminal justice system and disability. Explores common experiences of persons with disability such as limited access to community services, poverty, and homelessness and the connection of these experiences to mass incarceration. Explores federal disability rights laws and the implementation of these laws in education, legal, and incarceration settings. Introduction to criminal justice reform to address the experiences of persons with disabilities in this system.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the causes for over-incarceration of people with disabilities in the United States
Audience: Undergraduate

2. Demonstrate knowledge and understanding of the federal and state polices related to the incarceration and community monitoring of persons with disabilities who have been involved in the criminal justice system
Audience: Undergraduate

3. Demonstrate knowledge of roles and functions that rehabilitation professionals fill within the criminal justice system
Audience: Undergraduate

4. Demonstrate knowledge of treatment programming for individuals with disabilities who are incarcerated and the efficacy of different interventions in increasing community re-integration
Audience: Undergraduate

5. Demonstrate knowledge of community supports for individuals with disabilities subsequent to their release from institutional care
Audience: Undergraduate

6. Develop an awareness of the ethical standards of professional practice that rehabilitation professionals working with individuals with disabilities within the legal system
Audience: Undergraduate

RP & SE 200 – ISSUES IN SPECIAL EDUCATION
3 credits.

Designed for learning about special education, particularly related to careers in this field. Provides information on the history and evolution of special education and special educators' roles.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025

RP & SE 210 – THE DISABILITY EXPERIENCE
3 credits.

Introduction to the modern disability experience, with an emphasis on disability justice and advocacy. Examines the societal implications and individual experiences of disability, centering the voices of individuals with disabilities themselves, and discusses strategies that can be used to work toward their full participation and inclusion in society.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define the term "disability" in multiple ways and in multiple contexts
Audience: Undergraduate

2. Explain various models of disability, including the medical and social models, and describe how those models affect the lives of individuals with disabilities
Audience: Undergraduate

3. Summarize the foundational implications of the disability rights movement and how it relates to current disability justice and advocacy actions
Audience: Undergraduate

4. Describe how societal attitudes affect the lives of people with disabilities and explain strategies to modify them
Audience: Undergraduate

5. Articulate the role of power and the impact of bias, stigma, stereotypes, and prejudice in the lives of individuals with disabilities, and describe ways to reduce them
Audience: Undergraduate

6. Illustrate an intersectional approach to the experience of disability, including the implications of living with multiple minoritized statuses (BIPOC, LGBTQIA+, etc.)
Audience: Undergraduate

7. Examine the ways that people react to the onset of a disability or chronic illness, including coping, acceptance, adaptation, and disability identity development
Audience: Undergraduate

8. Explain the role of families, relationships, human intimacy, and sexuality in the disability experience
Audience: Undergraduate

9. Develop into confident and effective advocates for the full participation and inclusion of individuals with disabilities in everyday society
Audience: Undergraduate

RP & SE 274 – REHABILITATION PSYCHOLOGY AND SPECIAL EDUCATION - STUDY ABROAD
1-3 credits.

Topics vary reflecting the specializations, expertise, and curricula of study-abroad programs.
Requisites: None
Repeatable for Credit: Yes, for 3 number of completions
Learning Outcomes: 1. Gain a deeper knowledge and understanding of other cultures and their environments.
Audience: Undergraduate

2. Develop greater cultural self-awareness and intercultural competence.
Audience: Undergraduate

3. Develop different economic, political, social, and educational perspectives on global issues.
Audience: Undergraduate

4. Increase their capacity to analyze issues with appreciation for disparate viewpoints.
Audience: Undergraduate

5. Develop career readiness and gain leadership skills that are relevant for a global world.
Audience: Undergraduate

6. Communicate appropriately and effectively with diverse individuals and groups.
Audience: Undergraduate

7. Examine their own actions in terms of personal responsibility and ethical, social, and environmental consequences.
Audience: Undergraduate

8. Develop a better understanding of the diversity of the host society and better understand the diversity in their own society.
Audience: Undergraduate

RP & SE 300 – INDIVIDUALS WITH DISABILITIES
3 credits.

Designed to expand the knowledge base of future educators, clinicians, and society members to better understand and serve the diverse needs and interests of individuals with disabilities. Introduces the concept of disability as well as the field of special education. The history, etiology, and characteristics of specific categories of disability are examined, as are educational and other federally mandated programs designed to address the needs of both children and adults with disabilities. Topics germane to the study of disability and the field of special education are explored.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate an understanding of the concepts of ability differences and exceptionality
Audience: Undergraduate

2. Articulate knowledge of the specific categories of disability designated by federal law and characteristics associated with those categories
Audience: Undergraduate

3. Summarize significant legislation and litigation that has affected the education and lives of individuals with disabilities
Audience: Undergraduate

4. Demonstrate knowledge of interventions utilized by professionals who work with people who have disabilities or are at risk of being identified as having a disability
Audience: Undergraduate

RP & SE 310 – POSITIVE PSYCHOLOGY AND WELL BEING
3 credits.

Introduction to positive psychology, or the science of human strengths, mental health, and well-being. Covers theory and current research on positive psychology including concepts of optimism, flow, gratitude, and purpose in life. Positive psychology concepts are discussed within the context of health promotion, with an emphasis on minimizing the impact of illness and disability. Learn to apply positive psychology concepts in personal and professional contexts to cultivate fulfilling, healthy, and meaningful lives.
Requisites: Sophomore standing
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

RP & SE 311 – INTERNATIONAL PERSPECTIVES ON DISABILITY IN AUSTRALIA
3 credits.

Examine the lived experience of Australians with disabilities, comparing the treatment of and services provided to disabled US Americans and Australians with respect to the standards outlined in the United Nations' Convention on the Rights of Persons with Disabilities (CRPD) and localized policies abroad, and considering the US and Australia's multicultural landscape and shared colonial background. Understand issues surrounding disability access, inclusion, and rights globally to become effective advocates for positive change. Must have sophomore standing and a valid passport.
Requisites: Consent of instructor
Repeatable for Credit: No
Learning Outcomes: 1. Discuss the implications of the 2007 Convention on the Rights of Persons with Disabilities for individuals with disabilities in the US and Australia
Audience: Undergraduate

2. Describe and compare issues related to access and inclusion of people with disabilities from diversity of cultural backgrounds in the US and Australia
Audience: Undergraduate

3. Describe and compare the services and supports that are provided to individuals with disabilities in the US and Australia
Audience: Undergraduate

4. Articulate international development needs with respect to the rights and services provided to people with disabilities, and work to improve them
Audience: Undergraduate

RP & SE/COM ARTS/JOURN 312 – DISABILITY AND THE MEDIA
3 credits.

Examines the interaction between disability and media in modern society. Explore representations of disability in various forms of mass media, including television and film, social media, advertising, and others. Analyze how these representations affect disabled people directly, including the development of their identities, as well as how they influence disability attitudes and stigma throughout society. Discuss overt and casual ableism within media, as well as how the disability community uses media for activism. Discuss issues of access for disabled people (e.g., assistive technology, captions, audio descriptions), as well as the future of disability representations within media.
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify key concepts and terminology for understanding the intersection of disability and the media, including the medical and social models of disability, definitions and conceptualizations of disability, ableism, stigma, disability justice, disability identity development, and others.
Audience: Undergraduate

2. Identify how disability is represented within various forms of media, and how these representations affect disabled people both directly and indirectly.
Audience: Undergraduate

3. Describe how technology can facilitate access to media for disabled people
Audience: Undergraduate

4. Discuss how the media is and can be utilized in pursuit of disability justice.
Audience: Undergraduate

RP & SE 316 – HEALTH PROMOTION FOR INDIVIDUALS WITH DISABILITY AND CHRONIC ILLNESS
3 credits.

Addresses theories and research related to health psychology, health behavior and quality of life. Focus on understanding models of healthy lifestyle interventions, assessment/intervention strategies for health promotion, factors affecting health behavior, public health initiatives. Attention is given to application of practical tools for promoting health and preventing secondary conditions for individuals with disabilities and chronic illness.
Requisites: Declared in Rehabilitation Psychology, Health Promotion and Health Equity, or classified as Pre-Rehabilitation Psychology or Pre-Special Education
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify health issues, health promotion and health practices that increase functioning and reduce secondary conditions due to disability and chronic illness.
Audience: Undergraduate

2. Engage in dialogue across professional disciplines related to health and disability
Audience: Undergraduate

RP & SE 320 – INTRODUCTION TO TEACHING IN SPECIAL EDUCATION
3 credits.

Provides an overview of teaching in early childhood and K-12 special education and introduces the content of and highlights the underlying themes (e.g., inclusion, collaboration) embedded in teacher preparation courses required for licensing in early childhood special education and K-12 special education.
Requisites: Declared in Special Education BSE, Elementary Education and Special Education BSE, or Special Education MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the legal and procedural foundation of education for students with disabilities (e.g., The Individuals with Disabilities Education Act (IDEA), Individualized Family Service Plan (IFSP), Individualized Education Program (IEP), 504 Plan).
Audience: Both Grad & Undergrad

2. Describe the initial preparation standards of early childhood/K-12 special educators, high leverage practices, and recommended practices.
Audience: Both Grad & Undergrad

3. Identify, write, and communicate individualized goals based on students' and families' assets, needs, priorities, and values.
Audience: Both Grad & Undergrad

4. Develop lesson plans that reflect high expectations and individualized goals and promote students' full membership and participation in inclusive programs, schools, and communities.
Audience: Both Grad & Undergrad

5. Articulate the roles and purposes of assessment in teaching in special education.
Audience: Both Grad & Undergrad

6. Apply knowledge of the IFSP/IEP processes to advocate for students with disabilities and their families.
Audience: Graduate

RP & SE 325 – SELF MANAGEMENT OF CHRONIC ILLNESS AND DISABILITY
3 credits.

Provides knowledge and understanding of concepts of self-management of chronic Illness and disability using both theoretical and empirically-based approaches. Includes discussion of collaboration among healthcare providers in helping individuals manage symptoms of their chronic health conditions, condition-specific education about the typical symptoms and advice about the decisions and actions that the individual with the chronic health condition can take when those symptoms occur, and coping skills that can be facilitated to address the emotional reactions and stress related to chronic health conditions.
Requisites: Declared in Health Promotion and Health Equity BS or Rehabilitation Psychology BS
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define Self-Management in the context of health
Audience: Undergraduate

2. Analyze the theoretical models and research on condition-specific, empirically based interventions that promote self-management
Audience: Undergraduate

3. Apply the tripartite approach to specific chronic health conditions
Audience: Undergraduate

RP & SE 330 – BEHAVIOR ANALYSIS: APPLICATIONS TO PERSONS WITH DISABILITIES
3 credits.

Children with exceptional learning and behavior characteristics (contrasting views and practices); a humanistic behavioral approach; development and evaluation of behavior change programs, classification and foundations of exceptional learning and behavior characteristics, and facilitating behavior change in different settings.
Requisites: RP & SE 300 and declared in Rehabilitation Psychology, Special Education, Disability Rights and Services Certificate, Special Education MS or classified as Pre-Rehabilitation Psychology or Pre-Special Education
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

RP & SE 335 – INTRODUCTION TO SPORT PSYCHOLOGY
3 credits.

Examines the psychological factors that influence participation in sport and exercise. Theories and interventions used to understand and enhance performance will be examined. Additionally, mental health, substance use and transition out of sport will be reviewed.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. demonstrate understanding of major theories and approaches of motivation and performance anxiety theories
Audience: Undergraduate

2. demonstrate understanding of peak performance theories and the skills and the theoretical underpinnings of these skills.
Audience: Undergraduate

3. demonstrate understanding of clinical mental health diagnoses within the specific population of athletes.
Audience: Undergraduate

4. demonstrate professional ethics and behaviors with mental health processes, including steps to take for individuals with suicidal ideation.
Audience: Undergraduate

5. synthesize knowledge and use insight and creativity to better understand and create programs for those working with athletes both with performance and mental health issues.
Audience: Undergraduate

6. demonstrate understanding of multicultural issues that impact athletic environments and personal performance.
Audience: Undergraduate

7. demonstrate an understanding of psychosocial theories of injury and aspects associated with athletic injury and possible return to sport or completion of career
Audience: Undergraduate

8. design and create professional presentations utilizing current research and synthesizing information from finding and professional resources.
Audience: Undergraduate

9. synthesize knowledge and use insight and creativity to better understand athletic identity as it relates to the process of transition out of sport with a special look at career transition.
Audience: Undergraduate

RP & SE 355 – REMOTE SERVICE PROVISION STRATEGIES FOR HEALTH AND REHABILITATION PROVIDERS
3 credits.

Explore the use of technology to provide evaluation, consultation, and services to the community. Study the creation and use of telecounseling and other remote strategies to provide services that are accessible to individuals unable to receive care in a traditional office setting. Introduce technology for remote service provision and a foundational knowledge to effectively integrate this service modality as this practice evolves.
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Demonstrate knowledge of different remote service provision strategies and technology
Audience: Undergraduate

2. Demonstrate an understanding of the ethical implications of remote service provision
Audience: Undergraduate

3. Identify the basic requirements for the delivery of remote services
Audience: Undergraduate

4. Demonstrate the ability to differentiate and apply different telecounseling technologies and practices
Audience: Undergraduate

5. Identify basic remote service provision standards
Audience: Undergraduate

6. Demonstrate knowledge of public concerns regarding new treatment modalities
Audience: Undergraduate

7. Identify methods to promote and advocate the use of remote technologies to overcome geographic barriers to deliver treatment and education
Audience: Undergraduate

RP & SE/CURRIC 365 – TEACHING MATHEMATICS IN INCLUSIVE SETTINGS
3 credits.

Introduction to a variety of approaches for teaching mathematics to students in inclusive schools
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe and implement principles of systematically designed instruction to develop lesson plans that foster high-quality mathematics instruction for students with disabilities.
Audience: Undergraduate

2. Determine a multitude of tools to assess students' mathematical learning and utilize assessment results to adjust instructional practice.
Audience: Undergraduate

3. Identify, employ, and advocate for instructional practices that promote rich learning experiences and meaningful inclusion of students with disabilities in mathematical settings.
Audience: Undergraduate

4. Evaluate mathematics as a practice, as a philosophy, and how it impacts your own identity as a teacher and the identities of students with disabilities
Audience: Undergraduate

5. Articulate key mathematics concepts relevant to special educators' instruction in K-12 settings.
Audience: Undergraduate

RP & SE 390 – COMMUNITY PSYCHIATRIC REHABILITATION
3 credits.

Overview of the experiences, symptoms, and unique diagnoses of individuals with severe mental health illness along with common co-occurring diagnoses. Introduction to the guiding principles that rehabilitation services and human services use to support these populations.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and describe symptoms and diagnoses commonly associated with severe mental health illnesses (SMI), including schizophrenia spectrum disorders, bipolar disorder, major depressive disorder, and common co-occurring diagnoses.
Audience: Both Grad & Undergrad

2. Recognize societal barriers commonly experienced by people living with SMI, including the significance of the long-standing and deep-seeded roots of attitudes and discrimination towards this group.
Audience: Both Grad & Undergrad

3. Integrate recovery-oriented practices into the application of medical and psychosocial interventions for individuals with SMI, including consideration for the frequent conflicts between psychiatric rehabilitation practices, professional ethics, and the principles of recovery.
Audience: Both Grad & Undergrad

4. Distinguish between community mental health service options and their usefulness and necessity for collaborating with diverse individuals.
Audience: Both Grad & Undergrad

5. Understand the importance and bidirectional impact of SMI on the individual and their family unit.
Audience: Both Grad & Undergrad

6. Analyze case studies, summarize client strengths and needs, and suggest potential interventions.
Audience: Both Grad & Undergrad

7. Describe the health inequities experienced by people living with SMI and strategies for improving physical health outcomes for this group.
Audience: Both Grad & Undergrad

8. Employ strategies aimed at reducing societal attitudes and stigma experienced by individuals living with SMI.
Audience: Both Grad & Undergrad

9. Complete research on a specific area of study related to community psychiatric rehabilitation and relevant to student long-term career aspirations
Audience: Graduate

RP & SE 405 – CURRENT TOPICS IN SPECIAL EDUCATION
1 credit.

Explores current issues, topics, and trends in special education.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

RP & SE/CURRIC 406 – RACE, INTERSECTIONALITY, AND EQUITY IN EDUCATION
3 credits.

Addresses a range of issues to help teachers more thoughtfully and equitably serve their students of color and develop a critical and historical understanding of the racism, marginalization, and exclusion that is endemic to the U.S. public school system. Provides an overview of foundational constructs that are essential for pre-service teachers preparing to teach and serve diverse students and families. Explore how race, racism, and racialization in education intersect with class, gender, dis/ability, religion, sexuality, etc. to shape inequitable schooling conditions and experiences for students of color. Analyze the effects at the individual, interactional, institutional, and societal levels Consider how power always-already enables particular policies and practices that reproduce educational inequities and hence sustain white privilege and dominance.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate self-awareness and empathy toward the cultural perspectives and worldviews of others.
Audience: Undergraduate

2. Recognize and question cultural assumptions and knowledge claims as they relate to race and ethnicity.
Audience: Undergraduate

3. Articulate how the past has affected present day circumstances regarding race and racial inequalities in the U.S.
Audience: Undergraduate

4. Apply course concepts to their lives outside the classroom by respectfully participating in our multicultural society.
Audience: Undergraduate

RP & SE 435 – OVERVIEW OF EARLY CHILDHOOD SPECIAL EDUCATION
3 credits.

An introduction to the Early Childhood Special Education profession including historical, philosophical, social and psychological foundations, awareness of values, ethical and legal issues, staff relations, and the importance of becoming an advocate for children and families. Analyze trends in early education, including diversity, early intervention, early childhood special education, family centered practices, legislation, public policy, and developmentally appropriate practice.
Requisites: Declared in Special Education: Early Childhood Special Education/Special Education Dual Certification Birth-Grade 12 BSE, Special Education: Early Childhood Special Education Birth-Grade 3 BSE, or Certificate in Disability Rights and Services
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the curriculum models and instructional and intervention approaches that primarily guide early childhood special education practice.
Audience: Undergraduate

2. Explain key components of early childhood special education practice, including assessment, multi-tiered systems of support, systematic instruction, and collaboration with families and other professionals
Audience: Undergraduate

3. Understand, evaluate, and apply research to support evidence-based practice with young children with disabilities.
Audience: Undergraduate

4. Identify the ethical and legal guidelines that shape the profession of early intervention/early childhood special education.
Audience: Undergraduate

RP & SE 445 – SPECIAL EDUCATION PRACTICUM: EARLY ADOLESCENCE THROUGH ADOLESCENCE
3-6 credits.

Approved placement with a qualified cooperating teacher serving students with disabilities in any of grades 6-12, supervised by a qualified university supervisor. Includes observation and supervised practice in the field of special education and discussion focusing on reflection and application of special education theories to practical settings.
Requisites: Declared in the Special Education BSE or Special Education: Teacher Certification MS
Course Designation: Workplace - Workplace Experience Course
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Reflect on their actions and attitudes in the classroom to improve their practice.
Audience: Both Grad & Undergrad

2. Plan and carry out lessons, reflecting a variety of instructional strategies and arrangements, to meet the needs of a wide range of students.
Audience: Both Grad & Undergrad

3. Demonstrate professional communication skills with parents, related services providers, and other members of the education community.
Audience: Both Grad & Undergrad

4. Demonstrate an ability to proactively manage the learning environment
Audience: Both Grad & Undergrad

5. Identify research that supports their instructional decisions and interactions with students.
Audience: Graduate

6. Demonstrate professional leadership and advocacy skills in the school setting.
Audience: Graduate

RP & SE 455 – EARLY CHILDHOOD SPECIAL EDUCATION METHODS: INCLUSIVE STRATEGIES FOR INFANTS AND TODDLERS
3 credits.

Explore instructional approaches and practices that support developmentally appropriate, effective, and inclusive early childhood education and evidenced-based intervention for infants and toddlers (i.e., birth-3 years old). Learn strategies to support access to the general education curriculum, participation, and achievement of young children with developmental delays and disabilities. Examines "what" to teach, the selection of developmentally- and individually-appropriate child goals and objectives, and "how" to teach, the practical components of developing and delivering effective, evidenced based instruction and intervention. Emphasis on adapting general early childhood education curriculum and practices in order to support children's individualized goals within inclusive classrooms. Addresses planning and implementing instruction in alignment with state and federal mandates.
Requisites: Declared in Special Education: Early Childhood Special Education/Special Education Dual Certification Birth-Grade 12 or Special Education: Early Childhood Special Education Birth-Grade 3 BSE
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Write individualized family service outcomes in alignment with policy and quality standards and use said outcomes to determine supports and intervention strategies for young children (Birth-3 years) with developmental delays or disabilities and their families.
Audience: Undergraduate

2. Apply an understanding of early childhood curriculum, child strengths and support needs, and family preferences, support needs, and characteristics to determine curricular adaptations, instructional strategies, and family support strategies.
Audience: Undergraduate

3. Identify different methods of family-based practices and family capacity-building practices in order to determine how to partner with and support families and young children (Birth-3 years) from a variety of backgrounds.
Audience: Undergraduate

RP & SE 457 – ELEMENTARY EDUCATION AND SPECIAL EDUCATION STUDENT TEACHING SEMINAR
1 credit.

Addresses professionalism, research and problem solving, assessment, and collaborative skills relevant to the elementary education and special education student teaching placement.
Requisites: Declared in Elementary Education and Special Education BSE
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply critical reflective thinking skills to classroom practices
Audience: Undergraduate

2. Consider Social Justice Pedagogy implementation in the classroom
Audience: Undergraduate

3. Apply collaborative practices in engaging the cooperating teachers, supervisors, and their peers in the implementation of social justice pedagogy.
Audience: Undergraduate

RP & SE 460 – EARLY CHILDHOOD SPECIAL EDUCATION METHODS: INCLUSIVE STRATEGIES FOR PRESCHOOL AND EARLY ELEMENTARY
3 credits.

Covers instructional approaches and practices that support developmentally appropriate, effective, and inclusive early childhood education and evidenced-based intervention for preschool and early elementary-age children (i.e., 3-8 years old). Focuses on strategies for supporting access to the general education curriculum, participation, and achievement of young children with developmental delays and disabilities. Learn "what" to teach, the selection of developmentally- and individually-appropriate child goals and objectives, and "how" to teach, the practical components of developing and delivering effective, evidenced based instruction and intervention. Emphasis is placed on adapting general early childhood education curriculum and practices in order to support children's individualized goals within inclusive classrooms. Addresses planning and implementing instruction in alignment with state and federal mandates.
Requisites: Declared in Special Education: Early Childhood Special Education/Special Education Dual Certification Birth-Grade 12 or Special Education: Early Childhood Special Education Birth-Grade 3 BSE
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Write individualized annual goals and short-term objectives in alignment with policy and quality standards and use said goals to determine supports and instructional strategies for young children (Prek-3rd grade) with developmental delays or disabilities.
Audience: Undergraduate

2. Apply an understanding of early childhood curricular standards, child strengths and support needs, and family preferences and characteristics to determine curricular adaptations and instructional strategies.
Audience: Undergraduate

3. Distinguish the multiple purposes and processes of progress monitoring and determine appropriate methods of progress monitoring for different types of goals/objectives and instructional contexts.
Audience: Undergraduate

4. Identify multiple ways to partner with families and other professionals to collaboratively determine and implement supports for young children (Prek-3rd grade) with developmental delays or disabilities.
Audience: Undergraduate

RP & SE 464 – DIAGNOSIS, ASSESSMENT, AND INSTRUCTIONAL PLANNING IN SPECIAL EDUCATION
3 credits.

Introduction to assessment terms and tools used to assist in the identification and diagnosis of students with disabilities; provide the skills necessary to collect and use assessment data to promote the successful outcomes in core academic instruction for students with disabilities.
Requisites: Declared in Elementary Education BSE, Elementary Education and Special Education BSE, Special Education BSE, or Special Education MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate knowledge of basic terminology used in assessment
Audience: Both Grad & Undergrad

2. Articulate knowledge of educators, families and other professionals roles in the assessment process
Audience: Both Grad & Undergrad

3. Demonstrate knowledge of different types of assessment including specific uses, limitations and culturally responsive practices
Audience: Both Grad & Undergrad

4. Demonstrate knowledge of how formal and informal assessments can be used for instructional decision-making and monitoring student progress

Audience: Both Grad & Undergrad

5. Articulate knowledge of the legal rights and responsibilities of the IEP team including educators, parents and other members
Audience: Both Grad & Undergrad

6. Articulate understanding of legal mandates and accountability of schools and how they relate to students with disabilities.
Audience: Both Grad & Undergrad

7. Identify current research in the field that supports their decisions about what interventions to include in the IEPs of students with disabilities.
Audience: Graduate

8. Identify research-based practices in the area of collaboration when developing the IEPs of students with disabilities.
Audience: Graduate

RP & SE 465 – LANGUAGE AND READING INSTRUCTION FOR STUDENTS WITH DISABILITIES
3 credits.

Designed to prepare future special educators to plan and provide language and reading instruction to a broad range of students with disabilities.
Requisites: Declared in Elementary Education BSE, Elementary Education and Special Education BSE, Special Education BSE, or Special Education MS
Course Designation: Gen Ed - Communication Part B
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate an understanding of typical and atypical language development and the ways in which exceptional conditions can interact with a student's experience with and use of language
Audience: Both Grad & Undergrad

2. Articulate an understanding of difficulties that a student with a disability might display in the areas of oral language, phonological awareness, phonics fluency, vocabulary, reading comprehension, and written expression.
Audience: Both Grad & Undergrad

3. Select and carry out appropriate research-based instructional strategies to improve the reading skills of K-12 students, based on knowledge of a wide range of tools, pedagogies, and assessments.
Audience: Both Grad & Undergrad

4. Identify current research in the field that supports their decisions about what interventions to include in reading instructional and intervention plans for students with disabilities.
Audience: Graduate

RP & SE 466 – DIVERSITY IN SPECIAL EDUCATION
3 credits.

Provides an overview of the context and unique considerations for providing special education services to culturally and linguistically diverse learners and their families. Upon completion, describe the diversity of students who receive special education services, including trends over time, and identify deficit orientations toward diversity, culture and disability that limit youths' opportunities to learn.
Requisites: Declared in Elementary Education BSE, Elementary Education and Special Education BSE, Special Education BSE or Certificate in Disability Rights and Services
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the diversity of students who receive special education services, including trends over time
Audience: Undergraduate

2. Identify deficit orientations toward diversity, culture and disability that limit youths' opportunities to learn
Audience: Undergraduate

3. Construct IEP goals that take students' cultural background and linguistic characteristics into account
Audience: Undergraduate

4. Identify ongoing professional and personal development goals that will increase ability to be responsive to a diversity of learners with disabilities and their families as a future teacher.
Audience: Undergraduate

RP & SE 467 – ELEMENTARY STUDENT TEACHING SEMINAR
2 credits.

Addresses professionalism, research and problem solving, assessment, and collaborative skills relevant to the elementary special education student teaching placement.
Requisites: Declared in Special Education, Elementary Education: Middle Childhood Through Early Adolescence/Special Education Dual Cert or Special Education MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

RP & SE 468 – SECONDARY STUDENT TEACHING SEMINAR
2 credits.

Addresses professionalism, research and problem solving, assessment, and collaborative skills relevant to the secondary special education student teaching placement.
Requisites: Declared in Special Education, Elementary Education: Middle Childhood Through Early Adolescence/Special Education Dual Cert or Special Education MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

RP & SE 472 – METHODS IN TRANSITION AND VOCATIONAL EDUCATION
3 credits.

Provides information and methods necessary to provide individualized programming in transition and vocational education for students with disabilities, grades six through twelve.
Requisites: Declared in Special Education, Elementary Education: Middle Childhood Through Early Adolescence/Special Education Dual Cert or Special Education MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

RP & SE 473 – CLASSROOM MANAGEMENT FOR INCLUSIVE CLASSROOMS
3 credits.

Focus on theories and practices to promote positive, proactive, and culturally responsive management of K-12 inclusive classrooms. Topics covered include multi-tiered systems of support, functional behavior assessment, and behavioral intervention plan.
Requisites: Declared in Elementary Education BSE, Elementary Education and Special Education BSE, Special Education BSE, or Special Education MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Illustrate the understandings of the various sociocultural factors and contexts influencing interpersonal interactions and behaviors.
Audience: Both Grad & Undergrad

2. Analyze challenging behaviors using culturally responsive and functional approaches.
Audience: Both Grad & Undergrad

3. Apply classroom management theories and approaches to develop behavioral goals and objectives, behavioral assessment systems, and functional behavioral assessment-based interventions.
Audience: Both Grad & Undergrad

4. Evaluate evidence to determine and implement evidence-based classroom management approaches
Audience: Graduate

RP & SE 475 – SPECIAL EDUCATION PRACTICUM: EARLY CHILDHOOD AND ELEMENTARY
1-9 credits.

Supervised practicum teaching in an approved placement with a qualified cooperating teacher serving students with disabilities birth through grade 9.
Requisites: Declared in Special Education BS, Elementary Education BS, Elementary Education and Special Education BS, or Special Education: Teacher Certification MS
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: Yes, for 3 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Reflect on their actions and approaches in the classroom to improve their practice
Audience: Undergraduate

2. Plan and carry out lessons, reflecting a variety of instructional strategies and arrangements, to meet the needs of a wide range of students
Audience: Undergraduate

3. Demonstrate professional communication skills with parents, related service providers, and other members of the education community
Audience: Undergraduate

4. Demonstrate an ability to proactively manage the learning environment
Audience: Undergraduate

RP & SE 476 – SPECIAL EDUCATION PRACTICUM: SECONDARY (GRADES 4-12)
1-9 credits.

Practicum teaching in an approved placement with a qualified cooperating teacher serving students with disabilities in any of grades 4-12, supervised by a qualified university supervisor. Placement schedule determined by course instructor.
Requisites: Declared in Special Education BSE, Special Education MS, or Elementary Education BSE: Middle Childhood Through Early Adolescence/Special Education Dual Cert
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Reflect on actions and approaches in the classroom to improve practice
Audience: Undergraduate

2. Plan and carry out lessons, reflecting a variety of instructional strategies and arrangements, to meet the needs of a wide range of students
Audience: Undergraduate

3. Demonstrate professional communication skills with parents, related service providers, and other members of the education community
Audience: Undergraduate

4. Demonstrate an ability to proactively manage the learning environment
Audience: Undergraduate

RP & SE 477 – SPECIAL EDUCATION STUDENT TEACHING: ELEMENTARY (PK - GRADE 9)
6-12 credits.

Full time student teaching in an approved placement with a qualified cooperating teacher serving students with disabilities in any of grades PK-Grade 9, supervised by a qualified university supervisor. Placement schedule follows the host school district calendar.
Requisites: Declared in Special Education BSE, Special Education MS, or Elementary Education BSE: Middle Childhood Through Early Adolescence/Special Education Dual Cert
Course Designation: Workplace - Workplace Experience Course Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Reflect on actions and attitude in the classroom in order to improve practice
Audience: Both Grad & Undergrad

2. Demonstrate ability to plan, implement, and assess learning activities that meet the needs of students
Audience: Both Grad & Undergrad

3. Demonstrate professional communication skills across a variety of formats in contacts with parents, related service providers, and other members of the relevant education community
Audience: Both Grad & Undergrad

4. Recognize and apply principles of ethical and professional conduct.
Audience: Graduate

RP & SE 478 – SPECIAL EDUCATION STUDENT TEACHING: SECONDARY (GRADES 4-12)
6-12 credits.

Full time student teaching in an approved placement with a qualified cooperating teacher serving students with disabilities in any of grades 4-12, supervised by a qualified university supervisor. Placement schedule follows the host school district calendar.
Requisites: Declared in Special Education BSE, Special Education MS, or Elementary Education BSE: Middle Childhood Through Early Adolescence/Special Education Dual Cert
Course Designation: Workplace - Workplace Experience Course Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Reflect on actions and attitude in the classroom in order to improve practice
Audience: Both Grad & Undergrad

2. Demonstrate ability to plan, implement, and assess learning activities that meet the needs of students
Audience: Both Grad & Undergrad

3. Demonstrate professional communication skills across a variety of formats in contacts with parents, related service providers, and other members of the relevant education community
Audience: Both Grad & Undergrad

4. Recognize and apply principles of ethical and professional conduct.
Audience: Graduate

RP & SE 480 – PRACTICUM IN TEACHING LITERACY: SECONDARY SPECIAL EDUCATION (GRADES 4-12)
3 credits.

Learn how to deliver effective literacy instruction to students with disabilities at the secondary level. Includes a supervised teaching experience in an approved special education school setting under the guidance of a qualified cooperating teacher.
Requisites: Declared in Special Education BSE, Elementary Education and Special Education BSE, or Special Education MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Use information from a variety of sources to develop a written summary of a student's current literacy performance.
Audience: Both Grad & Undergrad

2. Select, administer, score, interpret, and summarize the findings of literacy assessments.
Audience: Both Grad & Undergrad

3. Develop a literacy-related goal based on assessment data and create a relevent instructional plan to address identified needs.
Audience: Both Grad & Undergrad

4. Deliver effective literacy instruction and reflect on teaching practices and feedback.
Audience: Both Grad & Undergrad

5. Demonstrate professional communication skills across contexts (e.g., seminar, school setting), formats (e.g., spoken, written), and individuals (e.g., instructors, cooperating teacher, university supervisor, students, families) while addressing the literacy needs of secondary students.
Audience: Both Grad & Undergrad

6. Identify and summarize research examining the efficacy of foundational literacy skill interventions for secondary students.
Audience: Graduate

RP & SE 500 – REHABILITATION-COUNSELING PSYCHOLOGY: FOUNDATIONS
3 credits.

History, philosophy, principles, legislation, and development of vocational rehabilitation; organizational structure and objectives of the principal community agencies.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025

RP & SE 501 – REHABILITATION-COUNSELING PSYCHOLOGY: APPLICATIONS
3 credits.

Introduction to rehabilitation and human service programs for people with disabilities and other special needs. Emphasis on communication relevant to professional service, particularly writing.
Requisites: Declared in Rehabilitation Psychology and concurrent enrollment in RP & SE 630
Course Designation: Gen Ed - Communication Part B
Repeatable for Credit: No
Last Taught: Fall 2025

RP & SE 505 – BIOLOGICAL, PSYCHOSOCIAL, AND VOCATIONAL ASPECTS OF DISABILITIES
3 credits.

Provides an overview of disabilities with an emphasis on biological, psycho-social, and vocational aspects.
Requisites: RP & SE 125 or 325
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop an understanding of the various definitions of chronic illness and disability.
Audience: Undergraduate

2. Demonstrate basic knowledge of the biological aspects of disability, including health conditions and body functions and structure.
Audience: Undergraduate

3. Demonstrate basic knowledge of the meaning and importance of activity and participation in the lives of people with disabilities.
Audience: Undergraduate

4. Demonstrate basic knowledge of the salient environmental factors that affect the disability experience.
Audience: Undergraduate

5. Demonstrate basic knowledge of the salient personal factors that affect the disability experience.
Audience: Undergraduate

6. Consider the several aspects of disability in combination with regards to the topic of psychosocial adaptation.
Audience: Undergraduate

RP & SE/CURRIC 506 – STRATEGIES FOR INCLUSIVE SCHOOLING
3 credits.

Comparison of historical and current practices in special education; legal, philosophical, and programmatic changes leading to inclusive models of education; emphasis on concepts of collaboration, cooperative learning structures, and curricular and instructional adaptations to accommodate learners with disabilities in general education classrooms.
Requisites: Sophomore standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply disability law to understand students with disabilities in the classroom.
Audience: Both Grad & Undergrad

2. Utilize disability law to create inclusive classroom for students with disabilities
Audience: Both Grad & Undergrad

3. Apply understanding of varied types of disabilities to students
Audience: Both Grad & Undergrad

4. Utilize a general understanding of differentiation and universal deisgn for learning practices
Audience: Graduate

RP & SE 510 – PARTNERING WITH FAMILIES AND OTHER PROFESSIONALS IN EARLY CHILDHOOD SPECIAL EDUCATION
3 credits.

Provides the knowledge and skills to implement federal and state mandates as well as professional organization recommendations for special education and related services programs. Explores collaboration in schools, community systems and families, family functioning, historical perspectives of family life and school involvement, effective relationships between home, school, community, communication among professionals and with families, school-based programs as well as multicultural considerations including those related to race, ethnicity, gender, language, and culture, among others. Gain knowledge of family-centered practices and family systems theory to develop and maintain reciprocal partnerships with families. Apply family capacity-building practices to support families to make informed decisions and advocate for their young children.
Requisites: Declared in Special Education: Early Childhood Special Education/Special Education Dual Certification Birth-Grade 12 BSE, Special Education: Early Childhood Special Education Birth-Grade 3 BSE, or Certificate in Disability Rights and Services
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Communicate and collaborate with learners, families, colleagues, other school professionals, and community members to ensure learner growth
Audience: Undergraduate

2. Engage families in identifying their strengths, priorities, and concerns; support families to achieve the goals they have for their family and their young child's development and learning
Audience: Undergraduate

3. Use a variety of collaborative strategies when working with other adults that are evidence-based, appropriate to the task, culturally and linguistically responsive, and take into consideration the environment and service delivery approach.
Audience: Undergraduate

RP & SE 515 – ACCESS TO THE GENERAL CURRICULUM FOR STUDENTS WITH DISABILITIES
3 credits.

Prepares special educators to develop curriculum for students with disabilities aligned with general education content. Identifying appropriate Individualized Education Plan goals, supplementary aids and services, and service coordination in inclusive school contexts will be emphasized. Activities will cover three main topics, which will be woven through our activities, class readings, and assignments throughout the semester. These topics are: (a) planning supports for inclusion and access throughout the school day; (b) developing meaningful grade- and standards-aligned Individualized Education Plans; and (c) teaching and adapting general curriculum content.
Requisites: Declared in Special Education BSE, Special Education MS, or Elementary Education BSE: Middle Childhood Through Early Adolescence/Special Education Dual Cert
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand the components of curriculum planning for students with disabilities.
Audience: Both Grad & Undergrad

2. Analyze curricular materials and adapt them for students with disabilities.
Audience: Both Grad & Undergrad

3. Apply knowledge of curriculum and curricular adaptations to instructional plans for students with disabilities
Audience: Both Grad & Undergrad

4. Identify current research in the field that supports their instructional and curricular adaptation decisions as a teacher.
Audience: Graduate

5. Implement strategies for collaboration and leadership within the school setting that improve access to the general curriculum for students with disabilities.
Audience: Graduate

RP & SE 520 – CASE MANAGEMENT AND COMMUNITY RESOURCES
3 credits.

Provides an introduction to the concepts and processes of case management, including case planning, service coordination, referral to and utilization of other disciplines, and client advocacy; and integrating community resources and services for rehabilitation planning with persons with disabilities. Emphases on the basic principles of supporting persons with disabilities within clinical and service systems. Fosters knowledge and understanding of how theories and research translate into appropriate case management practices and explores the case management roles and processes involved in integrated, interdisciplinary, and community service settings.
Requisites: RP & SE 125, 316, or PSYCH 202
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the history and development of counseling case management and understand the roles and functions of case managers in goal development, planning, coordination, and delivery of rehabilitation and mental health services.
Audience: Both Grad & Undergrad

2. Understand the role of benefit and payment systems for health care and rehabilitation including Health Insurance, Worker Compensation, Short and Long-term Disability, Social Security benefit programs, and state, federal, and private sector Vocational Rehabilitation programs.
Audience: Both Grad & Undergrad

3. Describe rehabilitation case management in life care planning, disability management and expert witness testimony.
Audience: Both Grad & Undergrad

4. Identify and critically evaluate community resources relevant to case management in rehabilitation counseling and mental health practice settings and identify techniques for working effectively in teams and across disciplines.
Audience: Both Grad & Undergrad

5. Understand the skills and techniques necessary to manage cases and caseloads during the rehabilitation and mental health counseling process.
Audience: Graduate

6. Demonstrate effective communication and writing skills for case recording and documentation, case planning, coordination, referral, and assisting consumers in accessing other needed services.
Audience: Both Grad & Undergrad

7. Identify legal and ethical issues and responsibilities in case management and advocacy processes needed to address institutional and social barriers that impede access, equity, and success for clients.
Audience: Both Grad & Undergrad

8. Identify culturally competent and relevant strategies for case management.
Audience: Both Grad & Undergrad

RP & SE 535 – INTRODUCTION TO FORENSIC REHABILITATION
3 credits.

Overview of the roles and functions of rehabilitation professionals who provide services and expert testimony in matters of litigation, such as worker's compensation, personal injury, product liability, medical/professional malpractice, catastrophic injury, and others. Ethical standards, practices, and common situations found in the litigation process.
Requisites: RP & SE 125 or 325
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Identify the roles and functions that rehabilitation professionals fill within the legal system
Audience: Undergraduate

2. Demonstrate knowledge and understanding of the different characteristics and needs which vocational rehabilitation professionals can address in each of the various legal venues in which they may serve
Audience: Undergraduate

3. Develop an awareness of the ethical standards of professional practice that rehabilitation professionals follow in their work as testifying experts or consultants within the legal system
Audience: Undergraduate

4. Discern and state appropriate actions that the professional should make when confronted by unethical and/or illegal practices, in conjunction with their service as a testifying expert or consultant
Audience: Undergraduate

5. Demonstrate their knowledge, understanding, and the application of outcomes of key cases and precedents governing the admissibility of testimony and evidence that affect professionals in the role of testifying expert or consultant
Audience: Undergraduate

RP & SE 605 – DEVELOPMENT, LEARNING AND EDUCATION FOUNDATIONS IN SPECIAL EDUCATION
3 credits.

Key issues and trends in special education today are examined in detail. These issues and trends are discussed within the context of ecological models of human development. Gain knowledge about child and adolescent development within the contexts of families, peer groups, schools, and communities. Apply this knowledge to teaching and practice linking these to current concepts and issues in the field. Examines the role of education and educators in providing effective supports and services to promote student learning and well-being, considering the "whole child". Gain awareness, knowledge and skills to be critical thinkers, effective educators, and leaders in the field of education including special education. Although much of what is covered will have clear implications for intervention and practice, this is not a methods or techniques course with a "how to" focus.
Requisites: Declared in Art Education BS, Elementary Education BS, Special Education BS, Elementary Education and Special Education BS, or Special Education: Teacher Certification MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate an understanding of theoretical and empirical perspective on student knowledge and skills, and educational program components and services associated with positive outcomes for all students, including students with disabilities and those from diverse backgrounds.
Audience: Both Grad & Undergrad

2. Demonstrate an understanding of how contextual factors interact with the process of human development and use this knowledge to respond to the varying abilities and behaviors of diverse individuals.
Audience: Both Grad & Undergrad

3. Identify strategies and effective practices to promote development and learning of diverse students.
Audience: Both Grad & Undergrad

4. Demonstrate an understanding that professional practice requires on going attention to developmental issues; social justice and equity, and what is and isn't effective practice.
Audience: Both Grad & Undergrad

5. Use discussion to articulate, learn, revise, and expand ideas.
Audience: Both Grad & Undergrad

6. Use self-reflection as a tool for examining authentic problems and issues of practice.
Audience: Both Grad & Undergrad

7. Integrate and communicate course content, experiences, and activities effectively.
Audience: Both Grad & Undergrad

8. Lead peers in a discussion about educational equity, strategies, and effective practices to promote the development and learning of diverse students
Audience: Graduate

RP & SE 630 – INTERNSHIP IN REHABILITATION OR SPECIAL EDUCATION
2-6 credits.

Practicum experience in state or community agencies or in public school programs serving individuals with physical, cognitive, emotional, learning, social or behavioral problems.
Requisites: Declared in Rehabilitation Psychology, Special Education, Elementary Education: Middle Childhood through Early Adolescence/ Special Education Dual Cert, or Special Education graduate program
Course Designation: Workplace - Workplace Experience Course
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

RP & SE 660 – SPECIAL TOPICS
1-3 credits.

Examines a variety of topics related to rehabilitation psychology and special education.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Identify contemporary disability issues and their significance for educational and/or rehabilitation purposes and practices.
Audience: Both Grad & Undergrad

2. Critically analyze disability-related policies and issues.
Audience: Graduate

3. Demonstrate knowledge and reflective responses about specific disability-related issues in the course.
Audience: Both Grad & Undergrad

RP & SE 690 – RESEARCH OR THESIS
1-3 credits.

Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

RP & SE 699 – INDEPENDENT READING
1-3 credits.

Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

RP & SE 700 – RESEARCH METHODS IN REHABILITATION, MENTAL HEALTH, & SPECIAL EDUCATION
3 credits.

Research and program evaluation methods and understanding of published research in clinical rehabilitation counseling, mental health counseling, and special education settings.
Requisites: Declared in Clinical Rehabilitation Counseling or Rehabilitation Counselor Education
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Identify basic types and methods of counseling, rehabilitation, and special education research
Audience: Graduate

2. Describe the reciprocal relationship between research and professional practice and strategies for applying research findings to practice
Audience: Graduate

3. Identify and describe how ethical, legal, and cultural issues impact research activities
Audience: Graduate

4. Describe and use basic research methodology and statistics and psychometric concepts to plan simple research studies and critique published research reports
Audience: Graduate

5. Identify and describe basic methods of needs assessment and program evaluation and how to use information produced in service and program planning
Audience: Graduate

6. Describe the process of developing and implementing a research study and presenting and publishing the results of the research
Audience: Graduate

7. Locate and interpret quantitative and qualitative published research literature regarding rehabilitation, counseling, and special education services, identifying evidence-based and best practices
Audience: Graduate

RP & SE 710 – MULTICULTURAL ISSUES IN SPECIAL EDUCATION
3 credits.

Designed to engage in an exploration and discussion of issues and trends in special education as relates to the diversity of populations, based on race/ethnicity, socioeconomic backgrounds, disability label, gender, language dominance, etc., receiving special education.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

RP & SE 715 – EQUITY AND FULL PARTICIPATION FOR INDIVIDUALS WITH SIGNIFICANT DISABILITIES
3 credits.

Analysis of historical and contemporary trends and issues pertaining to persons with significant disabilities (i.e., significant intellectual disability, multiple disabilities, and autism spectrum disorder) across the lifespan. Topics include: an overview of the field of significant disabilities, historical trends, and current directions in curriculum design for students with significant disabilities, and valued outcomes for persons with significant disabilities.
Requisites: Declared in Special Education graduate program, Clinical Rehabilitation Counseling, or Rehabilitation Counselor Education
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2018

RP & SE/COUN PSY/CURRIC/ED POL/ED PSYCH/ELPA 719 – INTRODUCTION TO QUALITATIVE RESEARCH
3 credits.

Provides an overview of qualitative inquiry, examining assumptions, standards, and methods for generating and communicating interpretations. Methodological and theoretical works illustrate case study, ethnography, narrative, and action research. Does not include a field method component.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

RP & SE 720 – CLINICAL REHABILITATION & MENTAL HEALTH COUNSELING - ASSESSMENT
3 credits.

Psychometric theory and statistics and testing and assessment procedures in clinical rehabilitation and mental health counseling practice.
Requisites: Declared in Clinical Rehabilitation Counseling, Counseling, or Rehabilitation Counselor Education graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and explain individual and group educational and psychometric theories related to assessment
Audience: Graduate

2. Identify and analyze ethical issues relevant to assessment
Audience: Graduate

3. Identify, explain, and use the core methodology of assessment procedures (e.g., reliability, validity, standardization) in evaluating assessment procedures
Audience: Graduate

4. Use knowledge of assessment procedures to administer, score, and interpret results using available psychometric statistics
Audience: Graduate

5. Differentiate and explain assessment considerations relevant to gender, racial and ethnic background, disability, and other social and cultural factors related to assessment
Audience: Graduate

6. Identify appropriate assessment tools and methods to gather information for different assessment purposes in different clinical situations
Audience: Graduate

7. Analyze assessment information for individualized planning with the client to support the clinical rehabilitation and mental health counseling process
Audience: Graduate

RP & SE 721 – ADDICTIONS COUNSELING
3 credits.

Provides an overview of the evidence-based practices and common practices for the treatment of addiction disorders. Emphasis is placed on training of the interventions used in the treatment of substance abuse and dependence.
Requisites: Declared in Clinical Rehabilitation Counseling or Rehabilitation Counselor Education
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

RP & SE 725 – CLINICAL REHABILITATION COUNSELING - CAREER DEVELOPMENT & INTERVENTIONS
3 credits.

Career development and related interventions in clinical rehabilitation counseling practice.
Requisites: Declared in Clinical Rehabilitation Counseling or Rehabilitation Counselor Education
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe theories, models, applications, and evaluation of career development
Audience: Graduate

2. Describe and demonstrate career and leisure counseling, guidance, education, and placement interventions
Audience: Graduate

3. Describe and use labor market information as a resource in the career planning and decision making required for clinical practice
Audience: Graduate

4. Describe advocacy needs related to employment of people with disabilities and demonstrate use of advocacy strategies
Audience: Graduate

5. Describe methods to evaluate the effectiveness of leisure and career development interventions
Audience: Graduate

6. Identify and describe occupational and educational information systems and resources and their use in clinical rehabilitation counseling practice
Audience: Graduate

7. Identify assessment tools relevant to career development and to lifestyle and career decision-making and demonstrate use of those tools in facilitating the decision-making process
Audience: Graduate

RP & SE/COUN PSY/PSYCH 729 – ADVANCED SOCIAL PSYCHOLOGY
3 credits.

Intensive examination of theoretical conceptions in contemporary social psychology, including learning-theoretic, reinforcement, incentive, cognitive, and psychodynamic approaches, and research in selected topic areas reflecting these approaches, such as aggression, attitude formation and change, conformity, limitation and modeling, interpersonal attraction, perception of others, prosocial behavior, and social influence.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

RP & SE/COUN PSY 730 – PROFESSIONAL COUNSELING ORIENTATION
3 credits.

Provides a broad understanding of professional counselor roles and functions. Also provides a broad understanding of the ethical and legal standards for professional counselors. Gain familiarity with the ACA Code of Ethics, as well as with credentialing standards and organizations relevant to the practice of mental health counseling.
Requisites: Declared in a Rehabilitation Psychology or Counseling Psychology graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

RP & SE 732 – CLINICAL REHABILITATION COUNSELING - FOUNDATIONS
3 credits.

History, development, principles, and theories and models of clinical rehabilitation counseling and psychosocial theory and research relevant to disability.
Requisites: Declared in Clinical Rehabilitation Counseling or Rehabilitation Counselor Education
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Summarize the history and development of rehabilitation counseling
Audience: Graduate

2. Identify and explain theories and models related to rehabilitation counseling
Audience: Graduate

3. Summarize and explain broad social science theory that addresses psychosocial aspects of disability, including client, family, other supports, and societal considerations
Audience: Graduate

4. identify the several barriers and facilitators of social participation for clients, including environmental, attitudinal, and individual
Audience: Graduate

5. Identify and explain principles of rehabilitation, including prevention, intervention, wellness, consultation, education, and advocacy
Audience: Graduate

6. Identify roles and settings of rehabilitation counselors and the delivery systems of rehabilitation within the continuum of care, including a consideration of emergency management systems within rehabilitation agencies
Audience: Graduate

7. Identify and explain the legal and ethical considerations specific to clinical rehabilitation counseling
Audience: Graduate

8. Identify professional organizations, preparation standards, and credentials relevant to the practice of rehabilitation counseling (e.g., legislation, discrimination, and assistive technology)
Audience: Graduate

9. Identify and explain cultural factors relevant to rehabilitation counseling

Audience: Graduate

10. Examine professional issues that affect rehabilitation counselors, including independent provider status, third party reimbursement, expert witness status, forensic rehabilitation, and access to and practice privileges within managed care systems
Audience: Graduate

RP & SE 735 – LEGAL & ETHICAL BASES OF COUNSELING
3 credits.

Legal and ethical issues for counselors, with an emphasis on the American Counseling Association (ACA) and Commission on Rehabilitation Counselor Certification (CRCC) ethics codes and Wisconsin statutes relevant to counseling practice and research.
Requisites: Declared in Rehabilitation Counselor Education
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify potential ethical concerns in counseling, supervision, and teaching activities
Audience: Graduate

2. Apply and analyze the Commission on Rehabilitation Counselor Certification's (CRCC) code of ethics, the American Counseling Association's (ACA) Ethics Code for counselors, and the relevance of ethics codes to ethical decision making and practice
Audience: Graduate

3. Integrate legal considerations related to professional practice into their ethical decision-making
Audience: Graduate

4. Apply knowledge about statutes and legal issues pertinent to rehabilitation counseling professionals and counseling practice
Audience: Graduate

5. Summarize the nature of an ethical issue/dilemma through ethics awareness
Audience: Graduate

6. Apply an ethical decision making model for case analysis using relevant law, regulations, policies, codes, values and principles to develop options/plans of action to address identified ethical issues
Audience: Graduate

RP & SE/COUN PSY/ED PSYCH 736 – SEMINAR IN PSYCHOLOGY OF INDIVIDUAL DIFFERENCES
3 credits.

Seminar in the psychology of individual differences, providing broad and general coverage of theory and research related to individual and cultural differences.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

RP & SE/COUN PSY/ED PSYCH 737 – SEMINAR IN HISTORY AND SYSTEMS OF PSYCHOLOGY
3 credits.

Seminar in the history of psychology, providing broad and general coverage of the development of psychology as a scientific discipline. Includes coverage of philosophy of science and systems of psychological inquiry, with applications to current research in psychology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

RP & SE 750 – CLINICAL REHABILITATION COUNSELING - MEDICAL & PSYCHOSOCIAL ASPECTS
3 credits.

Medical and psychosocial information regarding chronic illnesses and disabilities in clinical rehabilitation counseling practice.
Requisites: Declared in Clinical Rehabilitation Counseling or Rehabilitation Counselor Education
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Define common medical terminology, medical treatments, and procedures
Audience: Graduate

2. Give examples of the functional impact of chronic illnesses and disabilities
Audience: Graduate

3. Identify principles of health and wellness that can improve the lives of persons with chronic illnesses and disabilities; how public health initiatives can be applied to improving health and well-being of individuals with disabilities
Audience: Graduate

4. Use medical and psychosocial information for clinical rehabilitation counseling and rehabilitation planning
Audience: Graduate

5. Identify roles of various health care professionals and the process of interdisciplinary health and rehabilitation teamwork
Audience: Graduate

6. Give examples of medical treatments, complementary and alternative medicine approaches, assistive technology, health promotion, and prevention efforts to reduce or accommodate for the functional limitations of chronic health conditions
Audience: Graduate

7. Identify vocational, psychosocial, and independent living implications of various chronic illnesses and disabilities
Audience: Graduate

RP & SE 780 – INTRODUCTION TO RESEARCH IN SPECIAL EDUCATION
3 credits.

Introduction to research in the field of special education and provides an opportunity to acquire knowledge related to research methodology, gain competencies in critically consuming research, and spark interests in conducting action research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Analyze themes and identify gaps in special education research through reviews of existing research
Audience: Graduate

2. Identify and reflect on ethical issues and considerations in special education research (e.g., bias, power dynamic, access, equity, confidentiality)
Audience: Graduate

3. Identify and articulate action research questions based on research interests
Audience: Graduate

4. Select appropriate research methods to answer action research questions
Audience: Graduate

5. Apply knowledge of special education research to engage in action research
Audience: Graduate

6. Apply knowledge of special education research to select, evaluate, and innovate practices
Audience: Graduate

7. Evaluate the quality of four different types of special education research (i.e., qualitative research, correlational research, group design research, and single case design research)
Audience: Graduate

RP & SE/COUN PSY/CURRIC/ED POL/ED PSYCH/ELPA 788 – QUALITATIVE RESEARCH METHODS IN EDUCATION: FIELD METHODS I
3 credits.

Introductory field methods experience in qualitative research. Learn to define good research questions, determine which methods of data collection and analysis are useful for addressing those questions, engage in these methods, reflect on their utility in education research.
Requisites: ED PSYCH/COUN PSY/CURRIC/ED POL/ELPA/ RP & SE 719
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

RP & SE/COUN PSY/CURRIC/ED POL/ED PSYCH/ELPA 789 – QUALITATIVE RESEARCH METHODS IN EDUCATION: FIELD METHODS II
3 credits.

Focus on data analysis and translation of finds and implications. Gain theoretical and practical knowledge and skills regarding coding and analysis techniques, use of qualitative analytic tools, strategies for sharing findings with audiences beyond research team.
Requisites: ED PSYCH/COUN PSY/CURRIC/ED POL/ELPA/ RP & SE 788
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

RP & SE 810 – CLINICAL REHABILITATION COUNSELING - COUNSELING TECHNIQUES
3 credits.

Basic counseling skills and techniques in clinical rehabilitation counseling practice.
Requisites: Declared in Clinical Rehabilitation Counseling or Rehabilitation Counselor Education
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe conceptual models of the overall helping process and integrate and use those models to analyze client needs for basic counseling interventions
Audience: Graduate

2. Demonstrate the use of basic and more advanced counseling skills in simulated counseling interactions
Audience: Graduate

3. Use counseling skills in simulated counseling interactions to facilitate understanding on the part of the counselor and the client, along with facilitating self-development
Audience: Graduate

4. Use clinical skills, including identifying client problems and needs, setting goals, and selecting and implementing intervention strategies in simulated counseling interactions
Audience: Graduate

5. Use counseling skills in simulated interactions to facilitate client change
Audience: Graduate

6. Summarize consultation theories and their application in clinical rehabilitation counseling
Audience: Graduate

RP & SE 820 – CLINICAL REHABILITATION COUNSELING - COUNSELING THEORIES
3 credits.

Theories of counseling and related interventions in clinical rehabilitation counseling practice.
Requisites: Declared in Clinical Rehabilitation Counseling or Rehabilitation Counselor Education
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe a broad variety of theoretical models of counseling in-depth, in addition to the research evidence-base supporting them.
Audience: Graduate

2. Describe how a broad variety of theoretical approaches to counseling, and the techniques and strategies emanating from these theories, can be used as interventions to facilitate the personal, vocational, and social adjustment of individuals with a variety of disabilities and special needs
Audience: Graduate

3. Critically evaluate a variety of theories and associated techniques as they relate to the student's own perspective, value system, and the counseling process
Audience: Graduate

4. Critically evaluate a variety of theories and associated techniques as they relate to clients and counselors as individuals with different backgrounds, experiences and priorities
Audience: Graduate

5. Describe some of the major ethical and professional issues confronting counselors and the counseling profession
Audience: Graduate

RP & SE 830 – CLINICAL REHABILITATION COUNSELING - DIAGNOSIS & TREATMENT PLANNING
3 credits.

Diagnostic assessment and planning of treatment, interventions and services in clinical rehabilitation counseling, including both clinical and career and work-related assessments and interventions, in addition to advocacy.
Requisites: Declared in Clinical Rehabilitation Counseling or Rehabilitation Counselor Education
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify strategies to advocate for individuals with disabilities at the individual, group, institutional, and societal levels to: (a) promote opportunity and access, (b) improve the quality of life for individuals with disabilities, and (c) remove potential barriers to the provision of access to services
Audience: Graduate

2. Recognize when disability occurs in tandem with other social justice issues (e.g., poverty, homelessness, trauma) and identify and explain appropriate support to address these issues
Audience: Graduate

3. Conduct diagnostic interviews and mental status examinations and use different classification systems such as the DSM, ICD, ICF for diagnostic purposes
Audience: Graduate

4. Conduct an effective intake interview and gather the necessary information for initial formulation of a treatment plan and a comprehensive understanding of the client and the presenting problems
Audience: Graduate

5. Interpret and use the results of symptom inventories and psychoeducational and personality assessments with case studies
Audience: Graduate

6. Formulate biopsychosocial histories and apply them to writing a treatment plan for a client that includes measurable goals, objectives, cultural considerations, and that includes advocacy as an intervention
Audience: Graduate

7. Identify the role of clinical formulation in treatment planning and document biopsychosocial case conceptualizations
Audience: Graduate

8. Develop comprehensive assessments in vocational rehabilitation and apply assessment results for consumers' career planning
Audience: Graduate

9. Conduct a job analysis and design worksite accommodations
Audience: Graduate

10. Conduct transferable skills analysis and assessment of work readiness
Audience: Graduate

RP & SE/ELPA 835 – LEADERSHIP FOR INCLUSIVE SCHOOLING
3 credits.

Examines historical and organizational context of special education administration at the federal, state and local levels. Includes policy implementation, constituency management, coordination, communication, and current issues.
Requisites: ELPA 735
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

RP & SE 840 – CLINICAL REHABILITATION COUNSELING - GROUP COUNSELING
3 credits.

Theory and technique in group counseling in clinical rehabilitation counseling practice.
Requisites: Declared in Clinical Rehabilitation Counseling or Rehabilitation Counselor Education
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and explain theories and models of counseling, as applied to group counseling
Audience: Graduate

2. Identify and describe counselor characteristics and behavior that influence the counseling process, with a focus on group counseling
Audience: Graduate

3. Explain theoretical foundations of group counseling and group work
Audience: Graduate

4. Identify and explain dynamics associated with group process and development
Audience: Graduate

5. Identify and explain therapeutic factors and how they contribute to group effectiveness
Audience: Graduate

6. Identify characteristics and functions of effective group leaders
Audience: Graduate

7. Identify and explain approaches to group formation, including recruiting, screening, and selecting members
Audience: Graduate

8. Identify types of groups and other considerations that affect conducting groups in varied settings
Audience: Graduate

9. Identify and explain ethical and culturally relevant strategies for designing and facilitating groups
Audience: Graduate

10. Use concepts and skills from class in direct experiences as group members in a small group activity, approved by the program, for a minimum of 10 clock hours over the course of the academic term
Audience: Graduate

11. Identify mental health service delivery modalities within the continuum of care, such as inpatient, outpatient, partial treatment, and after care, and the mental health counseling services networks
Audience: Graduate

RP & SE/ED POL/ED PSYCH/ELPA 842 – LEGAL FOUNDATIONS OF SPECIAL EDUCATION AND PUPIL SERVICES
3 credits.

Legal requirements and issues relative to special education and pupil services programs; special education, juvenile justice, programs for English language learners, programs for children who are homeless; examination of applicable federal and state statutes and case law.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Describe various legal issues and identify those issues inherent in the delivery of pupil services.
Audience: Graduate

2. Explain the foundation created by federal disability law (Section 504, ADA, IDEA).
Audience: Graduate

3. Describe the relationship between state and federal law in the delivery of special education.
Audience: Graduate

4. Apply legal principles to a set of facts.
Audience: Graduate

5. Explain the relationship between statutory and regulatory requirements and practice.
Audience: Graduate

6. Identify various analytic frameworks that guide legal analysis.
Audience: Graduate

7. Apply principles and/or frameworks to a situation or issue.
Audience: Graduate

8. Analyze existing policies and practice from a legal perspective.
Audience: Graduate

9. Explain the dynamic nature of this branch of school law and will identify tools and resources available to help them remain current.
Audience: Graduate

RP & SE 855 – CULTURAL-HISTORICAL ACTIVITY THEORY
3 credits.

Cultural-Historical Activity Theory (CHAT) is a generative, praxis-based theory of learning. CHAT has been used to analyze and transform human-context interactions. Provides a comprehensive review of the foundations, applications, and future directions of CHAT. Reviews the theoretical and empirical CHAT studies in the fields of education, psychology, health, arts, and learning sciences with an interdisciplinary and multi-methodological perspective.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Identify the foundational concepts in CHAT (e.g., object, contradictions, and agency)
Audience: Graduate

2. Define the four generations of CHAT
Audience: Graduate

3. Apply CHAT as an analytical tool
Audience: Graduate

4. Explain formative intervention methodology and its applications in education, health, arts, and technology
Audience: Graduate

5. Identify the guiding principles of the Utopian methodology in CHAT
Audience: Graduate

RP & SE 860 – REHABILITATION COUNSELING PSYCHOLOGY-CLINICAL PRACTICE SEMINAR
1 credit.

Concurrent seminar for clinical practice students in RP & SE 880, 890, and 900 or 910.
Requisites: Declared in Clinical Rehabilitation Counseling or Rehabilitation Counselor Education
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

RP & SE 870 – REHABILITATION COUNSELOR EDUCATION - ASSESSMENT THEORY & RESEARCH
3 credits.

Review of research and scholarly literature on theory, models, and methods of assessment; and research priorities, approaches, and methods to improving assessment practices in clinical rehabilitation counseling.
Requisites: Declared in Rehabilitation Counselor Education
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Summarize and explain historical perspectives concerning the nature and meaning of assessment and testing in rehabilitation counseling
Audience: Graduate

2. Summarize and explain the importance of research related to assessment in advancing the counseling profession, including how to critique and/or evaluate research related to assessment to inform rehabilitation counseling knowledge and practice
Audience: Graduate

3. Summarize, explain, and use basic measurement concepts, principles, and methodologies, including, standardized and non-standardized assessment practices, norm- and criterion-referenced assessments, group and individual assessments, statistical concepts, including scales of measurement, measures of central tendency, indices of variability, shapes and types of distributions, and correlations, and reliability and validity in the use of assessments
Audience: Graduate

4. Summarize and explain the state of the art in assessment practice, as well as the underlying research base, including issues and trends in different types of assessments, methods of effectively preparing for and conducting initial assessment meetings, including interviewing
Audience: Graduate

5. Summarize and explain implications of the literature for the pre-professional and continuing education needs of practicing rehabilitation counselors and instructional approaches for meeting those needs
Audience: Graduate

6. Explain and illustrate approaches to teaching assessment coursework to students in clinical rehabilitation counseling and closely related fields and provide continuing education to practitioners
Audience: Graduate

7. Explain the conduct of assessment-related research, including instrument development and measuring variables under study in other types of research
Audience: Graduate

8. Use knowledge of assessment theory and research to prepare a scholarly paper on a topic related to assessment that might possibly be published in a rehabilitation or related journal
Audience: Graduate

9. Utilize assessments for diagnostic and intervention planning purposes, assessing aggression or danger to others, self-inflicted harm, or suicide, identifying trauma and abuse, as well as reporting abuse, assessing addiction and substance use disorders as well as assessments relevant to academic/educational, career, social, and personal development
Audience: Graduate

10. Summarize and explain the state of the art in using environmental

RP & SE 871 – FOUNDATIONS OF SPECIAL EDUCATION
3 credits.

Engage participants in a critical exploration of Special Education issues and trends as located in social, cultural, philosophical, and historical contexts.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

RP & SE 872 – SEMINAR IN SPECIAL EDUCATION RESEARCH
3 credits.

Equips the knowledge and skills necessary to be thoughtful critically consumers and producers of education and special education research. Designed to: (a) provide an overview of the variety of research methods and approaches typically used in special education and the utility of these methods and approaches in addressing educational problems and issues; (b) critically appraise published peer-reviewed research in special education; (c) develop the skills necessary to summarize, synthesize and expand upon research already conducted on topics of personal and professional relevance; and (d) communicate research ideas, findings, and implications for practice and future research to a variety of audiences in an effective and professional manner.
Requisites: RP & SE 871
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

RP & SE 873 – PROFESSIONAL DEVELOPMENT FOR FUTURE SPECIAL EDUCATION RESEARCHERS AND FACULTY IN HIGHER EDUCATION
1 credit.

Provides information and professional development on careers in academia. Designed for students to take multiple times to correspond to their developmental needs and professional development.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021

RP & SE 875 – MIXED METHODS INQUIRY IN DISABILITY, EDUCATION AND RELATED RESEARCH
3 credits.

Addresses the theory and practice of mixed methods inquiry, particularly within disability-related fields of study. Introduces to mixed methods design, data collection, and analysis approaches. Discuss how mixed methods inquiry builds on experimental and quasi-experimental quantitative research, qualitative research, and general social science frameworks for research inquiry. Additional topics include the history of mixed methods research, various philosophical traditions and paradigms applied when mixing methods, purposes for mixed methods research, and contemporary issues in mixed methods inquiry.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the historical roots of contemporary mixed methods approaches
Audience: Graduate

2. Identify different purposes for mixed methods research and the implications they have for mixed methods design, data collection, and analysis
Audience: Graduate

3. Articulate the various philosophical frameworks and paradigms for mixing methods and the implications they have for mixed methods design, data collection, and analysis
Audience: Graduate

4. Analyze mixed methods studies to identify features of rigorous design and limitations
Audience: Graduate

5. Apply a mixed methods inquiry approach to explore a research topic
Audience: Graduate

RP & SE 880 – CLINICAL REHABILITATION COUNSELING - SUPERVISED PRACTICUM I
3 credits.

Supervised experience in clinical rehabilitation counseling practice (beginning).
Requisites: Declared in Clinical Rehabilitation Counseling or Rehabilitation Counselor Education
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025
Learning Outcomes: 1. Apply knowledge regarding ethical standards of professional counseling organizations and credentialing bodies and related ethical and legal considerations in professional counseling
Audience: Graduate

2. Apply knowledge regarding strategies for identifying and eliminating barriers, prejudices, and processes of intentional and unintentional oppression and discrimination
Audience: Graduate

3. Apply knowledge regarding general frameworks for understanding differing abilities and strategies for differentiated interventions
Audience: Graduate

4. Apply methods of identifying and using assessment tools and techniques relevant to career planning and decision making
Audience: Graduate

5. Apply knowledge of counseling theories and techniques in developing a personal model of counseling
Audience: Graduate

6. Apply knowledge regarding characteristics and functions of effective group leaders
Audience: Graduate

7. Apply knowledge regarding methods of effectively preparing for and conducting initial assessment meetings
Audience: Graduate

8. Apply knowledge regarding evidence-based counseling practices to identify and implement those practices
Audience: Graduate

9. Apply knowledge regarding social science theory that addresses psychosocial aspects of disability
Audience: Graduate

10. Apply knowledge regarding principles, models, and documentation formats of biopsychosocial case conceptualization and treatment planning

Audience: Graduate

11. Apply knowledge and skill in conducting diagnostic interviews, mental status examinations, symptom inventories, psychoeducational and personality assessments, biopsychosocial histories, assessments for treatment planning, and assessments for assistive technology needs
Audience: Graduate

12. Apply knowledge and skill in conducting career- and work-related assessments, including job analysis, work site modification, transferrable skills analysis, job readiness, and work hardening
Audience: Graduate

RP & SE 890 – CLINICAL REHABILITATION COUNSELING - SUPERVISED PRACTICUM II
3 credits.

Supervised experience in clinical rehabilitation counseling practice (intermediate).
Requisites: Declared in Clinical Rehabilitation Counseling or Rehabilitation Counselor Education
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply knowledge regarding ethical standards of professional counseling organizations and credentialing bodies and related ethical and legal considerations in professional counseling
Audience: Graduate

2. Apply knowledge regarding strategies for identifying and eliminating barriers, prejudices, and processes of intentional and unintentional oppression and discrimination
Audience: Graduate

3. Apply knowledge regarding general frameworks for understanding differing abilities and strategies for differentiated interventions
Audience: Graduate

4. Apply methods of identifying and using assessment tools and techniques relevant to career planning and decision making
Audience: Graduate

5. Apply knowledge of counseling theories and techniques in developing a personal model of counseling
Audience: Graduate

6. Apply knowledge regarding characteristics and functions of effective group leaders
Audience: Graduate

7. Apply knowledge regarding methods of effectively preparing for and conducting initial assessment meetings
Audience: Graduate

8. Apply knowledge regarding evidence-based counseling practices to identify and implement those practices
Audience: Graduate

9. Apply knowledge regarding social science theory that addresses psychosocial aspects of disability
Audience: Graduate

10. Apply knowledge regarding principles, models, and documentation formats of biopsychosocial case conceptualization and treatment planning

Audience: Graduate

11. Apply knowledge and skill in conducting diagnostic interviews, mental status examinations, symptom inventories, psychoeducational and personality assessments, biopsychosocial histories, assessments for treatment planning, and assessments for assistive technology needs
Audience: Graduate

12. Apply knowledge and skill in conducting career- and work-related assessments, including job analysis, work site modification, transferrable skills analysis, job readiness, and work hardening
Audience: Graduate

RP & SE 900 – CLINICAL REHABILITATION COUNSELING - SUPERVISED PRACTICUM III
3 credits.

Supervised experience in clinical rehabilitation counseling practice (advanced).
Requisites: Declared in Rehabilitation Counselor Education graduate program and completion of RP & SE 880 and 890
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025
Learning Outcomes: 1. Apply knowledge regarding ethical standards of professional counseling organizations and credentialing bodies and related ethical and legal considerations in professional counseling
Audience: Graduate

2. Apply knowledge regarding strategies for identifying and eliminating barriers, prejudices, and processes of intentional and unintentional oppression and discrimination
Audience: Graduate

3. Apply knowledge regarding general frameworks for understanding differing abilities and strategies for differentiated interventions
Audience: Graduate

4. Apply methods of identifying and using assessment tools and techniques relevant to career planning and decision making
Audience: Graduate

5. Apply knowledge of counseling theories and techniques in developing a personal model of counseling
Audience: Graduate

6. Apply knowledge regarding characteristics and functions of effective group leaders
Audience: Graduate

7. Apply knowledge regarding methods of effectively preparing for and conducting initial assessment meetings
Audience: Graduate

8. Apply knowledge regarding evidence-based counseling practices to identify and implement those practices
Audience: Graduate

9. Apply knowledge regarding social science theory that addresses psychosocial aspects of disability
Audience: Graduate

10. Apply knowledge regarding principles, models, and documentation formats of biopsychosocial case conceptualization and treatment planning

Audience: Graduate

11. Apply knowledge and skill in conducting diagnostic interviews, mental status examinations, symptom inventories, psychoeducational and personality assessments, biopsychosocial histories, assessments for treatment planning, and assessments for assistive technology needs
Audience: Graduate

12. Apply knowledge and skill in conducting career- and work-related assessments, including job analysis, work site modification, transferrable skills analysis, job readiness, and work hardening
Audience: Graduate

RP & SE 903 – REHABILITATION COUNSELOR EDUCATION - PSYCHOSOCIAL THEORY & RESEARCH
3 credits.

Review of theory and research on psychosocial aspects of chronic illness and disability; and research priorities, approaches, and methods to improving understanding of psychosocial factors in clinical rehabilitation counseling.
Requisites: Declared in Rehabilitation Counselor Education
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Explain the concepts of evidence-based practice, culturally-sensitive psychosocial interventions, and psychosocial research methodologies
Audience: Graduate

2. Identify and explain societal attitudes toward people with disabilities and the intersectionality of race/ethnicity, gender, class and disability, with special emphasis on how attitudinal and environmental barriers restrict community integration and participation of people with disabilities especially those facing multiple intersecting oppressions
Audience: Graduate

3. Use strategies through which these attitudes can be modified/become more positive
Audience: Graduate

4. Identify and explain the contributions of theories of personality to the study of psychosocial reactions to loss and disability
Audience: Graduate

5. Describe the role of developmental concepts (e.g., body image, self-concept) in adjusting to disability
Audience: Graduate

6. Summarize models of disability and how the different social constructions of disability affect service delivery and the full inclusion of people with disabilities in society
Audience: Graduate

7. Explain models of depression related to chronic illness and disability
Audience: Graduate

8. Describe models of psychosocial adaptation to physical and traumatic disability (e.g., traumatic brain injuries) with special emphasis on the process (e.g., experiences, reactions, behaviors, phases) of adaptation
Audience: Graduate

9. Identify and explain the commonalities (transpersonal) and individualities (personal) of the experiences and reactions that follow the onset of disability
Audience: Graduate

10. Summarize the literature related to mediators and moderators (e.g., coping and social support) between life stressors and psychosocial adjustment to chronic illness and disability
Audience: Graduate

11. Explain the process of familial psychosocial adaptation to the onset of a disability in one of its members
Audience: Graduate

12. Use counseling/therapeutic intervention strategies to working with people with disabilities (i.e., strategies for coping with adjusting to

RP & SE 910 – CLINICAL REHABILITATION COUNSELING - INTERNSHIP
6-12 credits.

Full-time supervised experience in clinical rehabilitation counseling.
Requisites: Declared in Clinical Rehabilitation Counseling or Rehabilitation Counselor Education
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply knowledge regarding ethical standards of professional counseling organizations and credentialing bodies and related ethical and legal considerations in professional counseling
Audience: Graduate

2. Apply knowledge regarding strategies for identifying and eliminating barriers, prejudices, and processes of intentional and unintentional oppression and discrimination
Audience: Graduate

3. Apply knowledge regarding general frameworks for understanding differing abilities and strategies for differentiated interventions
Audience: Graduate

4. Apply methods of identifying and using assessment tools and techniques relevant to career planning and decision making
Audience: Graduate

5. Apply knowledge of counseling theories and techniques in developing a personal model of counseling
Audience: Graduate

6. Apply knowledge regarding characteristics and functions of effective group leaders
Audience: Graduate

7. Apply knowledge regarding methods of effectively preparing for and conducting initial assessment meetings
Audience: Graduate

8. Apply knowledge regarding evidence-based counseling practices to identify and implement those practices
Audience: Graduate

9. Apply knowledge regarding social science theory that addresses psychosocial aspects of disability
Audience: Graduate

10. Apply knowledge regarding principles, models, and documentation formats of biopsychosocial case conceptualization and treatment planning

Audience: Graduate

11. Apply knowledge and skill in conducting diagnostic interviews, mental status examinations, symptom inventories, psychoeducational and personality assessments, biopsychosocial histories, assessments for treatment planning, and assessments for assistive technology needs
Audience: Graduate

12. Apply knowledge and skill in conducting career- and work-related assessments, including job analysis, work site modification, transferrable skills analysis, job readiness, and work hardening
Audience: Graduate

13. Apply knowledge and skill in conducting strategies to advocate for

RP & SE 920 – REHABILITATION COUNSELOR EDUCATION - COUNSELING SUPERVISION
3 credits.

Supervised experience with concurrent instruction in the individual and group supervision of practicum students in Clinical Rehabilitation Counseling.
Requisites: Declared in Rehabilitation Counselor Education
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the purposes of clinical supervision
Audience: Graduate

2. Identify theoretical frameworks and models of clinical supervision
Audience: Graduate

3. Describe roles and relationships related to clinical supervision
Audience: Graduate

4. Apply and practice skills of clinical supervision
Audience: Graduate

5. Identify styles of supervision and practice development of a personal style of clinical supervision
Audience: Graduate

6. Demonstrate assessment techniques for evaluating supervisees' developmental level and other relevant characteristics
Audience: Graduate

7. Describe modalities of clinical supervision and the use of technology
Audience: Graduate

8. Identify administrative procedures and responsibilities related to clinical supervision
Audience: Graduate

9. Describe techniques in evaluation, remediation, and gatekeeping in clinical supervision
Audience: Graduate

10. Identify legal and ethical issues and responsibilities in clinical supervision
Audience: Graduate

11. Identify culturally relevant strategies for conducting clinical supervision
Audience: Graduate

12. Apply and practice strategies for personal and professional self-evaluation and implications for practice
Audience: Graduate

RP & SE 930 – REHABILITATION COUNSELOR EDUCATION - TEACHING
3 credits.

Supervised experience with concurrent instruction in teaching methods with graduate students in clinical rehabilitation counseling and undergraduates in rehabilitation psychology.
Requisites: Declared in Rehabilitation Counselor Education or Special Education PHD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the essential elements and implications of Accreditation Standards for graduate-level training in clinical rehabilitation counseling and rehabilitation counselor education
Audience: Graduate

2. Describe and discuss the implications of role and expectations of rehabilitation counselor educators
Audience: Graduate

3. Describe and discuss implications of rehabilitation counselor education history and current status
Audience: Graduate

4. Describe and apply understanding of the multiple factors influencing teaching and learning.
Audience: Graduate

RP & SE 940 – REHABILITATION COUNSELOR EDUCATION - SUPERVISED RESEARCH
1-3 credits.

Supervised experience in rehabilitation research and scholarship.
Requisites: Declared in Rehabilitation Counselor Education
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Use the knowledge and skill acquired in classroom courses in statistics, measurement and instrument construction, research design, and scholarly writing in supervised research and scholarly projects in contributing to a scholarly product, whether independently or in collaboration with faculty
Audience: Graduate

RP & SE 941 – INTERNSHIP: RESEARCH
1-3 credits.

Supervised participation in conducting, evaluation, and reporting university level research.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

RP & SE 942 – INTERNSHIP IN POSTSECONDARY TEACHING
3 credits.

Supervised experience with concurrent instruction in teaching methods and development of teaching philosophy with graduate students in special education.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Understand the role and expectations of special education teacher educator
Audience: Graduate

2. Apply models of adult development and learning to instructional strategies, including attention to identities of learners and their importance within instructional settings
Audience: Graduate

3. Utilize research on effective pedagogical strategies in face to face and online settings
Audience: Graduate

4. Understand the process of course design and syllabus development, including selection and management of assessment tools
Audience: Graduate

5. Articulate a personal teaching philosophy as a special education teacher educator
Audience: Graduate

RP & SE 945 – INTERNSHIP IN REHABILITATION COUNSELOR EDUCATION I
3 credits.

Supervised experience in counseling and direct service, supervision, teaching, research, and advocacy and leadership.
Requisites: Declared in Rehabilitation Counselor Education graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the purposes of clinical supervision, counseling, teaching, research and scholarship, and leadership and advocacy in rehabilitation counselor education.
Audience: Graduate

2. Demonstrate advanced skill in case conceptualization and presentation in clinical supervision, counseling, teaching, research and scholarship, and leadership and advocacy in rehabilitation counselor education.
Audience: Graduate

3. Demonstrate knowledge and skills in rehabilitation counselor education gained through coursework and practical experiences in counseling and direct service, supervision, teaching, research, and/or leadership and advocacy.
Audience: Graduate

4. Demonstrate knowledge and advanced skills in leading peer professional discussion in rehabilitation counselor education.
Audience: Graduate

RP & SE 955 – INTERNSHIP IN REHABILITATION COUNSELOR EDUCATION II
3 credits.

Supervised experience in counseling and direct service, supervision, teaching, research, and advocacy and leadership.
Requisites: RP & SE 945
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the purposes of clinical supervision, counseling, teaching, research and scholarship, and leadership and advocacy in rehabilitation counselor education
Audience: Graduate

2. Demonstrate advanced skill in case conceptualization and presentation in clinical supervision, counseling, teaching, research and scholarship, and leadership and advocacy in rehabilitation counselor education
Audience: Graduate

3. Demonstrate knowledge and skills in rehabilitation counselor education gained through coursework and practical experiences in counseling and direct service, supervision, teaching, research, and/or leadership and advocacy
Audience: Graduate

4. Demonstrate knowledge and advanced skills in leading peer professional discussion in rehabilitation counselor education
Audience: Graduate

RP & SE 980 – CLINICAL REHABILITATION COUNSELING - ADVANCED ASSESSMENT PRACTICE
3 credits.

Advanced assessment practices and interpretation of findings in clinical rehabilitation counseling, including the assessment of intelligence, neuropsychological functioning, and personality.
Requisites: Declared in Clinical Rehabilitation Counseling or Rehabilitation Counselor Education
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Identify historical perspectives concerning the nature and meaning of assessment and testing in counseling
Audience: Graduate

2. Evaluate what types of assessment information would be useful for rehabilitation, career, and life planning
Audience: Graduate

3. Identify appropriate assessment tools, including interviews and behavioral observation, to gather the information necessary for diagnosis and treatment planning
Audience: Graduate

4. Summarize the core methodology of assessment procedures (e.g., reliability, validity, standardization)
Audience: Graduate

5. Summarize the process involved to administer, score, and interpret results of assessment procedures with particular emphasis on the WAIS-IVCompose written reports of assessment results
Audience: Graduate

6. Compose written reports of assessment results
Audience: Graduate

7. Identify the implications of client assessment for rehabilitation and vocational/life planning with the client
Audience: Graduate

8. Apply and analyze research, including critical appraisal of research, in interpreting and utilizing cognitive assessments to inform practice
Audience: Graduate

9. Identify the limits and ethical issues relevant to cognitive assessment
Audience: Graduate

10. Summarize assessment considerations relevant to individual differences such as gender, racial and ethnic background, and disability
Audience: Graduate

11. Identify the applications of assessment in a variety of rehabilitation, school and work settings
Audience: Graduate

RP & SE 983 – REHABILITATION COUNSELOR EDUCATION - LEADERSHIP & PROFESSIONAL ISSUES
3 credits.

Leadership theory and practice, history, basic philosophy, and professional issues in clinical rehabilitation counseling and rehabilitation counselor education.
Requisites: Declared in Rehabilitation Counselor Education
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Examine and understand the history and philosophy of counseling and rehabilitation counseling; legislation; current perspectives on rehabilitation counselor educator roles and functions
Audience: Graduate

2. Identify and disuss leadership and advocacy in counseling and rehabilitation counseling organizations and other institutions
Audience: Graduate

3. Review professional preparation for rehabilitation counselor educators
Audience: Graduate

4. Review professional standards (credentialing, qualifications, and affiliations) for counselors, rehabilitation counselors, and rehabilitation counselor educators
Audience: Graduate

5. Review rehabilitation service delivery systems in terms of organizations, service coordination, community resources, and staff requirements
Audience: Graduate

6. Identify and discuss contemporary issues related to counseling and rehabilitation counseling
Audience: Graduate

7. Summarize and explain the importance of research in advancing the counseling profession, including how to critique research to inform counseling practice
Audience: Graduate

RP & SE 984 – REHABILITATION COUNSELOR EDUCATION - COUNSELING THEORY & RESEARCH
3 credits.

Review of research and scholarly literature on theory, models and methods of counseling and related interventions, research priorities, approaches, and methods to improve counseling practices in clinical rehabilitation counseling.
Requisites: Declared in Rehabilitation Counselor Education
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Teach counseling theory and technique in a graduate program in Clinical Rehabilitation Counseling or a related counseling specialty (e.g., techniques, theories, group counseling courses, practicum and internship seminars)
Audience: Graduate

2. Review and conduct research related to this content
Audience: Graduate

3. Practice at an advanced level and effectively supervise entry-level counseling students and professionals
Audience: Graduate

RP & SE 985 – ADVANCED METHODOLOGIES IN DISABILITY & REHABILITATION RESEARCH
3 credits.

Advanced statistical methods, design, instrumentation, and procedures in research and program evaluation in disability and rehabilitation settings.
Requisites: Declared in Rehabilitation Counselor Education
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe foundational knowledge of quantitative and qualitative research designs including problems and hypotheses; constructs, variables, and definitions; designs of research; measurements; and data collection
Audience: Graduate

2. Identify advanced research designs, methods, and multivariate statistics in professional counseling research
Audience: Graduate

3. Describe classic research in the rehabilitation, counseling, and psychology literature
Audience: Graduate

4. Outline implications of design issues when working with diverse populations and multicultural topics
Audience: Graduate

5. Evaluate rehabilitation counseling research proposals with regard to: the sufficiency of the literature review as a foundation for the research questions/hypotheses, the clarity of the research questions/hypotheses, the sufficiency of the reason(s) for conducting the study, and the adequacy of the proposed methodology
Audience: Graduate

6. Develop crystalized dissertation research ideas
Audience: Graduate

7. Practice skills in developing a dissertation research proposal. The proposal will contain the research problem (the research questions and why they are important to address), a review of the literature to provide a foundation for the research questions/hypotheses, and the research methodology (e.g., the research design, the sampling population, instrumentation, procedures, and data analysis)
Audience: Graduate

RP & SE 988 – REHABILITATION COUNSELOR EDUCATION - DISSERTATION RESEARCH SEMINAR
1 credit.

Seminar taken in conjunction with RP & SE 990 to facilitate conceptualization, methodology, presentation, writing, and defense of the dissertation proposal and research.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the structure and requirements of the Rehabilitation Counselor Education dissertation process
Audience: Graduate

2. Demonstrate advanced understanding of the procedures and expectations for the different elements of the dissertation process
Audience: Graduate

3. Present rehabilitation counseling research effectively
Audience: Graduate

4. Demonstrate progression toward dissertation completion
Audience: Graduate

5. Demonstrate advanced understanding of rehabilitation counseling research proposals with regard to: the sufficiency of the literature review as a foundation for the research questions/hypotheses, the clarity of the research questions/hypotheses, the sufficiency of the reason(s) for conducting the study, and the adequacy of the proposed methodology
Audience: Graduate

6. Demonstrate skills in developing and defending a dissertation research proposal and/or final dissertation draft
Audience: Graduate

RP & SE 990 – RESEARCH OR THESIS
1-3 credits.

Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

RP & SE 999 – INDEPENDENT READING
1-3 credits.

Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

RELIGIOUS STUDIES (RELIG ST)

RELIG ST 101 – RELIGION IN GLOBAL PERSPECTIVE
3 credits.

Foundational and thematic approaches in the academic study of religion applied across global religious systems.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2019

RELIG ST 102 – EXPLORING RELIGION IN SICKNESS AND HEALTH
3 credits.

An introduction to the study of religion through the lens of health and health through the lens of religion employing approaches from the humanities and social sciences in conversation with health-related disciplines. It asks questions such as, How do religious peoples understand and live in sickness and health? How do people connect physical well-being to spiritual well-being? Medicine to meaning-making? How does looking at religion in sickness and health provide insight into its roles in a variety of cultures and contexts, globally and locally? How do health and religion connect particularly in situations of social marginalization and immigration? How does religion impact understandings of health and sickness beyond the borders of specific religious communities?
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

RELIG ST 103 – EXPLORING RELIGION AND SEXUALITY
3 credits.

An introductory examination of "what religion is" via investigation of how religious traditions imagine, interrogate, and regulate sexuality using several approaches in the discipline of religious studies. Focuses, although not exclusively, on the religions of the Ancient Mediterranean (Greeks, Romans, Rabbinic Jews, and early Christians) and also considers the (re)construction of ideas and practices over time and contexts.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

RELIG ST/FOLKLORE 104 – SACRED PLACES AND JOURNEYS
3 credits.

An introduction to the study of religion through the lens of sacred places and journeys, including pilgrimage.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2021
Learning Outcomes: 1. Apply key theories in the study of religion to varied religious phenomena in research and essay writing
Audience: Undergraduate

2. Articulate the influence of positionality in the study of religion
Audience: Undergraduate

3. Articulate how places become perceived, constructed and used as sites of sacrality in different religious, spiritual and secular contexts
Audience: Undergraduate

4. Articulate the complex ways that migration and politics affect the perception and use of sacred sites
Audience: Undergraduate

5. Discuss religious matters in a respectful but detached (non-proselytizing) manner
Audience: Undergraduate

RELIG ST 105 – RELIGION AND POPULAR CULTURE-LOCAL AND GLOBAL
3 credits.

Introduces religious studies through the lens of popular culture. In recent decades, many have predicted the demise of religion and the "death of God." Indeed, many seem to embrace science and rationality over faith and the supernatural, yet religion, religious language, religious themes permeate popular culture. This raises many questions: What is popular culture? What role is religion playing in it? How can we better understand popular culture using religious studies theory? Explores these questions through theme parks in the U.S. and Japan, Sports, Music, and tattoos.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Apply some theories in the academic study of religion to examine a variety of religious expression related to popular culture
Audience: Undergraduate

2. Test these theories against the experiences and practices of people across a range of contexts in the U.S. and globally.
Audience: Undergraduate

3. Demostrate key aspects of global religious literacy and articulate the diversity of ways that religion both reflects and shapes human communities and self-conceptions
Audience: Undergraduate

4. Employ improved skills in critical reading, writing, and thinking
Audience: Undergraduate

RELIG ST/ART HIST 115 – RELIGION AND ART
3 credits.

Fundamental to all religions are shared beliefs about human beings' relation to that which they regard as holy, sacred, spiritual, divine, or worthy of reverence. Focuses on how religions around the world, from antiquity to the present, mediate sacred and divine presence through material means, aimed to stimulate the human senses. Considers the questions: What makes particular places sacred? How do architecture and ritual contribute to the fashioning sacred worship spaces or places of pilgrimage and healing in diverse religious traditions? How do some religions use icons/images, painted or sculpted, to mediate divine presence, while others consider figural images to be idols? How do art, architecture, and even landscapes serve as places of memory and convey fundamental beliefs about the afterlife?
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Analyze, compare, and evaluate theories about the material manifestations of religion
Audience: Undergraduate

2. Recognize, describe, compare and differentiate visual images, architecture, landscapes and religious material culture of different religious traditions
Audience: Undergraduate

3. Demonstrate collaborative skills by working in small groups to critically respond to questions about readings prepared in advance or works of art in the museum
Audience: Undergraduate

4. Develop written and oral arguments based on visual and material evidence.
Audience: Undergraduate

5. Employ research skills to interpret religious images and architecture
Audience: Undergraduate

RELIG ST/CNSR SCI 173 – CONSUMING HAPPINESS
3 credits.

As the saying goes, money can't buy happiness -- but in modern America, we certainly try. This course will provide an overview of the study of happiness and well-being, examine how consumers engage in consumption in pursuit of happiness, as well as explore the emergence of the experience economy, and the intersection of money and well-being. Students will read academic and popular pieces on positive psychology, prosocial spending and explore the psychology of persuasion in the promises associated with this industry. In addition to integrating visual media, students will have the opportunity to experience first-hand whether the advice works in their own lives.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2024
Learning Outcomes: 1. Differentiate between hedonic and eudaimonic happiness, prosocial spending and pure materialism and the pros and cons of the intersection of faith and happiness
Audience: Undergraduate

2. Theorize via thought-provoking discussions about the quest to "buy happiness" in modern America
Audience: Undergraduate

3. Contrast advice literature with positive and social psychology research
Audience: Undergraduate

4. Evaluate through the research whether one can 'get happier' through consumer culture
Audience: Undergraduate

5. Critique diverse materials including popular and academic readings
Audience: Undergraduate

RELIG ST 200 – INTRODUCTORY TOPICS IN RELIGIOUS STUDIES (HUMANITIES)
3-4 credits.

Topics in religious studies in the humanities at an introductory level.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

RELIG ST 201 – RELIGION IN/AND EVERYDAY LANGUAGE
3 credits.

An introduction to the study of religious language and the role of religion in everyday language. Through discourse analytical and linguistic ethnographic tools, explore ritual speech and magic, prayer, song, sermons, conversation, social media, etc., across several religious traditions.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Interpret linguistic data and secondary sources in writing and orally.
Audience: Undergraduate

2. Analyze diverse value and belief systems in various contexts.
Audience: Undergraduate

3. Interpret the interrelationships and impact of religious worldviews and communities in Wisconsin, the United States, and globally.
Audience: Undergraduate

4. Present limited research on a primary source using linguistic and/or ethnographic methods.
Audience: Undergraduate

5. Recognize cultural assumptions and knowledge claims about religion.
Audience: Undergraduate

6. Demonstrate self-awareness and empathy toward the cultural perspectives and worldviews of others.
Audience: Undergraduate

7. Apply course concepts to their lives outside the classrooms by respectfully participating in our multicultural society.
Audience: Undergraduate

RELIG ST/GEN&WS 202 – QUEERING RELIGION
3 credits.

Explore the intersections of religiosity and queerness, including the role of religion in the lives of LGBTQ+ individuals and communities, the role of queerness and LGBTQ inclusion in various religious traditions, and what queerness can add to the study of religion (and vice versa).
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze oral and written materials about religion, queerness, and transness.
Audience: Undergraduate

2. Compare diverse systems of value and belief.
Audience: Undergraduate

3. Interpret the interrelationships and impact of religious worldviews and communities.
Audience: Undergraduate

4. Understand core concepts and debates in queer and trans studies of religion.
Audience: Undergraduate

5. Connect scholarship to the institutions that shape everyday life.
Audience: Undergraduate

RELIG ST/JEWISH/LEGAL ST 203 – JEWISH LAW, BUSINESS, AND ETHICS
3 credits.

Explores the development of Jewish law from antiquity to modernity, with a focus on legal questions related to business practices and ethics. Consider issues ranging from ethical practices in agriculture to how to run a modern multi billion-dollar kosher industry; from the ethics of Jews celebrating Thanksgiving to regulations governing the preparation, consumption, and sale of coffee.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. articulate the general development and evolution of Jewish law
Audience: Undergraduate

2. apply different strategies that different Jewish communities have used to regulate business and ethical practices
Audience: Undergraduate

3. analyze, in both written and oral form, Jewish legal texts
Audience: Undergraduate

4. apply Jewish legal principles to new material
Audience: Undergraduate

RELIG ST/HISTORY 205 – THE MAKING OF THE ISLAMIC WORLD: THE MIDDLE EAST, 500-1500
3-4 credits.

Development of society and culture in the Middle East and North Africa from the emergence of Islam (7th century) to early modern times.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023

RELIG ST/ASIAN 206 – THE QUR'AN: RELIGIOUS SCRIPTURE & LITERATURE
3 credits.

An introduction to the Qur'an, the sacred scripture of the Islamic religious tradition, focused on Muslim approaches to reading the text, its themes and history, and its use as a source of law, theology, aesthetics, politics, and practices of piety.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2018
Learning Outcomes: 1. Demonstrate knowledge of the content of the complete Qur'an through reading English-language interpretation ("translation"), focused writing assignments, and close listening exercises
Audience: Undergraduate

2. Identify parameters of Qur'an's study in Muslim and other academic contexts
Audience: Undergraduate

3. Demonstrate an appreciation of the complexities of the interpretative process within multiple historical contexts, such as key issues and debates
Audience: Undergraduate

4. Demonstrate knowledge of major movements, trends, or events in the development of Muslim cultures with respect to the Qur'an and Islamic global experience, early period to contemporary expression
Audience: Undergraduate

5. Apply critical approaches to the "texts"/works and alternative ways of considering them, as per the approach of the academic study of religion
Audience: Undergraduate

6. Critically and constructively examine "culture," hybridity, and global community in a comparative sense
Audience: Undergraduate

RELIG ST/HISTORY 208 – WESTERN INTELLECTUAL AND RELIGIOUS HISTORY TO 1500
3-4 credits.

Survey of key themes in Western intellectual history and religious thought from ancient Greece through the Renaissance, focusing on relationships among classical, Jewish, and Christian traditions.
Requisites: Sophomore standing or 3 credits in HISTORY or RELIG ST
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

RELIG ST/HISTORY 209 – WESTERN INTELLECTUAL AND RELIGIOUS HISTORY SINCE 1500
3-4 credits.

A survey of major trends in Western intellectual history and religious thought in the modern era, a period that saw a new range of competing ideas about the divine, the human condition, justice and the social order, and the quest for meaning. Explores shifts in Christian and Jewish thought as well as secular alternatives to religious outlooks. Topics include the impact of the Reformation, Scientific Revolution, and Enlightenment; radical critiques of religion; existentialism; theological responses to World Wars and the Holocaust; and civil rights and social justice. Sources include films, novels, autobiographies, essays, theological works, and political manifestos.
Requisites: Sophomore standing or 3 credits in HISTORY or RELIG ST
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

RELIG ST/JEWISH 211 – INTRODUCTION TO JUDAISM
4 credits.

General introduction to Judaism covering the biblical, classical rabbinic, medieval, and modern periods.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2018

RELIG ST/HISTORY 212 – THE HISTORY OF WESTERN CHRISTIANITY TO 1750
4 credits.

A survey of Christianity from being a small, persecuted sect in the Roman Empire to becoming the dominant religion of western Europe, penetrating into the lives of Europeans, fissuring into multiple churches, and spreading across the globe. Attention is given to doctrine, ritual, worship, architecture, images, and music.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

RELIG ST/JEWISH 215 – THE SABBATH
3 credits.

What is the "Sabbath"? What does it mean "to rest"? Offers a broad, comparative introduction to the history of the Sabbath, from the Bible to the present day. Explore a range of textual sources from the Jewish and Christian traditions. Topics include the major theological, ritual, and cultural practices that have developed around the Sabbath. Analysis places emphasis on literary representations of the Sabbath across genres. Discuss contemporary political iterations of the Sabbath in modern, secular contexts.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Demonstrate knowledge of major forms, practices, social conditions, values, and themes that have shaped the history of the “Sabbath” in Jewish and Christian traditions, from antiquity to modernity
Audience: Undergraduate

2. Discern and integrate divergent and contradictory perspectives, identify and question assumptions, and assess evidence and methods in religious studies and across disciplinary lines
Audience: Undergraduate

3. Display skills in textual analysis and evaluate a range of formal and structural elements in writing
Audience: Undergraduate

4. Identify and interpret the literary techniques used by Jewish and Christian writers across genres, including relevant stylistic, rhetorical, figurative, and liturgical forms used in the representation of the Sabbath
Audience: Undergraduate

5. Generate original ideas and texts, experimenting and taking risks, solving problems, and answering questions in a range of media
Audience: Undergraduate

6. Write original, coherent, and compelling arguments that push beyond summary to analysis and independent and critical thinking in clear prose that meets expectations for grammatical correctness
Audience: Undergraduate

RELIG ST/ASIAN 218 – HEALTH AND HEALING IN SOUTH ASIA
3-4 credits.

Study primary and secondary sources to explore how South Asian societies have understood the ideas of health and well-being throughout history. We will consider a number of cases that illustrate uniquely South Asian conceptions of illness and physical dysfunction and the ways in which people in South Asia have attempted (and continue to attempt today) to heal bodies. Students will learn about the traditional healing systems of South Asia, including Ayurveda, Siddha, and Unani, the basic components of each systems' ideas about disease pathology and treatment that have been used for centuries to heal illness, maintain good health, and, in some instances, aspire to a state of super-health that transcends the limitations of bodily existence altogether.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

RELIG ST/CLASSICS/JEWISH/LITTRANS 227 – INTRODUCTION TO BIBLICAL LITERATURE (IN ENGLISH)
4 credits.

Introduction to the text, development, history, and social context of the Hebrew Bible/Old Testament. Covers the Torah (Pentateuch), Neviim (Former and Latter Prophets), and Ketuvim (Writings), and provides a brief introduction to early Jewish literature (Pseudepigrapha/Apocrypha). Discusses various methods of analysis and theories of composition. Addresses major theological claims made of the text by Jewish and Christian communities. Explores contextualized interpretations in the ancient and modern day.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate knowledge of ancient Near Eastern societies and cultures.
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts in translation.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

4. Articulate a self-critical understanding of one’s own approach to the biblical text.
Audience: Undergraduate

RELIG ST/ILS 234 — GENRES OF WESTERN RELIGIOUS WRITING
3 credits.

Explores literary forms through which religions originating in western culture convey ideas. Focuses on Jewish, Christian, Muslim and related religious texts.
Requisites: Satisfied Communications A requirement
Course Designation: Gen Ed - Communication Part B
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Identify and explain significant genres of religious writing.
Audience: Undergraduate

2. Identify ways in which written religious expressions are employed and deployed across various contexts and themes, such as pluralism, authority, race, identity, and violence.
Audience: Undergraduate

3. Demonstrate proficiency in close reading, interpretation, and written and oral analysis
Audience: Undergraduate

4. Demonstrate proficiency in categorizing, analyzing, and comparing diverse systems of value and belief in a variety of contexts.
Audience: Undergraduate

RELIG ST/ASIAN 236 — ASIA ENCHANTED: GHOSTS, GODS, AND MONSTERS
3 credits.

Explores how different cultures in Asia conceive of and relate to the monstrous, ghostly, and divine, both in the past and in the contemporary world. These themes are approached from a range of different disciplinary perspectives, including religious studies, literature, anthropology, and history.
Requisites: None
Course Designation: Gen Ed - Communication Part B
Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Consider the cultural and personal functions of depictions of gods, ghosts, and monsters, both in the past and the present day.
Audience: Undergraduate

2. Practice writing and oral presentations in a variety of forms for a variety of purposes, including critical use and proper citation of primary and secondary sources.
Audience: Undergraduate

3. Practice research skills on previously unfamiliar topics, gaining skills in using both on-campus and online resources.
Audience: Undergraduate

4. Be introduced to different approaches a variety of humanities disciplines (including anthropology, art history, history, film studies, folklore studies, literature, and religious studies) take to the course subject matter.
Audience: Undergraduate

5. Use the course subject matter to improve their knowledge of the cultural geography of Asia.
Audience: Undergraduate

RELIG ST/LITTRANS/MEDIEVAL 253 – OF DEMONS AND ANGELS. DANTE'S DIVINE COMEDY
3 credits.

Have you ever wondered about human nature? What is our place in this world? Through readings, videos, and original images, explore and discuss Dante's answers from one of the greatest world literary classics, his Divine Comedy. From Hell, through Purgatory to Paradise, we will travel together with Dante in a universal tale of the journey of the human soul. Along the way, learn about Dante, his life and his works, development of literary history, historical and socio-political context of medieval Europe, the Mediterranean and the Middle East. Make connections that cross today's geographic and cultural lines in an exploration of literary topics, the history of ideas, and shared history, pondering universal concepts and patterns in the development of civilization that can still be observed today.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Learn about Dante Alighieri, his life, and works
Audience: Undergraduate

2. Understand medieval civilization and its human culture(s)
Audience: Undergraduate

3. Describe literary, historical, cultural concepts and phenomena
Audience: Undergraduate

4. Analyze from multiple perspectives a text, a situation, a context
Audience: Undergraduate

5. Synthesize information acquired from primary and secondary sources
Audience: Undergraduate

6. Learn the dangers of anachronism
Audience: Undergraduate

RELIG ST/ENVIR ST 270 – THE ENVIRONMENT: RELIGION & ETHICS
3-4 credits.

What are sources on which members of religious communities draw in order to understand and address environmental change? Explores how religious persons and communities confront global environmental questions and challenges today, with case studies drawn from culturally and religiously plural societies such as India and Indonesia. Introducing diverse varieties of Christianity, Islam, and Hindu and Buddhist systems, gives overview of some approaches in the environmental humanities related to philosophy, history, sociology and anthropology, and ethics.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025

RELIG ST/GERMAN/SOC 273 – GOD & MONEY
3 credits.

Explores the historical connections between capitalism and religion. Considers if and how religious ideas and practices facilitated the rise of capitalism; asks whether religious institutions have supported the reproduction of social inequalities, unjust labor practices, and exploitative economies; and studies the role played by religious actors in the critique of capitalism. Pays attention to the historical specificity of the capitalist system, its conditions of emergence in the Christian West, and the effects of its globalization on non-Christian traditions. Covers topics including classical social theories of religion and capitalism; contemporary examples of religious practice and capital accumulation; and the relationship between religious movements and social-economic justice.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge of debates surrounding the historical and theoretical relationship between religion and capitalism
Audience: Undergraduate

2. Discern and integrate divergent and contradictory perspectives on the relationship between religion and capitalism across a range of fields (e.g., philosophy, history, sociology) and contexts (e.g., America, Europe, Middle East, and South Asia)
Audience: Undergraduate

3. Cultivate skills in textual analysis and evaluate a range of formal and structural elements in a range of media
Audience: Undergraduate

4. Generate original ideas and texts, experimenting and taking risks, solving problems, and answering textual questions
Audience: Undergraduate

5. Write original, coherent, and compelling arguments that push beyond summary to analysis and independent and critical thinking in clear prose that meets expectations for grammatical correctness
Audience: Undergraduate

RELIG ST/ASIAN 274 – RELIGION IN SOUTH ASIA
3 credits.

Introductory survey of Hinduism, Buddhism, Islam, Sikhism, etc., and an examination of the cultural, historical, ritual, and philosophical foundations of South Asian religion. Not open to students with credit for LCA 274 prior to Fall 2019.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

RELIG ST 280 – WITCHES AND WIZARDS: FROM HECATE TO HARRY POTTER
3 credits.

Consider tales of witchcraft and wizardry, examining how they tap into concerns and debates about religion and the supernatural. Debate historic representations of witchcraft and wizardry, especially from sixteenth- and seventeenth-century England, asking the questions, "What is religion?" and "What is magic?" Consider contemporary depictions of witchcraft and wizardry in children's stories and young-adult fiction, and discuss issues concerning religion, science, language and the nature of "reality".
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Compare diverse systems of religious belief in a variety of contexts, developing a strong trans-historical understanding of the ways in which magic and religion (especially western religions) interact
Audience: Undergraduate

2. Analyze written texts about magic and witchcraft, especially through the lens of religious studies
Audience: Undergraduate

3. Utilize a variety of resources and methods of research across disciplinary lines, including, especially, the disciplines of religious studies, and literary and historical research
Audience: Undergraduate

4. Demonstrate knowledge of major forms, techniques, social conditions, values, and genres that shaped the representation of magic in the English-speaking world
Audience: Undergraduate

5. Compare contradictory critical perspectives
Audience: Undergraduate

6. Question critical assumptions
Audience: Undergraduate

7. Write original, coherent, and compelling arguments that push beyond summary to analysis and independent and critical thinking in clear prose that meets expectations for grammatical correctness
Audience: Undergraduate

RELIG ST 300 – AMERICA AND RELIGIONS
3 credits.

Explores the colorful, contested relationship of religion and American (U.S.) culture. Surveys a variety of themes from Native American-European encounters to the present. Significant court cases focus on the tension between a quest for American consensus and an abiding religious and cultural pluralism.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2018
Learning Outcomes: 1. articulate the changing meaning of the First Amendment in the U.S.A.
Audience: Undergraduate

2. develop your own explanations of the consequences of these changing meanings on a variety of religious communities in the U.S.
Audience: Undergraduate

3. identify, evaluate, and interpret the interrelationships of global religious worldviews and their religious expression in communities in Wisconsin and throughout the U.S.
Audience: Undergraduate

4. hone your close reading and interpretive skills in both your writing and your oral presentations
Audience: Undergraduate

5. exhibit their knowledge, application and explication of primary disciplinary tools in Religious Studies as demonstrated in advanced research and its presentation
Audience: Graduate

RELIG ST 302 – CHRISTIANITY: INTERPRETATION AND PRACTICE
3 credits.

A comparative, thematic exploration of major Christian theological ideas and their relationships to practices across varieties of Christianity and contexts.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Discuss and write in the common language and themes of Christianity.
Audience: Undergraduate

2. Analyze theological texts, connect texts to contexts and practices, and make scholarly comparison of texts and their interpretations.
Audience: Undergraduate

3. Articulate how Christian interpretation is a dynamic process as evidenced in Christian texts and local examples of Christian communal practice.
Audience: Undergraduate

4. Participate in fruitful, academically-informed discussion of difficult and often passionately debated theological ideas.
Audience: Undergraduate

5. Articulate how Christianity functions as a complex, global religion in the variety and continuity of its interpretation and practice.
Audience: Undergraduate

RELIG ST/ASIAN 303 – JAINISM: RELIGION AND CULTURE OF NONVIOLENCE
3 credits.

Introduction to the Jain tradition. Despite being a small minority religion, core Jain ethical and philosophical concepts of ahimsa (non-violence) and anekantavada (non-absolutism) have influenced all other major traditions in India and secular Indian society. Examines how Jain philosophy, ritual, social relations, and politics are informed by a commitment to ascetic ethics that uphold ahimsa as the greatest virtue for renouncers (monks and nuns) and lay practitioners, tracing the evolution of Jain ethical engagements with modern social and political issues including environmental and animal rights activism, business and finance, and medicine and bioethics. Course covers canonical texts and scholarly literature on Jainism to understand how ahimsa has been historically articulated within Jain philosophy and doctrine, re-articulated in modern social movements, and how it has been constructed in academic studies of Jainism.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Identify and explain basic concepts, ideas, and terminology relating to Jainism from both the monastic and lay perspectives
Audience: Undergraduate

2. Compare and differentiate between the basic tenets of Jainism, Hinduism, and Buddhism.
Audience: Undergraduate

3. Apply anthropological and religious studies concepts and theories to the relationship of Jain rituals, theology, and experience as well as the larger world of South Asian religions
Audience: Undergraduate

4. Make connections between historical and current practice of Jainism in both living and historical situations
Audience: Undergraduate

5. Analyze a social, cultural, historical, visual, or textual aspect of Jain philosophy in a research project to support their interpretations of course material and apply them to the student's own local and global context
Audience: Undergraduate

RELIG ST/GEN&WS 305 – WOMEN, GENDER AND RELIGION
3 credits.

Explores themes significant to the impact of religion on women and women on religion, historically and today, across a diverse range of contexts.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

RELIG ST/ASIAN 306 — HINDUISM
3 credits.

A historical survey of Hindu scriptures, rituals, philosophies, and ethics from the ancient to the contemporary world. Concepts such as karma, yoga, and reincarnation will be put in the broader contexts of Hindu theism, worship, and law. Not open to students who completed RELIG ST 355 prior to Fall 2019.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Recognize and understand the fundamental rituals, social systems, philosophical schools, and devotional traditions that make up the many forms of the Hindu religion.
Audience: Undergraduate

2. Explore important conceptual categories in Hinduism and significant sociohistorical developments in India.
Audience: Undergraduate

3. Consider, through close readings and discussions of philosophical texts, law books, devotional literature, and mythologies the ways in which Hinduism influences the everyday lives of Hindu women and men, Hindus of different classes and castes, and Hindus in different locations in India and throughout the world.
Audience: Undergraduate

RELIG ST/ASIAN 307 — A SURVEY OF TIBETAN BUDDHISM
3 credits.

By studying the distinctively Tibetan forms of Buddhism, we also examine more general issues, such as the relationship between theory and practice, ancient meditation and mind training, the politics of "world making", and the connection between identity and experience. Not open to students with credit for LCA 421 prior to Fall 2019.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the core practical and theoretical aspects of Tibetan Buddhism and Buddhism in general.
Audience: Undergraduate

2. Apply multiple variations of meditation for personal use and demonstrate for others.
Audience: Undergraduate

3. Summarize and explain Buddhist perspectives of true mode of existence of internal and external phenomena, the environment and its habitants, mental factors and external physical matter.
Audience: Undergraduate

RELIG ST/ASIAN/HISTORY 308 — INTRODUCTION TO BUDDHISM
3-4 credits.

The basic thought, practices and history of Buddhism, including selflessness and relativity, practices of meditation, merit- making and compassion from both local and translocal perspectives. Includes a discussion of Buddhism as a contemporary, North American religion. Not open to students with credit for E ASIAN or LCA 308 prior to Fall 2019.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

RELIG ST/HISTORY/MEDIEVAL 309 — THE CRUSADES: CHRISTIANITY AND ISLAM
3-4 credits.

An examination of the Crusades from both Christian and Islamic perspectives; the historical, social, and religious context and significance of the Crusades for both Christians and Muslims.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

RELIG ST 311 — SECTS AND CULTS
3 credits.

An introduction to new religious movements in the U.S. frequently referred to as "sects," "cults," and "fringe religions."
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Articulate the complexities of defining new religious movements.
Audience: Undergraduate

2. Describe and assess a variety of arguments about religion, brainwashing and representation.
Audience: Undergraduate

3. Demonstrate skills of analysis, persuasive writing, oral communication.
Audience: Undergraduate

4. Articulate and better understand your own definition of religion.
Audience: Undergraduate

RELIG ST 320 – PROPHETS AND POETS: WOMEN, WRITING AND RELIGION IN A TIME OF WAR, 1642-1660
3 credits.

How does the study of religion affect the ways we interpret the past? Can we ever recover and understand the beliefs and values held by people who lived in different countries and previous centuries? Draws on the disciplines of religious studies, history and literature to evaluate the different frameworks that scholars have used in their investigations of women's spiritual writing during the turbulent English civil wars (1642-1660). Unable to fight with swords or speak out in church because they were denied ordination, women raised their pens to express their partisanship in the conflict. Positioning themselves as faithful spouses and devout Christians, these women endorsed religious injunctions about feminine modesty and spirituality at the same time as they secretly worked as messengers and spies. Involves some discussion of violence concerning the ways in which this period of conflict and religious turmoil paradoxically accorded some women a powerful literary voice.
Requisites: Satisfied Communications A requirement and sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. analyze the major forms, techniques, social conditions, values, and genres that shaped English literature and language in the early modern period, specifically in relation to religious studies and the study of the English civil wars
Audience: Undergraduate

2. utilize a variety of resources and methods of research across disciplinary lines, including, especially, the disciplines of religious studies, and literary and historical research;
Audience: Undergraduate

3. compare divergent and contradictory critical perspectives;
Audience: Undergraduate

4. question critical and historical assumptions;
Audience: Undergraduate

5. write original, coherent, and compelling arguments that push beyond summary to analysis and independent and critical thinking in clear prose that meets expectations for grammatical correctness.
Audience: Undergraduate

RELIG ST/CLASSICS/JEWISH 323 – THE BIBLE AND FILM: LITERATURE AND MEDIA
3 credits.

An introduction to the study of the Bible as literature and of biblical reception in the medium of film, from early Hollywood to the present day. Explores the way in which the Bible (including both Hebrew and Greek Testaments), one of the foundational literary corpora of American society, has been interpreted, reinterpreted, and misinterpreted through the medium of film over the past century. We will begin each segment of the course by reading portions of the biblical text that have experienced significant interpretation, in order to understand the literary text that has been received in film. How beholden are filmmakers to the interpretations of communities that view these texts as authoritative, and where are they free to depart from their sources? Is it possible to "translate" biblical narratives into film without losing something in the translation? These questions will focus our study on ways the literature has been interpreted in this new medium.
Requisites: Sophomore standing
Course Designation: Gen Ed - Communication Part B
Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Demonstrate knowledge of ancient Near Eastern societies and cultures.
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts in translation.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

4. Develop understanding of film as a form of biblical reception.
Audience: Undergraduate

5. Hone close reading and film-watching skills so as to be able to read a literary text with deeper attention to detail and sharper interpretive instincts, as well as increase ability to articulate their observations.
Audience: Undergraduate

6. Demonstrate skills in critical reading, logical thinking, and the use of evidence.
Audience: Undergraduate

7. Demonstrate skills in the use of appropriate style and disciplinary conventions in writing and speaking.
Audience: Undergraduate

8. Demonstrate skills in the use of core library resources specific to the ancient Near Eastern world.
Audience: Undergraduate

RELIG ST/FOLKLORE 326 – THE SUPERNATURAL IN THE MODERN WORLD
3 credits.

Explores evidence of belief in the supernatural in the modern world as it appears in the context of folk religion, folk medicine, legends, folk drama, ritual and custom, and media accounts and presentations. Surveys scholarly approaches to the topic. Course not available to students with credits for Folklore 415 before Fall 2023.
Requisites: Satisfied Communications A requirement or graduate/professional standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize and explore different types of supernatural narratives, practices, and beliefs from around the world and throughout history.
Audience: Undergraduate

2. Analyze the roles that supernatural narratives, practices, and beliefs play in human societies, and in the lives of individuals.
Audience: Undergraduate

3. Analyze "the supernatural" in relationship to historical memories, cultural anxieties, folk traditions, spiritual beliefs, physiological sensations, political conflicts, environmental disasters, and existential imperatives.
Audience: Undergraduate

4. Engage with the course themes via analytical and creative written responses, experiential learning experiments, and the active documentation of folklore.
Audience: Undergraduate

RELIG ST/JEWISH/LITTRANS 328 – CLASSICAL RABBINIC LITERATURE IN TRANSLATION
3-4 credits.

Introduction to the literature of the Classical Rabbinic or Talmudic period of Judaism (2nd to 7th centuries CE). Historical and intellectual background; the interrelation of liturgy, legal and non-legal literature.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2019

RELIG ST/HIST SCI/MED HIST 331 – SCIENCE, MEDICINE AND RELIGION
3 credits.

Introduction to the study of religion, science, and medicine. Focus on how religion, science, and medicine have shaped practices of knowledge production and meaning making with respect to human life, by considering theories of human history and racial progress; how logics of contagion structure human relationships and communal boundaries; the variety of ways of understanding and caring for bodies; and the place of humans within broader ecologies.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. read and interpret critically primary and secondary source texts about religion, science, and medicine
Audience: Both Grad & Undergrad

2. access and utilize a variety of resources and methods for critical inquiry and research in religious studies, history of science and medicine, and science and religion
Audience: Both Grad & Undergrad

3. categorize, analyze, and compare core concepts in religious studies, the history of science and medicine, and science and religion, such as the conflict thesis; knowledge production; creation/evolution; eugenics; race; gender; embodiment; care; health/healing; capitalism; and progress narratives
Audience: Both Grad & Undergrad

4. identify, evaluate, and interpret the interrelationships and impact of religious and and scientific worldviews as related to health, bodies and communities
Audience: Both Grad & Undergrad

5. perform textual analysis, primary source research and synthesis of scholarly ideas, in persuasive writing, oral communication, active listening, and with critical empathy
Audience: Both Grad & Undergrad

6. create conversations about complex topics that seek academic excellence, honesty, and integrity
Audience: Both Grad & Undergrad

7. engage with the academic literature on religion, science, and medicine that is pertinent to the student's specific research area and apply it to facilitate original primary source analysis
Audience: Graduate

RELIG ST/CLASSICS/HEBR-BIB/JEWISH/LITTRANS 332 – PROPHETS OF THE BIBLE
4 credits.

An introduction to the thought, literature, and history of the prophets of ancient Israel (in English).
Requisites: RELIG ST/CLASSICS/JEWISH/LITTRANS 227 or Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2019
Learning Outcomes: 1. Demonstrate knowledge of ancient Near Eastern societies and cultures.
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts in translation.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

4. Compare ancient Near Eastern prophetic voices to modern prophetic voices.
Audience: Undergraduate

RELIG ST 333 – EARLY CHRISTIAN LITERATURE: MATTHEW-REVELATION
3 credits.

An exploration of Christianity's charter documents in the light of what modern scholarship has discovered about the New Testament's sociohistorical context, composition, theologies, and presentations of Jesus.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

RELIG ST/CLASSICS/JEWISH 335 – KING DAVID IN HISTORY AND TRADITION
3 credits.

An exploration of the literary and historical aspects of the text of 1-2 Samuel + 1 Kings 1-2; the history and archaeology of Jerusalem during the tenth century B.C.E.; and the varieties of ways in which the figure of King David has been received in subsequent religious and secular literature, visual art, music, television, and cinema.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Demonstrate knowledge of ancient Near Eastern societies and cultures.
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts in translation.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

4. Demonstrate a critical understanding of the reception of David in various media.
Audience: Undergraduate

RELIG ST/JEWISH 340 – THE AMERICAN JEWISH LIFE OF DNA
3 credits.

Explores the range of relationships between DNA and American Jewish life. It begins with the "prehistory" of the relationship between Jewishness and genetic science, from Biblical genealogies to early twentieth century racial science. It then turns to America in the second half of the twentieth century, when the discovery of the double helix and the atrocities of Auschwitz reinvigorated and reshaped American Jewish relationships to DNA.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. articulate informed answers to central questions at the intersection of Jewish Studies and Science and Technology Studies
Audience: Undergraduate

2. identify key themes, movements, and people in twentieth century American Jewish Studies and the history of the biological sciences
Audience: Undergraduate

3. analyze a range of sources, including material objects and digital media as well as written texts from religious, ethnic, and scientific communities
Audience: Undergraduate

4. employ an expanded range of religious literacy, including skills for identifying, evaluating, and interpreting the interrelationships and impact of religious and scientific worldviews and communities in the United States via a variety of theoretical ideas and methodologies in the social sciences and humanities
Audience: Undergraduate

5. employ stronger research and writing skills, including textual analysis, primary source analysis, synthesis of scholarly ideas, persuasive writing, oral communication, active listening, and critical empathy
Audience: Undergraduate

6. participate more effectively in creating open, engaging, fun, and collaborative learning environments that seek academic excellence, honesty, and integrity
Audience: Undergraduate

RELIG ST/FOLKLORE/MEDIEVAL/SCAND ST 342 – NORDIC MYTHOLOGY
3 credits.

Mythology, literature, ritual, traditions, medieval folklore, and religion from Nordic areas and Scandinavia.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize, describe and analyze cultural phenomena, specifically pre-Christian Nordic Religion, and put it into context.
Audience: Undergraduate

2. Demonstrate an understanding of the major theories, approaches, concepts and current research findings concerning medieval Nordic mythology and religion.
Audience: Undergraduate

3. Synthesize the written and material information and use insight and creativity to demonstrate an understanding of the knowledge base from the field.
Audience: Undergraduate

4. Communicate effectively through written essays, oral presentations and discussion.
Audience: Undergraduate

5. Retrieve, analyze, and interpret the professional and lay literature providing information to both professionals and public.
Audience: Undergraduate

6. Guide, mentor and support peers to achieve excellence in practice of the discipline.
Audience: Undergraduate

7. Work in multi-disciplinary teams to analyze the cultural material from various disciplinary points of view
Audience: Undergraduate

RELIG ST/ANTHRO 343 – ANTHROPOLOGY OF RELIGION
3-4 credits.

Anthropological approaches. Illustrated by critical considerations of outstanding contributions. Selected religious systems; areal and topical comparative studies; religion as an ethnographic problem.
Requisites: ANTHRO 104 or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021

RELIG ST/FOLKLORE 352 — SHAMANISM
3 credits.

Survey of shamanism as a religious tradition and sociocultural force in Siberian, Asian, and Native American societies. Exploration of shamanic rituals, roles, cosmology. Cultural and political uses of shamanism in traditional and modern contexts.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022

RELIG ST/ENGL/HISTORY 360 — EARLY MEDIEVAL ENGLAND
3 credits.

Introduction to the peoples and cultures of Early Medieval England (c450-c1100), with primary emphasis on texts written in Old English and Latin. Interdisciplinary approach including history, literature, religion, and material culture. Attention to literary genres ranging from elegy to riddles; the development of Christianity; encounters with Romans, Vikings, and Normans; and other political and social concerns. All readings in translation.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Recognize and discuss major forms, techniques, social conditions, values, and genres that have shaped the history of English literature, language, and culture.
Audience: Undergraduate

2. Discern and integrate divergent and contradictory perspectives, identify and question assumptions, and assess evidence and methods related to Early Medieval England.
Audience: Undergraduate

3. Write original, coherent, and compelling arguments about assigned texts and/or objects that push beyond summary to analysis and independent and critical thinking in clear prose that meets expectations for grammatical correctness.
Audience: Undergraduate

RELIG ST 361 — EARLY CHRISTIAN LITERATURE: PAULINE CHRISTIANITY
3 credits.

By conventional reckoning, Paul was a major contributor to the development of Christianity. Analyzes both Paul's and other contemporary writings to assess the extent to which he contributed to the development of the early church.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

RELIG ST/AFRICAN/ASIAN 370 — ISLAM: RELIGION AND CULTURE
3-4 credits.

The emergence and development of Islam; schism; theology; asceticism; speculative and popular mysticism; literatures in diverse Islamic languages. Not open to students with credit for LCA 370 prior to Fall 2019.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023

RELIG ST/ART HIST 373 – MECCA, CAIRO, ISTANBUL, DELHI: GREAT CITIES OF ISLAM
3 credits.

Have you always wanted to visit the Taj Mahal? Are you intrigued by the annual pilgrimage of millions of Muslims to Mecca in Saudi Arabia? Do you wonder how ancient cities like Cairo or Istanbul preserve their history while operating as modern, global megacities? Explore the development of some of the world's most fascinating cities - Mecca (Saudi Arabia), Cairo (Egypt), Istanbul (Turkey), and Delhi (India). Through images, texts, films, sounds, and even food, examine the development of architectural wonders and the urban fabric from the time of their foundation to the present day.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Interpret architecture and urban development in ways that take into account the historical contexts in which they were produced and received.
Audience: Undergraduate

2. Recognize distinct architectural languages in various Islamic cities over time.
Audience: Undergraduate

3. Understand the role of architecture in articulating urban/national narratives about the past and the present.
Audience: Undergraduate

4. Improve in ability to understand complex scholarly arguments, beginning to judge the strength of the visual and textual evidence presented.
Audience: Undergraduate

5. Communicate about architecture and urban history in written and oral form.
Audience: Undergraduate

6. Locate, assess, and use research resources in both print and digital form.
Audience: Undergraduate

RELIG ST/COM ARTS 374 – THE RHETORIC OF RELIGION
3 credits.

Rhetorical character of religious controversy and sectarian persuasion in Western religion.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2022
Learning Outcomes: 1. Identify and describe key theories, concepts, and methods used to analyze religious communication within their historical, technical, cultural, social or political contexts
Audience: Undergraduate

2. Identify and describe key theories, concepts, and methods used to analyze how media shape the flow of information, policy law, culture, and power in relation to religous communication
Audience: Undergraduate

3. Apply key theories, concepts, and methods in the analysis of religious communication
Audience: Undergraduate

RELIG ST 400 – TOPICS IN RELIGIOUS STUDIES - HUMANITIES
3-4 credits.

Topics may include religion in specific societies or regions; religion in the arts; contemporary themes in religion.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

RELIG ST 401 – TOPICS IN RELIGIOUS STUDIES - SOCIAL STUDIES
3-4 credits.

Topics in religious studies in the social sciences.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2022

RELIG ST 403 – TOPICS IN RELIGIOUS STUDIES-US ETHNIC STUDIES
3-5 credits.

Topics in historical or contemporary religious culture and society pertaining to persistently marginalized racial or ethnic groups in the United States.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

RELIG ST/ASIAN 405 – GODS AND GODDESSES OF SOUTH ASIA
3 credits.

Introduces some of the most important deities of South Asia through visual representation, mythical narratives and rituals of worship. Topics include the development of iconographic forms and concepts, masculine and feminine aspects of the divine, the belief in human embodiments of divinities, the phenomenon of possession, modes of domestic and public worship and the symbolism of the temple structure.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand ways of conceiving of divinity and its presence in the world and in the life of the practitioner
Audience: Both Grad & Undergrad

2. Interpret forms of religious expression, representations of deities and their function in ritual
Audience: Both Grad & Undergrad

3. Critically examine taken-for-granted notions and stereotypes pertaining to image worship and to inquire into the process of their construction
Audience: Both Grad & Undergrad

4. Articulate in writing a critical perspective on image worship and devotional practices
Audience: Both Grad & Undergrad

5. Learn critical analysis and research skills
Audience: Both Grad & Undergrad

6. Improve skills in delivering oral presentations
Audience: Both Grad & Undergrad

7. Refine writing skills
Audience: Both Grad & Undergrad

8. Become familiar with multiple perspectives scholars use to study gods and goddesses of South Asia and use these perspectives in self-reflective thinking
Audience: Graduate

9. Refine critical analysis and research skills
Audience: Graduate

RELIG ST 406 – THE AMISH
3 credits.

An exploration of the faith and life of one of America's most familiar yet widely misunderstood religious groups, the Old Order Amish.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023

RELIG ST/AFRICAN 408 – EVERYDAY RELIGION IN AFRICA
3 credits.

Explore the diverse lived experiences of religion in Africa, examine the role of religion in shaping individual and communal identities, and understand the complex ways in which religion is practiced, experienced, and expressed in various African contexts.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Analyze diverse value and belief systems in various contexts.
Audience: Both Grad & Undergrad

2. Define key terms in religious studies and African studies.
Audience: Both Grad & Undergrad

3. Communicate effectively through close reading, writing, oral presentations, and discussion.
Audience: Both Grad & Undergrad

4. Interpret the interrelationships and impact of religious worldviews and communities in Africa.
Audience: Both Grad & Undergrad

5. Recognize cultural assumptions and knowledge claims as they relate to Africa and religion.
Audience: Both Grad & Undergrad

6. Demonstrate empathy toward the cultural perspectives and worldviews of others.
Audience: Both Grad & Undergrad

7. Utilize the terminology and methodology of cultural studies and religious studies in speech and writing.
Audience: Graduate

8. Construct complex arguments using primary and secondary sources to support arguments about lived religion in Africa.
Audience: Graduate

RELIG ST/HISTORY 409 – CHRISTIANITY IN THE ATLANTIC WORLD, 1500-1800
3 credits.

Between the late Middle Ages and the era of democratic revolutions Western Christianity saw a series of sweeping changes that altered its global profile and helped form the modern world - examines some of these shifts and their impact. Questions explored include: Why did the Reformations of the 16th century occur and with what effects on people's lives and on early modern societies? What was the relationship between European colonization, the Atlantic slave trade, new theories of race, and the spread of Christianity to the "New World"? How was the Christian religion resisted, received, and reshaped by Native Americans and people of African descent? What sparked movements of reform and renewal - including new Catholic religious orders and the Protestant Evangelical Awakening - and with what consequences for modern Christianity? How did the nature of Christian belief and identity change under the impact of religious conflict, political revolution, and new intellectual movements?
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Identify and explain the significance of key trends, thinkers, and texts in the history of early modern Christianity
Audience: Undergraduate

2. Analyze and evaluate some of the scholarly debates in the field of early modern Christianity
Audience: Undergraduate

3. Interpret complex writings from the past contextually, critically, and empathetically
Audience: Undergraduate

4. Construct strong historical arguments based on evidence and careful reasoning
Audience: Undergraduate

5. Compose clear analytical and argumentative written prose
Audience: Undergraduate

RELIG ST 410 – CHILDREN AND RELIGION IN AMERICA
3 credits.

Based upon the assumption children are important participants in religious communities; that they co-create their religious traditions. Through studies of children's lives in various religious communities in America (mostly), explore how including children's perspectives shifts general claims about religious groups and their practices.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

RELIG ST/HISTORY 411 – THE ENLIGHTENMENT AND ITS CRITICS
3 credits.

European intellectual history in the 17th and 18th centuries, from the Wars of Religion to the French Revolution. Examines the rise of Enlightenment thought in relation to political and religious conflict, revolutions in science and philosophy, and the emergence of the public sphere. Special attention is paid to the Enlightenment's relationship to religion and to contemporary critiques made of Enlightenment thinking, including those of the early Romantic movement.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

RELIG ST/AFRICAN 414 – ISLAM IN AFRICA AND THE DIASPORA
3 credits.

Explore African Muslim communities and Black Muslim communities in the US as an under-examined archive of Islamic authenticity and authority. Involves close readings of ethnographies, fiction, films, and other forms of cultural expression and examination of the practice of Islam and representation of Muslims in Africa and Muslims of African ancestry in the US. Through both primary and secondary sources, explore themes of not just authenticity and authority but also related issues of representation, positionality, difference, otherness, essentialism, and normativity. Ultimately, form a deeper understanding of the diversity and complexity of Islam and Muslims of African ancestry.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate understanding of major theories, approaches, concepts, and current and classical research findings in African and diaspora literary, cultural studies, and religious studies related to Islam and Muslims.
Audience: Both Grad & Undergrad

2. Communicate effectively through close reading, essays, oral presentations, and discussion about Islam and Muslims, to share knowledge, wisdom, and values with others across social and professional settings.
Audience: Both Grad & Undergrad

3. Write and speak across disciplinary boundaries with regard to existing research about Africa, the diaspora, and Islam in the humanities.
Audience: Both Grad & Undergrad

4. Access, appraise, and utilize a variety of resources and methods for research across disciplinary lines
Audience: Both Grad & Undergrad

5. Analyze and compare diverse systems of value and belief in a variety of contexts
Audience: Both Grad & Undergrad

6. Demonstrate global and local religious literacy by identifying, evaluating, and interpreting the interrelationships and impact of religious worldviews and communities in the United States and globally
Audience: Both Grad & Undergrad

7. Articulate how the past has affected present day circumstances regarding race and racial inequalities in the US, Africa, and other African diasporic communities.
Audience: Both Grad & Undergrad

8. Recognize and question cultural assumptions and knowledge claims as they relate to race and ethnicity.
Audience: Both Grad & Undergrad

9. Demonstrate self-awareness and empathy toward the cultural perspectives and worldviews of others.
Audience: Both Grad & Undergrad

10. Apply course concepts to their lives outside the classroom by respectfully participating in our multicultural society.

RELIG ST 420 – RELIGIOUS STUDIES COLLOQUIUM
1 credit.

Explores why and how religious studies matters as a helpful interpretative field across a variety of topics of interdisciplinary interest and societal concern.
Requisites: Declared in Religious Studies, Certificate in Religious Studies, or Religious Studies Doctoral Minor
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, for 3 number of completions
Learning Outcomes: 1. Articulate awareness of significant current issues related to religion and its study
Audience: Undergraduate

2. Apply Religious Studies methods to social concerns and interdisciplinary topics
Audience: Undergraduate

3. Talk about and contribute to analysis of religion in an informed scholarly manner in an interdisciplinary conversation
Audience: Undergraduate

RELIG ST/ASIAN 430 – INDIAN TRADITIONS IN THE MODERN AGE
3 credits.

Explores how ancient Indian traditions have been reframed for the modern age. Topics include the Ramayama in popular media, negotiations over sacred spaces, and popular Tantra. We will also examine recent controversies, such as the one surrounding the ancient Jain practice of fasting until death (sallekhana) in the modern age.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020

RELIG ST/POLI SCI 433 – RELIGION AND POLITICS
3-4 credits.

Explores the relationships and interactions between religion and politics from a comparative perspective. Discuss the appropriate relationship between religion and state. Investigate the implications of the various ways in which the religion-state relationship have been involved in political conflict. Building on this, turn to several of the current issues in religion and politics asking: Why is religion apparently more important than ever despite an increasingly secular world? What is religious nationalism? What is fundamentalism? How can we explain the similarities and differences between religious fundamentalist movements across the globe? How should democratic states cope with the emergence of fundamentalist movements? In order to begin answering these questions, integrate the theoretical frameworks we develop with explorations of the historical and local context of relevant case-studies from around the world.
Requisites: Sophomore standing and (POLI SCI 140, 120, RELIG ST 101, 102, 103, or INTL ST 101) or (POLI SCI 103 or 106 prior to fall 2017)
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Examine the relationships and interactions between religion and politics from a comparative perspective.
Audience: Undergraduate

2. Analyze the appropriate relationship between religion and state.
Audience: Undergraduate

3. Discuss the implications of the various ways in which the religion-state relationship have been involved in political conflict.
Audience: Undergraduate

RELIG ST/ENGL 434 – MILTON
3 credits.

Study of John Milton's poems and selected prose.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

RELIG ST/ITALIAN/MEDIEVAL 440 – POVERTY, ECOLOGY AND THE ARTS: ST. FRANCIS OF ASSISI
3 credits.

Focuses on literature about Francis of Assisi, from medieval accounts to contemporary literature, and related artistic portrayals of St. Francis as a religious symbol and model for economic, political and environmental justice.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Articulate the significance of Francis of Assisi as a multi-faceted historical, literary and symbolic figure, especially in relation to economic and environmental justice and reform.
Audience: Both Grad & Undergrad

2. Read and assess critically a range of literary genres that employ and depict Francis.
Audience: Both Grad & Undergrad

3. Compare interpretive models of Francis in literature and related artistic media over time and contexts.
Audience: Both Grad & Undergrad

4. Craft cogent written analysis of a literary and religious model such as Francis via selected interdisciplinary methods from religious studies, literary and historical scholarship.
Audience: Both Grad & Undergrad

5. Produce a research paper on a critical aspect of the presentation of Francis in selected works, employing one or more disciplinary approaches covered in the course.
Audience: Graduate

RELIG ST/ASIAN 444 – INTRODUCTION TO SUFISM (ISLAMIC MYSTICISM)
3 credits.

The rise and development of mysticism in Islam; basic Sufi doctrines, values and practices; life and works of important speculative and popular Sufi saints; Sufi brotherhoods in the Middle East, South Asia and North Africa.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

RELIG ST/ASIAN 460 – THE HISTORY OF YOGA
3 credits.

Explores the history of Yoga techniques from the ancient to the modern period. Not open to students with credit for RELIG ST 623 prior to Spring 2019.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1.
Audience: Undergraduate

2.
Audience: Graduate

RELIG ST/AFRICAN/JEWISH/MEDIEVAL 462 — MUSLIMS AND JEWS
3 credits.

Explores the historical relationship between Muslims and Jews in a variety of contexts from the seventh century to the present. Surveys literary and cultural exchanges against the background of shifting political and social conditions across the Middle East, Europe, and the United States. Considers also the parallel legacies of anti-Semitism, Orientalism, and Islamophobia. Major themes include comparative religion, secularization, migration, and colonialism, as well as the politics of history and cultural memory. Introduces readings in English translation of medieval and modern texts originally written across languages, and especially in Hebrew and Arabic.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate contextual knowledge of major historical events, figures, social conditions, religious communities, and geographies of Muslim Iberia (al-Andalus) from the eighth to sixteenth centuries
Audience: Undergraduate

2. Situate al-Andalus in relation to wider developments in politics, culture, and religion of the Middle East and North Africa, from the eighth century to the present
Audience: Undergraduate

3. Understand the terms and conditions that have shaped Muslim-Jewish relations from the seventh century until the present, including frameworks of theology, lived religious experience, and Orientalist representation
Audience: Undergraduate

4. Integrate relevant theoretical frameworks, debates, and conversations regarding the distinction between historical writing and cultural memory
Audience: Undergraduate

5. Discern divergent and contradictory representations of the history of al-Andalus in contemporary memory culture
Audience: Undergraduate

6. Cultivate skills in textual analysis and evaluate a range of formal and structural elements in written and visual materials across genres (philosophy, literature, religion, film) as well as in primary and secondary historical sources
Audience: Undergraduate

7. Generate original ideas and texts, through coherent writing and compelling argumentation, by experimenting and taking risks, solving problems, and answering questions in a range of media
Audience: Undergraduate

RELIG ST/ASIAN 466 — BUDDHIST THOUGHT
3 credits.

Survey of the fundamental trends in Buddhist thought through the works of major philosophers. Themes include the concept of "selflessness" and concomitant theories of essencelessness, perception, language and rationality. Not open to students with credit for E ASIAN or LCA 466 prior to Fall 2019.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020

RELIG ST/ASIAN 473 — MEDITATION IN INDIAN BUDDHISM AND HINDUISM
3 credits.

Examines contemplative practices in the two major Indian religions, Buddhism and Hinduism. Covers practices described in ancient texts but also provides an overview of selected modern practices.
Requisites: Sophomore standing (not open to students with credit for LCA 624 prior to Fall 2019)
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Ability to understand the historical context of meditation practices;
Audience: Undergraduate

2. Explain the complex nature and interdependence of contemporary meditation practices;
Audience: Undergraduate

3. Articulate in writing a critical perspective on practices using evidence as support.
Audience: Undergraduate

RELIG ST 475 – RELIGION, GLOBAL AND PUBLIC HEALTH
3 credits.

Explores health issues and practices in religious communities and their interaction with public health concerns and programs in U.S. and international contexts.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Articulate significances of religion/spirituality for public health and a variety of ways that religious communities, particularly marginalized communities, address health concerns and interact with community health in the U.S. and internationally.
Audience: Undergraduate

2. Read, annotate, assess and employ substantial academic works in religious studies and related areas more productively.
Audience: Undergraduate

3. Employ short writing assignments (preliminary reports, summaries) in reading comprehension and participation in complex group discussion more effectively.
Audience: Undergraduate

4. Apply terminology and analysis in religious studies, public/global health and associated disciplines to health-related contexts and sources.
Audience: Undergraduate

5. Research, produce and present an academic project contributing to the understanding of religion for public/global health.
Audience: Undergraduate

6. Participate in creating informed, collegial, engaging and productive conversation about religion and health concerns.
Audience: Undergraduate

RELIG ST 500 – ADVANCED TOPICS IN RELIGIOUS STUDIES
2-4 credits.

Topics may include religion in specific contexts, religion and other disciplines or specific themes in Religious Studies.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2020

RELIG ST/PHILOS 501 – PHILOSOPHY OF RELIGION
3-4 credits.

Analysis of religious experience and activity, and examination of principal religious ideas in light of modern psychology, philosophy, science, and anthropology.
Requisites: Junior standing or 3 Credits in PHILOS
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

RELIG ST/ASIAN 505 – THE PERFECTIBLE BODY IN RELIGIONS, MEDICINES, AND POLITICS
3 credits.

Looking at the cultural institutions of politics, medicine, and religion in multiple cultures and historical times, students will explore ideas about what constitutes a perfect body, how and why different parts of the body are privileged over others, and how and why the notion of bodily perfectibility differs for men and women, children and adults, and humans and gods. Readings encourage such questions as: Is the perfect body attainable and, if so, how? And, who benefits from bodily perfection (or the rhetoric of the bodily perfection)? We will ask these questions with comparative intent: we want both to learn about cultures other than our own and, in the process of understanding the other, we will ask how this new knowledge might empower us to be more observant and critical of the role(s) and treatment of the body in our own society historically and today.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

RELIG ST/CURRIC/ED POL 516 – RELIGION AND PUBLIC EDUCATION
3 credits.

Examines theories and practices related to the role of religion in public schooling and its accompanying tensions: political and philosophical, practical and personal.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021

RELIG ST/CLASSICS/HISTORY 517 – RELIGIONS OF THE ANCIENT MEDITERRANEAN
3 credits.

Ancient religions in their political, social and cultural contexts; topics include ritual, literary and artistic representations, religious persecutions, and/or modern approaches to the study of ancient religions. Chronological and geographical focus will vary between Greece, Rome, Judaea and Egypt.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate knowledge of Classical and ancient Near Eastern societies and cultures.
Audience: Undergraduate

2. Examine, analyze, and interpret ancient texts in translation and material culture.
Audience: Undergraduate

3. Critique ancient Greek, Roman, and/or Near Eastern societies and cultures and compare them to other societies and cultures.
Audience: Undergraduate

4. Demonstrate knowledge of ancient Mediterranean religions.
Audience: Undergraduate

RELIG ST 600 – RELIGION IN CRITICAL PERSPECTIVE
3 credits.

Theory and analysis of religion as a human phenomenon.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

RELIG ST 601 – SENIOR CAPSTONE RESEARCH AND COLLOQUIUM
4 credits.

Integrated capstone course combining discussion of research methods, conduct of senior thesis research, and presentation and discussion of research results.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023

RELIG ST/ASIAN 650 – PROSEMINAR IN BUDDHIST THOUGHT
2-3 credits.

Advanced topics in theories focused on the mechanisms of contemplative practices such as mindfulness, focused attention and compassion practices, with special emphasis on the interaction of traditional theories from contemplative traditions such as Buddhism and more recent theoretical accounts in psychology and cognitive science.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023

RELIG ST 681 – SENIOR HONORS THESIS
3 credits.

Independent research undertaken by students in the honors program.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025

RELIG ST 682 – SENIOR HONORS THESIS
3 credits.

Independent research undertaken by students in the honors program.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2024

RELIG ST 699 – DIRECTED STUDY
1-4 credits.

Advanced directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

RELIG ST 799 – INDEPENDENT RESEARCH
1-6 credits.

Independent research for graduate students.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

RELIG ST 999 – INDEPENDENT WORK
1-6 credits.

Individual tutorial on topics in religious studies.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2020

RISK MANAGEMENT AND INSURANCE (R M I)

R M I 300 – PRINCIPLES OF RISK MANAGEMENT
3 credits.

Nature of risk, principal techniques of risk management, including insurance markets, and the bases for decision-making in managing risk effectively.
Requisites: (ECON 101 or 111) or declared in undergraduate Business Exchange program. Not open to graduate/professional students
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize the general types and characteristics of situations involving risk, how to identify them, and why they are important
Audience: Undergraduate

2. Possess the skills and knowledge to measure and assess risk
Audience: Undergraduate

3. Know the basics of how risk management tools work and their benefits/costs in any given situation
Audience: Undergraduate

4. Apply the risk management process in a simple situation involving risk
Audience: Undergraduate

5. Explain the value that sound risk management provides individuals, organizations, and society
Audience: Undergraduate

R M I 365 – CONTEMPORARY TOPICS
1-3 credits.

Exploration of subject areas possibly to be introduced into the business curriculum.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

R M I 399 – READING AND RESEARCH-RISK MANAGEMENT
1-6 credits.

Individual work suited to the needs of undergraduate students may be arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

R M I/ECON 530 – INSURING LIFE'S RISKS: HEALTH, AGING, AND POLICY
3 credits.

Covers risks related to health and aging, rationales for social insurance programs to protect against these risks, and costs and benefits of these programs. Broad topics include health insurance, disability insurance, and Social Security and pension policy.
Requisites: (ECON 301 or 311) and ECON 310; or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe and interpret models of risk and insurance
Audience: Undergraduate

2. Identify and interpret the basic features (and rationales) of major US social insurance programs related to health and aging
Audience: Undergraduate

3. Apply knowledge from Learning Outcomes 1 and 2 to be able to critique and evaluate the merits of recent research articles
Audience: Undergraduate

R M I 620 – EMPLOYEE BENEFITS MANAGEMENT
3 credits.

Nongovernmental schemes for treating the risks of superannuation of members of a group; property, liability, legal expense, life and health coverages available to groups; organizational characteristics, benefit structure and pricing of risk transfer schemes for groups; characteristics and funding of various types of pension plans; effects of ERISA.
Requisites: R M I 300 or graduate standing or declared in the Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2022

R M I 635 – CAPTIVE INSURANCE
1-2 credits.

Examines how captive insurance works, the different structures of captives, and advantages and disadvantages of their use in various settings. In addition, the captive feasibility process, as well as techniques for measuring financial performance, will be covered.
Requisites: R M I 300, 700, or declared in the Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Summarize the advantages and disadvantages of captives
Audience: Both Grad & Undergrad

2. Explain how captives financially and operationally work
Audience: Both Grad & Undergrad

3. Differentiate the types of captive structures
Audience: Both Grad & Undergrad

4. Manage a captive feasibility study
Audience: Both Grad & Undergrad

5. Conduct analyses to choose a captive domicile and select service providers
Audience: Both Grad & Undergrad

6. Design a captive
Audience: Both Grad & Undergrad

7. Summarize complex concepts, present information succinctly and with logical flow, respond effectively to questions, and listen to critiques
Audience: Graduate

R M I 636 – INSURER FINANCIAL STATEMENT ANALYSIS AND CAPTIVE INSURANCE
1-3 credits.

Comprehensive overview of insurer financial statement analysis and captive insurance. Examine the construction of insurer financial statements, including premiums, expenses, and losses. Financial statement analysis focusing on the statutory statement with differences from GAAP highlighted. Assess captive insurance, covering its structures, feasibility studies, and financial performance measurement.
Requisites: (R M I 300 or 700) or declared in undergraduate Business Exchange Program. Not open to students with credit for R M I 635.
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain the construction of insurer financial statements.
Audience: Undergraduate

2. Analyze insurer financial statements to assess an insurer's strategy and solvency.
Audience: Undergraduate

3. Summarize the advantages and disadvantages of captive insurance.
Audience: Undergraduate

4. Conduct a captive feasibility study of captive insurance, including actuarial loss projections and financial pro formas.
Audience: Undergraduate

5. Differentiate between various captive structures and domiciles.
Audience: Undergraduate

R M I 637 – REINSURANCE
1 credit.

Focuses on reinsurance, a key component to the successful implementation of the insurance mechanism. Provides exposure to the types and uses of reinsurance, its specific regulatory requirements, how it affects and is affected by primary insurance, and general market mechanisms.
Requisites: R M I 300 or 700
Repeatable for Credit: No

R M I 640 – MANAGEMENT OF INSURANCE ENTERPRISE
3 credits.

Functional analysis of the operations of insurance organizations; legal organization, marketing systems, management and control, underwriting, rating, financial analysis, rate making and regulation.
Requisites: (R M I 300 or 700) or declared in the Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the economic role of insurance in society through various coverages.
Audience: Undergraduate

2. Explain the major technical functions that exist within an insurance company.
Audience: Undergraduate

3. Demonstrate how insurers utilize risk aggregation as the centerpiece of their operations.
Audience: Undergraduate

4. Utilize insurer data and extract information from insurer financial statements.
Audience: Undergraduate

5. Present an analysis in a confident, organized, and coherent manner.
Audience: Undergraduate

R M I 645 – COMMERCIAL INSURANCE
3 credits.

Consideration of the structure, use, benefits, and limitations of corporate insurance products. Fundamental to the material is the economic underpinning of the insurance contract structure. The major commercial property and liability insurance products will be analyzed in detail with the purpose of illustrating these economic principles and applying them to specific organizational situations.
Requisites: (R M I 300 or 700) or declared in the Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and evaluate risk management issues associated with property and liability exposures.
Audience: Undergraduate

2. Anticipate the types of risks that can be transferred effectively through commercial insurance products.
Audience: Undergraduate

3. Articulate the reasons why commercial insurance products are frequently constructed as they are.
Audience: Undergraduate

4. Analyze loss situations and explain why or why not that situation is covered by commercial insurance.
Audience: Undergraduate

R M I 650 – SUSTAINABILITY, ENVIRONMENTAL AND SOCIAL RISK MANAGEMENT
2-3 credits.

The assessment, control, financing and management of risks deriving from pressures on and damages to the environment, workers and local/foreign communities. Risks include liability and directors and officers law suits, boycotts, regulations and competitors' actions.
Requisites: Junior standing
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the manner and extent to which organizations and individuals contribute to degradation of the world's ecosystems, including a historical perspective
Audience: Undergraduate

2. Recognize legal obligations of organizations and individuals in protecting the environment and conducting business as it relates to workers, customers, and the community at large
Audience: Undergraduate

3. Compare methods to identify, evaluate, and manage risks associated with environmental and social justice issues
Audience: Undergraduate

4. Evaluate organizations' sustainability risk management strategies
Audience: Undergraduate

5. Design effective sustainability risk management strategies
Audience: Undergraduate

6. Demonstrate that investment in sustainability risk management is value enhancing (that is, make the business case for it)
Audience: Undergraduate

R M I 655 – RISK FINANCING TECHNIQUES
3 credits.

Study of advanced risk management tools and markets for financing loss costs. Topics include: insurance, self-insurance, retrospective premium plans, risk retention and purchasing groups, reinsurance, insurance subsidiaries (captives), and other policyholder-owned facilities.
Requisites: (R M I 300 or graduate/professional standing) and (GEN BUS 306, 704, ECON 310, STAT/MATH 309, 431, or MATH 331), and (FINANCE/ECON 300 or FINANCE 700), or declared in the Business Exchange program
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the objective of risk management for corporations, and summarize and interpret how risk management creates value for corporations
Audience: Undergraduate

2. Apply the enterprise risk management process for a corporation
Audience: Undergraduate

3. Use statistical tools (regression, Value-at-Risk, and simulation analysis) to quantify and analyze risk exposures and how they impact the value of a corporation
Audience: Undergraduate

4. Classify and differentiate the institutions, contracts, and strategies available to finance risks
Audience: Undergraduate

5. Evaluate the potential risks to a corporation and generate recommendations regarding the risk management strategy that leads to the greatest increase in corporate value
Audience: Undergraduate

R M I 660 – RISK ANALYTICS AND BEHAVIORAL SCIENCE
3 credits.

Learning to effectively navigate uncertainty is a key issue for all areas of business and especially for those engaged in explicit risk-management activities. The skills for success in these environments include knowing how to formulate the right questions to ask, how to identify the information that is valuable for answering those questions, understanding how to process incoming information to distinguish signal from noise, and how to use that information to put structure to uncertain environments so that one can take good calculated risks. This collective set of skills are at the heart of "decision analysis", which is a structured rational approach to making decisions under uncertainty.
Requisites: (R M I 300 or graduate/professional standing) and (GEN BUS 306, 704, 705, ECON 310, MATH/STAT 309, 431, or MATH 331), or declared in the Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize situations where potential biases in perceptions, understanding, and decisions related to risk management are likely to arise
Audience: Both Grad & Undergrad

2. Articulate the behavioral factors and psychological processes that may generate bias in that situation
Audience: Both Grad & Undergrad

3. Employ appropriate decision/evaluation process and business analytics to help improve decisions in the face of potential bias. These techniques include Monte Carlo Simulation, Decision Tree Analysis, and Expected Value Maximization
Audience: Both Grad & Undergrad

4. Diagnose risk management failures for corporations and suggest techniques and alternative management approaches that could mitigate these risk management issues
Audience: Graduate

R M I 670 – CYBER RISK & REGULATIONS
2-3 credits.

Defines cyber risk and studies prominent case examples to become familiar with the many challenges it poses. Includes an in-depth look at the current state of data privacy law both in the US and globally. Establishes a framework and some basic methods to quantify cyber risk. Explores current cyber risk management options in the market including the implementation of internal risk controls as well as options in the burgeoning market for cyber insurance.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and evaluate exposures, perils, and hazards of cyber risk that companies face
Audience: Both Grad & Undergrad

2. Assess cyber risk and employ basic measurement frameworks
Audience: Both Grad & Undergrad

3. Comply with cyber laws and regulations across geographies with legal exposure
Audience: Both Grad & Undergrad

4. Implement behavioral risk controls to manage the human side of cyber risk
Audience: Both Grad & Undergrad

5. Analyze available cyber risk management options for most efficient use of capital
Audience: Both Grad & Undergrad

6. Explain current cyber risk transfer options in the market
Audience: Both Grad & Undergrad

7. Analyze company cyber risk practices from an enterprise risk perspective
Audience: Graduate

8. Apply a multidisciplinary approach to design organizational data privacy policies
Audience: Graduate

9. Negotiate strategic business contracts with an understanding of rapidly developing data privacy law and compliance
Audience: Graduate

R M I 700 – PRINCIPLES OF RISK MANAGEMENT
3 credits.

Nature of risk, principal techniques of risk management, including insurance markets, and the bases for decision-making in managing risk effectively.
Requisites: Graduate/professional standing. Not open to students with credit for R M I 300
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize the general types and characteristics of situations involving risk, how to identify them, and why they are important
Audience: Graduate

2. Explain risk preferences and how they impact risk management decisions
Audience: Graduate

3. Apply the risk management process in a situation involving risk
Audience: Graduate

4. Use statistical tools to value, summarize, and analyze risk
Audience: Graduate

5. Differentiate the methods for managing risk: avoidance, risk control, retention, and transfer
Audience: Graduate

6. Judge the effectiveness of a risk management technique for particular risk or portfolio of risks
Audience: Graduate

7. Use statistical tools to demonstrate the benefits of risk pooling
Audience: Graduate

8. Explain the value that sound risk management provides individuals,organizations and society
Audience: Graduate

R M I 705 – RISK MANAGEMENT AND TECHNOLOGIES IN A DIGITAL AGE
3 credits.

Develop insight into the principles of risk management, including institutions engaged in identifying, assessing, preventing, mitigating, and transferring risk. Specific focus is given to how the digitization of data, technology, and analytics are creating a new risk landscape, and how conventional risk management approaches can adapt to meet these emerging business needs.
Requisites: Graduate/professional standing. Not open to students with credit for R M I 300 or 700.
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain risk, including differentiation from uncertainty, and frameworks for risk mitigation and management.
Audience: Graduate

2. Assess, quantify, and categorize emerging risk factors associated with the digital landscape, and how conventional management and mitigation strategies will have to adjust.
Audience: Graduate

3. Anticipate how insurance and risk management operations, institutions, markets, and regulation will evolve due to digital transformation.
Audience: Graduate

4. Support the development of novel risk management, mitigation, and transfer solutions supported by digital technology.
Audience: Graduate

R M I 710 – RISK MANAGEMENT
2 credits.

The purpose of risk management is to minimize the adverse consequences of variability. Topics include the general philosophy of risk management, environmental factors affecting risk, options to manage risk, and decision processes to select among those options.
Requisites: Graduate Students Only
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

R M I 765 – CONTEMPORARY TOPICS
1-4 credits.

Exploration of advanced subject areas possibly to be introduced into the business curriculum.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

R M I 799 – READING AND RESEARCH-RISK MANAGEMENT
1-6 credits.

Individual work suited to the needs of graduate students may be arranged.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

R M I 820 – ADVANCED TOPICS IN RISK MANAGEMENT
3 credits.

Examination of data collection and analysis methods for risk management decisions. Analysis of qualitative and quantitative data to support transfer, retention, and loss control decisions, including loss trending, and evaluation of regulatory controls.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply complex risk management and insurance concepts to solve real world business challenges.
Audience: Graduate

2. Demonstrate analytical and problem-solving skills.
Audience: Graduate

3. Exhibit capabilities to interact effectively with industry leaders.
Audience: Graduate

4. Deploy skills in leadership, project management, teamwork, communication, analytics, and strategy.
Audience: Graduate

5. Apply course concepts to a project with a large organization and present results to the client.
Audience: Graduate

R M I 875 – SEMINAR-RISK MANAGEMENT AND INSURANCE
3 credits.

Applied learning in risk management and insurance.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Apply risk management and insurance concepts within an actual business context.
Audience: Graduate

2. Demonstrate analytical and problem-solving skills.
Audience: Graduate

3. Exhibit capabilities to interact effectively with industry members.
Audience: Graduate

4. Deploy skills in leadership, project management, teamwork, communication, analytics, and strategy.
Audience: Graduate

5. Apply course concepts to a project with a large organization and present results to the client.
Audience: Graduate

R M I 920 – SEMINAR IN ACTUARIAL SCIENCE, RISK MANAGEMENT & INSURANCE I
3 credits.

Doctoral seminar in actuarial science, risk management and insurance with emphasis on developing an appreciation of existing literature and appropriate skills to conduct own scholarly work in the field.
Requisites: Graduate/professional standing or declared in graduate Business Exchange program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze and critique existing literature in actuarial science, risk management and insurance.
Audience: Graduate

2. Develop skills to conduct scholarly work that makes significant contributions to the body of knowledge in the field.
Audience: Graduate

R M I 990 – RISK & INSURANCE INDEPENDENT RESEARCH PHD THESIS
1-12 credits.

Individual work to complete dissertation requirement of Ph.D. program.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

R M I 999 – READING AND RESEARCH-RISK MANAGEMENT AND INSURANCE PHD
1-6 credits.

Individual work suited to the needs of Ph.D. students may be arranged.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

SCANDINAVIAN STUDIES (SCAND ST)

SCAND ST 101 – FIRST SEMESTER NORWEGIAN
4 credits.

For beginning learners of Norwegian; emphasis on proficiency through speaking, listening, reading, and writing, and on communication in cultural context.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

SCAND ST 102 – SECOND SEMESTER NORWEGIAN
4 credits.

For beginning learners of Norwegian; emphasis on proficiency through speaking, listening, reading, and writing, and on communication in cultural context.
Requisites: SCAND ST 101
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

SCAND ST 111 – FIRST SEMESTER SWEDISH
4 credits.

For beginning learners of Swedish; emphasis on proficiency through speaking, listening, reading, and writing, and on communication in cultural context.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

SCAND ST 112 – SECOND SEMESTER SWEDISH
4 credits.

For beginning learners of Swedish; emphasis on proficiency through speaking, listening, reading, and writing, and on communication in cultural context.
Requisites: SCAND ST 111
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025

SCAND ST 121 – FIRST SEMESTER DANISH
4 credits.

For beginning learners of Danish; emphasis on proficiency through speaking, listening, reading, and writing, and on communication in cultural context.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

SCAND ST 122 – SECOND SEMESTER DANISH
4 credits.

For beginning learners of Danish; emphasis on proficiency through speaking, listening, reading, and writing, and on communication in cultural context.
Requisites: SCAND ST 121
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

SCAND ST 131 – FIRST SEMESTER FINNISH
4 credits.

For beginning learners of Finnish; emphasis on proficiency through speaking, listening, reading, and writing, and on communication in cultural context.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

SCAND ST 132 – SECOND SEMESTER FINNISH
4 credits.

For beginning learners of Finnish; emphasis on proficiency through speaking, listening, reading, and writing, and on communication in cultural context.
Requisites: SCAND ST 131
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023

SCAND ST 201 – SECOND YEAR NORWEGIAN
4 credits.

Reading of selections from Norwegian writers, grammar review and conversation.
Requisites: SCAND ST 102
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Communicate in intermediate language (increasingly complex conversations and short essays) through speaking and writing.
Audience: Undergraduate

2. Comprehend spoken and written texts in Norwegian, including a novel.
Audience: Undergraduate

3. Explore the intersections of language and culture in a Norwegian and Scandinavian context.
Audience: Undergraduate

4. Learn about various aspects of Norwegian culture, including how these compare to an American context.
Audience: Undergraduate

5. Develop strategies for studying language, which may apply to other fields of study.
Audience: Undergraduate

6. Deepen an understanding of language as a system, increasing appreciation for language in general, including their own language(s).
Audience: Undergraduate

SCAND ST 202 – SECOND YEAR NORWEGIAN
4 credits.

Rapid reading of suitable Norwegian texts by modern writers.
Requisites: SCAND ST 201
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

SCAND ST 211 – SECOND YEAR SWEDISH
4 credits.

Reading of selections from Swedish writers, grammar review and conversation.
Requisites: SCAND ST 112
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

SCAND ST 212 – SECOND YEAR SWEDISH
4 credits.

Reading of selections from Swedish writers, grammar review and conversation.
Requisites: SCAND ST 211
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

SCAND ST 221 – SECOND YEAR DANISH
4 credits.

Reading of selections from Danish writers, grammar review and conversation.
Requisites: SCAND ST 122
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

SCAND ST 222 – SECOND YEAR DANISH
4 credits.

Reading of selections from Danish writers, grammar review and conversation.
Requisites: SCAND ST 221
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

SCAND ST/FOLKLORE/MEDIEVAL 235 – THE WORLD OF SAGAS
3 credits.

The Icelandic sagas viewed in their social, cultural, and literary contexts. An introduction to one of the greatest bodies of vernacular literature of the early Middle Ages.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize, describe and analyze shifting geographic, cultural, and ethnic/racial factors in the Northern European region during the Viking Age, and put it into context
Audience: Undergraduate

2. Identify and distinguish between different types of sources used in the study of the Nordic region during the Viking Age
Audience: Undergraduate

3. Demonstrate a general understanding of major scholarly approaches, concepts and current research findings concerning the Nordic region during the Viking Age
Audience: Undergraduate

4. Synthesize information, engage in discussion and research, and argue persuasively about key topics in the Nordic region during the Viking Age
Audience: Undergraduate

5. Analyze the connections between images of the Vikings Age and the wider workings of modern culture
Audience: Undergraduate

6. Guide, mentor and support peers to achieve excellence in practice of the discipline
Audience: Undergraduate

7. Work in multi-disciplinary teams to analyze the cultural material from various disciplinary points of view
Audience: Undergraduate

SCAND ST 250 – INTRODUCTION TO SCANDINAVIA
3 credits.

Provides an introductory survey of Scandinavia and Northern Europe. Approaches the source material by focusing on concepts such as environment and sustainability, nation, migration, diversity, family, childhood, happiness, and melancholy. Learn about modern and contemporary Northern European cultures through literature, film, television, music, and other media from Norway, Denmark, Sweden, Iceland, Finland, Sápmi, or the Baltic countries.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. gain a knowledge of contemporary Scandinavian, Northern Europe, and the Baltic region in a broad cultural, literary and social context
Audience: Undergraduate

2. interpret specific literary texts, major figures, and ideas in Northern European cultures
Audience: Undergraduate

3. develop skills for interpreting and writing about literary texts, films, and other media
Audience: Undergraduate

4. investigate the Nordic and Baltic countries' roles and contributions as small nations in a globalizing world
Audience: Undergraduate

SCAND ST 251 – READINGS IN NORWEGIAN LITERATURE
3-4 credits.

Prose, poetry, and drama read in Norwegian. Taught extensively in Norwegian.
Requisites: SCAND ST 202
Course Designation: Breadth - Literature. Counts toward the Humanities req
Frgn Lang - 5th + semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SCAND ST 261 – READINGS IN SWEDISH LITERATURE
3-4 credits.

Prose, poetry, and drama read in Swedish. Taught extensively in Swedish.
Requisites: SCAND ST 212
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SCAND ST 271 – READINGS IN DANISH LITERATURE
3-4 credits.

Prose, poetry, and drama read in Danish. Taught extensively in Danish.
Requisites: SCAND ST 222
Course Designation: Breadth - Literature. Counts toward the Humanities req
Frgn Lang - 5th + semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2022

SCAND ST 276 – CULTURE & COMMUNITY IN SCANDINAVIA
3 credits.

An extensive, wide-ranging introduction to the cultures of and community in the Scandinavian and Nordic Countries. Through a diverse series of guest lectures and discussions, explore the culture, arts, geography, history, religion, languages, music, literature, politics etc. of the Scandinavian countries.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2019
Learning Outcomes: 1. Gain the ability to identify and understand the various categories of information given about Scandinavia.
Audience: Undergraduate

2. Analyze and discuss the important features of the categories of information presented.
Audience: Undergraduate

3. Compose and produce writing that applies the concepts introduced to describe, analyze, and differentiate the categories, knowledge, and readings in the class.
Audience: Undergraduate

4. Place Scandinavia in a historical context from Early Stone Age to Contemporary Times.
Audience: Undergraduate

5. Demonstrate profound knowledge of The Scandinavian Countries in a cultural, historical, political, financial, literary, artistic, educational, and diverse setting.
Audience: Undergraduate

SCAND ST 299 – DIRECTED STUDY
1-3 credits.

Directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

SCAND ST/LITTRANS 320 – THE NORDIC CHILD
3 credits.

Astrid Lindgren's Pippi Longstocking is an icon of childhood in the Nordic countries and beyond. Pippi has come to symbolize the Nordic "autonomous" child par excellence. Takes up a diverse selection of books and films that represent both the common ideas of the Nordic Child, as well as various elaborations of and exceptions to the idealized norm. Examines a number of the prevalent forms and themes in Nordic children's culture, such as nature, play, school, sexuality, death, loss, and storytelling.
Requisites: Satisfied Communications A requirement or graduate/ professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate an informed understanding of diverse Nordic childhoods and how these are represented in a variety of texts.
Audience: Both Grad & Undergrad

2. Build and show skills of creative and critical thinking, historical thinking, and literary and media analysis through class discussion, short writing assignments, and formal papers.
Audience: Both Grad & Undergrad

3. Develop and demonstrate skills of literary analysis by interpreting texts in multiple genres--including novels, tales, and short stories--in class discussion and especially in writing.
Audience: Both Grad & Undergrad

4. Demonstrate and apply knowledge of current scholarship in the fields of children's literature, childhood studies, and Nordic literary studies in class discussion and formal papers.
Audience: Graduate

SCAND ST/ILS/LITTRANS 321 – HUMANS AND OTHER ANIMALS IN NORDIC LITERATURE AND FILM
3 credits.

Engage with major questions in the field of animal studies while studying a variety of Nordic texts that center the animal, including novels, tales, and feature and documentary films. Through fiction, film, and theory, tackle questions such as: What distinguishes humans from animals? Can humans speak for animals, and should they try? And, what can Nordic literature and film teach us about humans and other animals in the Anthropocene?
Requisites: Satisfied Communications A requirement or graduate/ professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Identify and critically engage with major questions in the field of animal studies in a Nordic context in class discussion, in writing assignments, and on exams.
Audience: Both Grad & Undergrad

2. Interpret film and literature in their cultural and historical contexts in class discussion, in writing assignments, and on exams.
Audience: Both Grad & Undergrad

3. Analyze literature and film in multiple genres--including novels, tales, and feature and documentary films--in formal papers.
Audience: Both Grad & Undergrad

4. Synthesize, interpret, and respond to current scholarship in the fields of Nordic literary studies, film studies, and animal studies in formal papers.
Audience: Graduate

SCAND ST/FOLKLORE/MEDIEVAL/RELIG ST 342 – NORDIC MYTHOLOGY
3 credits.

Mythology, literature, ritual, traditions, medieval folklore, and religion from Nordic areas and Scandinavia.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize, describe and analyze cultural phenomena, specifically pre-Christian Nordic Religion, and put it into context.
Audience: Undergraduate

2. Demonstrate an understanding of the major theories, approaches, concepts and current research findings concerning medieval Nordic mythology and religion.
Audience: Undergraduate

3. Synthesize the written and material information and use insight and creativity to demonstrate an understanding of the knowledge base from the field.
Audience: Undergraduate

4. Communicate effectively through written essays, oral presentations and discussion.
Audience: Undergraduate

5. Retrieve, analyze, and interpret the professional and lay literature providing information to both professionals and public.
Audience: Undergraduate

6. Guide, mentor and support peers to achieve excellence in practice of the discipline.
Audience: Undergraduate

7. Work in multi-disciplinary teams to analyze the cultural material from various disciplinary points of view
Audience: Undergraduate

SCAND ST/FOLKLORE/LITTRANS/MEDIEVAL 345 – THE NORDIC STORYTELLER
3 credits.

Exploring the oral nature and performance traditions of folklore, ethnography, tales and ballads, literature and culture from Nordic areas and Scandinavia.
Requisites: Satisfied Communications A requirement
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize, describe and analyze cultural phenomena, specifically Nordic Narrative, and put it into context.
Audience: Undergraduate

2. Demonstrate an understanding of the major theories, approaches, concepts and current research findings concerning Nordic Narrative and folklore studies.
Audience: Undergraduate

3. Synthesize the written and material information and use insight and creativity to demonstrate an understanding of the knowledge base from the field.
Audience: Undergraduate

4. Communicate effectively through written essays, oral presentations and discussion.
Audience: Undergraduate

5. Retrieve, analyze, and interpret the professional and lay literature providing information to both professionals and public.
Audience: Undergraduate

6. Work in multi-disciplinary teams to analyze the cultural material from various disciplinary points of view.
Audience: Undergraduate

SCAND ST 348 – THE SECOND WORLD WAR IN NORDIC CULTURE
3 credits.

How have the wartime issues of occupation, resistance, collaboration, neutrality, and the Holocaust been addressed in Nordic culture? During the Second World War, Norway and Denmark were invaded and occupied by Nazi Germany, while Sweden remained neutral and Finland fought against the Soviet Union. Resistance movements developed in the occupied countries, but some Norwegians and Danes collaborated with the occupying power and were tried for treason after the war. Become familiar with the basic history of the period by reading texts of various sorts (essays, novels, diaries, poetry, memoir) that were written during the war years and since. Through analyzing films and works of fiction, in addition to historical writing, learn how the Second World War and the Holocaust have been represented and remembered in the Nordic countries.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Explain the history of the Nordic region during the Second World War, including the key differences between the war experiences of each Nordic country
Audience: Both Grad & Undergrad

2. Analyze literary, historical, and cultural texts in terms of how they address and represent issues such as occupation, collaboration, resistance, neutrality, Nazism, and the Holocaust
Audience: Both Grad & Undergrad

3. Interpret how films and memoirs reflect and embody cultural memories of war and occupation, and how they address social and historical issues related to the Second World War
Audience: Both Grad & Undergrad

4. Conduct research about the Second World War, the Holocaust, and the Nordic countries using English-language sources
Audience: Both Grad & Undergrad

5. Conduct research about the Second World War, the Holocaust, and the Nordic countries using Nordic-language sources (Swedish, Danish, Norwegian, or Finnish)
Audience: Graduate

SCAND ST 355 – AUTOBIOGRAPHY
3 credits.

Investigate the genre of autobiography in historical, cultural, and literary contexts, with a highlight of Nordic authors. Analyze autobiographical writing in the context of race, ethnicity, gender, and sexuality, while problematizing concepts such as "fiction," "truth" and "self."
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Explain autobiography as a genre in a historical, a cultural, and a literary context.
Audience: Both Grad & Undergrad

2. Apply theoretical terms to the analysis of autobiographies and autobiographical acts.
Audience: Both Grad & Undergrad

3. Historicize and contextualize concepts such as “fiction” “self” and “truth.”
Audience: Both Grad & Undergrad

4. Analyze the complex relationship between form and content.
Audience: Both Grad & Undergrad

5. Interpret autobiography in relation to gendered and racialized myths and models of national identity.
Audience: Both Grad & Undergrad

6. Understand how autobiography pervades contemporary culture across media and materialities.
Audience: Both Grad & Undergrad

7. Enter into dialogue with autobiographical theory and conduct independent research on autobiographical writing.
Audience: Graduate

SCAND ST 373 – MASTERPIECES OF SCANDINAVIAN LITERATURE: FROM THE MIDDLE AGES TO 1900
3-4 credits.

During the late Middle Ages, Scandinavian literature reached its first high point: The Old Norse sagas and poems. Study Scandinavian literature from the sagas to the prose and drama of the golden age of the late 19th century.
Requisites: SCAND ST 202, 212, or 222
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2019

SCAND ST 374 – MASTERPIECES OF SCANDINAVIAN LITERATURE: THE TWENTIETH CENTURY
3-4 credits.

Through a selection of short texts, novels, and plays, we'll be learning from some of the best: Nobel Laureates (Knut Hamsun, Pär Lagerkvist), medical doctors (P.C. Jersild), and other provocateurs (August Strindberg, Isak Dinesen, Ingmar Berman, Peter Hoeg, and the rest).
Requisites: SCAND ST 202, 212, or 222
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

SCAND ST 401 – CONTEMPORARY SCANDINAVIAN LANGUAGES
3 credits.

Intensive work in spoken and written Danish, Norwegian, and Swedish, based on contemporary readings.
Requisites: SCAND ST 251, 261, 271, or graduate/professional standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

SCAND ST 404 – LANGUAGES OF NORTHERN EUROPE
2-4 credits.

Introduction to languages of Northern Europe not covered by other department courses (e.g., Sami, Estonian). Practice in language, accompanied by introduction to grammar, culture, and literature. Other language-related topics offered occasionally; check timetable for details.
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SCAND ST/MEDIEVAL 407 – INTRODUCTORY OLD NORSE
3 credits.

Designed with a linguistic purpose: to obtain a reading knowledge of Old Norse-Icelandic through the study of Old Icelandic grammar and selections of Old Norse-Icelandic texts.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Demonstrate a basic understanding of Old Norse-Icelandic phonology and grammar with a focus on nominal and verbal inflection.
Audience: Undergraduate

2. Read and understand basic Old Norse-Icelandic texts in normalized editions and access more challenging texts with the help of a dictionary.
Audience: Undergraduate

3. Identify the characteristic features of the various genres of Old Norse-Icelandic texts.
Audience: Undergraduate

SCAND ST/MEDIEVAL 408 – INTERMEDIATE OLD NORSE
3 credits.

Designed with a linguistic purpose: to obtain a reading knowledge of Old Norse-Icelandic through the study of Old Icelandic grammar and selections of Old Norse-Icelandic texts.
Requisites: SCAND ST/MEDIEVAL 407
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate sufficient knowledge of Old Norse-Icelandic grammar and vocabulary to read Old Norse- Icelandic texts.
Audience: Undergraduate

2. Read and understand basic Old Norse-Icelandic texts in normalized editions and access more challenging texts with the help of a dictionary.
Audience: Undergraduate

SCAND ST/MEDIEVAL 409 – SURVEY OF OLD NORSE-ICELANDIC LITERATURE
3 credits.

Eddic and skaldic poetry; homilies and saints' lives, kings' sagas, sagas of the Icelanders; mythical-heroic sagas and romances; rimur.
Requisites: MEDIEVAL/SCAND ST 407 or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

SCAND ST 410 – INTRODUCTION TO SCANDINAVIAN LINGUISTICS
3 credits.

Scandinavia as a linguistic area. The main historical developments and structural features of the Scandinavian languages.
Requisites: Graduate/professional standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

SCAND ST 411 – AREAS IN SCANDINAVIAN LITERATURE
1 credit.

Concentrated study of topics within Scandinavian literature.
Requisites: SCAND ST 251, 261, 271, or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SCAND ST 415 – HISTORY OF THE SCANDINAVIAN LANGUAGES II: STANDARD LANGUAGES
3 credits.

Study of Scandinavian languages from the early Scandinavian period to the present day.
Requisites: Graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022

SCAND ST 419 – SCANDINAVIAN CHILDREN'S LITERATURE
4 credits.

Forms and themes of Scandinavian children's literature from the nineteenth century to the present. Exploration of the dominant concerns of authors, adult and non-adult audiences. Film adaptations and Scandinavian-American materials included.
Requisites: Junior standing and SCAND ST 202, 212, or 222, or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

SCAND ST 421 – ADVANCED TOPICS IN NORDIC STUDIES
1-3 credits.

Study of topics in Nordic and Nordic-American history, culture, and/or folklore.
Requisites: Junior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2019

SCAND ST 422 – THE DRAMA OF HENRIK IBSEN
4 credits.

Intensive study of dramatic production and the part played by Ibsen as the founder of modern drama.
Requisites: SCAND ST 202, 212, 222 or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022

SCAND ST 424 – NINETEENTH-CENTURY SCANDINAVIAN FICTION
3-4 credits.

Readings in such authors as Hans Christian Andersen, Steen Steensen Blicher, C.J.L. Almquist, Alexis Kivi, Bjornstjerne Bjornson, Jonas Lie, Alexander Kielland, Jens Peter Jacobsen, Henrik Pontoppidan, August Strindberg, Selma Lagerlof, and Johs V. Jensen.
Requisites: SCAND ST 202, 212, 222 or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

SCAND ST 426 – KIERKEGAARD AND SCANDINAVIAN LITERATURE
3 credits.

An introduction to Danish philosopher Søren Kierkegaard and existentialism in Scandinavian literature. An overview into Kierkegaard's work in translation and his influence on a number of Scandinavian writers from the 19th century to the 21st.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Explain the basic tenet of Kierkegaard's philosophy
Audience: Both Grad & Undergrad

2. Apply his philosophy to the reading of other writers.
Audience: Both Grad & Undergrad

3. Historicize existentialism.
Audience: Both Grad & Undergrad

4. Analyze literary works with an existential perspective.
Audience: Both Grad & Undergrad

5. Interpret discourses of existentialism across different medias.
Audience: Both Grad & Undergrad

6. Enter into dialogue with existing Kierkegaard scholarship and conduct independent research on literary existentialism.
Audience: Graduate

SCAND ST 427 – CONTEMPORARY SCANDINAVIAN LITERATURE
4 credits.

Twentieth-century literary traditions and experiments, with attention to major movements, genres, and authors.
Requisites: SCAND ST 202, 212, 222 or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2020

SCAND ST/LITTRANS 428 – MEMORY AND LITERATURE FROM PROUST TO KNAUSGARD
3 credits.

Investigates the relations between theories of memory, both individual and collective, and modern literary representations of remembering. Survey seminal conceptions of memory in the interdisciplinary field of memory studies, investigating topics such as nostalgia, trauma, personal and cultural identity, war and Holocaust, sites of memory, and autobiographical narrative. Through the avenues opened up by these theoretical frameworks, consider the narrative forms as well as the ethical and political dimensions of remembering in major novels by Marcel Proust, W. G. Sebald, and Karl Ove Knausgard.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2019

SCAND ST/MEDIEVAL 430 – THE VIKINGS
4 credits.

Within a historical framework, a thorough introduction to the culture, literature, and religion of the Vikings.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2022

SCAND ST/HISTORY 431 – HISTORY OF SCANDINAVIA TO 1815
3 credits.

Political, social, economic, and cultural developments of Scandinavia through the "Viking Age" to the break-up of Sweden-Finland and Denmark-Norway; emphasis on the interplay between social and political forces and institutions and the area's relationship with the rest of Europe.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

SCAND ST/HISTORY 432 – HISTORY OF SCANDINAVIA SINCE 1815
3 credits.

Political, social, economic, and cultural development: political realignments and rise of nationalism, industrialization and rise of liberalism and socialism, democratization, independence struggles and social conflict, evolution of welfare states, World War II and its aftermath.
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain the significance of major historical events, figures, processes, and periods in the Nordic region since 1815.
Audience: Both Grad & Undergrad

2. Analyze modern and contemporary Scandinavian culture, politics, and society from an informed historical perspective.
Audience: Both Grad & Undergrad

3. Interpret historical information, engage in discussion and debate, and argue persuasively about significant topics in the Nordic history.
Audience: Both Grad & Undergrad

4. Graduate students will be able to do all of the above with reference to a larger amount of academic scholarship and secondary literature written in both English and the Nordic languages.
Audience: Graduate

SCAND ST 434 – THE ART OF ISAK DINESEN/KAREN BLIXEN
4 credits.

Blixen's tales and biographical fiction; themes of gender, power, dreams, and love.
Requisites: SCAND ST 202, 212, 222 or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023

SCAND ST/LITTRANS 435 – THE SAGAS OF ICELANDERS IN ENGLISH TRANSLATION
3 credits.

The prose narratives of medieval Iceland. Gain an understanding of saga literature as a genre and of the cultural history of Iceland in the Viking Era and the Middle Ages, based on the interplay between pagan codes of honor and Christian ethics. In addition, gain an understanding of the methodological problems involved in studying sagas as historical documents.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Demonstrate understanding of approaches, concepts, and current and classical findings in the area of concentration.
Audience: Undergraduate

2. Appropriately apply major theories in terms of analyzing Old Norse-Icelandic texts.
Audience: Undergraduate

3. Analyze Old Norse-Icelandic texts, especially with a view to historical knowledge and jurisprudence.
Audience: Undergraduate

SCAND ST 436 – TOPICS IN SCANDINAVIAN LITERATURE
3-4 credits.

An examination of selected topics in Scandinavian literature.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

SCAND ST/GEN&WS/LITTRANS 438 – SEXUAL POLITICS IN SCANDINAVIA
3 credits.

Read and discuss works by Scandinavian writers of the nineteenth and twentieth century reflecting sexual politics and the roles of women in literature. Course taught in English.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and understand the categories depicting sexual politics and the position of women in Scandinavia as portrayed through various works of literature
Audience: Undergraduate

2. Analyze and discuss the important features characterizing sexual politics and the position of women in Scandinavia as portrayed through various works of literature
Audience: Undergraduate

3. Compose and produce writing that applies the concepts introduced to describe, analyze, and differentiate sexual politics and the position of women as portrayed through various works of literature about Scandinavian women.
Audience: Undergraduate

SCAND ST 439 – NORDIC FILMMAKERS
3 credits.

Analyze English translations of key works by Nordic filmmakers as well as theories, histories, and the changing meaning of film authorship in the Nordic region.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 2 number of completions
Last Taught: Spring 2023
Learning Outcomes: 1. Recognize and describe the central issues at stake in the works of a selection of Nordic filmmakers
Audience: Both Grad & Undergrad

2. Understand critical texts about film authorship and film analysis, and incorporate these readings to discussing film in the Nordic region
Audience: Both Grad & Undergrad

3. Demonstrate a basic vocabulary of film analysis to guide close readings, analysis and arguments
Audience: Both Grad & Undergrad

4. Analyze a selection of Nordic films using a variety of methods common within cinema and Scandinavian studies
Audience: Both Grad & Undergrad

5. Discuss and write critically about film and film authorship in the Nordic region
Audience: Both Grad & Undergrad

6. Demonstrate an understanding of theoretical frameworks in cinema and other relevant studies
Audience: Graduate

7. Incorporate and communicate relevant theoretical frameworks effectively to guide critical discussion and analysis of selected films
Audience: Graduate

SCAND ST/FOLKLORE 440 – SCANDINAVIAN AMERICAN FOLKLORE
3 credits.

Examines the verbal, musical, customary, and material folklore of Scandinavian Americans, with emphasis on the upper Midwest.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022

SCAND ST/FOLKLORE 443 – SAMI CULTURE, YESTERDAY AND TODAY
4 credits.

Interdisciplinary study of Sami (Lapp) people of Scandinavia past and present. Indigenous modes of expression and worldview, contemporary cultural and political activism. Extensive discussion of connections to Native American and Inuit experiences; rise of U.S. and other indigenous peoples' movements.
Requisites: Junior standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

SCAND ST/MEDIEVAL 444 – KALEVALA AND FINNISH FOLK-LORE
4 credits.

Kalevala - the national epic of Finaland - and the oral literature of Finland.
Requisites: Junior standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022

SCAND ST/FOLKLORE/MEDIEVAL 446 – CELTIC-SCANDINAVIAN CULTURAL INTERRELATIONS
3 credits.

Examination of shared traditions and historical connections between the North and Northwest of Europe. Readings of medieval and pre-modern Scandinavian, Scottish, Welsh and Irish sagas, histories, talkes. Discussion of the role of folklore in modern Celtic and Scandinavian societies.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022

SCAND ST 450 – SCANDINAVIAN DECADENCE IN ITS EUROPEAN CONTEXT
3-4 credits.

Examines the European context of literary decadence (Baudelaire, Huysmans, Wilde) and how it inspired some of Scandinavia's most important writers (Strindberg, Hamsun, Jacobsen).
Requisites: SCAND ST 202, 212, 222 or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

SCAND ST 475 – THE WRITINGS OF HANS CHRISTIAN ANDERSEN FOR SCANDINAVIAN MAJORS
4 credits.

In-depth discussion of selected texts, historical and literary background material, application and discussion of pertinent literary criticism.
Requisites: SCAND ST 202, 212, 222 or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

SCAND ST 476 – SCANDINAVIAN LIFE AND CIVILIZATION II
4 credits.

Scandinavian culture in all its aspects ranging from past history up to contemporary trends in politics and ideologies.
Requisites: SCAND ST 202, 212, 222 or graduate/professional standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2019

SCAND ST 510 – TOPICS IN SCANDINAVIAN LINGUISTICS
3 credits.

Hands-on introduction to a topic in Scandinavian language study.
Requisites: Graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022

SCAND ST 511 – PALEOGRAPHY AND PHILOLOGY - OLD NORSE
3 credits.

A history of writing in Iceland 1150-1550 on the basis of manuscripts as principal sources of evidence for Old Norse-Icelandic.
Requisites: MEDIEVAL/SCAND ST 407 or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

SCAND ST 520 – SPECIAL TOPICS
3 credits.

Special topics in Scandinavian culture, literature, and linguistics.
Requisites: Junior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

SCAND ST/HISTORY 577 – CONTEMPORARY SCANDINAVIA: POLITICS AND HISTORY
3-4 credits.

Social, economic, and ideological changes, institutions, and movements and their relationships with the political processes and structures in the Nordic states.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2020

SCAND ST 634 – SURVEY OF SCANDINAVIAN LITERATURE: 1500-1800
3 credits.

Survey representative literary texts from Scandinavia spanning through Reformation, Renaissance, Baroque, Rococo and Pre-Romanticism, including historical context.
Requisites: Junior standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020
Learning Outcomes: 1. Comprehend, and employ various approaches to interpreting and creating cultural artifacts, in particular, representative Scandinavian literary texts from 1500 to 1800.
Audience: Both Grad & Undergrad

2. Demonstrate knowledge of major movements, trends, or events in the development of world cultures, in particular, Reformation, Renaissance, Baroque, Rationalism, Rococo, Pre-Romanticism.
Audience: Both Grad & Undergrad

3. Demonstrate an appreciation of the complexities of the interpretative process within historical and cultural contexts
Audience: Both Grad & Undergrad

4. Apply critical approaches to the works and alternative ways of considering them
Audience: Both Grad & Undergrad

5. Think critically about and appreciate the complexities of one's own culture and larger global communities
Audience: Both Grad & Undergrad

6. Make use of and improve Nordic language skills.
Audience: Both Grad & Undergrad

7. Articulate research problems, potentials, and limits with respect to theory, knowledge, or practice within the fields of literary scholarship surrounding the Baroque and Rococo.
Audience: Graduate

8. Create research and scholarship that makes a substantive contribution.
Audience: Graduate

9. Be prepared for the M.A. exam in Scandinavian Literature and Culture.
Audience: Graduate

SCAND ST 635 – SURVEY OF SCANDINAVIAN LITERATURE: 1800-1890
3 credits.

Survey representative literary texts from Scandinavia spanning eras including Romanticism, Realism, and Naturalism; includes historical context.
Requisites: SCAND ST 202, 212, 222 or graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

SCAND ST 681 – SENIOR HONORS THESIS
3 credits.

Mentored individual research and study for students completing a thesis in an Honors program.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2022

SCAND ST 682 – SENIOR HONORS THESIS
3 credits.

Mentored individual research and study for students completing a thesis in an Honors program.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2023

SCAND ST 698 – DIRECTED STUDY
1-6 credits.

Advanced directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 1991

SCAND ST 699 – DIRECTED STUDY
1-6 credits.

Advanced directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SCAND ST 710 – TOPICS IN DEPTH
1-2 credits.

Penetrating study of an important Scandinavian literary or linguistic topic.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2020

SCAND ST 799 – INDEPENDENT STUDY
1-6 credits.

Faculty-guided in depth study of a topic.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SCAND ST 901 – SEMINAR IN SPECIAL TOPICS
2-3 credits.

In-depth study of topic of faculty's choice.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SCAND ST 990 – RESEARCH AND THESIS
1-6 credits.

Advanced level mentored reading and research for students with dissertator status.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SCAND ST 999 – INDEPENDENT READING
1-6 credits.

Advanced level mentored reading and research for students with dissertator status.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2011

SCIENCE AND TECHNOLOGY STUDIES (STS)

STS 201 – WHERE SCIENCE MEETS SOCIETY
3 credits.

An overview of science and technology studies. Explores science and technology as central institutions in modern societies. Teaches approaches to analyzing social dimensions of recent advances in areas such as genetics, environment, Internet, surveillance, and nanotechnology..
Requisites: Sophomore standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

STS 699 – DIRECTED STUDY
1-3 credits.

Advanced directed study projects as arranged with a faculty member. Requires completion of STS 201.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2020

STS/CURRIC 733 – PUBLIC ENGAGEMENT WITH SCIENCE
3 credits.

Examines the influence of science in everyday life. Provides both academic context (research and theory) and a firsthand look at how science matters to people who are not themselves scientists.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Identify and critique common claims about the importance and value of science literacy, public understanding of science, and public engagement with science
Audience: Graduate

2. Describe the different ways in which researchers have attempted to measure and otherwise evaluate science literacy etc.
Audience: Graduate

3. Understand and be able to recognize the implications of social and cultural forces that shape particular episodes of public engagement with science.
Audience: Graduate

4. Describe and discuss the complex relevance of science in one particular public setting.
Audience: Graduate

5. Discuss the merits and challenges associated with common strategies for improving public engagement with science through formal education, museums, and sponsored outreach activities.
Audience: Graduate

STS/CURRIC 734 – SCIENCE STUDIES AND SCIENCE EDUCATION
3 credits.

Examination of the key ideas from the field of science and technology studies (history, philosophy, sociology of science, etc.) and how they have been taken up in both the school science curriculum as well as the science education research community.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023

STS 901 – SCIENCE, TECHNOLOGY AND MEDICINE IN SOCIETY
3 credits.

Key themes, issues and scholarship in the interdisciplinary fields of science and technology studies. Explores how different disciplinary perspectives contribute to and influence the questions, methods and theoretical approaches within particular fields of science studies.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

STS 902 – CURRENT TOPICS IN SCIENCE AND TECNOLOGY STUDIES
1 credit.

Key themes, issues and scholarship in the interdisciplinary field of science and technology studies (STS). Participating faculty and speakers will be drawn from the social sciences, humanities, and physical and life sciences.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

STS 903 – SPECIAL TOPICS IN SCIENCE AND TECHNOLOGY STUDIES
3 credits.

An interdisciplinary exploration of one or more high profile issues motivated debate and discussion among science and technology studies scholars.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

STS 999 – INDEPENDENT STUDY IN SCIENCE AND TECHNOLOGY STUDIES
1-6 credits.

Independent study as arranged with a faculty member. Topics, readings, assignments and meetings will be outlined in a student-faculty "contract."
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2022

SENIOR MEDICAL PROGRAM (SR MED)

SR MED 913 – EXTRAMURAL ELECTIVE-PREVENTIVE MEDICINE
1-44 credits.

Individually arranged elective for Phase 3 outside of the UW Madison Statewide Campus. Engage in the provision of primary or specialty patient care in ambulatory and/or hospital settings.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022

SR MED 921 – EXTRAMURAL ELECTIVE-ANESTHESIOLOGY
1-44 credits.

Individually arranged elective for Phase 3 outside of the UW Madison Statewide Campus. Engage in the provision of primary or specialty patient care in ambulatory and/or hospital settings.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SR MED 922 – EXTRAMURAL ELECTIVE-FAMILY MEDICINE
1-44 credits.

Individually arranged elective for Phase 3 outside of the UW Madison Statewide Campus. Engage in the provision of primary or specialty patient care in ambulatory and/or hospital settings.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

SR MED 923 – EXTRAMURAL ELECTIVE-HUMAN ONCOLOGY
1-26 credits.

Individually arranged elective for Phase 3 outside of the UW Madison Statewide Campus. Engage in the provision of primary or specialty patient care in ambulatory and/or hospital settings.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SR MED 924 – EXTRAMURAL ELECTIVE-MEDICINE
1-44 credits.

Individually arranged elective for Phase 3 outside of the UW Madison Statewide Campus. Engage in the provision of primary or specialty patient care in ambulatory and/or hospital settings.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SR MED 925 – EXTRAMURAL ELECTIVE-NEUROLOGY
1-44 credits.

Individually arranged elective for Phase 3 outside of the UW Madison Statewide Campus. Engage in the provision of primary or specialty patient care in ambulatory and/or hospital settings.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SR MED 926 – EXTRAMURAL ELECTIVE-OBSTETRICS AND GYNECOLOGY
1-44 credits.

Individually arranged elective for Phase 3 outside of the UW Madison Statewide Campus. Engage in the provision of primary or specialty patient care in ambulatory and/or hospital settings.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

SR MED 927 – EXTRAMURAL ELECTIVE-OPHTHALMOLOGY
1-44 credits.

Individually arranged elective for Phase 3 outside of the UW Madison Statewide Campus. Engage in the provision of primary or specialty patient care in ambulatory and/or hospital settings.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SR MED 928 – EXTRAMURAL ELECTIVE-PATHOLOGY
1-44 credits.

Individually arranged elective for Phase 3 outside of the UW Madison Statewide Campus. Engage in the provision of primary or specialty patient care in ambulatory and/or hospital settings.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

SR MED 929 – EXTRAMURAL ELECTIVE-PEDIATRICS
1-44 credits.

Individually arranged elective for Phase 3 outside of the UW Madison Statewide Campus. Engage in the provision of primary or specialty patient care in ambulatory and/or hospital settings.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

SR MED 931 – EXTRAMURAL ELECTIVE-PSYCHIATRY
1-44 credits.

Individually arranged elective for Phase 3 outside of the UW Madison Statewide Campus. Engage in the provision of primary or specialty patient care in ambulatory and/or hospital settings.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023

SR MED 932 – EXTRAMURAL ELECTIVE-RADIOLOGY
1-44 credits.

Individually arranged elective for Phase 3 outside of the UW Madison Statewide Campus. Engage in the provision of primary or specialty patient care in ambulatory and/or hospital settings.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

SR MED 933 – EXTRAMURAL ELECTIVE-REHABILITATION MEDICINE
1-44 credits.

Individually arranged elective for Phase 3 outside of the UW Madison Statewide Campus. Engage in the provision of primary or specialty patient care in ambulatory and/or hospital settings.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023

SR MED 934 – EXTRAMURAL ELECTIVE-SURGERY
1-44 credits.

Individually arranged elective for Phase 3 outside of the UW Madison Statewide Campus. Engage in the provision of primary or specialty patient care in ambulatory and/or hospital settings.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SR MED 935 – EXTRAMURAL ELECTIVE-PRIMARY CARE
1-16 credits.

Individually arranged elective for Phase 3 outside of the UW Madison Statewide Campus. Engage in the provision of primary or specialty patient care in ambulatory and/or hospital settings.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023

SR MED 936 – EXTRAMURAL ELECTIVE-EMERGENCY MEDICINE
2-12 credits.

Clinical elective for fourth year medical students.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SR MED 937 – EXTRAMURAL ELECTIVE CLERKSHIP IN INTERNATIONAL HEALTH
1-8 credits.

One to eight week elective as a site outside the U.S. Students will engage in the provision of primary or specialty patient care in ambulatory and/or hospital settings. May include community public health, prevention, and health education learning activities.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SR MED 951 – TRAINING IN URBAN MEDICINE AND PUBLIC HEALTH (TRUIMPH) I: SEMINAR AND PROJECTS
2 credits.

Introduces third year students to health disparities in Milwaukee and community and public health improvement projects. Students will devote four hours per week to projects under the guidance of community mentors and faculty.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

SR MED 953 – TRAINING IN URBAN MEDICINE AND PUBLIC HEALTH (TRIUMPH) II: MILWAUKEE
2 credits.

Introduces third year medical students to the communities, neighborhoods, healthcare systems and public health initiatives in Milwaukee.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

SR MED 955 – TRAINING IN URBAN MEDICINE AND PUBLIC HEALTH (TRIUMPH) III: LEADERSHIP
2 credits.

Provides fourth year medical students with advanced leadership skill building exercises to address community and public health challenges in Milwaukee.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

SR MED 957 – TRAINING IN URBAN MEDICINE AND PUBLIC HEALTH (TRIUMPH) IV: ADVANCED SEMINAR
2 credits.

A continuation of TRIUMPH I (SR MED 951) that will enable fourth year medical students to explore and address health disparities and to complete a community or public health improvement project with colleagues in Milwaukee.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

SLAVIC (SLAVIC LANGUAGES) (SLAVIC)

SLAVIC 101 – FIRST SEMESTER RUSSIAN
4 credits.

Introduction to speaking, listening, reading and writing in Russian, with an introduction to Russian culture.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

SLAVIC 102 – SECOND SEMESTER RUSSIAN
4 credits.

Introduction to speaking, listening, reading and writing in Russian, with an introduction to Russian culture.
Requisites: SLAVIC 101
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025

SLAVIC 105 – FIRST SEMESTER UKRAINIAN
3 credits.

An introduction to the basics of the Ukrainian language and culture. Acquire elementary Ukrainian language skills in the four main areas: reading, writing, listening, and speaking. Pronunciation, formal/informal language, and colloquialisms.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. read and write simple texts in Ukrainian
Audience: Undergraduate

2. initiate, sustain and close a conversation in Ukrainian, on a variety of everyday topics
Audience: Undergraduate

3. understand how the grammar of the language contributes to the clarity of written and spoken communication
Audience: Undergraduate

4. acquire basic sociolinguistic and pragmatic proficiency in Ukrainian
Audience: Undergraduate

5. develop a metalinguistic understanding of Ukrainian grammar and learn to successfully apply it in practice
Audience: Undergraduate

6. gain an understanding of a variety of aspects of the Ukrainian language and Ukrainian culture in general
Audience: Undergraduate

SLAVIC 111 – FIRST SEMESTER POLISH
4 credits.

Introduction to speaking, listening, reading and writing in Polish, with an introduction to Polish culture.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

SLAVIC 112 – SECOND SEMESTER POLISH
4 credits.

Introduction to speaking, listening, reading and writing in Polish, with an introduction to Polish culture.
Requisites: SLAVIC 111
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

SLAVIC 115 – FIRST SEMESTER CZECH
4 credits.

Introduction to speaking, listening, reading and writing in Czech, with an introduction to Czech culture.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2022

SLAVIC 116 – SECOND SEMESTER CZECH
4 credits.

Introduction to speaking, listening, reading and writing in Czech, with an introduction to Czech culture.
Requisites: SLAVIC 115
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023

SLAVIC 117 – INTENSIVE SECOND YEAR RUSSIAN
4 credits.

Intensive development of speaking, listening, reading and writing skills in Russian, with continued study of Russian culture.
Requisites: SLAVIC 102
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Build upon previous skills in Russian speaking, listening, reading, and writing, in everyday situations and contexts
Audience: Undergraduate

2. Navigate travel and daily life in a Russian-speaking community
Audience: Undergraduate

3. Recall important Russian cultural figures and events
Audience: Undergraduate

4. Read excerpts of famous Russian literature
Audience: Undergraduate

5. Write short written compositions on the topics covered
Audience: Undergraduate

SLAVIC 118 – INTENSIVE SECOND YEAR RUSSIAN
4 credits.

Intensive development of speaking, listening, reading and writing skills in Russian, with continued study of Russian culture.
Requisites: SLAVIC 117
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Build upon previous skills in Russian speaking, listening, reading, and writing, in everyday situations and contexts
Audience: Undergraduate

2. Navigate travel and daily life in a Russian-speaking community
Audience: Undergraduate

3. Recall important Russian cultural figures and events
Audience: Undergraduate

4. Read excerpts of famous Russian literature
Audience: Undergraduate

5. Write short written compositions on the topics covered
Audience: Undergraduate

SLAVIC 141 – FIRST SEMESTER SERBO-CROATIAN
3 credits.

Introduction to primary language (speaking, listening, reading and writing) in Serbo-Croatian.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2018

SLAVIC 142 – SECOND SEMESTER SERBO-CROATIAN
3 credits.

Introduction to primary language (speaking, listening, reading and writing) in Serbo-Croatian.
Requisites: SLAVIC 141
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2019

SLAVIC 203 – THIRD SEMESTER RUSSIAN
4 credits.

Development of speaking, listening, reading and writing skills in Russian, with continued study of Russian culture.
Requisites: SLAVIC 102
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

SLAVIC 204 – FOURTH SEMESTER RUSSIAN
4 credits.

Development of speaking, listening, reading and writing skills in Russian, with continued study of Russian culture.
Requisites: SLAVIC 203
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

SLAVIC 207 – THIRD SEMESTER POLISH
4 credits.

Development of speaking, listening, reading and writing skills in Polish, with continued study of Polish culture.
Requisites: SLAVIC 112
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

SLAVIC 208 – FOURTH SEMESTER POLISH
4 credits.

Development of speaking, listening, reading and writing skills in Polish, with continued study of Polish culture.
Requisites: SLAVIC 207
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

SLAVIC/LITTRANS 215 – LOVE AND DEATH: INTRODUCTION TO POLISH LITERATURE & CULTURE
3 credits.

Examines major traditions, narratives, and ideas that have shaped Polish literature and culture from their beginnings to World War II. Gain broad and contextualized knowledge of Polish civilization by closely reading and analyzing literary and cultural texts in their historical context. Course contents are organized into four major paradigms: Christianity, Sarmatism, Romanticism, and Modernity.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. identify and describe the main characteristics of various literary and cultural texts in Polish (and European) culture;
Audience: Undergraduate

2. define major themes, concepts, events, and ideas that shape Poland's literary and cultural history;
Audience: Undergraduate

3. analyze literary texts in their historical context using basic tools of literary analysis (genres, critical concepts, etc.)
Audience: Undergraduate

4. develop, compare, and effectively express ideas about literary texts and their underlying semantic structures;
Audience: Undergraduate

SLAVIC 217 – THIRD SEMESTER CZECH
4 credits.

Development of speaking, listening, reading and writing skills in Czech.
Requisites: SLAVIC 116
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023

SLAVIC 218 – FOURTH SEMESTER CZECH
4 credits.

Development of speaking, listening, reading and writing skills in Czech.
Requisites: SLAVIC 217
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

SLAVIC 231 – HISTORY AND ETHICS ON FILM: POLISH CINEMA
3 credits.

What constitutes heroism in the absence of universally shared moral frameworks? Who are we as individuals? What responsibility do we have for the way we represent reality to ourselves and to others? What constitutes "good life"? Engage with these questions and examine Polish cinematic tradition from the so-called Polish Film School to the present. Explore key works, themes, and creators of Polish cinema, and probe the ethical and existential dimensions these films open up. Consider various challenges faced by individuals when they lose connection to social, national, political, religious, and existential frameworks that used to define their identity, along with the strategies -- successful or not -- for maintaining one's selfhood and moral integrity in such crises
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. understand the idea of film as an art form engaged in ethical problems
Audience: Undergraduate

2. identify, analyze, and evaluate ways through which films address and attempt to resolve ethical challenges
Audience: Undergraduate

3. analyze films from the ethical perspective using a variety of critical methodologies
Audience: Undergraduate

4. recognize and explain the central themes and developments of Polish cinematic tradition
Audience: Undergraduate

5. discuss film's position in Poland's shifting social, cultural, and political landscape
Audience: Undergraduate

6. develop, compare, and effectively express ideas about films and their underlying semantic structures
Audience: Undergraduate

SLAVIC/LITTRANS 238 – LITERATURE AND REVOLUTION
3 credits.

Take a literary journey from St. Petersburg to Moscow, following the shifting cultural and political currents in Russia from the years preceding the 1917 Revolution to the rise of Stalinism in the 1930s. Topics in translation will include: revolutionary violence and terror, civil war and emigration, Futurism and the birth of Russian avant-garde art, Soviet feminism and the engineering of the "New Man," technological utopias and totalitarian dystopias, literature and early Soviet economic policy.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Conduct close readings of literary texts that take into consideration both form and content.
Audience: Undergraduate

2. Acquire a greater awareness of another culture and become more adept at engaging with perspectives and ways of thinking that are different from the student's own.
Audience: Undergraduate

3. Develop a sensitivity to the way texts and ideas are rooted in their unique historical and political contexts, while having a life span that stretches far beyond them.
Audience: Undergraduate

SLAVIC 239 – PERFORMANCE AND POWER
3 credits.

What does it mean "to perform" and what does performance do? How does performance help impose or challenge oppressive structures of power? Focusing on artists and authors like Sergei Eisenstein, Bertold Brecht, Marina Abramovic, and Pussy Riot, learn about political theater in the 20th and 21st centuries, the emergence and evolution of performance art and art actionism, the aesthetic and juridical functions of documentary theater and film, and the recent performative turn in New Left poetry.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Build the necessary historical and theoretical foundation for analyzing a broad range of performances and other artistic works through discussion of critical and theoretical readings.
Audience: Undergraduate

2. Acquire a greater awareness of other cultures and become more adept at engaging with perspectives and ways of thinking that are different from their own.
Audience: Undergraduate

3. Consider and describe the ways that ideas and works of art are rooted in their unique cultural and political contexts, while having a life span that stretches far beyond them.
Audience: Undergraduate

SLAVIC 242 – LITERATURES AND CULTURES OF EASTERN EUROPE
3 credits.

Introduction to the literature, culture and art of Eastern Europe.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2019

SLAVIC 243 – CONTEMPORARY RUSSIA: HISTORY, POLITICS, AND CULTURE
3 credits.

Post-Soviet Russia has been shaped by the tension between growing state violence and the slowly emerging public sphere of protest and activism. Crossing boundaries between literary, political, cultural, and art studies, draw on investigative journalism as well as contemporary Russian film, fiction, and art in order to explore the peculiar, yet not unprecedented cult of violence that underlies the Russian political climate and the alternatives suggested by activist opposition.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Acquire basic knowledge of Russia's history, literature, performance arts, and film of the last two decades
Audience: Undergraduate

2. Develop an ability to interpret politics through a cultural lens
Audience: Undergraduate

3. Improve and refine academic writing skills.
Audience: Undergraduate

SLAVIC 245 – TOPICS IN SLAVIC LITERATURES
3 credits.

Exploration of various topics - periods, genres, individual writers, themes, problems, etc. in Russian and Eastern European literature.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SLAVIC 246 – ESCAPING UTOPIA: CULTURES AFTER COMMUNISM
3 credits.

The swift collapse of communist regimes across Central and Eastern Europe came as a surprise to both their opponents and political clients. How did culture mediate the experience of this political, social, and economic revolution? How does the experience of communism shape the historiography, identity, and vision(s) of the future of the affected nations? What is the condition of postcommunism? These are some of the questions we will be exploring as we examine Polish, Russian, Ukrainian, Czech, and South Slavic literature in translation and cinema from the decades following the dissolution of the Soviet Union.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. identify and discuss main events, figures, themes, concepts, aesthetic devices, ideas, and social changes that have shaped the culture of the region since the collapse of communist regimes
Audience: Undergraduate

2. define "postcommunism/post-socialism" as a cultural phenomenon in the context of East-Central Europe
Audience: Undergraduate

3. apply basic methods of literary, cinematic, and cultural analysis to interpret a wide range of cultural texts produced in East-Central European countries in the years following the collapse of communism
Audience: Undergraduate

4. develop, compare, and effectively express ideas about cultural texts and their underlying semantic structures
Audience: Undergraduate

SLAVIC 251 – THIRD SEMESTER SERBO-CROATIAN
3 credits.

Development of speaking, listening, reading and writing in Serbo-Croatian.
Requisites: SLAVIC 142
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2019

SLAVIC 252 – FOURTH SEMESTER SERBO-CROATIAN
3 credits.

Development of speaking, listening, reading and writing in Serbo-Croatian.
Requisites: SLAVIC 251
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2020

SLAVIC/GEOG/HISTORY/POLI SCI 253 – RUSSIA: AN INTERDISCIPLINARY SURVEY
4 credits.

Comprehensive interdisciplinary survey of Russian civilization from its beginnings through the present day.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

SLAVIC/GEOG/HISTORY/POLI SCI 254 – EASTERN EUROPE: AN INTERDISCIPLINARY SURVEY
4 credits.

Comprehensive interdisciplinary survey of East European culture, society, politics, and literature from its beginnings to the present day.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

SLAVIC/LITTRANS 259 – ADVENTURE IN LITERATURE AND FILM
3 credits.

How do we define adventure? Who gets to experience it and on what terms? What role has it played in ancient and modern cultures? What do its ever-changing definitions, heroes, and genres tell us about our evolving values? Address these and similar questions on our intellectual journey through some of the most iconic adventures in Western cultural tradition, from Homer's The Odyssey to Spielberg's Raiders of the Lost Ark, and beyond.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. identify the conventions of adventure narratives across different periods, traditions, and genres
Audience: Undergraduate

2. apply basic methods of literary, cinematic, and cultural analysis to close readings of cultural texts, be they epics, romances, novels, or films
Audience: Undergraduate

3. develop, compare, and effectively express ideas about cultural texts and their underlying semantic structures
Audience: Undergraduate

4. discuss how adventure tropes evolve to reflect and often mediate social and cultural changes
Audience: Undergraduate

5. explain the function of adventure as a social construct, both historically and in the context of today’s globalized world.
Audience: Undergraduate

SLAVIC/LITTRANS 266 – ELEMENTARY SPECIAL TOPICS IN RUSSIAN LITERATURE & CULTURE
1-3 credits.

Exploration of various topics - periods, genres, individual writers, themes, problems, etc. in Russian and Eastern European literature.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Gain basic knowledge of Russia's history, literature, performance arts, and films.
Audience: Undergraduate

2. Develop an ability to interpret politics through a cultural lens
Audience: Undergraduate

3. Improve academic writing skills beyond the elementary level
Audience: Undergraduate

4. Place works of literature in their social, historical, and political context
Audience: Undergraduate

5. Analyze literary texts in their historical and cultural context
Audience: Undergraduate

6. Integrate information from primary and secondary sources
Audience: Undergraduate

SLAVIC 275 – THIRD YEAR RUSSIAN I
3 credits.

A thorough review of several major aspects of Russian grammar, focusing on the use of complex syntax in speech and writing. Read and discuss literary works and other Russian-language texts. Develop writing proficiency through compositions on a variety of topics.
Requisites: SLAVIC 118 or 204
Course Designation: Breadth - Humanities
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Gain an increased understanding and better control of the Russian case system and verbal conjugations.
Audience: Undergraduate

2. Write and speak with greater proficiency in Russian about topics including education, social media, religion, appearance, cities, family, immigration and gender stereotypes
Audience: Undergraduate

3. Employ features of complex syntax in order to speak and write in paragraph-length discourse in Russian.
Audience: Undergraduate

4. Demonstrate improved listening comprehension skills.
Audience: Undergraduate

SLAVIC 276 – THIRD YEAR RUSSIAN II
3 credits.

A thorough review of several major aspects of Russian grammar, focusing on the use of complex syntax in speech and writing. Read and discuss literary works and other Russian-language texts. Develop writing proficiency through compositions on a variety of topics.
Requisites: SLAVIC 275
Course Designation: Breadth - Humanities
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Gain an increased understanding and better control of the Russian case system and verbal conjugations
Audience: Undergraduate

2. Write and speak with greater proficiency in Russian about topics including education, social media, religion, appearance, cities, family, immigration and gender stereotypes
Audience: Undergraduate

3. Employ features of complex syntax in order to speak and write in paragraph-length discourse in Russian.
Audience: Undergraduate

4. Demonstrate improved listening comprehension skills
Audience: Undergraduate

SLAVIC 277 – THIRD YEAR POLISH I
3 credits.

Review of Polish grammar. Reading, oral practice, and composition.
Requisites: SLAVIC 208
Course Designation: Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

SLAVIC 278 – THIRD YEAR POLISH II
3 credits.

Review of Polish grammar. Reading, oral practice, and composition.
Requisites: SLAVIC 277
Course Designation: Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

SLAVIC 285 – SLAVIC CULTURE IN CONTEXT: AN HONORS COURSE
3 credits.

Writing and discussion intensive seminar that introduces students to one or more Slavic (Russian, Polish, Serbian, Czech, Croatian, Bosnian) languages, literatures, and/or cultures within a global context.
Requisites: Declared in an Honors program
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SLAVIC 299 – DIRECTED STUDY
1 credit.

Directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2015

SLAVIC 301 – INTRODUCTION TO INTENSIVE POLISH
3 credits.

Intensive coverage of the structure of the Polish language. Rapid introduction to reading and speaking.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023

SLAVIC 304 – FOURTH SEMESTER INTENSIVE POLISH
4 credits.

Advanced grammar and reading: reading selections from various sources in Polish literature, history, and culture.
Requisites: SLAVIC 301
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

SLAVIC 305 – FIFTH SEMESTER INTENSIVE POLISH
3 credits.

Vocabulary reinforced through literature, film and journalism. Readings and discussions related to issues of contemporary Polish society. Continued work on grammar and vocabulary with written exercises and compositions.
Requisites: SLAVIC 304
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

SLAVIC 306 – SIXTH SEMESTER INTENSIVE POLISH
3 credits.

Continuation of 305. Reading selections from twentieth century Polish literature. Focus on intensive writing.
Requisites: SLAVIC 305
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023

SLAVIC 307 – STUDY ABROAD IN POLAND
1-4 credits.

A course carried with a UW-Madison study abroad program which has no equivalent on this campus. Enrollment in a UW-Madison resident study abroad program.
Requisites: None
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

SLAVIC 308 – POLISH CULTURE AND AREA STUDIES ON STUDY ABROAD
1-4 credits.

A course carried with a UW-Madison study abroad program which has no equivalent on this campus. Enrollment in a UW-Madison resident study abroad program.
Requisites: None
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

SLAVIC 309 – RUSSIAN AREA STUDIES ON STUDY ABROAD
1-4 credits.

A course carried with a UW-Madison study abroad program which has no equivalent on this campus. Enrollment in a UW-Madison resident study abroad program.
Requisites: None
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

SLAVIC 310 – TOPICS IN RUSSIAN: STUDY ABROAD
1-6 credits.

A course carried with a UW-Madison study abroad program which has no equivalent on this campus. Enrollment in a UW-Madison resident study abroad program.
Requisites: None
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2001

SLAVIC 315 – RUSSIAN LANGUAGE AND CULTURE I
3 credits.

Emphasizes speaking and listening skills. Converse on different stylistic levels, with varying degrees of formality, according to the rules of Russian speech etiquette.
Requisites: SLAVIC 118 or 204
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Improve listening comprehension and speaking skills and work towards developing Advanced level proficiency in Russian.
Audience: Undergraduate

2. Expand vocabulary on topics related to education, careers, social issues, economy, and travel.
Audience: Undergraduate

3. Develop skills in understanding of Russian syntax and conversational patterns.
Audience: Undergraduate

4. Develop critical thinking skills and comprehension while reading texts in Russian.
Audience: Undergraduate

5. Develop academic discussion skills in Russian.
Audience: Undergraduate

SLAVIC 316 – RUSSIAN LANGUAGE AND CULTURE II
3 credits.

Emphasizes speaking and listening skills, learn to converse on different stylistic levels, with varying degrees of formality, according to the rules of Russian speech etiquette.
Requisites: SLAVIC 315
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Improve listening comprehension and speaking skills and work towards developing Advanced level proficiency in Russian.
Audience: Undergraduate

2. Expand vocabulary on topics related to education, careers, social issues, economy, and travel.
Audience: Undergraduate

3. Develop skills in understanding of Russian syntax and conversational patterns.
Audience: Undergraduate

4. Develop critical thinking skills and comprehension while reading texts in Russian.
Audience: Undergraduate

5. Develop academic discussion skills in Russian.
Audience: Undergraduate

SLAVIC 321 – FOURTH YEAR RUSSIAN I
3 credits.

Improvement of Russian proficiency in all four skills. Read texts from literature and media, watch video clips from contemporary media sources, write and make presentations on current topics in the Russian-speaking world.
Requisites: SLAVIC 276
Course Designation: Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Read, interpret, analyze, and discuss a variety of texts from Russian literature and contemporary Russian media at the Intermediate High and Advanced levels.
Audience: Undergraduate

2. Listen to, interpret, and discuss excerpts from contemporary Russian media sources at the Intermediate High and Advanced levels.
Audience: Undergraduate

3. Discuss, present, and write cohesive essays and presentations about topics relevant to contemporary life in the Russian-speaking world, including education, work and professional life, leisure and the arts, family life, and housing and urban/suburban life. Students will also write response papers to the assigned literary texts.
Audience: Undergraduate

4. Reflect on and compare aspects of culture in Russian-speaking countries with US culture in the above-mentioned areas of contemporary life, and through critical reading of Russian literary texts.
Audience: Undergraduate

SLAVIC 322 – FOURTH YEAR RUSSIAN II
3 credits.

Improvement of Russian proficiency in all four skills. Progress in language proficiency from the Intermediate to the Advanced level in reading and listening, and to the Intermediate High level in speaking and writing. In addition, enriches knowledge about contemporary Russia through discussion of recent essays, journalism, and news articles.
Requisites: SLAVIC 321
Course Designation: Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2020
Learning Outcomes: 1. Read, interpret, analyze, and discuss a variety of texts from Russian literature and contemporary Russian media at the Intermediate High and Advanced levels
Audience: Undergraduate

2. Listen to, interpret, and discuss excerpts from contemporary Russian media sources at the Intermediate High and Advanced levels.
Audience: Undergraduate

3. Discuss, present, and write cohesive essays and presentations about topics relevant to contemporary life in the Russian-speaking world, including education, work and professional life, leisure and the arts, family life, and housing and urban/suburban life. Students will also write response papers to the assigned literary texts.
Audience: Undergraduate

4. Reflect on and compare aspects of culture in Russian-speaking countries with US culture in the above-mentioned areas of contemporary life, and through critical reading of Russian literary texts.
Audience: Undergraduate

SLAVIC 331 – FOURTH YEAR POLISH I
3 credits.

Extensive reading, discussion, composition, and grammar review.
Requisites: SLAVIC 278
Course Designation: Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

SLAVIC 332 – FOURTH YEAR POLISH II
3 credits.

Extensive reading, discussion, composition, and grammar review.
Requisites: SLAVIC 331
Course Designation: Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

SLAVIC 341 – FIRST SEMESTER INTENSIVE SERBO-CROATIAN
3 credits.

Rapid introduction to Serbo-Croatian grammar, reading, and speaking.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2018

SLAVIC 342 – INTRODUCTION TO SERBIAN AND CROATIAN LITERATURE
3 credits.

Introduction to the fundamentals of Serbian and Croatian literature. Learn how to speak, write and use the basic concepts of literary analysis: character, plot, setting, style, etc.
Requisites: SLAVIC 341
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2019

SLAVIC 351 – FIRST SEMESTER INTENSIVE CZECH
3 credits.

Rapid introduction to Czech grammar, reading, and speaking.
Requisites: Consent of instructor
Course Designation: Frgn Lang - 1st semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2022

SLAVIC 352 – SECOND SEMESTER INTENSIVE CZECH
3 credits.

Rapid introduction to Czech grammar, reading, and speaking.
Requisites: SLAVIC 351
Course Designation: Frgn Lang - 2nd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023

SLAVIC/LITTRANS 357 – INTERMEDIATE SPECIAL TOPICS IN SLAVIC LANGUAGES AND LITERATURES
3 credits.

Special topics in Slavic and Central and Eastern European Languages and Literatures.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024
Learning Outcomes: 1. Define, explain, and contextualize literary periods, genres, individual writers, themes, and problems in Polish, Central European, Slavic, and East-Central European literatures and cultures
Audience: Undergraduate

2. Apply learned knowledge to contemporary issues in cultures and societies of East-Central Europe in their literary and cultural contexts
Audience: Undergraduate

3. Communicate effectively through written reports and essays, oral presentations, classroom discussions, and other
Audience: Undergraduate

4. Demonstrate understanding of the methods, theories, and sources used by scholars of literature and culture
Audience: Undergraduate

5. Develop and learn to utilize techniques, skills, and concepts of literary and cultural criticism in a variety of contexts
Audience: Undergraduate

SLAVIC/LITTRANS 361 – LIVING AT THE END OF TIMES: CONTEMPORARY POLISH LITERATURE AND CULTURE
3 credits.

The collapse of communism and the posthumous triumph of the Solidarity movement started a new era in Polish culture. However, living in "posthistory" comes with its own set of problems. Examine contemporary Polish literature, film, and other cultural forms as they struggle with the country's turbulent past while trying to forge new collective identities for the future. How does culture mediate our relationship with the past? How does it help us understand the present and prepare for the future?
Requisites: SLAVIC/LITTRANS 215 or SLAVIC 111
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. identify and define major themes, concepts, events, and ideas that shape Poland's cultural history since 1989
Audience: Undergraduate

2. develop, compare, and effectively express ideas about various cultural texts and their underlying semantic structures
Audience: Undergraduate

3. demonstrate an understanding of contemporary cultural, social, and political issues that shape collective identities in Poland and, more broadly, East-Central Europe
Audience: Undergraduate

4. apply the concepts learned in classroom to select contemporary debates in Polish culture and society
Audience: Undergraduate

SLAVIC/CURRIC/THEATRE 362 – DRAMA FOR TEACHING AND LEARNING
3 credits.

Methods for all involved in teaching and learning, including foreign languages. Introduction to philosophy, methodology, and practice of the use of drama and performance techniques in any educational or recreational settings. Focus on creativity and embodied and contextual learning, based on current neurological, psychological, and sociological research. A practical class which includes demonstration and practice with children.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Articulate the importance of drama in the education of all children.
Audience: Both Grad & Undergrad

2. Connect drama to multiple forms of expressing and receiving experiences, ideas, and feelings.
Audience: Both Grad & Undergrad

3. Apply the basic terms, skills, philosophies, and methodologies for leading drama sessions
Audience: Both Grad & Undergrad

4. Articulate the difference and similarities between the drama methodologies offered in the course.
Audience: Both Grad & Undergrad

5. Connect the use of drama with current brain based research
Audience: Both Grad & Undergrad

6. Demonstrate ability to design, implement, and evaluate activities and lesson plans with sound objectives and goals.
Audience: Both Grad & Undergrad

7. Connect school and community-making connections between community-based knowledge and school knowledge in theory and practice of drama.
Audience: Both Grad & Undergrad

8. Demonstrate ability to design, implement, and evaluate lesson plans that focus on inclusion and diversity in theory, practice, and pedagogy.
Audience: Graduate

9. Articulate the value of drama in relation to children's social, cultural, cognitive, linguistic, emotional, and moral development.
Audience: Graduate

SLAVIC/LITTRANS 366 – INTERMEDIATE SPECIAL TOPICS IN RUSSIAN LITERATURE & CULTURE
3 credits.

Exploration of various topics - periods, genres, individual writers, themes, problems, etc. in Russian and Eastern European literature at the intermediate level.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Gain a greater awareness of another culture and become more adept at engaging with perspectives and ways of thinking that are different from your own.
Audience: Undergraduate

2. Develop a sensitivity to the way texts and ideas are rooted in their unique historical and political contexts, while having a life span that stretches far beyond them.
Audience: Undergraduate

3. Be able to conduct a close reading of a literary text that takes into consideration both its form and content.
Audience: Undergraduate

SLAVIC 405 – WOMEN IN RUSSIAN LITERATURE
3-4 credits.

The portrayal and perspectives of women, first in literature written by men in the nineteenth-century and then, primarily, by women writers in nineteenth-, twentieth- and twenty-first-century Russian literature. Examine works in their literary, historical, and cultural contexts.
Requisites: Graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2019

SLAVIC 420 – CHEKHOV
3-4 credits.

Examine works of Anton Chekhov in their literary, historical, and cultural context.
Requisites: Graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

SLAVIC 421 – GOGOL
3-4 credits.

Examine works of Nikolai Gogol in their literary, historical, and cultural contexts.
Requisites: Graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2020

SLAVIC 422 – DOSTOEVSKY
3-4 credits.

Examine works of Dostoevsky in their literary, historical, and cultural contexts.
Requisites: Graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2018

SLAVIC 424 – TOLSTOY
3-4 credits.

Examine works of Leo Tolstoy in their literary, historical, and cultural contexts.
Requisites: Graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023

SLAVIC 433 – HISTORY OF RUSSIAN CULTURE
3 credits.

Focuses on those topics in Russian cultural history that are most often discussed by Russians and serve as the basis for contemporary political and media discourse.
Requisites: SLAVIC 321
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

SLAVIC 434 – CONTEMPORARY RUSSIAN CULTURE
3 credits.

Focuses on those topics in Russian cultural history that are most often discussed by Russians and serve as the basis for contemporary political and media discourse.
Requisites: SLAVIC 433
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

SLAVIC/FOLKLORE 444 – SLAVIC AND EAST EUROPEAN FOLKLORE
3 credits.

Oral traditional literature of Eastern Europe: ritual and lyric poetry, epic, and folktale.
Requisites: Junior standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2019

SLAVIC 449 – HISTORY OF SERBO-CROATIAN LITERATURE
3 credits.

Major literary movements of Serbian and Croatian literatures from the medieval period until the formation of the Yugoslav state in 1919. Readings in Serbo-Croatian.
Requisites: SLAVIC 342
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2018

SLAVIC 451 – THIRD SEMESTER INTENSIVE CZECH
3 credits.

Reading selections from various sources in Czech literature, history, and culture.
Requisites: SLAVIC 352
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023

SLAVIC 452 – FOURTH SEMESTER INTENSIVE CZECH
3 credits.

Reading selections from various sources in Czech literature, history, and culture.
Requisites: SLAVIC 451
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

SLAVIC 465 – ADVANCED READINGS IN RUSSIAN LITERATURE & CULTURE
3 credits.

A focus on development of reading, writing, and speaking skills and on the interpretation of texts in their historical and cultural context.
Requisites: SLAVIC 321
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Read and discuss a variety of texts from Russian literature and on Russian culture at the ACTFL Intermediate High and Advanced levels.
Audience: Undergraduate

2. Watch, listen to, and discuss films, excerpts from films, and other relevant videos related to the texts assigned for this class at the ACTFL Intermediate High and Advanced levels.
Audience: Undergraduate

3. Analyze and interpret literary and culturally salient texts in themselves and in their historical and cultural context.
Audience: Undergraduate

4. Write analytical essays on the assigned texts and their historical and cultural context.
Audience: Undergraduate

5. Give engaging presentations on the historical and cultural context of assigned works.
Audience: Undergraduate

SLAVIC/LITTRANS 467 – ADVANCED SPECIAL TOPICS IN SLAVIC LANGUAGES AND LITERATURES
3 credits.

Special topics in Slavic and Central and Eastern European Languages and Literatures.
Requisites: Junior standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024
Learning Outcomes: 1. list, define, and discuss the main figures, theories, and concepts related to the course's advanced topic
Audience: Undergraduate

2. apply methods of literary, cinematic, and cultural analysis in interpreting a wide range of cultural texts
Audience: Undergraduate

3. develop, compare, and effectively express ideas about cultural texts and their underlying semantic structures, informed by contextual knowledge and literary critical techniques
Audience: Undergraduate

4. hone critical and analytical skills through a close reading of fictional, philosophical, political, and theological texts in connection to social, political, and ethical issues
Audience: Undergraduate

SLAVIC 470 – HISTORY OF POLISH LITERATURE UNTIL 1863
3 credits.

Intensive study of major writers such as Kochanowski, Sep Szarzynski, Krasicki, Mickiewicz, and Slowacki. Readings in Polish.
Requisites: SLAVIC 302 or Graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

SLAVIC 472 – HISTORY OF POLISH LITERATURE AFTER 1863
3 credits.

A comprehensive survey of Polish literature and its historical background from 1863 to the present. Readings in Polish.
Requisites: SLAVIC 470 or Graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019

SLAVIC 555 – ADVANCED RUSSIAN LISTENING & SPEAKING
3 credits.

Development of advanced skills in Russian listening and speaking proficiency, with an emphasis on formal registers. Covers a variety of areas related to contemporary Russian-language media and culture necessary for a professional-level command of the language, regardless of the student's discipline.
Requisites: SLAVIC 321
Course Designation: Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Read, interpret, and analyze a variety of Russian-language news articles.
Audience: Undergraduate

2. Listen to, interpret, and analyze a variety of Russian-language media sources relevant to recent history and current affairs (news reports, interviews, debates, documentary films, and similar).
Audience: Undergraduate

3. Discuss current affairs in Russia and some of the Russian-speaking world in paragraph-length discourse, in the past and present, and discuss possible outcomes of current events in the future tense and conditional ("what if").
Audience: Undergraduate

4. Describe news-making figures and narrate current news events, using vocabulary accessible to the general interlocutor in Russian.
Audience: Undergraduate

5. Compare and analyze various Russian-language news and media sites.
Audience: Undergraduate

6. Present on topics of interest in historical and current events and respond to peers' questions at the ACTFL Advanced level, in at least paragraph-length discourse.
Audience: Undergraduate

7. Apply knowledge of Russian-language news sites, and, as appropriate, of historical and current events discussed in this course, to your discipline.
Audience: Undergraduate

SLAVIC 560 – CAPSTONE SEMINAR IN RUSSIAN LITERATURE AND CULTURE
3 credits.

History of Russian social and political satire in depth. Taught in Russian.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Examine how various authors and texts offer complex views and interpretations of society, culture, and history.
Audience: Undergraduate

2. Recognize explicit and implicit messages embedded in literary texts of various genres.
Audience: Undergraduate

3. Analyze and interpret textual detail, establish connections among observations and draw logical inferences while learning to use Russian literary terminology and utilize Russian sources.
Audience: Undergraduate

SLAVIC 681 – SENIOR HONORS THESIS
3 credits.

Individual mentored study for seniors completing theses for Honors in the Major as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Summer 2012

SLAVIC 682 – SENIOR HONORS THESIS
3 credits.

Individual mentored study for seniors completing theses for Honors in the Major as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2015

SLAVIC 699 – DIRECTED STUDY
1-6 credits.

Independent study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SLAVIC 701 – SURVEY OF OLD RUSSIAN LITERATURE
2 credits.

Readings of Russian Literature from the Byzantine though the 17th century.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023

SLAVIC 702 – EIGHTEENTH-CENTURY RUSSIAN LITERATURE
2 credits.

Readings of Russian Literature in the 18th century and beyond.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

SLAVIC 703 – FOUNDATIONS IN RUSSIAN ROMANTICISM
3 credits.

Introduction to Russian Romanticism. Provides a solid foundation in both primary texts and secondary scholarship in the field.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

SLAVIC 705 – SPECIAL TOPICS IN RUSSIAN LANGUAGE/ LINGUISTICS
3 credits.

Topics in Russian Language and Linguistics.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2019

SLAVIC 707 – FOUNDATIONS IN RUSSIAN REALISM (~1840-1890S)
3 credits.

Covers masterworks of the 19th century and the broader literary, historical, political, intellectual and cultural contexts in which they arose and which they shaped.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

SLAVIC 708 – FOUNDATION IN RUSSIAN MODERNISM (~1890S-1930S)
3 credits.

Introduction to various trends in Russian Modernist literature from the 1890s through the 1930s.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

SLAVIC 709 – FOUNDATION IN SOVIET, EMIGRE, AND POST-SOVIET LITERATURE (~1930-PRESENT)
3 credits.

Covers Soviet, Emigre, and Post-Soviet periods of Russian literature. Engage with the movements and conceptual issues shaping and influencing the production of Russian/Soviet literary texts from 1917 until the present day: e.g., realism, socialist realism, exile (internal and external), dissidence, postmodernism.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

SLAVIC 755 – TOPICS IN SLAVIC LITERATURE
1-3 credits.

Topics in Russian and Slavic literature.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SLAVIC 799 – INDEPENDENT STUDY
1-6 credits.

Advanced independent study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SLAVIC 800 – PROSEMINAR-SLAVIC LITERATURE AND CULTURE
1 credit.

An introduction to SLAVIC faculty, the Slavic field in general, and research methods in Slavic.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

SLAVIC 801 – SLAVIC CRITICAL THEORY AND PRACTICE
3 credits.

Introduction to the original works of major trends representing literary theory in the Slavic world and wider: formalism, materialism, structuralism, semiotics, deconstruction, psychoanalysis, gender-based theory and other relevant theories that have influenced the way we treat literature as a cultural and aesthetic practice.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

SLAVIC 802 – THE STRUCTURE OF RUSSIAN
2 credits.

Provides a theoretical and practical introduction to the linguistic structure of Contemporary Standard Russian.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

SLAVIC 803 – INTRODUCTION TO OLD CHURCH SLAVONIC AND THE HISTORY OF RUSSIAN LITERARY LANGUAGE
2 credits.

Introduction to Old Church Slavonic (OCS) and its impact on the formation of Russian literary language.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023

SLAVIC 804 – METHODS OF TEACHING SLAVIC LANGUAGES
2 credits.

Investigate the history of foreign language instruction, various models of adult foreign language acquisition, methods for teaching Russian, the creation of testing instruments, issues relevant to course design, and criteria for textbook selection.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

SLAVIC 820 – COLLEGE TEACHING OF RUSSIAN
1 credit.

Provides important professional development in course design, lesson planning, and assessment for teaching assistants. Work cooperatively to develop course activities and assessment instruments, and learn how to identify and solve problems in the classroom. Must be a teaching assistant in Russian.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

SLAVIC 900 – SEMINAR: SLAVIC LITERATURE AND CULTURE
1-3 credits.

Seminar topics related to Slavic literature and culture.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SLAVIC 991 – INDIVIDUAL RESEARCH-SLAVIC LITERATURE
1-12 credits.

Independent research and writing under the supervision of a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SOCIAL AND ADMINISTRATIVE PHARMACY (S&A PHM)

S&A PHM/NURSING/SOC WORK 105 — HEALTH CARE SYSTEMS: INTERDISCIPLINARY APPROACH
2 credits.

Introduction to health care systems. Factors affecting health and the value placed on health, the delivery of health care in different settings, the roles of various health workers, and the sociological and economic aspects of health care.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss selected contemporary problems, issues, and trends in health care services for individuals, groups, and populations from local, regional, and global perspectives.
Audience: Undergraduate

2. Describe and compare the impact of health and medical services, including environmental, behavioral, genetic, and biological factors, on personal and public health.
Audience: Undergraduate

3. Discuss the influences of technological, social, cultural, economic, and political forces on the organization of health care systems and delivery of health care services.
Audience: Undergraduate

4. Critically evaluate similarities and differences in health care systems and service conceptualization, organization, and delivery from national and international perspectives.
Audience: Undergraduate

S&A PHM/HIST SCI 401 — HISTORY OF PHARMACY
2 credits.

Pharmaceutical field, from antiquity to modern medical care; professional; structuring in principal countries of the West.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Outline the key theoretical issues in the history of medicine and pharmacy
Audience: Undergraduate

2. Explain the relationship, using models of change, between medicines, pharmacy practice, and society
Audience: Undergraduate

3. Assess critically the historiographies of the history of medicine and pharmacy
Audience: Undergraduate

4. Evaluate the reputations of pharmacy practices, organizations, and key actors
Audience: Undergraduate

5. Communicate effectively conclusions regarding the history of medicines and pharmacy
Audience: Undergraduate

6. Apply historical understandings to contemporary issues regarding pharmacy, drug regulation, and political conflicts
Audience: Undergraduate

S&A PHM 411 – PHARMACY IN THE HEALTH CARE SYSTEM
3 credits.

Orientation to the US health care system and pharmacy's integral role within it. Address roles and responsibilities of different individuals and organizations involved in the provision of health care, issues of insurance coverage, reimbursement, and payment for health care services. Apply principles of personnel management in pharmacy practice.
Requisites: Declared in Doctor of Pharmacy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify characteristics of the U.S. health care system and explain how individuals and organizations interact to provide health care services.
Audience: Graduate

2. Solve problems by applying important concepts related to insurance coverage.
Audience: Graduate

3. Recognize, describe, and analyze issues affecting health care systems.
Audience: Graduate

4. Recognize and apply principles of personnel management in pharmacy work environments.
Audience: Graduate

5. Effectively communicate in oral and written forms with the interprofessional health care team.
Audience: Graduate

S&A PHM 414 – SOCIAL AND BEHAVIORAL ASPECTS OF PHARMACY PRACTICE
3 credits.

Introduction to psychosocial and behavioral aspects of pharmacy practice and patient care, including professional, ethical decision-making; the pharmacist's role in patient care and public health; patient perspectives and factors related to health and medication use; and patient-pharmacist interaction and communication.
Requisites: S&A PHM 411
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify ethical issues in health care, apply a problem-solving framework to analyze dilemmas, and make decisions regarding appropriate courses of action
Audience: Graduate

2. Effectively communicate in oral and written forms with patients, caregivers, and the interprofessional healthcare team
Audience: Graduate

3. Apply social and behavioral principles in the provision of patient care services
Audience: Graduate

4. Identify health disparities and public health problems and address these issues incorporating awareness of sociocultural issues
Audience: Graduate

5. Develop patient-centered culturally aware disease management programs
Audience: Graduate

S&A PHM 490 – SELECTED TOPICS IN SOCIAL AND ADMINISTRATIVE PHARMACY
1-4 credits.

Specialized subject matter of current interest to undergraduate and professional students.
Requisites: Declared in Doctor of Pharmacy program
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2020

S&A PHM 514 – MANAGING PHARMACY SYSTEMS FOR PATIENT CARE
2 credits.

Introduces concepts and principles related to managing pharmacy operations and systems for patient care, and managing financial aspects of pharmacies.
Requisites: Declared in Doctor of Pharmacy program with second year standing
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Interpret and apply common financial statements in a pharmacy context
Audience: Undergraduate

2. Describe pharmacy operations and revenue sources in retail/community, hospital, and ambulatory clinic settings
Audience: Undergraduate

3. Plan and evaluate a pharmacy service, including quality, satisfaction, and financial considerations
Audience: Undergraduate

4. Write a business plan for a pharmacy service
Audience: Undergraduate

S&A PHM 611 – PHARMACY LAW AND REGULATION
2-3 credits.

Federal and Wisconsin laws related to drug manufacture, drug distribution, drug use, and pharmacy practice.
Requisites: S&A PHM 514
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify, locate, and use reputable sources of legal information
Audience: Undergraduate

2. Describe, interpret, and apply relevant federal and state statutes and regulations affecting pharmacy practice
Audience: Undergraduate

3. Analyze "real world" pharmacy practice situations from a variety of perspectives
Audience: Undergraduate

4. Identify potential legal problems in pharmacy practice before they may occur
Audience: Undergraduate

5. Demonstrate advocacy for the pharmacy profession and patient welfare

Audience: Undergraduate

S&A PHM 652 – PHARMACIST COMMUNICATION: EDUCATIONAL AND BEHAVIORAL INTERVENTIONS
2 credits.

Intermediate principles of pharmacist communication with patients and other care givers; weekly communications laboratory provides opportunity to refine skills in listening, interviewing, counseling, and use of various educational and behavioral strategies to improve drug use.
Requisites: S&A PHM 411 and Declared in the Doctor of Pharmacy Program with third year standing
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply and tailor a counseling framework to the needs of an individual patient and provider
Audience: Undergraduate

2. Demonstrate an empathic response to a patient
Audience: Undergraduate

3. Conduct motivational interviewing with patients and staff
Audience: Undergraduate

4. Evaluate and use a variety of resources to consult with patients who have limited English proficiency
Audience: Undergraduate

5. Demonstrate several types of probes for patient interviewing
Audience: Undergraduate

6. Evaluate patient understanding during your consultation
Audience: Undergraduate

7. Collect feedback from patients and staff to identify pharmacy program/service needs
Audience: Undergraduate

8. Conduct a SWOT analysis
Audience: Undergraduate

9. Design an intervention based on your assessment
Audience: Undergraduate

10. Diagram flowcharts of a proposed pharmacy service intervention and its implementation with staff
Audience: Undergraduate

11. Conduct a cost-benefit analysis of a pharmacy service
Audience: Undergraduate

12. Write a proposal
Audience: Undergraduate

13. Make a group presentation on a proposed pharmacy-based intervention
Audience: Undergraduate

S&A PHM 699 – ADVANCED INDEPENDENT STUDY
0-3 credits.

Directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

S&A PHM 701 – GRANT WRITING FOR HEALTH SERVICES RESEARCH
2 credits.

Prepare to enter professional careers requiring knowledge of grant-writing. Mechanics of proposal writing and social aspects of "grantsmanship," skill development in identifying sources of grant funding, practice research to support applications, and tailor proposals to specific audience interests. Utilizing an iterative and peer supported process, draft parts of an R36 dissertation grant.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate knowledge of where to find grant opportunities and the general procedures for grant submissions
Audience: Graduate

2. Demonstrate knowledge of the components of an NIH grant and the contents expected within each section
Audience: Graduate

3. Demonstrate the ability to succinctly synthesize the literature on a significant and timely topic and identify a gap in knowledge that is worthy of investigation
Audience: Graduate

4. Generate objectives/aims and hypotheses for a project that fill the identified knowledge gap
Audience: Graduate

5. Generate a compelling description of the expected benefit of completing the project objectives.
Audience: Graduate

6. Demonstrate the ability to combine the literature summary, aims, and expected benefits into a Specific Aims page of an NIH grant on a significant and timely topic in the field.
Audience: Graduate

7. Demonstrate the ability to combine the literature summary and description of the importance of the chosen research topic in a Significance Section.
Audience: Graduate

8. Demonstrate the ability to describe the novel aspects of the research question identified or approach selected to complete the research objective in an Innovation Section.
Audience: Graduate

9. Outline an Approach section that describes the methods to be used to complete the objective, including potential problems and alternative strategies.
Audience: Graduate

10. Demonstrate the ability to critically review one's own grant and iteratively improve it.
Audience: Graduate

11. Demonstrate the ability to receive critical feedback and revise research ideas in response to feedback.
Audience: Graduate

12. Demonstrate the ability to give constructive, critical feedback to colleagues about research ideas.

S&A PHM 702 – MIXED METHODS FOR HEALTH SCIENCES: PURPOSE, DESIGN AND APPROACH
2 credits.

Increase awareness, understanding, and knowledge about how mixed methods research fits into the broader world of health services research. Exposure to research and lay literature in health services research in pharmacy and related fields. Improve ability to write technically, read and interpret mixed methods research articles, and discuss implications of research findings.
Requisites: Graduate standing only or declared in the Doctor of Pharmacy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Use appropriate language to talk about mixed-methods research as a third family of research designs alongside the two monomethod families of quantitative and qualitative designs.
Audience: Graduate

2. Develop a study proposal based on research questions for which a mixed-methods design would be appropriate.
Audience: Graduate

3. Develop skills in communicating mixed methods research ideas to colleagues, funding agencies, policymakers, and journal audiences.
Audience: Graduate

S&A PHM 703 – COMMUNITY ENGAGEMENT IN HEALTH SERVICES RESEARCH
2 credits.

Apply principles of community engagement in the field of health services research. Read and interpret relevant articles, and discuss implications of these readings. Learn existing models and practical approaches for successfully partnering with community stakeholders to address health and medication-related needs through research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Delineate the types of community stakeholders and processes for entering communities based on the Wisconsin idea
Audience: Graduate

2. Identify existing infrastructure to conduct community engaged research projects and develop sustainable partnerships
Audience: Graduate

3. Apply principles and models for designing community engaged research
Audience: Graduate

4. Develop a grant proposal and a community stakeholder engagement plan using principles of team science
Audience: Graduate

S&A PHM 704 – DISSEMINATION, IMPLEMENTATION AND SUSTAINMENT OF CHANGE IN HEALTH SERVICES RESEARCH
2 credits.

Apply Dissemination and Implementation (DI) as well as sustainability concepts and principals to support organizational change efforts in different healthcare settings or learn how to conduct Sustainability research in their professional careers. Identify DI frameworks, appropriate implementation strategies, study designs and outcomes to address the implementation of an evidence-based practice or a specific organizational change.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Understand the importance of designing for dissemination and how to promote your innovation to key stakeholders.
Audience: Graduate

2. Differentiate between dissemination and implementation, understand the different D&I frameworks, and have knowledge on how to select the most appropriate framework.
Audience: Graduate

3. Understand how selected D&I frameworks CFIR, Re-Aim, EPIS and a selected few other frameworks) have been applied in the field.
Audience: Graduate

4. Differentiate between different research designs and evaluation approaches in D&I research, and to understand the difference between the different hybrid trials, and how they have been applied in the field
Audience: Graduate

5. Identify the different implementation strategies that can be utilized in D&I research and how selected strategies have been applied in different D&I research studies.
Audience: Graduate

6. Describe how different implementation strategies that could be applied in a pharmacy D&I project and discuss the importance of facilitated implementation as an effective implementation strategy
Audience: Graduate

7. Describe the different types of outcomes in D&I research, understand how they have been applied in the field, and discuss what these outcomes might look like in a pharmacy setting.
Audience: Graduate

8. Understand about D&I research has been applied in other areas of healthcare.
Audience: Graduate

9. Discuss the importance of implementation fidelity and understand how to assess fidelity in D&I research.
Audience: Graduate

10. Describe the importance of sustainability in D&I research and understand about D&I research has been applied in other areas of healthcare.
Audience: Graduate

11. Understand the importance of conducting an economic analysis in D&I research and describe how they might conduct such an analysis.
Audience: Graduate

S&A PHM 711 – RESEARCH METHODS FOR PHARMACEUTICAL OUTCOMES AND POLICY RESEARCH
3 credits.

Development of skills in the methods, techniques, and problems encountered in conducting evaluations of pharmaceutical services, programs, and policies.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Identify and conceptualize problems and critically evaluate information and past research (i.e., literature) related to a problem
Audience: Graduate

2. Analyze the literature related to research methods and the application of research methods
Audience: Graduate

3. Evaluate concepts and techniques related to study variable conceptualization, operationalization, and measurement
Audience: Graduate

4. Analyze data using concepts and techniques presented in class
Audience: Graduate

5. Evaluate measurement and data analysis concepts and techniques that are uniquely associated with health services research in pharmacy
Audience: Graduate

6. Use STATA software to analyze data and answer questions related to measurement and data analysis techniques
Audience: Graduate

S&A PHM 715 – SOCIAL BEHAVIORAL THEORIES IN PHARMACY, DRUG USE, AND HEALTH BEHAVIOR
3 credits.

Critical review and application of social behavioral theories, methodologies, and research to current problems in pharmacy, pharmacist communication and interaction with consumers and other providers, use of prescription and nonprescription drugs, and self-care.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Critically analyze selected theories and models as they relate to pharmacy/drug use/health behavior
Audience: Graduate

2. Identify alternative methods of testing and operationalizing theories
Audience: Graduate

3. Critique research approaches, design and measures
Audience: Graduate

4. Identify research needs and social behavioral strategies for improving care outcomes
Audience: Graduate

S&A PHM 716 – ADVANCED HOSPITAL PHARMACY ADMINISTRATION
2 credits.

Various components necessary to become an accomplished administrator of a pharmacy department in a hospital or organized health care setting.
Requisites: Declared in MS Pharmacy program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

S&A PHM 911 – RESEARCH SEMINAR IN SOCIAL & ADMINISTRATIVE PHARMACY
1 credit.

Exposes students to research related to SAS topics, discuss strategies for writing research theses and articles, discuss various methodological approaches to answering research questions, and improve oral and written communication skills. Seminars may involve presenting completed and/or planned research, leading discussions among seminar participants about research topics, and discussing written assignments.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2020
Learning Outcomes: 1. Delineate the types of community stakeholders and processes for entering communities based on the Wisconsin idea
Audience: Graduate

2. Identify existing infrastructure to conduct community engaged research projects and develop sustainable partnerships
Audience: Graduate

3. Apply principles and models for designing community engaged research
Audience: Graduate

4. Develop a grant proposal and a community stakeholder engagement plan using principles of team science
Audience: Graduate

S&A PHM 990 – RESEARCH
1-12 credits.

Independent research and writing for graduate students under the supervision of a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

S&A PHM 999 – ADVANCED INDEPENDENT STUDY
1-12 credits.

Directed study projects for graduate students as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SOCIAL WORK (SOC WORK)

SOC WORK 100 – SO YOU WANT TO CHANGE THE WORLD?
3 credits.

Examine ideas and values related to making a difference, think critically about the meaning and methods of changing the world, and integrate thoughtful evidence with your values and beliefs about doing good in the world. With a focus on the profession of social work and other helping professions, consider a variety of social problems, and investigate and critique various approaches to creating change to improve social problems.
Requisites: First year students or first year transfer students only
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop a better understanding of motivations and skills for changing the world.
Audience: Undergraduate

2. Develop the ability to examine the multiple and complex causes of social problems.
Audience: Undergraduate

3. Develop an understanding of multiple approaches to social change and the ability to critically evaluate pros and cons of different approaches.
Audience: Undergraduate

4. Develop an understanding of how social work and other professions contribute to understanding and addressing social problems.
Audience: Undergraduate

5. Further skills in collaborating with peers, providing and incorporating feedback, and communicating knowledge and ideas orally in writing.
Audience: Undergraduate

SOC WORK/NURSING/S&A PHM 105 – HEALTH CARE SYSTEMS: INTERDISCIPLINARY APPROACH
2 credits.

Introduction to health care systems. Factors affecting health and the value placed on health, the delivery of health care in different settings, the roles of various health workers, and the sociological and economic aspects of health care.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss selected contemporary problems, issues, and trends in health care services for individuals, groups, and populations from local, regional, and global perspectives.
Audience: Undergraduate

2. Describe and compare the impact of health and medical services, including environmental, behavioral, genetic, and biological factors, on personal and public health.
Audience: Undergraduate

3. Discuss the influences of technological, social, cultural, economic, and political forces on the organization of health care systems and delivery of health care services.
Audience: Undergraduate

4. Critically evaluate similarities and differences in health care systems and service conceptualization, organization, and delivery from national and international perspectives.
Audience: Undergraduate

SOC WORK 205 – INTRODUCTION TO THE FIELD OF SOCIAL WORK
4 credits.

Historical development, formation of social welfare policies, and the role of the social work professional.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

SOC WORK 206 – INTRODUCTION TO SOCIAL POLICY
4 credits.

Provides an awareness of problems and concepts of the policy process in the U.S. Explores the political, economic, and institutional frameworks which structure public social welfare choices.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

SOC WORK 275 – CONTEMPORARY ISSUES IN SOCIAL WELFARE
1-3 credits.

Topics will vary, reflecting new issues and trends in social justice, social welfare, or social work.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Examine the multiple and complex causes of social problems.
Audience: Undergraduate

2. Explain social work theories and approaches related to topic area
Audience: Undergraduate

3. Discuss societies and the larger global community.
Audience: Undergraduate

SOC WORK 299 – DIRECTED STUDY
1-3 credits.

Program of study devised by a student in collaboration with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2017

SOC WORK 316 – POWER, POSSIBILITY, AND THE PRACTICE OF SOCIAL JUSTICE
3 credits.

Theory and practice of social justice. Concepts of justice, values and ethics, critical theoretical frameworks, and practical strategies for organizing and advocacy provide the building blocks for this discussion based applied course. Concrete examples of ongoing theory and practice at the local, state, national, and global levels. Advocacy and organizing skills in projects relating to individual priorities.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Contrast diverse definitions of social justice.
Audience: Undergraduate

2. Analyze how personal values and ethics shape social justice priorities.
Audience: Undergraduate

3. Contribute to social change/social justice work connected to personal priorities.
Audience: Undergraduate

4. Analyze a range of perspectives and theories regarding the practice of social change.
Audience: Undergraduate

5. Demonstrate concrete teamwork, leadership, engagement, organizing, and communication skills in the classroom and in social justice work.
Audience: Undergraduate

SOC WORK 336 – MAKING SENSE OF MENTAL HEALTH & MENTAL ILLNESS
3 credits.

Examine critical perspectives of contemporary psychiatry and the mental health system, considering power structures, global and national cultural perspectives on mental health and illness, and the history, values, norms, and preferences of those served.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate awareness of their own assumptions and values related to 'mental health' , 'mental illness' and experiences that influence their perspectives.
Audience: Undergraduate

2. Identify the strengths and limitations of the approaches, services and systems designed to address mental health and mental illness currently and historically.
Audience: Undergraduate

3. Understand the importance of the historical and cultural background of individuals and communities for developing and delivering culturally sensitive and socially just mental health interventions.
Audience: Undergraduate

4. Understand and assess how critical theories challenge mainstream western conceptions and treatment approaches for mental illness and demonstrate the ability to critically evaluate the merits and limitations of these critical theories.
Audience: Undergraduate

5. Analyze alternatives for the treatment and care of severe mental illnesses that provide sustained support, choice, and empowerment to services users.
Audience: Undergraduate

SOC WORK 375 – CONTEMPORARY ISSUES IN SOCIAL WELFARE
2-3 credits.

Topics will vary, reflecting current issues and trends in social justice, social welfare, and social work.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Synthesize and communicate knowledge regarding contemporary social welfare issues
Audience: Undergraduate

2. Demonstrate knowledge of social work theories and approaches related to topic area
Audience: Undergraduate

3. Think critically about societies and the larger global community
Audience: Undergraduate

SOC WORK 400 – FIELD PRACTICE AND INTEGRATIVE SEMINAR I
2-6 credits.

An approved generalist field seminar and social work community agency placement. Seminar and placement require a minimum of 16 hours/week. The first course of the two-semester generalist field sequence.
Requisites: Declared in Social Work BSW or Social Work MSW
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Workplace - Workplace Experience Course
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

SOC WORK 401 – FIELD PRACTICE AND INTEGRATIVE SEMINAR II
2-6 credits.

An approved generalist field seminar and social work agency placement. Seminar and placement require a minimum of 16 hours per week. The second course of the two-semester generalist field sequence.
Requisites: SOC WORK 400 and declared in Bachelor or Master of Social Work program
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Workplace - Workplace Experience Course
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

SOC WORK 420 – POVERTY AND SOCIAL WELFARE
3 credits.

Nature and dimensions of poverty in the U.S. Individual and social consequences of poverty. Historic and contemporary approaches. Poverty and social welfare policy and programs.
Requisites: Sophomore standing and SOC WORK 206
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

SOC WORK/SOC 422 – SOCIAL ISSUES IN AGING
3 credits.

Origins, nature, scope and dynamics of the social problems of older adults and their families in the U.S. and to acquaint students with programs and services available to older adults.
Requisites: Sophomore standing and (SOC WORK 205, SOC 181, SOC/C&E SOC 140, 210 or 211)
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

SOC WORK 441 – GENERALIST PRACTICE WITH INDIVIDUALS, FAMILIES AND GROUPS
3 credits.

Develops generalist social work knowledge and skills for working with and on behalf of individuals, families, and groups. Focus on development of basic social work direct practice skills.
Requisites: Declared in Social Work BSW or Social Work MSW
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand and apply knowledge of how extant social and institutional factors might impact individuals and group interviews
Audience: Graduate

2. Demonstrate ethical and professional behavior
Audience: Both Grad & Undergrad

3. Engage with Individuals, Families, Groups
Audience: Both Grad & Undergrad

4. Assess Individuals, Families, Groups
Audience: Both Grad & Undergrad

5. Intervene with Individuals, Families, Groups
Audience: Both Grad & Undergrad

6. Evaluate Practice with Individuals, Families, Groups
Audience: Both Grad & Undergrad

SOC WORK 442 – GENERALIST PRACTICE WITH COMMUNITIES AND ORGANIZATIONS
1-2 credits.

Exposes students to the theory and practice of planned change in communities and organizations and helps them incorporate a generalist model into practice at these levels of intervention.
Requisites: Declared in Social Work BSW or Social Work MSW
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SOC WORK 453 – SUBSTANCE USE DISORDERS
3 credits.

Presentation of social, historical, legal, political, and ethical considerations surrounding the use and abuse of alcohol and psychotropic drugs in the U.S.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define basic terminology used in the field and differentiate between substance use, misuse, abuse, and dependence.
Audience: Undergraduate

2. Identify and evaluate common conceptual models used to understand problematic substance use.
Audience: Undergraduate

3. Discuss and understand social, historical, legal, political, biological, psychological, and ethical considerations surrounding the use and abuse of alcohol and psychoactive drugs in the U.S.
Audience: Undergraduate

SOC WORK 454 – SMALL GROUPS IN SOCIAL WORK PRACTICE
3 credits.

Exploration and application of theory to the formation and development of small groups deliberately used by social workers to effect specified change in interpersonal relationships.
Requisites: Sophomore standing and SOC WORK 205
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2019

SOC WORK 457 – HUMAN BEHAVIOR AND THE ENVIRONMENT
3 credits.

Physiological, psychological, and social changes throughout the life cycle. Major crisis and developmental tasks at each point in terms of their implications for social work practice.
Requisites: Junior standing and declared in Social Welfare or Social Work undergraduate program
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

SOC WORK 462 – CHILD WELFARE
3 credits.

History and current policies, statutes, and best practices that shape child welfare practice locally, nationally, and internationally. Gain knowledge and awareness to prevent and protect children from neglect, physical abuse, sexual abuse, and emotional abuse by strengthening, supporting and empowering their families. Explore various settings where children and families often receive social work services to engage in critical review on the purpose and organization of the setting, the role of social work, and evidence-based practices when working with children and families.
Requisites: Sophomore standing. Not open to students with credit for SOC WORK 646 or 656.
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and understand multifaceted aspects of the child welfare system.
Audience: Undergraduate

2. Integrate various aspects of generalist social work practice into the field of child welfare.
Audience: Undergraduate

3. Identify child welfare policies, services, and issues that impact the lives of children and families.
Audience: Undergraduate

4. Operationalize generalist social work knowledge, ethics, advocacy, and solution focused practice in public child welfare.
Audience: Undergraduate

SOC WORK/MEDICINE/NURSING/PHM PRAC 467 – INTERPROFESSIONAL COLLABORATIVE PRACTICE IN HIV CARE
1 credit.

Gain foundational knowledge and skills in interprofessional collaborative practice and HIV care. Explore the roles of medicine, nursing, pharmacy, and social work in the HIV care continuum. Discuss quality team-based care as a member of an interprofessional student team.
Requisites: Declared in Nursing BSN (Traditional, Collaborative, Accelerated), Social Work BSW, Medicine MD, Pharmacy PharmD, or Social Work MSW.
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the history and epidemiology of the HIV epidemic.
Audience: Both Grad & Undergrad

2. Define Interprofessional Collaborative Practice (ICP) and describe the characteristics of effective ICP.
Audience: Both Grad & Undergrad

3. Describe the natural history of HIV disease with and without antiretroviral therapy (ART).
Audience: Both Grad & Undergrad

4. Discuss US Dept of Health and Human Services guidelines and recommendations for prevention, screening, diagnosis, treatment, and management of HIV infection and HIV-related diseases in the United States.
Audience: Both Grad & Undergrad

5. Describe the HIV care continuum including testing, entry and retention in care, and treatment including associated stigma and discrimination as barriers.
Audience: Both Grad & Undergrad

6. Discuss dimensions of wellness (emotional, environmental, financial, intellectual, occupational, physical, social and spiritual).
Audience: Both Grad & Undergrad

7. Identify potential co-morbid conditions in the HIV infected population.
Audience: Both Grad & Undergrad

8. Discuss stigma and discrimination as barriers to prevention, care, and treatment.
Audience: Both Grad & Undergrad

9. Discuss the history of the Ryan White Care Act and other federal and state policies and their current importance in HIV prevention and HIV care.
Audience: Both Grad & Undergrad

10. Identify HIV care needs and common health issues among high risk and vulnerable populations.
Audience: Both Grad & Undergrad

11. Develop a plan of care for an HIV positive individual as part of an interprofessional team.
Audience: Both Grad & Undergrad

12. Develop skills working with mixed teams including undergraduate students
Audience: Graduate

13. Demonstrate higher level skills in identifying and resolving barriers to

SOC WORK 578 – HOUSING PRECARITY AND SOCIAL POLICY
4 credits.

An introduction to the issues surrounding housing precarity and being unhoused in the U.S. Explore the role of housing markets, social policies, demography, history, social provision, and attitudes impacting access to this fundamental good. Discuss social policies and service needs relevant to unhoused persons. Classroom and community-based learning experiences.
Requisites: Junior standing and SOC WORK 206
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the trends in rates of homelessness overtime and across demographic groups and geography
Audience: Undergraduate

2. Analyze and assess various methods for quantifying the size, scope and trends in housing affordability and homelessness by the federal and local government as well as non-profit service providers
Audience: Undergraduate

3. Compare the effectiveness of policy and service provision to address housing precarity
Audience: Undergraduate

SOC WORK 579 – SPECIAL TOPICS IN SOCIAL WORK
1 credit.

Intensive study of selected topics in the field of social work.
Requisites: Junior standing and declared in Social Welfare or Social Work undergraduate program
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2021

SOC WORK 612 – PSYCHOPATHOLOGY IN GENERALIST SOCIAL WORK PRACTICE
2 credits.

Addresses major mental health concerns across the lifespan, using the Diagnostic and Statistical Manual of Mental Disorders (DSM) as the organizing framework for reviewing major mental disorders and critiquing the current "medical model" approach to mental health in the United States. Approaches mental health issues from a generalist perspective, including the role of the social environment, culture, and stigma in mental health services, access, and policy.
Requisites: Declared in Social Work BSW, Social Work MSW, Social Work Advanced Standing MSW, Preparation for Admission to Graduate/ Professional, or Professional or Personal Enrichment Program
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Recognize DSM criteria for major mental health conditions across the lifespan, including a critique of the medical model approach employed in mental health diagnosis and treatment in the United States.
Audience: Undergraduate

2. Apply critical thinking to major mental health conditions considering social work values, a critique of the medical model approach, as well as a strengths-based, biopsychosocial framework.
Audience: Undergraduate

3. Examine the mental healthcare system, the process of mental health diagnosis, and current events in mental health through a sociocultural lens, exploring the impacts of stigma, disparities, poverty, and oppression on mental health/illness.
Audience: Undergraduate

SOC WORK 623 – INTERPERSONAL VIOLENCE
3 credits.

An overview of risk and protective factors, theories, services, research, and activism related to interpersonal violence. Models of prevention and intervention will be discussed. Skills related to social work practice with individuals and communities affected by interpersonal violence will be practiced.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explore how forms of oppression affect common perceptions of interpersonal violence.
Audience: Both Grad & Undergrad

2. Describe theories as to why interpersonal violence occurs.
Audience: Both Grad & Undergrad

3. Discuss prevention and intervention strategies to address interpersonal violence.
Audience: Both Grad & Undergrad

4. Evaluate and apply interpersonal violence research findings to social work practice.
Audience: Graduate

SOC WORK 624 – SOCIAL WORK WITH THE SMALL GROUP
2-3 credits.

Exploration of the small group as the interventive unit; major models and techniques; principles guiding the selection of the small group approach to intervention based on research knowledge of problems, processes, and outcomes.
Requisites: Declared in Social Work BSW or Social Work MSW
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019

SOC WORK 627 – SEX TRAFFICKING AND SEX TRADING
2 credits.

Anti-oppressive approaches to analyzing the dynamics of sex trading (including sex trafficking and sex work) as well as implications for practice and policy. Integrates diverse and conflicting perspectives of survivors, practitioners, and researchers to deconstruct sex trafficking risk, prevention, identification, and intervention strategies.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate Ethical and Professional Behavior by understanding the challenges of one's agency in victimization and the criminal justice system and direct practice
Audience: Both Grad & Undergrad

2. Define the extent and nature of the problem; including prevalence, experiences of survivors, types of trafficking and exploitation, methods of traffickers, the role of weak social institutions, cultural dynamics, and global power dynamics
Audience: Both Grad & Undergrad

3. Engage Diversity and Difference in Practice by understanding the interrelated inequities related to gender, sex, sexual orientation, gender identity, power, class, opportunity, education, culture, conflict, politics, race, ethnicity and sexual objectification are among the social phenomena that contribute to those who enter into systems of exploitation, including sex trafficking.
Audience: Both Grad & Undergrad

4. Advance Human Rights and Social, Economic and Environmental Justice by understanding how systems of oppression intersect with sex trafficking risk, and how people at risk of sex trafficking can be supported by client-centered policies (macro level) and practices (micro level).
Audience: Both Grad & Undergrad

5. Engage with Individuals, Families, Groups affected by sex trafficking
Audience: Both Grad & Undergrad

6. Engage In Practice-informed Research and Research-informed Practice in the context of the current sex trafficking literature.
Audience: Graduate

7. Assess Individuals, Families and Groups by demonstrating knowledge of trafficking identification, indicators, and needs
Audience: Graduate

SOC WORK/AMER IND 636 – SOCIAL WORK IN AMERICAN INDIAN COMMUNITIES: THE INDIAN CHILD WELFARE ACT
3 credits.

The role of social workers and social services in American Indian and tribal communities, particularly compliance with the Indian Child Welfare Act. Historical context includes land removal and loss, the boarding school and adoption eras, and social determinants of health including the impacts of historical and intergenerational trauma.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Engage diversity and difference in practice
Audience: Graduate

2. Advance Human Rights and Social, Economic, and Environmental Justice
Audience: Graduate

3. Engage in Policy Practice
Audience: Graduate

4. Engage with Individuals, Families, Groups, Organizations, and Communities
Audience: Graduate

5. Assess Individuals, Families, Groups, Organizations, and Communities
Audience: Graduate

6. Intervene with Individuals, Families, Groups, Organizations and Communities
Audience: Graduate

7. Evaluate Practice with Individuals, Families, Groups, Organizations and Communities
Audience: Graduate

8. Demonstrate awareness of the history of American Indian Tribes, including historical and intergenerational trauma and the impact on the Present experience of American Indians.
Audience: Undergraduate

9. Demonstrate the ability to recognize and question assumptions regarding American Indian Tribes and people.
Audience: Undergraduate

10. Apply knowledge learned in this course to practice in a multicultural society
Audience: Undergraduate

SOC WORK 639 – SOCIAL WORK PRACTICE WITH LGBTQIA2S+ INDIVIDUALS AND COMMUNITIES
3 credits.

Affirming social work practice with lesbian, gay, bisexual, transgender, nonbinary, queer, intersex, asexual, Two-Spirit, and other LGBTQIA2S+ individuals and communities.
Requisites: Junior standing and (SOC WORK 205 or 708), or declared in Social Work Advanced Standing MSW
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Summarize key concepts and terms related to LGBTQIA2S+ individuals and communities.
Audience: Both Grad & Undergrad

2. Identify strategies for affirming social work practice with LGBTQIA2S+ individuals.
Audience: Both Grad & Undergrad

3. Describe the historical and contemporary policy and practice context for working with LGBTQIA2S+ communities.
Audience: Both Grad & Undergrad

4. Apply core tenets of LGBTQIA2S+-affirming practice to a subpopulation and/or practice setting of interest.
Audience: Both Grad & Undergrad

5. Critically evaluate the acceptability and effectiveness of interventions with LGBTQIA2S+ individuals and communities.
Audience: Graduate

SOC WORK 640 – DIVERSITY, OPPRESSION AND SOCIAL JUSTICE IN SOCIAL WORK
3 credits.

Foundational knowledge for generalist social work practice in a multicultural society. Examines the experiences of diverse populations with interpersonal and institutional oppression, and implications are drawn for social policy.
Requisites: Junior standing and declared in Social Welfare or Social Work
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Engage diversity and difference in practice.
Audience: Undergraduate

2. Advance human rights and social, economic, and environment justice.
Audience: Undergraduate

3. Develop awareness of history's impact on the present
Audience: Undergraduate

4. Develop ability to recognize and question assumptions
Audience: Undergraduate

5. Develop consciousness of self and other
Audience: Undergraduate

6. Examine effective participation in a multicultural society
Audience: Undergraduate

SOC WORK 644 – ISSUES IN DEVELOPMENTAL DISABILITIES
3 credits.

Definition, incidence, etiology, and prevention of developmental disabilities. Examines the life-cycle needs of this population, as well as social-welfare issues, social services available, and the social worker's role.
Requisites: Junior standing and (SOC WORK 205 or 708), or declared in Social Work Advanced Standing MSW or the Professional or Personal Enrichment Program
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand the historical context of developmental disability
Audience: Both Grad & Undergrad

2. Compare models of disability and their implications
Audience: Both Grad & Undergrad

3. Differentiate typical development from atypical development
Audience: Both Grad & Undergrad

4. Classify different developmental disability diagnoses
Audience: Both Grad & Undergrad

5. Describe the ways in which developmental disabilities impact individuals and families
Audience: Both Grad & Undergrad

6. Understand the way in which disability intersects with other identities
Audience: Both Grad & Undergrad

7. Advance human rights and social and economic justice for people with disabilities.
Audience: Graduate

SOC WORK 646 – CHILD ABUSE AND NEGLECT
2 credits.

Examination of physical, emotional and sexual abuse of children, child neglect, and exploitation.
Requisites: Junior standing or declared in the Professional or Personal Enrichment Program
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop awareness of personal values and implicit biases related to child maltreatment.
Audience: Both Grad & Undergrad

2. Describe the complex nature of child maltreatment and how this complexity engenders ethical issues, both systemic and personal, and affects professional work with children and families.
Audience: Both Grad & Undergrad

3. Know the roles of historical social, racist, political, and institutional constructs as well as societal and cultural values intertwined with child maltreatment with a particular emphasis on those stereotypes related to social identities.
Audience: Both Grad & Undergrad

4. Understand the role of poverty in the etiology of child maltreatment.
Audience: Both Grad & Undergrad

5. Define common safety, risk and protective factors for assessing different forms of child maltreatment.
Audience: Both Grad & Undergrad

6. Describe the impact of child maltreatment and social welfare policies on diverse groups of children and families (e.g., from various racial, cultural, and ethnic backgrounds, people who identify as LGBTQ+, single parents, etc.).
Audience: Both Grad & Undergrad

7. Understand the history and power vested in the institutional systems that form the basis for governmental design and white supremacy in child welfare practice and structure in the U.S.
Audience: Graduate

8. Identify gaps in knowledge within professions responsive to child maltreatment and understand the resulting implications for practice and advocacy with children and families and the systems that have been created to respond to their needs.
Audience: Graduate

SOC WORK 648 – SOCIAL WORK PRACTICE IN PALLIATIVE CARE
2 credits.

Addressing psychosocial, cultural, existential, ethical, and team-based aspects of care with individuals and families across the life course who are impacted by serious illness.
Requisites: Senior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Define the concepts of serious illness, palliative care, hospice, and end-of-life care and differentiate among the terms.
Audience: Both Grad & Undergrad

2. Recognize how the psychosocial, cultural, and existential domains of palliative care can influence patient and family experience of serious illness.
Audience: Both Grad & Undergrad

3. Identify personal attitudes and values related to serious illness and end of life.
Audience: Both Grad & Undergrad

4. Describe the roles of social workers on palliative care teams and how those roles are distinct from (and similar to) the activities of other team members.
Audience: Both Grad & Undergrad

5. Describe the roles of other healthcare professionals (e.g., physicians, nurses, pharmacists, chaplains) on palliative care teams.
Audience: Both Grad & Undergrad

6. Examine ethical challenges that can arise in the setting of serious illness and end-of-life care.
Audience: Both Grad & Undergrad

7. Define approaches to screening, assessment, and intervention of psychosocial aspects of care.
Audience: Graduate

SOC WORK 650 – METHODS OF SOCIAL WORK RESEARCH
3 credits.

Examine foundational principles and processes involved in social work research to promote critical consumption of research that informs generalist social work knowledge base and practice. Evaluate empirical research to apply concepts and grasp strengths and limitations of various research designs. Gain foundational skills to engage in research activities that support evidence-based social-work practice. Address how questions are transformed into basic and applied researchable questions and the various considerations pertaining to conceptualization, measurement, sampling, and implementation of various qualitative and quantitative research designs, with particular attention to evaluation of social work practice and programs. Review social science research paradigms that shape researchers' worldview and methods, ethics and professional conduct in social work research, and the use of research as a tool to promote social work values and achieve social justice aims.
Requisites: SOC WORK 205, 206, and junior standing; or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Recognize the crucial role of empirical research and evaluation in informing and advancing social work practice.
Audience: Both Grad & Undergrad

2. Distinguish the various social work research paradigms that inform research assumptions, aims, and methods.
Audience: Both Grad & Undergrad

3. Interpret the ethical principles and regulatory standards for protecting human subjects that determine social work research practices.
Audience: Both Grad & Undergrad

4. Characterize how anti-oppressive and culturally sensitive practices and social-justice aims are embodied in social work research.
Audience: Both Grad & Undergrad

5. Critically appraise the strengths and limitations of different design options in social work research.
Audience: Both Grad & Undergrad

6. Select and apply appropriate quantitative and qualitative research methods to address different research aims and study questions.
Audience: Both Grad & Undergrad

7. Critique empirical research literature with respect to its relevance, rigor, and generalizability for informing social work practice and policy.
Audience: Both Grad & Undergrad

8. Summarize and critique evaluation efforts in a social service (field) agency
Audience: Graduate

SOC WORK 656 – CHILD WELFARE PRACTICE IN FOSTER AND KINSHIP CARE, PERMANENCY, AND ADOPTION
2 credits.

A multi-level exploration of out-of-home care and permanency in the child welfare field. Includes local, state and national perspectives, as well as research, policy and practice issues in foster care, kinship care, adoption and other permanency options.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Demonstrate an understanding of the logistical context of foster and kinship care, including history, relevant federal legislation, public child welfare processes, and foster home licensing.
Audience: Both Grad & Undergrad

2. Describe the benefits of placement with kin and compare outcomes of children placed with kin/like kin and children placed in traditional foster care placements.
Audience: Both Grad & Undergrad

3. Distinguish between policies, programs, and practices and investigate each against various outcomes.
Audience: Both Grad & Undergrad

4. Examine how intersecting identities including race, gender, sexual orientation, age and class impact all stages of the child welfare and out-of-home care process.
Audience: Both Grad & Undergrad

5. Appraise various permanency outcomes for children and families.
Audience: Both Grad & Undergrad

6. Analyze problems in the public child welfare system such as disparities related to race and investigate individual and systemic factors that may be contributing to these disparities.
Audience: Graduate

SOC WORK 662 – TOPICS IN CONTEMPORARY SOCIAL WELFARE
2-3 credits.

Topics will vary, reflecting issues and trends in social policy and social work.
Requisites: Junior standing and declared in Social Welfare or Social Work
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2019

SOC WORK 663 – TOPICS IN CONTEMPORARY SOCIAL WELFARE
2-3 credits.

Topics will vary, reflecting social issues/social problems relevant to social welfare and social work.
Requisites: Junior standing and declared in Social Welfare or Social Work
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2019

SOC WORK 664 – TOPICS IN CONTEMPORARY SOCIAL WELFARE
2-3 credits.

Topics will vary, reflecting new issues and trends in fields of practice such as child welfare, health, or mental health.
Requisites: Junior standing and declared in Social Welfare or Social Work
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2021

SOC WORK 672 – TOPICS IN CONTEMPORARY SOCIAL WELFARE
2-3 credits.

Topics will vary, reflecting issues and trends in social work for non-social workers.
Requisites: Consent of instructor
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2019

SOC WORK 673 – TOPICS IN CONTEMPORARY SOCIAL WELFARE
2-3 credits.

Topics will vary and designed to meet MSW Program requisites.
Requisites: Junior standing and declared in Social Welfare or Social Work
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2020

SOC WORK 674 – TOPICS IN CONTEMPORARY SOCIAL WELFARE
2-3 credits.

Topics will vary, reflecting emerging issues and trends in social work for social welfare, generalist and advanced practice students.
Requisites: Junior standing and declared in Social Welfare or Social Work
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2021

SOC WORK 675 – TOPICS IN CONTEMPORARY SOCIAL WELFARE
2-3 credits.

Topics will vary, reflecting current issues and trends in social justice, social welfare, and social work.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate understanding of contemporary social welfare issues
Audience: Both Grad & Undergrad

2. Examine social work theories and approaches related to topic area
Audience: Both Grad & Undergrad

3. Think critically about societies and the larger global community
Audience: Both Grad & Undergrad

4. Advance human rights and social and economic justice
Audience: Graduate

SOC WORK 679 – TOPICS IN CONTEMPORARY SOCIAL WELFARE
2-3 credits.

Topics will vary, reflecting trends in policy and practice for social welfare, generalist, and advanced students.
Requisites: Junior standing and declared in Social Welfare or Social Work
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2020

SOC WORK 681 – SENIOR HONORS THESIS
3 credits.

First of two semesters of undergraduate research for students in the honors program leading to completion of thesis.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2021

SOC WORK 682 – SENIOR HONORS THESIS
3 credits.

Second of two semesters of undergraduate research for students in the honors program including completion of a thesis.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2022

SOC WORK 691 – SENIOR THESIS
2 credits.

First of two semesters of undergraduate research leading to completion of thesis.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2003

SOC WORK 692 – SENIOR THESIS
2 credits.

Second of two semesters of undergraduate research including completion of a thesis.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2004

SOC WORK 699 – DIRECTED STUDY
1-3 credits.

Independent study for undergraduates under the direction of a Social Work instructor. Only juniors and seniors will be given permission to enroll.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SOC WORK 700 – PART-TIME MSW PROGRAM EXEMPTION TERM
0 credits.

Course for students in the Part-Time MSW Program to maintain UW-Madison status when they have partial exemptions and no other courses available.
Requisites: Declared in Social Work, MSW, or Part-Time MSW, Madison, or Part-Time MSW, Eau Claire
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

SOC WORK 705 – BASIC STATISTICS FOR SOCIAL WORK
3 credits.

An overview of statistical methods covering the topics required for social work professional degrees, such as distributions, standard error, regression, correlation assumptions and limitations, and basic ideas of experimental design.
Requisites: Graduate/professional standing or declared in the Preparation for Admission to Graduate or Professional School Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Engage in Practice Informed Research and Research Informed Practice
Audience: Graduate

2. Use basic statistical concepts in measurement, sampling, probability, and data description, presentation, and interpretation.
Audience: Graduate

3. Apply various approaches to asking research questions, explore relationships between and among variables, and test hypotheses using basic bivariate and multivariate analytical techniques.
Audience: Graduate

4. Develop foundational skills to be a critical consumer of empirical research involving quantitative data.
Audience: Graduate

SOC WORK 708 – THE FIELD OF SOCIAL WORK
2 credits.

Nature, purpose, function, and organizational content of the profession. Historical development; a consideration of the development of the social welfare institutions, formation of social welfare policies and their impact on practice, and the role of the social work professional.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss the historical foundations of the social work profession, including successes, failures, and controversies historically and contemporarily.
Audience: Graduate

2. Identify and define common theories used in social work practice.
Audience: Graduate

3. Identify and apply different Social Work ethics and values.
Audience: Graduate

4. Discuss the history of social policy-making in the U.S., including social work's role.
Audience: Graduate

SOC WORK 709 – SOCIAL POLICY
2 credits.

Analysis of policy issues as applied to such fields as poverty, discrimination, crime, physical and mental health on both national and state levels.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Compare a variety of perspectives on social problem analysis, including poverty
Audience: Graduate

2. Examine the scope and limitations of social policy
Audience: Graduate

3. Analyze social policy at the local, state, federal and global level that affects well-being, human rights and justice, service delivery, and access to social services.
Audience: Graduate

4. Critique the structures of social policies and services and the role of policy in service delivery through anti-oppressive and anti-racist lenses.
Audience: Graduate

SOC WORK 710 – DIVERSITY, OPPRESSION AND SOCIAL JUSTICE IN SOCIAL WORK
2 credits.

Foundational preparation for social work practice in a multicultural society. Examines the experiences of diverse populations with interpersonal and institutional oppression and implications are drawn for social policy.
Requisites: Declared in Social Work MSW
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Engage diversity and difference in practice.
Audience: Graduate

2. Advance human rights and social, economic, and environment justice.
Audience: Graduate

SOC WORK 711 – HUMAN BEHAVIOR AND THE ENVIRONMENT
2 credits.

The literature on human behavior and the environment is reviewed from a bio-psychosocial perspective. Special attention is given to understanding individual and family behavior and development as a function of reciprocal interactions with groups, communities, organizations, and society.
Requisites: Declared in Social Work MSW
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

SOC WORK 712 – PSYCHOPATHOLOGY FOR SOCIAL WORK PRACTICE IN MENTAL HEALTH
3 credits.

Focuses on a biopsychosocial understanding of mental health from a social work and social environment perspective, giving special attention to the person-in-environment and current classification systems available to the practitioner.
Requisites: SOC WORK 612 and graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply knowledge of the social work perspective, examine the critical influence of culture, class, race and ethnicity, religion, and social values of the individual, family, group, and social institutions in the assessment of client strengths, vulnerabilities, and mental health symptomatology
Audience: Graduate

2. Employ a multidimensional framework that includes a biopsychosocial assessment, the DSM-5 TR and other classification systems, culturally relevant variables and contemporary research when assessing, diagnosing, and treating the subjective distress of their clients
Audience: Graduate

3. Differentiate diagnostic criteria of the major mental health conditions across the lifespan
Audience: Graduate

4. Demonstrate skills necessary for diagnostic interviewing, formulation, and case presentation
Audience: Graduate

5. Synthesize and effectively communicate findings through written reports and oral presentations to inform clinical practice
Audience: Graduate

6. Apply clinical judgment, professional and ethical responsibility to inform practice
Audience: Graduate

SOC WORK/URB R PL 721 – METHODS OF PLANNING ANALYSIS
3 credits.

Research methods and statistics used in analyzing planning problems: conceptualization, design, and implementation of planning research; statistical methods for analyzing data including review of inferential statistics, analysis of variance, correlation, and multiple regression; use of computer; review of sources of planning data.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss equity, diversity, and social justice, focusing on planners' use of planning analysis and engagement to close disparities between advantaged and disadvantaged groups and to promote racial, gender, economic and other dimensions of equity.
Audience: Graduate

2. Explain the social, economic, public health, and environmental dimensions of the sustainability challenges of urban and regional development.
Audience: Graduate

3. Differentiate between quantitative and qualitative analysis in planning.
Audience: Graduate

4. Connect planning analysis to best practices for community-engagement in the co-production of planning knowledge.
Audience: Graduate

5. Carry out research and critical analysis, including the use of quantitative and qualitative methods of data collection, analysis, and forecasting.
Audience: Graduate

6. Connect planning ethics to public decision-making, research, and client representation (including the provisions of the AICP Code of Ethics and Professional Conducts, and APA's Ethical Principles in Planning).
Audience: Graduate

7. Relate complex ideas through written, oral, and graphic communication.
Audience: Graduate

8. Reflect on working in teams and with professionals in allied fields, including self-assessment of professional leadership in the planning context.
Audience: Graduate

SOC WORK 741 – INTERVENTIONS WITH CHILDREN, YOUTH, AND FAMILIES
2 credits.

Addresses multi-level interventions with children, youth, and families across multiple service systems, with an emphasis on practice innovations.
Requisites: (SOC WORK 441 and graduate/professional standing) or declared in Social Work Advanced Standing MSW
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate ways to engage a diverse population through an intersectional framework.
Audience: Graduate

2. Articulate the forms and interventions that address and mitigate the impact of oppression and discrimination on the lived experience & circumstances of individuals, groups, and/or communities served.
Audience: Graduate

3. Articulate social work ethics and values, practice dilemmas, and ethical decision making.
Audience: Graduate

4. Determine, customize, and implement the most appropriate intervention(s) based on information, including the person's preferences, strengths, and cultural considerations.
Audience: Graduate

5. Identify, implement, and analyze evidence-informed interventions to achieve the goals of clients.
Audience: Graduate

6. Critically analyze outcomes and effectiveness of social work practice.
Audience: Graduate

SOC WORK 742 – ASSESSING AND TREATING CHILDREN AND ADOLESCENTS
2 credits.

Explore evidence-based services through a holistic perspective that looks at a person in their environment, using a person-centered approach. Assessment, treatment, and generalization of change strategies; problem solving; resource development; intervention planning; current trends in mental health and other practice issues are explored.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use a client-centered approach to assess and analyze a client and their family's needs and strengths, through a person in their environment lens.
Audience: Graduate

2. Identify a client and their family's varying needs and demonstrate the ability to incorporate those needs into well designed service/treatment goals that create a framework for interventions that create sustainable change.
Audience: Graduate

3. Understand a wide variety of evidence-based treatment modalities that can be used to address the identified problem and support service/treatment goals and be able to articulate, incorporate, and effectively demonstrate a multitude of evidence-based interventions that address the identified problem and use a client and their family's strengths.
Audience: Graduate

4. Understand the importance of practice evaluation and how evaluation measures are applied to assess, evaluate, and improve service providing, including applying the NASW Code of Ethics to identify, deconstruct, and create a plan of action for any ethical dilemmas that may present in the course of practice.
Audience: Graduate

5. Evaluate personal bias, societal privileges (or non-privileged), and systemic elements of racism, discrimination, and oppression, as well as create practice measures that advocate and facilitate positive change for all clients.
Audience: Graduate

SOC WORK/NURSING/PHM PRAC 746 – INTERDISCIPLINARY CARE OF CHILDREN WITH SPECIAL HEALTH CARE NEEDS
3 credits.

Interdisciplinary team care of children with special health care needs across the trajectory of illness presented within the context of family, culture, social determinants of health, community, and healthcare policy. Students introduced to interdisciplinary, collaborative, family-centered team care.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the interdisciplinary team approach to the care of the child with a chronic illness from the perspective of a child with a chronic illness and their family, community care providers, and each of the disciplines involved, including the student's own.
Audience: Graduate

2. Demonstrate an understanding of issues relating to larger social and cultural context for the care of children with chronic illness.
Audience: Graduate

3. Identify and assess healthcare delivery systems and financing for children with chronic illness.
Audience: Graduate

4. Describe ways to advocate for pediatric patients with chronic disease and their families at an individual level and a policy level.
Audience: Graduate

SOC WORK 799 – INDEPENDENT STUDY
1-6 credits.

Independent study for MSW graduate students.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SOC WORK 800 – FIELD PRACTICE AND INTEGRATIVE SEMINAR III
2-6 credits.

An approved advanced practice social work field seminar and placement.
Requisites: Graduate/professional standing and SOC WORK 401, or Declared in Social Work Advanced Standing MSW
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Employ ethical reasoning and decision-making, including appropriate use of consultation and supervision, in problem solving with individuals, families, groups, communities, and organizations.
Audience: Graduate

2. Engage in critical self-reflection to examine boundaries, personal and professional needs, implicit biases, and the impact of power, positionality, status, privilege, and oppression in their social work practice.
Audience: Graduate

3. Uphold the code of ethics and values of the profession through respectful communication, productive conflict resolution, reliable and responsible work ethic, ethical use of technology, and strong interpersonal skills that foster effective relationships with clients, supervisors, and other professionals.
Audience: Graduate

4. Draw on intersectional and anti-oppressive critical theories to analyze underlying social and organizational structures and oppressive forces that deny universal human rights and shape inequities across the lifespan.
Audience: Graduate

5. Develop and implement strategies to advocate for extending human rights in direct practice, in organizational practice, and/or in social change.
Audience: Graduate

6. Can describe the extent to which our society's structures and values oppress, marginalize, alienate, create, and/or enhance privilege and power and address their own internalized prejudices and biases.
Audience: Graduate

7. Identify, evaluate, and address detrimental aspects of systems and environments with targeted populations, work to change policies and practices which by design or default, perpetuate inequities using strength-based, anti-racist, and anti-oppressive perspectives.
Audience: Graduate

8. Co-create with families, individuals, organizations, and communities, interventions and plans for advocacy that focus on equity and social justice and support those constituents' goals and aspirations.
Audience: Graduate

9. Translate practice and policy issues into researchable questions, processes, and outcomes.
Audience: Graduate

10. Translate research findings into more effective practice and policy.
Audience: Graduate

11. Evaluate the strengths and weaknesses in existing evidence-based research to draw conclusions relevant to social work practice at the micro, mezzo, and macro levels.
Audience: Graduate

12. Understand how international, national, local, and organizational

SOC WORK 801 – FIELD PRACTICE AND INTEGRATIVE SEMINAR IV
2-6 credits.

An approved advanced practice social work field seminar and placement.
Requisites: SOC WORK 800
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Employ ethical reasoning and decision-making, including appropriate use of consultation and supervision, in problem solving with individuals, families, groups, communities, and organizations.
Audience: Graduate

2. Engage in critical self-reflection to examine boundaries, personal and professional needs, implicit biases, and the impact of power, positionality, status, privilege, and oppression in their social work practice.
Audience: Graduate

3. Uphold the code of ethics and values of the profession through respectful communication, productive conflict resolution, reliable and responsible work ethic, ethical use of technology, and strong interpersonal skills that foster effective relationships with clients, supervisors, and other professionals.
Audience: Graduate

4. Draw on intersectional and anti-oppressive critical theories to analyze underlying social and organizational structures and oppressive forces that deny universal human rights and shape inequities across the lifespan.
Audience: Graduate

5. Develop and implement strategies to advocate for extending human rights in direct practice, in organizational practice, and/or in social change.
Audience: Graduate

6. Can describe the extent to which our society's structures and values oppress, marginalize, alienate, create, and/or enhance privilege and power and address their own internalized prejudices and biases.
Audience: Graduate

7. Identify, evaluate, and address detrimental aspects of systems and environments with targeted populations, work to change policies and practices which by design or default, perpetuate inequities using strength-based, anti-racist, and anti-oppressive perspectives.
Audience: Graduate

8. Co-create with families, individuals, organizations, and communities, interventions and plans for advocacy that focus on equity and social justice and support those constituents' goals and aspirations.
Audience: Graduate

9. Translate practice and policy issues into researchable questions, processes, and outcomes.
Audience: Graduate

10. Translate research findings into more effective practice and policy.
Audience: Graduate

11. Evaluate the strengths and weaknesses in existing evidence-based research to draw conclusions relevant to social work practice at the micro, mezzo, and macro levels.
Audience: Graduate

12. Understand how international, national, local, and organizational policies shape services, rights, and well-being of individuals, families, and

SOC WORK 815 – SOCIAL WORK PRACTICE IN SCHOOLS I
2 credits.

Practice and coursework in educational settings to conceptualize social work skills in schools and to integrate knowledge of social work theory and practice.
Requisites: Graduate/professional standing and concurrent enrollment in SOC WORK 800, or declared in the Professional or Personal Enrichment Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and understand the unique aspects of and advocate for the role of school social work within a school setting.
Audience: Graduate

2. Apply models of ethical decision making and application of the supplemental school social work standards and ethics in all areas of school social work
Audience: Graduate

3. Understand and identify inequalities in access to school and community programing and the dynamics of risk factors for school failure and the strategies to address them.
Audience: Graduate

4. Use state and national laws involving special education and mental health evaluations, assessments, and supports, including student's learning, behavior, and attitudes in various settings, IEP's and 504 plans.
Audience: Graduate

5. Demonstrate skills in providing group and individual counseling, crisis intervention, and other mental health services in schools. Also demonstrate skills in providing student casework and case management and supporting classroom instruction and curriculum development.
Audience: Graduate

6. Use practice literature and empirically based knowledge in the areas of children, youth, families, and schools to evaluate programs and services within the educational setting.
Audience: Graduate

SOC WORK 816 – SOCIAL WORK PRACTICUM IN SCHOOLS I
1 credit.

Practicum and supervision in school settings.
Requisites: Declared in Post-Bachelor's Personal Professional Development program and concurrent enrollment in SOC WORK 815
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate ethical and professional behavior
Audience: Graduate

2. Engage Diversity and Difference in Practice
Audience: Graduate

3. Advance Human Rights and Social, Economic, and Environmental Justice
Audience: Graduate

4. Engage in Practice-informed Research and Research informed Practice

Audience: Graduate

5. Engage in Policy Practice
Audience: Graduate

SOC WORK 817 – SOCIAL WORK PRACTICE IN SCHOOLS II
2 credits.

Advanced practice and coursework in educational settings to conceptualize social work skills in schools and to integrate knowledge of social work theory and practice.
Requisites: Graduate/professional standing and concurrent enrollment in SOC WORK 801 or declared in the Professional or Personal Enrichment Program.
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Educate families, schools, and communities on the role and impact of school social work in promoting student success.
Audience: Graduate

2. Understand and apply policy formation and implementation to analyze, influence and advocate for student and family supports in educational settings.
Audience: Graduate

3. Challenge norms, practices, and structural barriers that promote social inequities and educational disparities, structural racism, and school to prison pipeline. Utilize social work, anti-racist, and social justice theories for service delivery in schools.
Audience: Graduate

4. Promote and utilize data-informed decision-making through collecting and assessing data based on equity-based data management strategies applicable in schools.
Audience: Graduate

5. Engage in prevention-oriented systems of support, which may include behavior management, continuum of service provisions, and social-emotional support.
Audience: Graduate

6. Develop cooperative and collaborative relationships with community agencies and organizations and interdisciplinary teams to improve students' educational outcomes.
Audience: Graduate

7. Design and implement practice strategies and assessments with persons from diverse backgrounds as applicable in educational settings.
Audience: Graduate

SOC WORK 818 – SOCIAL WORK PRACTICUM IN SCHOOLS II
1 credit.

Practicum and supervision in school settings.
Requisites: Declared in Post-Bachelor's Personal Professional Development program, SOC WORK 816, and concurrent enrollment in SOC WORK 817
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate ethical and professional behavior.
Audience: Graduate

2. Engage Diversity and Difference in Practice
Audience: Graduate

3. Advance Human Rights and Social, Economic, and Environmental Justice
Audience: Graduate

4. Engage in Practice-informed Research and Research informed Practice

Audience: Graduate

5. Engage in Policy Practice
Audience: Graduate

SOC WORK 821 – SOCIAL WORK PRACTICE IN AGING AND MENTAL HEALTH
2 credits.

Addresses mental health needs of older adults and their family members. Examines common mental health conditions, assessment, planning, evidence-based individual, family and group interventions, resources, cultural competence, ethical issues, and contexts for practice.
Requisites: (SOC WORK 441 and graduate/professional standing) or declared in Social Work Advanced Standing MSW
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate ways to engage a diverse population through an intersectional framework.
Audience: Graduate

2. Articulate the forms and interventions that address and mitigate the impact of oppression and discrimination on the lived experience and circumstances of individuals, groups, and/or communities served.
Audience: Graduate

3. Articulate social work ethics and values, practice dilemmas, and ethical decision making.
Audience: Graduate

4. Determine, customize, and implement the most appropriate intervention(s) based on information, including the person's preferences, strengths, and cultural considerations.
Audience: Graduate

5. Identify, implement, and analyze evidence-informed interventions to achieve the goals of clients.
Audience: Graduate

6. Critically analyze outcomes and effectiveness of social work practice.
Audience: Graduate

SOC WORK/LAW 822 – FAMILY LAW: MARRIAGE AND DIVORCE
2-4 credits.

Marriage and less formal spousal relationships, husband-wife relationships in on-going marriage; divorce and its economic and custody consequences; post-divorce relationships.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

SOC WORK/LAW 823 – FAMILY LAW: PARENT AND CHILD
3-4 credits.

The relationship of parent and child; the rights of unmarried mothers and fathers and their children; parental rights to custody vis a vis third parties; parents' rights to make decisions affecting children; neglect; termination of parental rights; the foster care system and adoption.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

SOC WORK 825 – GRIEF, DEATH, LOSS, AND LIFE
2 credits.

Explores the nature and centrality of the experience of loss and subsequent grief, preparing individuals with strategies to intervene with individuals, families, and communities in response to a diversity of losses throughout the lifespan.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Identify key losses throughout human development beyond death.
Audience: Graduate

2. Apply theoretical models to a myriad of losses that will assist in understanding the grief experience.
Audience: Graduate

3. Use respectful and appropriate assessment methods with diverse populations.
Audience: Graduate

4. Develop effective interventions with grieving people across the lifespan.
Audience: Graduate

5. Recognize personal barriers to professional work with grieving people and how to create meaningful self-care routines.
Audience: Graduate

SOC WORK 835 – ADVANCED SOCIAL WORK PRACTICE IN MENTAL HEALTH
2 credits.

Focuses on the core practice theories, conceptual frameworks, and intervention skills necessary for social work practice in mental health.
Requisites: (SOC WORK 441 and graduate/professional standing) or declared in Social Work Advanced Standing MSW
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate ways to engage a diverse population through an intersectional framework.
Audience: Graduate

2. Articulate the forms and interventions that address and mitigate the impact of oppression and discrimination on the lived experience and circumstances of individuals, groups, and/or communities served.
Audience: Graduate

3. Articulate social work ethics and values, practice dilemmas, and ethical decision making.
Audience: Graduate

4. Determine, customize, and implement the most appropriate intervention(s) based on information, including the person's preferences, strengths, and cultural considerations.
Audience: Graduate

5. Identify, implement, and analyze evidence-informed interventions to achieve the goals of clients.
Audience: Graduate

6. Critically analyze outcomes and effectiveness of social work practice.
Audience: Graduate

SOC WORK 836 – MENTAL HEALTH POLICIES AND SERVICES
2 credits.

Preparation for leadership roles in mental health programs, agencies, and organizations. Examine mental health policies and services that influence care and treatment of persons with mental illness and shape mental health care systems, programs and services
Requisites: SOC WORK 709 or Declared in Social Work Advanced Standing MSW
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the history, organization, and implementation of US social welfare policies within the focal area
Audience: Graduate

2. Articulate how social welfare issues and problems are defined, created, framed, and prioritized in the focal area
Audience: Graduate

3. Understand the policymaking process, including the historical context, legislative activities, and the role of advocacy within the focal area
Audience: Graduate

4. Analyze social welfare problems in the focal area and evaluate policy alternatives
Audience: Graduate

5. Examine how social welfare policies in the focal area impact the lives of individuals, including those from marginalized, oppressed, or underserved communities, intentionally and unintentionally
Audience: Graduate

6. Evaluate social welfare policies and advocate for reform in social welfare systems within the focal area
Audience: Graduate

SOC WORK 838 – PRINCIPLES OF PSYCHEDELIC HEALING
2 credits.

Foundational knowledge of contemporary psychedelic healing and integration practices.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Understand the current legal landscape of psychedelic-assisted therapies and healing practices at federal, state, and local levels.
Audience: Graduate

2. Examine ethical implications and considerations engaging with psychedelic healing as a licensed social worker.
Audience: Graduate

3. Examine the historical and present-day impacts of colonialism, capitalism, and xenophobia on psychedelic healing practices and research.
Audience: Graduate

4. Examine racial health and justice inequities in access and use of psychedelic healing therapies and research, and overall drug policy.
Audience: Graduate

5. Become familiar with clinical protocols and effects for ketamine, MDMA, and psilocybin.
Audience: Graduate

6. Develop integration skills and activities for supporting clients who have engaged in psychedelic-assisted therapies, research, underground or international work, and other experiences with mystical and/or non-ordinary states of consciousness.
Audience: Graduate

SOC WORK 840 – ADVANCED MACRO PRACTICE
2 credits.

Explore multiple approaches social workers use to foster social justice across organizations, communities, and societal levels. Practice advanced skills for addressing complex macro level practice issues.
Requisites: (Graduate/professional standing and SOC WORK 442) or Declared in Social Work Advanced Standing MSW
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe concepts, theories, and models of advanced macro practice.
Audience: Graduate

2. Identify strategies, tools, and skills for creating change at organizational, community, and societal levels.
Audience: Graduate

3. Apply ethical principles of social justice to leadership, management, advocacy, and community organizing.
Audience: Graduate

4. Demonstrate macro advocacy skills using a social justice lens.
Audience: Graduate

SOC WORK 842 – SUPERVISION AND LEADERSHIP IN SOCIAL WORK AND HUMAN SERVICES ORGANIZATIONS
3 credits.

Learn patterns, principles and methods of supervision and consultation.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze the historical progression of organizational theories and their relevance to modern social work settings, fostering a critical understanding of how these concepts translate into more effective and just practices.
Audience: Graduate

2. Articulate the distinctive roles of administrative, educational, and supportive functions in social work supervision.
Audience: Graduate

3. Evaluate supervisory and leadership attributes, methods, roles, and relationships against best practice standards to develop strategies for ethical supervision with cultural humility.
Audience: Graduate

4. Critique the formation and operation of staff groups in social work, including barriers to leadership and strategies for balancing individual and collective needs.
Audience: Graduate

5. Apply culturally responsive and anti-oppressive supervisory practices that respect ethical principles and legal repercussions within the hiring and retention processes.
Audience: Graduate

SOC WORK 852 – INFLUENCING POLITICAL SYSTEMS FOR SOCIAL CHANGE
2 credits.

The focus on Social Work political advocacy strategies in public policy and government settings. To best prepare social workers seeking to impact public policy and social change and improve the social and economic status of individuals, families, communities and systems, examine the knowledge and political skills, strategies, techniques and actions which influence elected officials and policy makers and the policies, practices, programs, services and resources they establish for people in need through local, state and federal units of government.
Requisites: Declared in Social Work MSW, or Public Affairs MPA
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2018

SOC WORK 854 – CRISIS INTERVENTION
2 credits.

Meaning of crisis to client systems and social work practitioners; principles guiding rational decision to intervene at the point of "critical incident".
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Apply healing-informed de-escalation approaches.
Audience: Graduate

2. Identify and use triage and anticipatory guidance in disaster response and client-centered safety planning honoring survivorship.
Audience: Graduate

3. Develop and practice teamwork skills essential to crisis care via collaborative case consultation.
Audience: Graduate

4. Understand ways that crisis experience is compounded by structural inequity, scarcity, and marginalization.
Audience: Graduate

5. Understand ways that belonging, information-seeking, and adaptability are protective factors.
Audience: Graduate

6. Explore ethical dilemmas common to crisis situations.
Audience: Graduate

SOC WORK 861 – RECENT DEVELOPMENTS IN SOCIAL WORK
1-3 credits.

Topics vary and focus on advanced practice.
Requisites: Declared in Social Work MSW
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2020

SOC WORK 863 – RECENT DEVELOPMENTS IN SOCIAL WORK
2-3 credits.

Topics vary and focus on social problems/social issues.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Advance human rights and social and economic justice
Audience: Graduate

2. Critically examine contemporary issues in social work
Audience: Graduate

3. Demonstrate strategies and interventions designed to address social issues.
Audience: Graduate

SOC WORK 870 – COGNITIVE AND BEHAVIORAL MENTAL HEALTH TREATMENTS FOR ADULTS
2 credits.

Evidence-based cognitive and behavioral interventions used by social workers in the treatment of mental health challenges.
Requisites: SOC WORK 612 and graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss the benefits and limitations of cognitive and behavioral interventions for adults in the provision of culturally responsive social work practice.
Audience: Graduate

2. Understand and explain the theoretical tenets, rationale and concepts of cognitive behavioral therapy (CBT).
Audience: Graduate

3. Apply the principles and methods of cognitive behavioral therapy in mental health assessment, intervention and evaluation for a variety of mental health conditions.
Audience: Graduate

4. Formulate a CBT case conceptualization and treatment plan.
Audience: Graduate

SOC WORK 873 – SOCIAL WORK PRACTICE IN HEALTH CARE
2 credits.

Advanced practice knowledge and skills for social workers practicing in health and health care settings.
Requisites: (SOC WORK 441 and graduate/professional standing) or declared in Social Work Advanced Standing MSW
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate ways to engage a diverse population through an intersectional framework.
Audience: Graduate

2. Articulate the forms and interventions that address and mitigate the impact of oppression and discrimination on the lived experience and circumstances of individuals, groups, and/or communities served.
Audience: Graduate

3. Articulate social work ethics and values, practice dilemmas, and ethical decision making.
Audience: Graduate

4. Determine, customize, and implement the most appropriate intervention(s) based on information, including the person's preferences, strengths, and cultural considerations.
Audience: Graduate

5. Identify, implement, and analyze evidence-informed interventions to achieve the goals of clients.
Audience: Graduate

6. Critically analyze outcomes and effectiveness of social work practice.
Audience: Graduate

SOC WORK 874 – HEALTH, AGING, AND DISABILITY PRACTICE FOR THE 21ST CENTURY
2 credits.

Advanced practice knowledge and skills essential for social workers practicing in health, aging, and disability care settings.
Requisites: (Graduate/professional standing, SOC WORK 441, and 442) or Declared in Social Work Advanced Standing MSW
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand public benefits, insurance and funding that pays for services clients in health, aging and disability practice settings often utilize.
Audience: Graduate

2. Develop advanced practice knowledge and skills for interprofessional practice in health, aging and disability practice settings.
Audience: Graduate

3. Demonstrate knowledge of the needs of clients across the life span, including the needs of special populations and the impact health care disparities, socio-economic factors, age, gender, sexual orientation, disability, ethnicity and intersectionality have on client outcomes.
Audience: Graduate

4. Understand the values and ethics of the profession in relation to health, aging and disability practice settings.
Audience: Graduate

SOC WORK 875 – HEALTH, AGING, AND DISABILITY POLICY AND SERVICES
2 credits.

Contemporary organization of health care. Policies and services for older adults and people with disabilities.
Requisites: SOC WORK 709 or Declared in Social Work Advanced Standing MSW
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the history, organization, and implementation of US social welfare policies within the focal area.
Audience: Graduate

2. Articulate how social welfare issues and problems are defined, created, framed, and prioritized in the focal area.
Audience: Graduate

3. Understand the policymaking process, including the historical context, legislative activities, and the role of advocacy within the focal area.
Audience: Graduate

4. Analyze social welfare problems in the focal area and evaluate policy alternatives.
Audience: Graduate

5. Examine how social welfare policies in the focal area impact the lives of individuals, including those from marginalized, oppressed, or underserved communities, intentionally and unintentionally.
Audience: Graduate

6. Evaluate social welfare policies and advocate for reform in social welfare systems within the focal area.
Audience: Graduate

SOC WORK/ED PSYCH/HDFS/NURSING 880 – PREVENTION SCIENCE
3 credits.

Theoretical, empirical and practical foundation for prevention science as it relates to the prevention of human social problems. Research and evaluation methods, program design strategies, best practices and policy as they relate to the field of prevention are also examined.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

SOC WORK/ED PSYCH/HDFS/NURSING 881 – CAPSTONE SEMINAR IN PREVENTION SCIENCE
1 credit.

An opportunity to meet with prevention professionals and scholars from across campus and the community to explore current and emerging issues of prevention research and professional practice. Students must complete HDFS/ED PSYCH/NURSING/SOC WORK 880 before taking this course.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

SOC WORK 890 – THESIS-RESEARCH
1-6 credits.

Research and thesis for MSW students who who wish to submit a master's thesis or conduct independent research.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2021

SOC WORK 920 – CHILD, YOUTH, AND FAMILY POLICIES AND SERVICES
2 credits.

Considers legislation, policies, and institutional structures that affect children, youth, and families across multiple service systems.
Requisites: SOC WORK 709 or Declared in Social Work Advanced Standing MSW
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the history, organization, and implementation of US social welfare policies within the focal area.
Audience: Graduate

2. Articulate how social welfare issues and problems are defined, created, framed, and prioritized in the focal area.
Audience: Graduate

3. Understand the policymaking process, including the historical context, legislative activities, and the role of advocacy within the focal area.
Audience: Graduate

4. Analyze social welfare problems in the focal area and evaluate policy alternatives.
Audience: Graduate

5. Examine how social welfare policies in the focal area impact the lives of individuals, including those from marginalized, oppressed, or underserved communities, intentionally and unintentionally.
Audience: Graduate

6. Evaluate social welfare policies and advocate for reform in social welfare systems within the focal area.
Audience: Graduate

SOC WORK 921 – CHILD WELFARE POLICIES AND SERVICES
2 credits.

Implications of knowledge from the social and behavioral sciences and public welfare policy on child welfare problems and services.
Requisites: SOC WORK 709 or Declared in Social Work Advanced Standing MSW
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the history, organization, and implementation of US social welfare policies within the focal area.
Audience: Graduate

2. Articulate how social welfare issues and problems are defined, created, framed, and prioritized in the focal area.
Audience: Graduate

3. Understand the policymaking process, including the historical context, legislative activities, and the role of advocacy within the focal area.
Audience: Graduate

4. Analyze social welfare problems in the focal area and evaluate policy alternatives.
Audience: Graduate

5. Examine how social welfare policies in the focal area impact the lives of individuals, including those from marginalized, oppressed, or underserved communities, intentionally and unintentionally.
Audience: Graduate

6. Evaluate social welfare policies and advocate for reform in social welfare systems within the focal area.
Audience: Graduate

SOC WORK 924 – FAMILY PROBLEMS AND SOCIAL WORK
2-3 credits.

Review of family theory and its relevance for social work practice; an analysis of family subsystems in the U.S.; current research on the American family.
Requisites: Declared in Social Work MSW
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020

SOC WORK 929 – SOCIAL WORK AND SUBSTANCE MISUSE
2 credits.

Learn to work with individuals impacted by substance misuse. The history, current understanding, assessment, and treatment of problematic substance use will be described.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the biopsychosocial approach and its relevance to substance misuse and addiction
Audience: Graduate

2. Recognize standard tools used to screen and assess substance misuse and Substance Use Disorders (SUDs)
Audience: Graduate

3. Identify different types of strategies and interventions designed to address problematic substance use.
Audience: Graduate

4. Create treatment plans to help coordinate care for individuals impacted by substance misuse or diagnosed with SUDs.
Audience: Graduate

5. Recognize the critical components of a treatment plan for addressing substance misuse
Audience: Graduate

SOC WORK/ED PSYCH 945 – EVALUATION RESEARCH
3 credits.

A comprehensive introduction to practice of program evaluation research in social welfare and human development. Developments in descriptive, experimental, quasi-experimental, theory-driven, and naturalistic evaluations detailed. Topics include assessment, evaluation design, monitoring, outcome evaluation, selection bias, program theory, meta-analysis and utilization.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

SOC WORK 946 – FACULTY RESEARCH SEMINAR
1 credit.

Furthers the socialization of students to the Ph.D. program. Provides opportunities for faculty to discuss research interests and doctoral education.
Requisites: Declared in Social Welfare graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SOC WORK 947 – STUDENT RESEARCH SEMINAR
1 credit.

Provides a forum to discuss experiences, success strategies and research interests; receive feedback on research and later, on colloquia they prepare for job searches.
Requisites: Declared in Social Welfare graduate program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

SOC WORK 948 – PROSEMINAR
1-3 credits.

Quantitative research methods seminars for research in the social and behavioral sciences.
Requisites: Graduate Students Only
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

SOC WORK 949 – PROSEMINAR
1-3 credits.

Qualitative research methods seminars for research in the social and behavioral sciences.
Requisites: Graduate Students Only
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

SOC WORK 950 – PHD PROSEMINAR
1-3 credits.

Social policy seminars. Contemporary social welfare policy concerns are addressed utilizing a policy analytics framework. Poverty and Income Support Policy; Family Theory Policy; Child Development and Policy; and Social Determinants of Health and Policy are examples of topics offered.
Requisites: Graduate Students Only
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SOC WORK 951 – PHD PROSEMINAR
1-3 credits.

Applied theory seminars. Provide a model of the application of social theory to social problems. Adult Mental Health; Microeconomic Theory Applied to Social Problems; and Child Welfare are examples of topics offered.
Requisites: Graduate Students Only
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

SOC WORK 952 – PHD PROSEMINAR
3 credits.

Application of research methods seminars. Practical experience and application of research knowledge and skills. Applied data analysis, proposal and grant Writing, and research methods in communities of color are examples of topics addressed.
Requisites: Graduate Students Only
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

SOC WORK 990 – THESIS-RESEARCH
2-3 credits.

Dissertation preparation.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SOC WORK 999 – INDEPENDENT READING
1-9 credits.

Focused work on a topic or problem of graduate student interest under supervision of social work instructors.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SOCIOLOGY (SOC)

SOC 120 – MARRIAGE AND FAMILY
3-4 credits.

Sociology of the family. Demographic, social-psychological, economic, and historical aspects. Union formation and dissolution. Childbearing and childrearing. Social stratification and the family. Intergenerational support. Social consequences of family behaviors.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

SOC 125 – AMERICAN SOCIETY: HOW IT REALLY WORKS
3-4 credits.

Explanation of US performance in realizing the values of freedom, fairness, and democracy. Topics include markets, capitalism, democracy, capitalist democracy; class, race, and gender inequalities; militarism and US international role; and US electoral politics, media, and social mobilization.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

SOC/LEGAL ST 131 – CRIMINAL JUSTICE IN AMERICA
3-4 credits.

Day-to-day functioning of the elements of the criminal justice system in the U.S. Nature of crime in the U.S., ideas about causes and solutions. Emphasis on the sociology of the components of criminal justice system--organization and roles of police, lawyers, court and correctional personnel.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Assess evidence and critically evaluate research-based arguments concerning criminal justice in academic journals, policy studies, or popular media.
Audience: Undergraduate

2. Build arguments clearly and effectively and critically analyze evidence in both oral presentations and papers.
Audience: Undergraduate

3. Think critically about the functioning of law and its effects on society, going beyond the surface of crime as a social phenomenon, discovering the "why" and "how" of the socio-legal order, and assessing alternate explanations for phenomena.
Audience: Undergraduate

4. Analyze sentencing and carceral practices of the United States criminal legal system in the context of larger political, social, legal, and economic forces.
Audience: Undergraduate

5. Evaluate social phenomena and diversity in global perspective, comparing how different cultures, groups, and societies understand and respond to crime.
Audience: Undergraduate

6. Work effectively in groups, responding to group dynamics among people from different backgrounds with different strengths and weaknesses.
Audience: Undergraduate

SOC 134 – SOCIOLOGY OF RACE & ETHNICITY IN THE UNITED STATES
3-4 credits.

The nature of inter-group relations; emphasis on various forms of racism, discrimination, and white privilege; historical background and characteristics of American Indians, African Americans, Hispanic Americans, Asian Americans and other racial and ethnic minorities; a consideration of economic, housing, political, legal, educational, familial, and health challenges faced by minority groups in US society.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate an understanding of the impact of America's racial history on the present.
Audience: Undergraduate

2. Recognize race and ethnicity in both institutional and interpersonal contexts.
Audience: Undergraduate

3. Recognize and question hidden racial assumptions in social discourses.
Audience: Undergraduate

4. Develop an improved ability to successfully participate in a multicultural society.
Audience: Undergraduate

5. Collect data, analyze results, and draw conclusions.
Audience: Undergraduate

6. Read and critically evaluate published research in academic journals.
Audience: Undergraduate

7. Improve academic and professional communication skills.
Audience: Undergraduate

SOC 138 – THE SOCIOLOGY OF GENDER
3-4 credits.

A sociological examination of the status and roles of women and men in society, including the experiences of marriage, parenthood, employment and occupational attainment, socialization into sex roles and cultural reinforcement of these. Attention will be given to both existing patterns and change in those patterns.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

SOC/C&E SOC 140 – INTRODUCTION TO COMMUNITY AND ENVIRONMENTAL SOCIOLOGY
4 credits.

Sociological examination of the linkages between the social and biophysical dimensions of the environment. Key topics include community organizing, local food systems, energy transitions, environmental justice, resource dependence, and sustainable development.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand how social science arguments are constructed and evaluated.
Audience: Undergraduate

2. Learn and practice core elements of sociological reasoning, including making connections between a social phenomenon and its larger context; evaluating the "situated" nature of knowledge; and recognizing the paradigms, or knowledge frameworks, that structure our thinking about social issues.
Audience: Undergraduate

3. Gain experience critically evaluating various sources of knowledge and data about social issues.
Audience: Undergraduate

4. Become familiar with key concepts such as: "community," "development," "growth," "economic security," "environmental justice," "sustainability," "globalization," and "neoliberalism;" learn how these concepts are involved in contemporary debates about what is fair, just, and desirable for the places where we live and the world as a whole.
Audience: Undergraduate

5. Become familiar with important actors in the social processes that affect our communities and environment, including government, corporations, transnational institutions and social movements; also learn about historical shifts in the relationships among these actors.
Audience: Undergraduate

6. Develop skills and frameworks for analyzing how social processes disparately affect different groups of people.
Audience: Undergraduate

7. Make connections between sociological theories and concepts and your own experiences.
Audience: Undergraduate

SOC 144 – WELLBEING & SOCIETY
3-4 credits.

Investigate how society shapes our vision of a good life and our capability to live well by surveying classical and recent sociological perspectives. Examine how social contexts and interactions create our understandings of a good life, including why we consider some things to be valuable, moral, or pleasurable. Develop an understanding of ways our wellbeing is contingent upon the actions of others. Evaluate conventional wisdom and scientific claims about what it means to live well and apply these concepts in your own life.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply sociological principles and research to explain how social processes shape cultural ideas about a good life and individuals' life goals
Audience: Undergraduate

2. Critically analyze assumptions undergirding common wisdom about wellbeing
Audience: Undergraduate

3. Articulate how various domains of social life enhance or diminish wellbeing using social research
Audience: Undergraduate

4. Assess the relevance of the social phenomena to private psychological experiences
Audience: Undergraduate

5. Apply sociological principles and research to understand one's impact on others' wellbeing
Audience: Undergraduate

SOC/PSYCH 160 – HUMAN SEXUALITY: SOCIAL AND PSYCHOLOGICAL ISSUES
3-4 credits.

Biological, psychological and sociological aspects of sexual relationships and behavior. Presents theoretical and empirical materials on sexuality throughout the life-course, including childhood, adolescence, adulthood, and later life. Attention is given to gender, religion, education and the law as they relate to sexual expression in society.
Requisites: Not open to students with credit for SOC/PSYCH 453.
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

SOC 170 – POPULATION PROBLEMS
3-4 credits.

Social, economic, and political problems affected by birth and death rates, population size and distribution, voluntary and forced migration. World ecology, limits to growth, economic development, international conflict, environmental quality, metropolitan expansion, segregation by age, race, and wealth. Policies affecting reproduction, nuptiality, morbidity, mortality, migration.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

SOC 181 – HONORS INTRODUCTORY SEMINAR-THE SOCIOLOGICAL ENTERPRISE
3-4 credits.

An introduction to the paradigms, methods and substance of sociology.
Requisites: Declared in an Honors program and satisfied Communications A requirement. Not open to students with credit for C&E SOC/SOC 210 or 211.
Course Designation: Gen Ed - Communication Part B
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025

SOC 196 – ELEMENTARY SPECIAL TOPICS IN SOCIOLOGY
3-4 credits.

Introduction to sociology concepts and methods.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Explain that sociology is a social science that uses research to answer questions about the relationships between individuals and social patterns and institutions.
Audience: Undergraduate

2. Demonstrate the ability to think critically about received explanations of social phenomena.
Audience: Undergraduate

3. Demonstrate a basic understanding of sociological research and methods.
Audience: Undergraduate

4. Reflect upon how the class materials allow them to better understand themselves and their societies by engaging with multiple and diverse perspectives.
Audience: Undergraduate

SOC 198 – DIRECTED STUDY
1-3 credits.

Program of study devised by a student in collaboration with a faculty member. Open only to freshmen and sophomores.
Requisites: Consent of instructor
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2014

SOC 199 – DIRECTED STUDY
1-3 credits.

Program of study devised by a student in collaboration with a faculty member. Open only to Freshmen and sophomores.
Requisites: Consent of instructor
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2021

SOC/GEN&WS 200 – INTRODUCTION TO LESBIAN, GAY, BISEXUAL, TRANSGENDER AND QUEER+ STUDIES
3-4 credits.

A multidisciplinary introduction to lesbian, gay, bisexual, transgender, and queer+ (LGBTQ+) studies, including theories of identity formation, different societal interaction with LGBTQ+ communities, LGBTQ+ cultures in history, and contemporary legal and political issues. Course materials explore the intersections between LGBTQ+ identities and other socially marginalized identities, including (but not limited to) those based on race, ethnicity, religion and disability.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

SOC 205 – INTERCULTURAL DIALOGUES
3 credits.

Promotes diversity by bringing students of different backgrounds together for discussion, projects, and gatherings. Gain intergroup and critical thinking skills to promote diversity and equity in classroom and professional settings. Introduces sociological analysis of race, ethnicity, and other intersecting categories.
Requisites: Consent of instructor
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023

SOC 206 – LEADERSHIP IN INTERCULTURAL DIALOGUES
3 credits.

Gain skills for designing and facilitating effective dialogue on topics pertaining to race, ethnicity, and other categories of social difference as a facilitator and/or apprentice for SOC 205. Completion of SOC 205 required.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2022

SOC/C&E SOC 210 – SURVEY OF SOCIOLOGY
3-4 credits.

Introduction to the field of American sociology, its subfields and specialized areas of research, theoretical traditions and research methods.
Requisites: Satisfied Communications A requirement. Not open to students with credit for SOC 181 or C&E SOC/SOC 211
Course Designation: Gen Ed - Communication Part B
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

SOC/C&E SOC 211 – THE SOCIOLOGICAL ENTERPRISE
3 credits.

Basic principles and definitions of sociology. Readings and discussion of the perspectives of sociology, the individual and society, groups and social process, stratification, organizations and power, demography, and social change.
Requisites: Not open to students with credit for SOC 181 or C&E SOC/SOC 210
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze and discuss what sociologists (and scholars in "neighboring" disciplines) have written.
Audience: Undergraduate

2. Perform some forms of sociological research and writing.
Audience: Undergraduate

SOC/ASIAN AM 220 – ETHNIC MOVEMENTS IN THE UNITED STATES
3-4 credits.

Sociological analysis of historical and recent ethnic/racial conflict and movements in the U.S., including the relations between European Americans, African Americans, Mexican Americans, Native Americans, and Asian Americans, with additional material on other groups and relations.
Requisites: Satisfied Communications A requirement
Course Designation: Gen Ed - Communication Part B
Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

SOC/C&E SOC 222 – FOOD, CULTURE, AND SOCIETY
3 credits.

Social and cultural dimensions of food production and consumption. Uses historical and cross-cultural analytical frameworks. Treats a wide variety of topics including indigenous, racial, and ethnic foodways, industrialized food systems, sustainable agriculture, movements for food justice.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate knowledge about how the system of food production, distribution and consumption in the United States is organized, how it has changed, and how it is changing.
Audience: Undergraduate

2. Understand the ways that technologies, globalization, and social movements have affected the food system.
Audience: Undergraduate

3. Present clearly written, persuasive arguments in response to academic questions.
Audience: Undergraduate

4. Prepare for and present in oral discussion by offering points with evidence.
Audience: Undergraduate

5. Recognize, challenge and avoid false analogies, overgeneralizations, and other logical fallacies.
Audience: Undergraduate

SOC 236 – BASCOM COURSE
3 credits.

Developing skills in critical reading, logical thinking, use of evidence, and use of library resources. Emphasis on writing in the conventions of specific fields.
Requisites: Satisfied Communications A requirement
Course Designation: Gen Ed - Communication Part B
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

SOC/ASIAN/GEOG/HISTORY/POLI SCI 244 – INTRODUCTION TO SOUTHEAST ASIA: VIETNAM TO THE PHILIPPINES
4 credits.

As an introduction to Southeast Asia, covers the ethnic, cultural, religious, and political histories of the region from the classical states period to the present, with an emphasis on colonialism, nationalism, decolonization, and the emergence of modern political and social systems into the 21st century, including an exposure to region's contemporary literature. Not open to students who completed LCA 244 prior to Fall 2019.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Examine the ethnic, cultural, religious, and political histories of Southeast Asia from the classical states period to the present.
Audience: Undergraduate

2. Analyze colonialism, nationalism, decolonization, and the emergence of modern political and social systems into the 21st century in Southeast Asia.

Audience: Undergraduate

3. Explore contemporary literature in Southeast Asia.
Audience: Undergraduate

SOC/C&E SOC 245 – TECHNOLOGY AND SOCIETY
3 credits.

Covers technology, the social forces shaping its development, and social impacts of its adoption. Examine one's assumptions about technology and its relationship to society.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Recognize and apply key sociological concepts for the analysis of technology, technological change, and technological systems
Audience: Undergraduate

2. Critically evaluate and apply concepts and theory from existing Science and Technology Studies literature
Audience: Undergraduate

3. Interpret, explain, and critique both contemporary and historical technological issues and controversies
Audience: Undergraduate

4. Demonstrate verbal and written communication skills that are applicable in a professional setting
Audience: Undergraduate

5. Frame and conduct social science research
Audience: Undergraduate

6. Ethically apply research methods, such as qualitative, quantitative, historical, interdisciplinary, participatory, and action approaches, and evaluate findings
Audience: Undergraduate

SOC/C&E SOC/F&W ECOL 248 – ENVIRONMENT, NATURAL RESOURCES, AND SOCIETY
3 credits.

Introduces the concerns and principles of sociology through examination of human interaction with the natural environment. Places environmental issues such as resource depletion, population growth, food production, environmental regulation, and sustainability in national and global perspectives.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe and critique the role of social conditions and social change in shaping equities and disparities in environment, health, and community
Audience: Undergraduate

2. Place an understanding of local social conditions and change in the global context of rural and urban life, including political, ecological, economic, geographic, historical, and cultural dimensions
Audience: Undergraduate

3. Frame and conduct social science research
Audience: Undergraduate

4. Ethically apply research methods, such as qualitative, quantitative, historical, interdisciplinary, participatory, and action approaches, and evaluate findings
Audience: Undergraduate

5. Demonstrate leadership and collaboration skills for working with people from a diversity of backgrounds in professional and ethical ways that enable beneficial and regenerative relationships
Audience: Undergraduate

6. Demonstrate advanced verbal and written communication skills that are applicable in a professional setting
Audience: Undergraduate

7. Articulate the complex and intricate relationships between people and the planet by exploring the many stories that bind these two together in the US
Audience: Undergraduate

8. Describe how these social ecological relationships produce unequal health outcomes, life chances, and opportunities
Audience: Undergraduate

9. Identify the values and principles of environmental movements
Audience: Undergraduate

10. Evaluate how the climate change crisis exacerbates urgent and contemporary social problems
Audience: Undergraduate

11. Apply analytical skills in spatial, political economic, culture, and critical environmental analysis
Audience: Undergraduate

SOC/C&E SOC/HISTORY/POLI SCI 259 – FORWARD? THE WISCONSIN IDEA, PAST AND PRESENT
1-3 credits.

Engage in ongoing reflection and dialogue on the Wisconsin Idea and how it informs the mission of the University of Wisconsin. Consider the Wisconsin Idea as it has developed since its beginnings, with a focus on what it means today and what it can mean in the future.
Requisites: Junior or senior standing only
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023
Learning Outcomes: 1. Listen respectfully to different opinions, respond rationally rather than emotionally, make reasoned arguments.
Audience: Undergraduate

2. Respond to another point of view with research and substantive comments or questions, present and support your own position, and thus engage in a wider conversation.
Audience: Undergraduate

3. Consider a specific question ("What makes an idea a Wisconsin Idea...?) and present a reasoned argument supporting the conclusion. (1-credit students)
Audience: Undergraduate

4. Deeply analyze an argument and respond by applying it to the student's own educational strengths and weaknesses. (3-credit students)
Audience: Undergraduate

5. Use course content to explain a controversial issue and suggest a course of action to address it, stating reasons, and anticipating counterarguments. (3-credit students)
Audience: Undergraduate

SOC/AFROAMER/ANTHRO/C&E SOC/GEOG/HISTORY/LACIS/ POLI SCI/SPANISH 260 – LATIN AMERICA: AN INTRODUCTION
3-4 credits.

Latin American culture and society from an interdisciplinary perspective; historical developments from pre-Columbian times to the present; political movements; economic problems; social change; ecology in tropical Latin America; legal systems; literature and the arts; cultural contrasts involving the US and Latin America; land reform; labor movements; capitalism, socialism, imperialism; mass media.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Analyze Latin American culture and society from an interdisciplinary perspective.
Audience: Undergraduate

2. Examine historical developments from pre-Columbian times to the present.
Audience: Undergraduate

3. Identify political movements, economic problems, social change, and ecology in Latin America.
Audience: Undergraduate

SOC/GERMAN/RELIG ST 273 – GOD & MONEY
3 credits.

Explores the historical connections between capitalism and religion. Considers if and how religious ideas and practices facilitated the rise of capitalism; asks whether religious institutions have supported the reproduction of social inequalities, unjust labor practices, and exploitative economies; and studies the role played by religious actors in the critique of capitalism. Pays attention to the historical specificity of the capitalist system, its conditions of emergence in the Christian West, and the effects of its globalization on non-Christian traditions. Covers topics including classical social theories of religion and capitalism; contemporary examples of religious practice and capital accumulation; and the relationship between religious movements and social-economic justice.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge of debates surrounding the historical and theoretical relationship between religion and capitalism
Audience: Undergraduate

2. Discern and integrate divergent and contradictory perspectives on the relationship between religion and capitalism across a range of fields (e.g., philosophy, history, sociology) and contexts (e.g., America, Europe, Middle East, and South Asia)
Audience: Undergraduate

3. Cultivate skills in textual analysis and evaluate a range of formal and structural elements in a range of media
Audience: Undergraduate

4. Generate original ideas and texts, experimenting and taking risks, solving problems, and answering textual questions
Audience: Undergraduate

5. Write original, coherent, and compelling arguments that push beyond summary to analysis and independent and critical thinking in clear prose that meets expectations for grammatical correctness
Audience: Undergraduate

SOC/AFRICAN/AFROAMER/ANTHRO/GEOG/HISTORY/ POLI SCI 277 – AFRICA: AN INTRODUCTORY SURVEY
4 credits.

African society and culture, polity and economy in multidisciplinary perspectives from prehistory and ancient kingdoms through the colonial period to contemporary developments, including modern nationalism, economic development and changing social structure.
Requisites: None
Course Designation: Breadth - Either Humanities or Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze African society and culture from a multidisciplinary perspective.
Audience: Undergraduate

2. Discuss polity and economy from prehistory and ancient kingdoms through the colonial period to contemporary developments.
Audience: Undergraduate

3. Study contemporary nationalism, economic development and changing social structure.
Audience: Undergraduate

SOC 300 – SOCIOLOGY OF RACE, CLASS, GENDER, AND SEXUALITY
3 credits.

A sociological examination of race, class, gender and sexuality - four central axes of social stratification, identity and experience that have real consequences in people's lives, the opportunities they have, and the challenges they face. Topics include sociological perspectives on how identities and differences are socially constructed and reproduced, and how these categories manifest themselves in inequities in institutions such as schools, workplaces, housing, and the law.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Understand each core concept from a sociological perspective, as a social construction that helps to rationalize and justify social inequality.
Audience: Undergraduate

2. Understand, in particular, the key role of race and ethnicity in the history of the United States, and how this influences students' daily lives.
Audience: Undergraduate

3. Understand the relationships among them: how race, class, gender, and sexuality intersect to shape individual experiences, interpersonal interactions, and society more broadly.
Audience: Undergraduate

4. Draw conclusions from an examination of how these differences and inequalities matter in a variety of institutional contexts, including the media, schools, the economy, and the legal and criminal justice system.
Audience: Undergraduate

5. Suggest and critically assess solutions to social inequality, and discuss strategies for social change.
Audience: Undergraduate

SOC 320 – RESEARCH PRACTICUM IN SOCIOLOGY
1-3 credits.

Practical experience in techniques of social research through work on a research project for the semester.
Requisites: SOC/C&E SOC 357
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SOC/ASIAN 334 – GENDER, WORK, AND FAMILY IN EAST ASIA
3 credits.

An examination of contemporary East Asia (mainly South Korea, Japan, Taiwan, and China) by using concepts and frameworks from history, anthropology, sociology, political science, economics, and law. An emphasis will be on the intersection of multiple structures of inequality such as gender, race/ethnicity, citizenship, class, and sexuality.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain how institutional processes, including the labor market, family, and education generate, maintain, and change the cultural understandings of gender.
Audience: Undergraduate

2. List past and current studies on how and why female labor force participation and gender wage gap are different across Korea, Japan, Taiwan, and China.
Audience: Undergraduate

3. Answer the question of "Can women in East Asia have it all?" and of how social development influence women's aspirations and choices, producing the patterned behaviors that we observe.
Audience: Undergraduate

4. Develop a comparative lens in constructing your own argument on whether – if so, how - different speeds of social change and development influence institutions and cultures of a society.
Audience: Undergraduate

5. Draw a conceptual map of cultural and structural foundations of gender inequality in the context of East Asia.
Audience: Undergraduate

SOC/ASIAN 336 – SOCIAL CHANGE IN CONTEMPORARY SOUTH KOREA
3 credits.

An exploration of social continuity and change of contemporary South Korea. Covers different institutions of a society - political, economic, and societal/cultural spheres. Incorporates material from anthropology, sociology, political science, economics, and law. Focus on South Korea after the division of the 'two Koreas'.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Through a critique of the status quo in class, gender, and racial/ethnic dynamics of contemporary Korean society, an intermediate to advanced level of understanding of modern Korean society and its location in the modern world will be achieved.
Audience: Undergraduate

2. Discern the patterns, rules, and logic that undergird a social system and the consequences of these for social change and continuity within the Korean context.
Audience: Undergraduate

3. Be able to explain in your own language, how individuals' lives are shaped by social institutions such as the family, education, and work.
Audience: Undergraduate

4. Increase the social science literacy of contemporary Korea.
Audience: Undergraduate

5. Create your own viewpoint on social issues, with the capability to support your arguments.
Audience: Undergraduate

SOC/A A E/C&E SOC 340 – ISSUES IN FOOD SYSTEMS
3-4 credits.

With primary emphasis on the U.S., the course covers social, economic and biological dimensions of food systems. Using classroom and community experience, the course combines academic approaches with practitioner knowledge. A community project is required.
Requisites: SOC/C&E SOC 140, SOC 181, 210, or 211
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze the community food system from production, distribution, and consumption including cultural, environmental and social factors that influence food options.
Audience: Undergraduate

2. Investigate strategies communities engage to access nutrient-rich foods, including food justice/security/sovereignty movements
Audience: Undergraduate

3. Develop and conduct survey research and family oral histories to understand the significance of cultural food ways
Audience: Undergraduate

SOC/C&E SOC 341 – LABOR IN GLOBAL FOOD SYSTEMS
3 credits.

Overview of our current food system and how new technologies and globalization are reshaping it, focusing especially on the implications for workers throughout the food chain. Learn about the ways that social movements are working to reshape commodity chains by promoting local production, fair trade, and labor justice.
Requisites: 3 credits in C&E SOC or SOC
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Describe food commodity chains, the workers at the chains' nodes, and the systems of power that govern the chain
Audience: Undergraduate

2. Place an understanding of local social conditions and change in the global context of rural and urban life, including political, ecological, economic, geographic, historical, and cultural dimensions of the food system
Audience: Undergraduate

3. Frame independent research projects based on sociological articles
Audience: Undergraduate

4. Apply interview methodologies to gain knowledge of a type of food system labor
Audience: Undergraduate

5. Ethically apply research methods, such as qualitative, quantitative, historical, interdisciplinary, participatory, and action approaches, and evaluate findings
Audience: Undergraduate

6. Demonstrate excellent verbal and written communication skills that are applicable in a professional setting
Audience: Undergraduate

SOC/C&E SOC 343 – SOCIOLOGY OF HEALTH AND MEDICINE
3 credits.

Social, cultural, and structural factors in shaping definitions of health and illness, distribution of disparate health outcomes, and the organization of health professions and healthcare.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand how concepts such as "disease" and "health" are socially constructed.
Audience: Undergraduate

2. Identify and describe how social contexts (e.g. race and gender) shape health outcomes and structure disparities.
Audience: Undergraduate

3. Identify the social and cultural shifts in medicine and healthcare.
Audience: Undergraduate

4. Critically analyze their own experiences with health, illness, and medicine using course material.
Audience: Undergraduate

5. Demonstrate understanding and engagement with course material and produce thoughtful and compelling arguments in assigned work.
Audience: Undergraduate

SOC/C&E SOC/GEN&WS 347 – GENDER AND SEXUALITY IN RURAL PLACES
3 credits.

A sociological examination of the influence of rurality and place on gender and sexual performances, norms, and identities in rural geographies.
Requisites: GEN&WS 101, 102, 103, C&E SOC/SOC 140, 210, 211, or SOC 181
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Explain the role of social organization and social change in shaping equities and disparities in environment, health, and community.
Audience: Undergraduate

2. Describe how rurality and place influence gender norms and performance in private and public spheres.
Audience: Undergraduate

3. Critique ideas related to gender, sexuality, and rurality, including anti-urbanism, metronormativity, the rural idyll, natural/unnatural, and visibility politics.
Audience: Undergraduate

4. Assess how discourses and ideas about gender and sexuality influence dominant and minority groups.
Audience: Undergraduate

SOC 351 – INTRODUCTION TO SURVEY METHODS FOR SOCIAL RESEARCH
3-4 credits.

Introduction to principles and basic techniques in surveys for social research. Specific topics include the basic concepts of sampling and survey measurement. Learn how survey researchers apply the methods presented and practice applying the concepts and methods learned. The techniques used in this class are relevant for many kinds of data collection and standardized measurement. Provides a substantial experience with practical research skills that are relevant in many academic and private sector contexts.
Requisites: Sophomore standing and (C&E SOC/SOC 357, 360, STAT 301, 371, ECON 310, PSYCH 210, GEOG 360, or MATH/STAT 310)
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify basic sampling concepts and apply them when drawing and documenting a sample.
Audience: Undergraduate

2. Describe basic concepts of error in surveys, total survey error, variable errors and bias.
Audience: Undergraduate

3. Analyze the components of experiments with a variety of outcomes and designs relevant to survey methodology.
Audience: Undergraduate

4. Apply fundamental methods for question testing.
Audience: Undergraduate

5. Apply principles of question design in developing survey questions.
Audience: Undergraduate

6. Analyze split-ballot experiment, contextualize analysis with well-focused review of relevant literature, accurately describe results, and draw appropriate conclusions.
Audience: Undergraduate

7. Document work in professionally written reports.
Audience: Undergraduate

SOC/C&E SOC 357 – METHODS OF SOCIOLOGICAL INQUIRY
3-4 credits.

Scientific methods in the study of society; procedures for testing sociological theory: problem definition, hypothesis construction, collection and evaluation of data. Practical experience conducting small research projects.
Requisites: Sophomore standing or (SOC 181, SOC/C&E SOC 140, 210, or 211)
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

SOC/C&E SOC 360 – STATISTICS FOR SOCIOLOGISTS I
4 credits.

Presentation of sociological data; descriptive statistics; probability theory and statistical inference; estimation and tests of hypotheses; regression and correlation and the analysis of contingency tables.
Requisites: Satisfied Quantitative Reasoning (QR) A requirement
Course Designation: Gen Ed - Quantitative Reasoning Part B
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use the methods of quantitative social research to assemble, describe, and draw inference from quantitative data.
Audience: Undergraduate

2. Execute and present elementary statistical analyses.
Audience: Undergraduate

3. Critically evaluate statistical evidence in both academic and popular settings.
Audience: Undergraduate

SOC/C&E SOC 361 – STATISTICS FOR SOCIOLOGISTS II
4 credits.

Applied linear regression modeling for social scientists. Bivariate and multiple regression, dummy variables, interactions, nonlinear relationships, indirect effects and omitted variable bias, outliers, heteroskedasticity, and mulitcollinearity; associated diagnostics and corrections. Use of Stata and/or SAS for dataset creation and analysis.
Requisites: C&E SOC/SOC 360, ECON 310, PSYCH 210, GEOG 360, MATH/STAT 310, STAT 301, or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Honors - Accelerated Honors (!)
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Prepare oneself to conduct one's own research using linear and logistic regression analysis and secondary data sources, at a level befitting beginning research assistants on faculty research projects.

Audience: Both Grad & Undergrad

2. Find, download, and format social science data suitable for analysis.
Audience: Both Grad & Undergrad

3. Make, interpret, and critique advanced specifications involving dummy variables, interactions, and nonlinear transformations.
Audience: Both Grad & Undergrad

4. Use diagnostics for various threats to model fit and interpretation.
Audience: Both Grad & Undergrad

5. Establish a solid foundation for studying the many methods that are extensions of linear regression (including logistic regression).
Audience: Both Grad & Undergrad

6. Achieve a deep understanding of ordinary least squares regression (OLS).
Audience: Both Grad & Undergrad

7. Become expert at presenting quantitative results from OLS models in a substantively meaningful and accessible way.
Audience: Both Grad & Undergrad

8. Understand and critique the ways in which OLS is used in the field.
Audience: Both Grad & Undergrad

9. Prepare oneself to write an article-length description of an independent research project that uses linear or logistic regression.
Audience: Graduate

SOC 362 – STATISTICS FOR SOCIOLOGISTS III
4 credits.

Generalized linear models with selected applications to social science data. Topics: Review of multiple regression; properties of estimators; general linear restrictions; instrumental variables; two-stage least squares; panel data; fixed and random effects; logit, probit, and related models.
Requisites: C&E SOC/SOC 361, STAT 302, ECON 400, 410, MATH/STAT 309, or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Honors - Accelerated Honors (!)
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize what statistical techniques are appropriate to extract answers for common sociological questions from data in a variety of realistic scenarios.
Audience: Both Grad & Undergrad

2. Acquire the necessary tools to become critical readers of the majority of quantitative research in sociology.
Audience: Both Grad & Undergrad

3. Use skills to execute quantitative empirical research and decide which specialized course they should take next in order to participate at the research frontier.
Audience: Graduate

SOC/C&E SOC 365 – DATA MANAGEMENT FOR SOCIAL SCIENCE RESEARCH
3-4 credits.

Understanding the structure of different types of social scientific data, techniques for data evaluation, cleaning, documentation and visual display, merging data from multiple sources, restructuring data for analysis.
Requisites: C&E SOC/SOC 360, PSYCH 210, STAT 301, ECON 310, MATH/STAT 310, or GEOG 360
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

SOC 375 – INTRODUCTION TO MATHEMATICAL SOCIOLOGY
3 credits.

Explores mathematical models of social structure, focusing especially on social network analysis and related methods. Makes extensive use of matrix algebra and mathematical software.
Requisites: C&E SOC/SOC 360, PSYCH 210, STAT 301, ECON 310, MATH/STAT 310, or GEOG 360
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2019

SOC 376 – MATHEMATICAL MODELS OF SOCIAL SYSTEMS
3 credits.

Explores mathematical models of social process employing dynamical systems, Markov chains, and simulation analysis. Examples will address a wide range of sociological topics including cultural evolution, demography, social influence, social-network formation, religion, residential segregation, and social movements.
Requisites: Junior standing and (SOC 375, MATH 320, 340, 341, or 375)
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2019

SOC/GEN&WS/LEGAL ST 406 – LAW, SEXUALITY, & SOCIETY
3-4 credits.

Examines the legal and social development and implications of laws governing sexual behavior, human reproduction, media, privacy, and topics related to sexuality, sex and gender. Includes historical analyses of laws connected to present day regulations of sexuality, demonstrating the origins of many of the world's most frequently debated civil rights issues. Chief focus on the United States legal system, with some content including examinations of institutions around the world. Investigates taken-for-granted knowledge and assumptions about sexuality and look at legal, cultural and social constructions of sex in society. Covers intersectional social implications, including race, (dis)ability, class, etc. Topics include: obscenity, pornography, sex work, sexual surrogacy, birth control, abortion, sex education, sexual violence, sex offenders, sexual citizenship rights, trans and intersex legal topics.
Requisites: GEN&WS 101, 102, 103 or SOC/LEGAL ST 131
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss social theory about law and human behavior, particularly human sexuality
Audience: Undergraduate

2. Explain historical roots of modern sexuality-related laws and legal systems worldwide
Audience: Undergraduate

3. Analyze topics related to sexuality and society; constructing arguments based on academic, peer-reviewed research
Audience: Undergraduate

4. Examine sociolegal governance over a wide variety of sexual behaviors and gender/sex topics in a critical, thorough, and thoughtful manner
Audience: Undergraduate

5. Comprehend and apply legal history, precedent, and course concepts to specific sociolegal cases concerning sexuality
Audience: Undergraduate

SOC 421 – PROCESSES OF DEVIANT BEHAVIOR
3-4 credits.

Factors and conditions that underlie disagreement about fundamental values which inform views and conceptualizations of deviance; their relation to personal and social maladjustment; deviant behavior across different social contexts.
Requisites: Junior standing or (SOC/LEGAL ST 131, SOC 181, C&E SOC/SOC 210, or 211)
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

SOC/SOC WORK 422 – SOCIAL ISSUES IN AGING
3 credits.

Origins, nature, scope and dynamics of the social problems of older adults and their families in the U.S. and to acquaint students with programs and services available to older adults.
Requisites: Sophomore standing and (SOC WORK 205, SOC 181, SOC/C&E SOC 140, 210 or 211)
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

SOC/ILS/JEWISH 423 – MODERN JEWISH THOUGHT
3 credits.

How do Jews fit into the modern world? While the "Jewish Question" initially referred to debates about Jewish emancipation (the struggle for equal citizenship and social integration that started with the French Revolution), it later served to describe modern Jewish political and social thought about the identity, place, and role of the Jews in the modern world. Beginning in the late 19th century, as cultural assimilation, economic impoverishment in eastern Europe, and rising antisemitism sowed doubts about the viability of emancipation and traditionalism alike, Jewish thinkers proposed new answers to the Jewish question. Learn about some of the major answers they debated, including revolutionary universalistic utopias (socialism and Communism), various forms of Jewish nationalism, hyphenated identities, cultural pluralism, and cosmopolitanism. Work to contextualize these ideas historically while also considering whether and how they remain relevant to the present.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Engage with major figures, ideas, and debates in the social and political thought of Jews about the “Jewish Question” from the late 19th century until the mid-20th century
Audience: Undergraduate

2. Understand these ideas in relation to the historical contexts in which they were produced
Audience: Undergraduate

3. Enter into a dialogue with past thinkers, critically assessing whether and how their ideas may remain relevant to the changed circumstances of the present
Audience: Undergraduate

SOC/GEN&WS/LEGAL ST 425 – CRIME, GENDER AND JUSTICE
3 credits.

Focuses on the intersection between gender, crime and justice from a cross-cultural perspective. The gendered nature of the criminal justice system, female experiences of crime, prosecution and incarceration as well as the extent to which women are victims, offenders, and participants in the criminal justice system will be explored. Special emphasis will be placed on the theoretical implications of offending behavior and the intersection of gender with sexuality, race, ethnicity and class. The goal of this course is to provide a foundation for critically assessing the often controversial issues surrounding race, gender, crime, and criminal justice in society.
Requisites: SOC/LEGAL ST 131, GEN&WS 101, 102, 103 or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze the U.S. criminal justice system, including incarceration, sentencing, and policing, through the lens of gender studies
Audience: Undergraduate

2. Identify and describe criminological theories, specifically those focused on gender, race, class, and feminist academic thought
Audience: Undergraduate

3. Explore inequalities amongst gender groups and various other social intersections (race, class, ability, sexuality, age, parenthood, etc).
Audience: Undergraduate

4. Investigate topics related to gender and justice by conducting thorough literature reviews and preparing policy briefs with recommendations for legal change.
Audience: Undergraduate

5. Examine and discuss real-world experiences in criminal justice systems, both in the U.S. and abroad.
Audience: Undergraduate

SOC/CHICLA/LEGAL ST 440 – ETHNICITY, RACE, AND JUSTICE
3-4 credits.

An examination of ethnicity, race, and justice, with a specific emphasis on US Latinos, the largest minority group in the United States.
Requisites: C&E SOC/SOC 140, 210, 211, SOC 181, FOLKLORE/AFROAMER/AMER IND/ASIAN AM/CHICLA 102, CHICLA 201, CHICLA 210, CHICLA 230, POLI SCI/CHICLA 231, HISTORY/CHICLA/GEN&WS 245, LEGAL ST/SOC 131, or POLI SCI/LEGAL ST 217
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Discuss ethnic and racial differences in crime and criminal justice outcomes and analyze these patterns through the application of theory and empirical data in the social sciences.
Audience: Undergraduate

2. Engage major theoretical debates in social and legal scholarship. Why are there racial/ethnic disparities in crime and violence? How and why have these disparities changed over time? Are minorities treated differently by legal officials? Has mass incarceration mitigated or exacerbated racial and ethnic inequality? How has the Supreme Court viewed issues of ethnicity, race, and the law?
Audience: Undergraduate

3. Competently interpret representations of data and critically analyze study design in published research on ethnicity, race, and justice.
Audience: Undergraduate

4. Critically assess the often-controversial issues surrounding ethnicity, race, crime, and the law in society, drawing on readings and class discussion.
Audience: Undergraduate

SOC 441 – CRIMINOLOGY
3-4 credits.

Theoretical explanations of criminal behavior. Measurement of crime and evaluation of criminological research. Current issues in criminology and crime-related public policy.
Requisites: Junior standing or (SOC/LEGAL ST 131, SOC 181, C&E SOC/SOC 210, or 211)
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

SOC/CHICLA/LEGAL ST 443 – IMMIGRATION, CRIME, AND ENFORCEMENT
3-4 credits.

A study of immigration, crime, and border enforcement, engaging both historical and present-day debates, focusing on Latino immigration and the U.S.-Mexico border.
Requisites: C&E SOC/SOC 140, 210, 211, SOC 181, FOLKLORE/AFROAMER/AMER IND/ASIAN AM/CHICLA 102, CHICLA 201, CHICLA 210, CHICLA 230, POLI SCI/CHICLA 231, HISTORY/CHICLA/GEN&WS 245, LEGAL ST/SOC 131, or POLI SCI/LEGAL ST 217
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Discuss trends in immigration, crime, and border enforcement in recent decades and analyze these patterns through the application of theory in the social sciences and empirical data.
Audience: Undergraduate

2. Engage major theoretical debates in migration scholarship. Why do people (not) move? How are migration decisions made? What effect does migration have on (a) receiving societies, (b) sending societies, and (c) migrants themselves? How is migration organized by gender? What differentiates forced and unforced migration? How are immigrants incorporated into new societies?
Audience: Undergraduate

3. Develop a broader understanding of border enforcement through critical analysis of immigration policies and practices from an international perspective. That is, are recent trends in border enforcement unique to the United States?
Audience: Undergraduate

4. Critically assess the often-controversial issues surrounding ethnicity, race, crime, and the law in society, drawing on readings and class discussion.
Audience: Undergraduate

SOC 444 – SOCIAL PSYCHOLOGY: A SOCIOLOGICAL PERSPECTIVE
3-4 credits.

The systematic study of the individual in a social context, including social interaction, motivation, attitudes, conformity, communication, leadership, personal relationships, and behavior in small groups.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Use the basic principles of critical thinking to understand, evaluate, and critique or justify the multitude of positions one might take in social psychology or any other field of inquiry.
Audience: Undergraduate

2. Become broadly familiar with the field of social psychology, including its theories, methods, and controversies, and to see how social psychology may fit into broader sociological research.
Audience: Undergraduate

3. Learn to read, summarize, and evaluate research in social psychology critically and intelligently, and to write on it clearly.
Audience: Undergraduate

4. Become more reflective by identifying the various social influences on their own attitudes, behaviors, and personalities, including family, friends, mass media, groups, and culture, and by analyzing their own everyday interactions using social psychology theories and research.
Audience: Undergraduate

SOC 446 – JUVENILE DELINQUENCY
3-4 credits.

Concepts of childhood and delinquency. Measurement of delinquent behavior. Application of competing theories to relationships within the family, school, and peer group. Evaluation of programs for treatment, prevention, and control. The rise of the juvenile system.
Requisites: Junior standing or (SOC/LEGAL ST 131, SOC 181, C&E SOC/SOC 210, or 211)
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

SOC/LEGAL ST 451 – RACE, FAMILY & THE STATE
3 credits.

Examines the politics of state involvement in family life in America, particularly in poor and minoritized families. Investigates the state's role in the regulation of the family through systems of governance such as criminal justice, immigration, and welfare that shape the legal possibilities for family life. Incorporates sociological, historical, and legal scholarship to critically assess the structural influences shaping the experiences, choices, and legal possibilities for families of color.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Identify and describe key social science theories of race, ethnicity, and racism.
Audience: Undergraduate

2. Articulate how the concept of family is a social construct.
Audience: Undergraduate

3. Enumerate the ways state institutions intervene in family life, and how the role of race and racism these processes.
Audience: Undergraduate

4. Explain how cultural assumptions about the meanings and purpose attached to families influence policy making.
Audience: Undergraduate

5. Apply sociological research findings to evaluate family policy positions
Audience: Undergraduate

6. Communicate contemporary family policy issues to non-specialists through public speaking and writing.
Audience: Undergraduate

SOC/PSYCH 453 – HUMAN SEXUALITY
4 credits.

Provides an interdisciplinary introduction to biological, psychological, and sociological aspects of human sexuality.
Requisites: PSYCH 202 or Sophomore standing. Not open to student with credit for SOC/PSYCH 160
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain information about the biological, psychological, and social aspects of sexuality. Much of this is practical information that people need to know for daily living – e.g., information about contraception and sexually transmitted infections.
Audience: Undergraduate

2. Evaluate methods used in the scientific study of sexuality, to gain a better understanding of existing data and evaluate studies that will be published in the future.
Audience: Undergraduate

3. Describe the fabulous diversity of human sexuality along many dimensions, including age, sexual orientation, ethnicity within the United States, and cultures around the world.
Audience: Undergraduate

4. Develop comfort with the topic of sex to make more rational decisions about it, by using accurate terminology and evidence-based reasoning.
Audience: Undergraduate

5. Discuss sensitive topics with respect and clarity, particularly with individuals who have perspectives different from yours.
Audience: Undergraduate

SOC 460 – STUDY ABROAD IN DEMOGRAPHY AND ECOLOGY
1-6 credits.

Provides a sociology area equivalency for demography and ecology courses taken in study abroad programs that do not equate exactly to existing sociology courses. Enrollment in a UW-Madison resident study abroad program
Requisites: None
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

SOC 461 – STUDY ABROAD IN ADDITIONAL METHODS AND STATISTICS
1-6 credits.

Provides a sociology area equivalency for additional methods and statistics courses taken in study abroad programs that do not equate exactly to existing sociology courses. Enrollment in a UW-Madison resident study abroad program
Requisites: None
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

SOC 462 – STUDY ABROAD IN ADDITIONAL THEORY
1-6 credits.

Provides a sociology area equivalency for additional theory courses taken in study abroad programs that do not equate exactly to existing sociology courses. Enrollment in a UW-Madison resident study abroad program
Requisites: None
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

SOC 463 – STUDY ABROAD IN DEVIANT BEHAVIOR
1-6 credits.

Provides a sociology area equivalency for deviant behavior courses taken in study abroad programs that do not equate to existing sociology courses. Enrollment in a UW-Madison resident study abroad program
Requisites: None
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

SOC 464 – STUDY ABROAD IN SOCIAL PSYCHOLOGY
1-6 credits.

Provides a sociology area equivalency for social psychology courses taken in study abroad programs that do not equate exactly to existing sociology courses. Enrollment in a UW-Madison resident study abroad program
Requisites: None
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

SOC 465 – STUDY ABROAD IN SOCIAL ORGANIZATION
1-6 credits.

Provides a sociology area equivalency for social organization courses taken in study abroad programs that do not equate exactly to existing sociology courses. Enrollment in a UW-Madison resident study abroad program
Requisites: None
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

SOC/CHICLA 470 – SOCIODEMOGRAPHIC ANALYSIS OF MEXICAN MIGRATION
3 credits.

Introduces students to social and demographic analysis and explanations of the historical and present day causes and consequences of migration of the largest immigrant group to the United States in the 20th century.
Requisites: SOC 134, 170, 181, SOC/ASIAN AM 220, SOC/C&E SOC 140, 210, 211, CHICLA 201, CHICLA 210, or POLI SCI/CHICLA 231; or graduate/professional standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2020
Learning Outcomes: 1. Describe micro-level and macro-level patterns in Mexico-U.S. migration and analyze these patterns through the application of theory and empirical data in the social sciences.
Audience: Undergraduate

2. Examine major theoretical debates in migration scholarship. Why do people (not) move? How are migration decisions made? What effect does migration have on (a) receiving societies, (b) sending societies, and (c) migrants themselves? How is migration organized by gender? What differentiates forced and unforced migration? How are immigrants incorporated into new societies?
Audience: Undergraduate

3. Apply empirical findings on Mexico-U.S. migration to evaluate theories in migration scholarship.
Audience: Undergraduate

4. Competently interpret representations of social science data on Mexico-U.S. migration.
Audience: Undergraduate

5. Critically analyze study design in published social science research on Mexico-U.S. migration.
Audience: Undergraduate

SOC/C&E SOC 475 – CLASSICAL SOCIOLOGICAL THEORY
3 credits.

Classical theory; Marx, Durkheim, Weber, and other important classical theorists and schools of thought.
Requisites: Sophomore standing or (SOC 181, SOC/C&E SOC 140, 210, or 211)
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

SOC 476 – CONTEMPORARY SOCIOLOGICAL THEORY
3 credits.

Norm and norm emergence, Preference formation, Ideology, Bounded Rationality, Rational Choice, Prospect Theory, Framing processes, Models of Collective Behaviors, Symbolic Interactionism, Communicative Action, Game Theory, Processes of Social Influence.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

SOC 496 – TOPICS IN SOCIOLOGY
1-3 credits.

Intensive study of selected topics in sociology.
Requisites: Junior standing or (SOC 181, C&E SOC/SOC 210, or 211)
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SOC 497 – STUDY ABROAD IN SOCIOLOGY
1-6 credits.

Provides a sociology area equivalency for courses taken in study abroad programs that do not equate to existing sociology courses. Enrollment in a UW-Madison resident study abroad program
Requisites: None
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2001

SOC/HISTORY/JEWISH 518 – ANTISEMITISM IN EUROPEAN CULTURE
3 credits.

Through a critical and interdisciplinary lens, review the history and major theories of modern antisemitism in its past and present-day forms. Read scholarship on antisemitism, as well as canonical antisemitic texts, with attention to geographic, chronological, and cultural contexts. Learn about the origins, major themes, continuities and changes, and surprising endurance of antisemitism. Use historical thinking to understand antisemitism as a major historical problem and to address related contemporary issues with nuance.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the origins and development of antisemitism
Audience: Both Grad & Undergrad

2. Identify different elements and forms of antisemitism
Audience: Both Grad & Undergrad

3. Evaluate the claims in debates about the nature, origins, and development of antisemitism using historical evidence
Audience: Both Grad & Undergrad

4. Use historical evidence to assess the major theories of antisemitism
Audience: Both Grad & Undergrad

5. Critically analyze canonical antisemitic texts and understand classic and recent scholarship on antisemitism
Audience: Both Grad & Undergrad

6. Communicate clearly, effectively, and concisely in class discussions and writing assignments
Audience: Both Grad & Undergrad

7. Apply knowledge of antisemitism to understand it as an ongoing social problem
Audience: Both Grad & Undergrad

8. Develop original historical arguments using primary and secondary sources in discussion, presentations, and writing assignments.
Audience: Graduate

SOC/C&E SOC 532 – HEALTH CARE ISSUES FOR INDIVIDUALS, FAMILIES AND SOCIETY
3 credits.

Issues related to health and health care delivery in our society. Topics include social, cultural and ethical influences on consumer definitions of health and use of medical care, and on the health care system's responses.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2021

SOC/C&E SOC 533 – PUBLIC HEALTH IN RURAL & URBAN COMMUNITIES
3 credits.

Sociological approaches to community, rural, and public health. Examines epidemiological evidence for and policy solutions to health issues that impact vulnerable populations in diverse geographic and social settings. Topics include mental health, environmental and occupational health, preventive care, substance abuse.
Requisites: SOC 181, SOC/C&E SOC 140, 210, or 211
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe and critique the role of social conditions and social change in shaping equities and disparities in environment, health, and community
Audience: Undergraduate

2. Place an understanding of local social conditions and change in the context of rural and urban life and describe how these relate to health outcomes at the population level
Audience: Undergraduate

3. Demonstrate leadership and collaboration skills for working with people from a diversity of background
Audience: Undergraduate

4. Demonstrate advanced verbal and written communication skills that are applicable in a professional setting
Audience: Undergraduate

5. Identify and analyze a particular public health problem in detail and select and evaluate the interventions that have been undertaken to ameliorate that problem, assessing those interventions' strengths and weaknesses
Audience: Undergraduate

SOC 535 – TALK AND SOCIAL INTERACTION
3 credits.

Focus on the systematic observation and analysis of face-to-face interaction. Sociological approaches to naturally occurring interaction--i.e., human talk and behavior that has been observed, audiorecorded, or videorecorded--will be explored. The approaches include ethnomethodology, conversational analysis, and Goffmanian sociology.
Requisites: Junior standing or (SOC 181, C&E SOC/SOC 210, or 211)
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023

SOC/C&E SOC/ENVIR ST 540 – SOCIOLOGY OF INTERNATIONAL DEVELOPMENT, ENVIRONMENT, AND SUSTAINABILITY
3 credits.

Sociological analysis of relationships among economic growth, environmental sustainability and social justice in the developing world. Considers frameworks for understanding poverty, hunger, educational and technological inequality, and the impact of globalization on prospects for socially and ecologically sustainable development.
Requisites: SOC 181, SOC/C&E SOC 140, 210, or 211
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Critically reflect on the complex meanings and basic histories of international development, globalization, and environment
Audience: Undergraduate

2. Critically reflect on the history of sustainability and how it mediates development, globalization, and environmental politics
Audience: Undergraduate

3. Demonstrate a deep understanding the sociology of international development, environment, and globalization
Audience: Undergraduate

4. Use social theoretical concepts for speaking about development, globalization, and environment
Audience: Undergraduate

SOC/C&E SOC 541 – ENVIRONMENTAL STEWARDSHIP AND SOCIAL JUSTICE
3 credits.

Application of sociological theory and analysis to environmental issues. Examines the ways in which environmental stewardship and conflict are embedded within broader cultural, social, and political contexts.
Requisites: SOC 181, SOC/C&E SOC 140, 210, 211, F&W ECOL/C&E SOC/SOC 248, ENVIR ST 112, 113, GEOG/ENVIR ST 139, 337, 339, GEOG 101, or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe and critique the role of social conditions and social change in shaping equities and disparities in environment, health, and community
Audience: Both Grad & Undergrad

2. Place an understanding of local social conditions and change in the global context of rural and urban life, including political, ecological, economic, geographic, historical, and cultural dimensions
Audience: Both Grad & Undergrad

3. Frame and conduct social science research
Audience: Both Grad & Undergrad

4. Demonstrate the ability to ethically apply research methods, such as qualitative, quantitative, historical, interdisciplinary, participatory, and action approaches, and to evaluate findings
Audience: Both Grad & Undergrad

5. Demonstrate leadership and collaboration skills for working with people from a diversity of backgrounds in professional and ethical ways that enable beneficial and regenerative relationships
Audience: Both Grad & Undergrad

6. Demonstrate advanced verbal and written communication skills that are applicable in a professional setting
Audience: Both Grad & Undergrad

7. Critically and creatively evaluate environmental and social justice through a diversity of perspectives about knowledge, culture, and land management practices
Audience: Both Grad & Undergrad

8. Apply collaborative skills through writing workshops and weekly discussions
Audience: Both Grad & Undergrad

9. Identify the strengths, limitations, and possibilities of anti-racism, anti-colonial, and other justice-oriented approaches in the field of environmental stewardship, including their tensions with dominant discourses about sustainability, land management, and science and technology
Audience: Both Grad & Undergrad

10. Identify the practical challenges of universal values and perspectives, specifically how they impact people across the world
Audience: Both Grad & Undergrad

11. Unearth the hidden roots and connections across differently situated people and places
Audience: Both Grad & Undergrad

SOC 543 – COLLECTIVE BEHAVIOR
3 credits.

Emergence of various forms of collective behavior from social interactions, collective action problem, game theory, prospect theory, social networks, network effects, information cascade, increasing returns, social influence, epidemics, social movements, mass media.
Requisites: Junior standing or (SOC 181, SOC/C&E SOC 140, 210, or 211)
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

SOC 550 – COMPARATIVE RACIAL INEQUALITY
3 credits.

An introduction to the sociological study of racial orders in comparative and historical perspective. As W.E.B. Du Bois famously wrote, "The problem of the twentieth century is the problem of the color line," but as he also insisted, the social meaning of race is shaped by specific historical and economic contexts. Half of the content focuses on the American experience, especially over the last 50 years, exploring historical and contemporary meanings of race in America, and how racial dynamics have changed (and not changed) across time. The other half continues to explore the American experience, but now using a comparative historical approach, discussing patterns of racial inequality and social change in South Africa and Brazil, both to understand how these issues have played out in those contexts, and to gain new insights into our experiences in the United States.
Requisites: Junior standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Explore some of the effects the past has had on present day circumstances, perceptions of, and disparities in, race, both specifically in the U.S., and in comparison with other countries marked by racial disparities.
Audience: Undergraduate

2. Recognize and question cultural assumptions, rules, biases, and knowledge claims as they relate to race and ethnicity.
Audience: Undergraduate

3. Examine questions and make decisions with consideration for the cultural perspectives and worldviews of others.
Audience: Undergraduate

4. Use historical comparison to strengthen what CW Mills calls the 'sociological imagination,' especially by exploring similarities and differences across historical contexts.
Audience: Undergraduate

5. Explore theories of social change, with a focus on how transnational social movements can alter local political dynamics.
Audience: Undergraduate

6. Apply course content to their lives outside the classroom by respectfully participating in our multicultural society.
Audience: Undergraduate

SOC/C&E SOC 573 – COMMUNITY ORGANIZATION AND CHANGE
3 credits.

Examines theories of community change and different models of community organizing.
Requisites: Junior standing or (SOC 181, SOC/C&E SOC 140, 210, or 211)
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021
Learning Outcomes: 1. Situate oneself, individually, as an agent and (re)actor of change
Audience: Both Grad & Undergrad

2. Describe how the study of community organization development and change has evolved into a behavioral science over time, in a variety of settings and with multiple, equally valid approaches
Audience: Both Grad & Undergrad

3. Assess community need and readiness for change
Audience: Both Grad & Undergrad

4. Evaluate key change interventions and their efficacy for achieving intended outcomes
Audience: Both Grad & Undergrad

5. Discuss leadership and community organization with current professionals in the field
Audience: Both Grad & Undergrad

6. Construct a theory of change that demonstrates and articulates how a planned change effort is diagnosed, facilitated, implemented and evaluated
Audience: Both Grad & Undergrad

7. Synthesize and evaluate current academic literature to explore a current issue related to community organization and change
Audience: Graduate

SOC 575 – SOCIOLOGICAL PERSPECTIVES ON THE LIFE COURSE AND AGING
3 credits.

Age as a basis of societal differentiation in modern and premodern societies; social psychological, demographic, sociobiological, socioeconomic, and sociohistorical views of age-graded events and behaviors; examination of the life course and aging as sociological variables.
Requisites: Junior standing or SOC/C&E SOC 357
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2019

SOC/AMER IND/C&E SOC 578 – POVERTY AND PLACE
3 credits.

The allocation of economic and social rewards in the United States; emphasis on persistently poor regions and communities; analysis of selected minority groups and their poverty statuses; poverty programs and their consequences for structural and cultural changes.
Requisites: SOC/C&E SOC 140, 210, 211, or SOC 181
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze measures of poverty, inequality, and population health and draw conclusions from them
Audience: Undergraduate

2. Describe the places and communities in the United States in which poverty is deepest and most persistent and understand the historical processes that have reproduced such disadvantage
Audience: Undergraduate

3. Place an understanding of local social conditions and change in the global context of rural and urban life, including political, ecological, economic, geographic, historical, and cultural dimensions
Audience: Undergraduate

4. Describe how social conditions of poverty affect people's lives in distinct social contexts
Audience: Undergraduate

5. Contrast and evaluate theoretical approaches to explaining poverty
Audience: Undergraduate

6. Discuss racial and ethnic disparities in social conditions linked to poverty
Audience: Undergraduate

7. Compare the US to peer nations in terms of poverty levels, rates of attendant social problems, and kinds of policies affecting the poor
Audience: Undergraduate

8. Engage in ethical reasoning about how poverty and the policies that impact it relate to shared values
Audience: Undergraduate

9. Interpret and critique texts that describe and analyze poverty
Audience: Undergraduate

10. Identify a case of poverty in a geographic context and apply social scientific literature to support of analysis that contributes to the literature
Audience: Undergraduate

SOC/C&E SOC/URB R PL 617 – COMMUNITY DEVELOPMENT
3 credits.

Social, cultural and personality factors influencing community development, with reference to developing countries as well as contemporary rural communities; consideration of theoretical and operational issues.
Requisites: SOC/C&E SOC 140, 210, 211, SOC 181, or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Explain how social science arguments related to community development are constructed and evaluated
Audience: Both Grad & Undergrad

2. Assess data quality and whether particular data is appropriate to answer specific questions
Audience: Both Grad & Undergrad

3. Define general theories on basic social processes, especially those related to the relationships between society and the environment and the social organization of communities
Audience: Both Grad & Undergrad

4. Apply verbal and written communication skills to discuss complex issues in the social sciences
Audience: Both Grad & Undergrad

5. Synthesize and evaluate scholarly social science literature related to community development
Audience: Graduate

SOC/C&E SOC 618 – SOCIAL NETWORK ANALYSIS
3 credits.

Social network analysis is a social scientific approach examining individuals as embedded in networks of social relations. Covers the fundamentals of network thinking, network tools, and the analysis and presentation of social network data. Direct practice with network data using software R.
Requisites: Junior standing and (C&E SOC/SOC 360, STAT 301, STAT 371, ECON 310, PSYCH 210, GEOG 360, STAT/MATH 310, or GEN BUS 303)
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify when data are suitable for network analysis.
Audience: Both Grad & Undergrad

2. Choose the appropriate network analysis techniques to answer one's research questions.
Audience: Both Grad & Undergrad

3. Use the R software and packages to perform the analyses.
Audience: Both Grad & Undergrad

4. Critically read network studies from across the social sciences.
Audience: Both Grad & Undergrad

5. Prepare a substantive social network analysis up to publication standards.
Audience: Graduate

SOC 624 – POLITICAL SOCIOLOGY
3 credits.

Theory of democracy, political culture, comparative studies of voting behavior, political decisions, collective violence, regime breakdowns, social movements, mobilization processes, frame analysis.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

SOC 626 – SOCIAL MOVEMENTS
3 credits.

Role of social structure, authorities and movement participants, and leadership in the origins, mobilization, participation, strategy and tacts, and potential for success of social movements.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2024

SOC/C&E SOC 630 – SOCIOLOGY OF DEVELOPING SOCIETIES/ THIRD WORLD
3 credits.

Review of problems and prospects of so-called "developing societies." Includes theory of economic/social development, political economic organizations of "developing" societies, history of colonialism/imperialism, attempts to industrialize and results of those attempts.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023

SOC 631 – APPLIED QUALITATIVE METHODS FOR SOCIAL SCIENCE
3-4 credits.

Introduction to qualitative research methods most commonly used by practitioners in business, marketing and communications, healthcare, education, government, social service organizations, and think tanks. Produce high-quality data using open-ended survey questions, interviews, focus groups, observations and media/content analysis. Techniques for analyzing and presenting qualitative data, including text-based and visual reports.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate understanding of the pros and cons of different qualitative methods for answering different types of research questions
Audience: Undergraduate

2. Produce high quality qualitative data
Audience: Undergraduate

3. Analyze qualitative data to answer questions found in many types of workplaces in which applied social science research is conducted
Audience: Undergraduate

4. Effectively communicate the findings from qualitative data to a variety of audiences and practitioners.
Audience: Undergraduate

SOC 632 – SOCIOLOGY OF ORGANIZATIONS
3-4 credits.

Sociological perspectives on the structures and processes of large-scale formal organizations in Western society; a wide ranging examination of contemporary organizational theory and research, with illustrations from business, governmental, military, political and educational organizations.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

SOC 633 – SOCIAL STRATIFICATION
3 credits.

Classical and contemporary theories of the nature of social inequality; recent patterns and trends in inequality in the US; analysis of inequalities based on class, race, gender; the relationship of inequality to globalization, immigration, and politics.
Requisites: SOC 181, SOC/C&E SOC 140, 210, or 211
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

SOC 640 – SOCIOLOGY OF THE FAMILY
3 credits.

Examines family life from a sociological perspective, drawing on insights from demography, economics, history and anthropology. Considers theories and empirical evidence about families as social institutions; patterns of family change; and families and inequality.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

SOC/LAW/LEGAL ST 641 – SOCIOLOGY OF LAW
3-4 credits.

Theory and research on the social origins, processes and effects of law; examination of law-related behavior, legal institutions, law and social structure, and law and social change; linkage to contemporary theoretical and political debates.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

SOC/C&E SOC/URB R PL 645 – MODERN AMERICAN COMMUNITIES
3 credits.

Relevance of the concept of community to American society. Review of several basic theories of community and analysis of the nature of community in the broader political and economic context.
Requisites: SOC/C&E SOC 140, 210, 211, SOC 181, or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021
Learning Outcomes: 1. Critically analyze arguments and evidence in scholarly and public-facing materials concerning residential segregation and integration, housing access and choices, and the role of police and prisons within communities
Audience: Both Grad & Undergrad

2. Formulate an empirical question concerning at least one of the three identified course themes and answer it drawing on course reading materials and data sources
Audience: Both Grad & Undergrad

3. Communicate ideas and arguments about course themes rooted in theory and evidence through written and audio-visual mediums
Audience: Both Grad & Undergrad

4. Synthesize current research in an issue related to community or urban sociology and identify areas for novel research
Audience: Graduate

SOC 647 – SOCIOLOGY OF SPORT
3 credits.

Sport as a social institution; social characteristics and problems of sport at the youth, school, college, and professional levels.
Requisites: Junior standing or (SOC 181, C&E SOC/SOC 210, or 211)
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

SOC/ED POL 648 – SOCIOLOGY OF EDUCATION
3 credits.

Utilizes a sociological lens to examine American schools and schooling, with a particular focus on social inequality in the U.S. and how class, race, and gender intersect in the experiences of students. Examine how schools and schooling relate to broader social structures, institutions, and practices with a focus on inequality in public education.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Articulate the relationship between education and social inequality in the U.S. along various dimensions
Audience: Both Grad & Undergrad

2. Apply critical thinking skills to your understanding of educational institutions and individual educational experiences
Audience: Both Grad & Undergrad

3. Effectively communicate what you learned about the sociology of education both orally and in writing
Audience: Both Grad & Undergrad

4. Read and evaluate sociological research on education and schooling
Audience: Undergraduate

5. Read and evaluate sociological research on education and schooling and relate to own methodological and theoretical backgrounds
Audience: Graduate

SOC/C&E SOC 650 – SOCIOLOGY OF AGRICULTURE
3 credits.

Introduction to sociology of agriculture in advanced industrial-capitalist societies, including theoretical, historical, and empirical issues of agriculture in the United States.
Requisites: SOC 181, SOC/C&E SOC 140, 210, or 211
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe broad historical and contemporary trends in the development of the global agri-food system, as well as impacts from a sociological perspective
Audience: Undergraduate

2. Analyze the major theories, concepts, and debates associated with the sociology of agriculture and food systems
Audience: Undergraduate

3. Place an understanding of local social conditions and change in the global context of rural and urban life, including political, ecological, economic, geographic, historical, and cultural dimensions
Audience: Undergraduate

4. Demonstrate advanced verbal and written communication skills that are applicable in a professional setting
Audience: Undergraduate

SOC/C&E SOC 652 – SOCIOLOGY OF ECONOMIC INSTITUTIONS
3 credits.

Sociological perspectives on the organization of the firm, financial markets, and work, intermediate associations (unions, ethnic economies), the state, and the international economy. Contrast between neoclassical, traditional institutionalist, post-fordist, and neo-fordist perspectives on the nature and evolution of these institutions.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

SOC/HISTORY 670 – CAPITALISM, SOCIALISM, AND DEMOCRACY IN AMERICA SINCE 1890
3-4 credits.

Political institutional arrangements which have emerged since 1890 and how they have influenced social and economic policies implemented since the Second World War. Why the working class has been politically weak in America; policy consequences of this weakness.
Requisites: Junior standing and (SOC 181, SOC/C&E SOC 140, 210, 211, HISTORY 102 or 109), or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

SOC 674 – DEMOGRAPHIC TECHNIQUES I
3 credits.

Methods of measurement for enumeration and registration data; construction of life tables; measures of fertility, nuptiality and migration; examination of census variables.
Requisites: SOC/C&E SOC 357, 360, STAT 301, 371, ECON 310, PSYCH 210, GEOG 360, MATH/STAT 310, or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

SOC 678 – SOCIOLOGY OF PERSECUTION
3 credits.

Persecution as an object of sociological investigation with special focus on the perpetrators' motivations, the machinery of persecution policies, the behaviors of state agents, and the attitudes and strategies displayed by the potential victims.
Requisites: Junior standing and (SOC 181, SOC/C&E SOC 140, 210, or 211), or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

SOC 681 – SENIOR HONORS THESIS
3 credits.

Mentored individual research and study for students completing Honors in the Major.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2024

SOC 682 – SENIOR HONORS THESIS
3 credits.

Mentored individual research and study for students completing Honors in the Major.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2025

SOC 691 – SENIOR THESIS
2-3 credits.

Mentored individual research and study for students completing a senior thesis.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

SOC 692 – SENIOR THESIS
2-3 credits.

Mentored individual research and study for students completing a senior thesis.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

SOC/C&E SOC 693 – PRACTICUM IN ANALYSIS AND RESEARCH
3 credits.

Practical experience in techniques of social research through assignment to a research project for the semester. Focuses on the art and practice of research and the writing of research reports.
Requisites: SOC/C&E SOC 357, 361 and declared in Sociology: Concentration in Analysis and Research
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Accelerated Honors (!)
Repeatable for Credit: No
Last Taught: Spring 2025

SOC/LEGAL ST 694 – CRIMINAL JUSTICE FIELD OBSERVATION
2-3 credits.

Field placements and seminar sessions to develop sociological understanding of criminal justice processes. Placement in criminal justice agencies and lectures and discussions applying concepts and theories to field experience.
Requisites: Declared in Criminal Justice certificate and LEGAL ST/ SOC 131
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Workplace - Workplace Experience Course
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the role that mental health or substance abuse can play in one's contact with the criminal legal system.
Audience: Undergraduate

2. Assess how an individual's race and socio-economic class can impact the likelihood of contact with the American criminal legal system, as well as how it impacts their experience.
Audience: Undergraduate

3. Evaluate how consideration of a client's/ individual's cultural heritage and practices can improve one's effectiveness in providing services.
Audience: Undergraduate

4. Analyze the potential effects of trauma exposure on a practitioner or service provider and compare self-care strategies to deal with this.
Audience: Undergraduate

5. Conduct client interviews based on knowledge of the steps needed to prepare for interviews and document the information gathered.
Audience: Undergraduate

6. Describe the breadth of stakeholders to the work being conducted by community agencies.
Audience: Undergraduate

SOC 698 – DIRECTED STUDY
1-6 credits.

Directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

SOC 699 – DIRECTED STUDY
1-6 credits.

Directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SOC 700 – INTRODUCTORY PROSEMINAR FOR GRADUATE STUDENTS
1 credit.

An introduction to current issues in sociology and its subfields.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

SOC/C&E SOC/I SY E/N E 708 – SOCIETAL RISK MANAGEMENT OF TECHNOLOGICAL HAZARDS
3 credits.

Issues involved in decision-making regarding technological risks and risk management in areas such as nuclear power, hazardous waste disposal, and pollution control. Risk perception and cognitive biases; risk analysis and decision analysis; political issues in risk management; regulatory mechanisms; and risk communication. Selected case studies.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020

SOC/C&E SOC 724 – INTERMEDIATE POLITICAL SOCIOLOGY
3 credits.

Critical examination of theories and research in political sociology. Topics include: power and interests, state-formation, social movements, class and political behavior, revolutions, ideology, and states and social policy.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

SOC/C&E SOC 730 – INTERMEDIATE SOCIAL PSYCHOLOGY: THE INDIVIDUAL AND SOCIETY
3 credits.

Major social psychological theories and research that focus on the individual in social context. Topics include: perspectives on socialization, the self, social perception and attribution, attitudes, language and nonverbal communication, and attraction and relationships.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023

SOC 735 – ETHNOMETHODOLOGY & CONVERSATION ANALYSIS
3 credits.

Analysis of everyday, local practices for assembling coherent and stable social environments. The focus on everyday practices derives from both ethnomethodological and conversation analytic literatures and investigations. Instruction will involve both didactic or illustrative presentations and hands-on work with interactional data from a variety of social settings, whether informal telephone calls, or more formal work or organizational settings.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2019

SOC/C&E SOC 750 – RESEARCH METHODS IN SOCIOLOGY
3 credits.

Application of scientific methods to the analysis of social phenomena; methodological orientations in sociology; types of research procedure: nature of sociological variables.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

SOC 751 – SURVEY METHODS FOR SOCIAL RESEARCH
3 credits.

Theoretical and practical issues involved in the design of surveys and their components. Apply knowledge of survey research techniques to a specific and complete research project.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

SOC 752 – MEASUREMENT AND QUESTIONNAIRES FOR SURVEY RESEARCH
3 credits.

Analysis and presentation of survey results through contingency table analysis. Techniques for assessing the quality of data produced by survey methods. Practical application of material to a specific research problem through research reports and other exercises involving data analysis.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

SOC 753 – COMPARATIVE AND HISTORICAL METHODS IN SOCIOLOGY
3 credits.

Comparative strategies and historical methods through methodological readings, exercises, and evaluations of exemplary analyses in which investigators of organizational structures, institutional relationships, political conflicts, and cultural patterns bring theory and historical-comparative evidence to bear on one another.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

SOC 754 – QUALITATIVE RESEARCH METHODS IN SOCIOLOGY
3 credits.

Teaches how qualitative research can be used to advance sociological theory. Topics include inductive and deductive research designs in qualitative research, conducting and analyzing interviews, content analysis, conducting observations, focus groups and data management in qualitative research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

SOC/C&E SOC/ED POL 755 – METHODS OF QUALITATIVE RESEARCH
3 credits.

Introduces qualitative, or ethnographic, research methods, emphasizing those suitable for educational and other organizational settings. Considers strengths and limitations of qualitative approaches in relation to varied research problems. Explores methodological procedures from entry into the field through writing.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

SOC 756 – DEMOGRAPHIC TECHNIQUES II
3 credits.

Intermediate to advanced tools used by demographers for studying the behavior of human populations: multiple decrement processes, stable population model, demographic relations in non-stable populations, model age patterns of vital events, indirect estimation methods.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

SOC 773 – INTERMEDIATE CLASSICAL THEORY
3 credits.

Intensive and critical examination of the major theoretical traditions involved in sociology's development since the 19th century.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

SOC/POP HLTH 797 – INTRODUCTION TO EPIDEMIOLOGY
3 credits.

Design, implementation and interpretation of epidemiologic studies; emphasis on methodologic problems in the measurement of disease frequency, natural history and risk factors.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Calculate and interpret measures of health used to characterize morbidity and mortality in populations.
Audience: Graduate

2. Identify features of epidemiologic study designs, their strengths and limitations, and measures of association used to determine the relation between exposures and outcomes of interest.
Audience: Graduate

3. Describe major sources of bias and confounding in epidemiologic research, and how they can be addressed.
Audience: Graduate

4. Evaluate causal inferences between risk factors and health.
Audience: Graduate

5. Identify and interpret the presence of interaction between multiple risk factors in relation to an outcome.
Audience: Graduate

SOC/FRENCH/GERMAN/HISTORY/POLI SCI 804 – INTERDISCIPLINARY WESTERN EUROPEAN AREA STUDIES SEMINAR
3 credits.

Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

SOC/C&E SOC 875 – SPECIAL TOPICS
1-4 credits.

Advanced topics in sociology. Topics vary.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SOC 901 – SEMINAR: TOPICS IN CURRENT SOCIOLOGY
2-3 credits.

Critical review of most recent research in sociology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

SOC/C&E SOC/GEN&WS 904 – SOCIOLOGICAL PERSPECTIVES ON GENDER
3 credits.

Advanced topics in the analysis of gender relations in society.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

SOC/ED POL 908 – SEMINAR-SOCIOLOGY OF EDUCATION
3 credits.

Selected topics.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

SOC 915 – SEMINAR-SOCIOLOGICAL THEORY
3 credits.

Coordination of current theories and methods of relevance for sociological research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

SOC 918 – SEMINAR IN COMPARATIVE SOCIOLOGY OF CONTEMPORARY CAPITALISM
3 credits.

Origins and consequences of inter-regime and inter-temporal variation in the institutions of capitalism. The evolution and current trajectory of contemporary capitalism across North America, Europe, and East Asia. Theoretical debates on the dynamics, contradictions and variations of capitalist systems.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2019

SOC 919 – SEMINAR: TOPICS IN ECONOMIC SOCIOLOGY
3 credits.

Explores the frontiers of research in economic sociology, drawing on recently published major work and on ongoing research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate an understanding of the place of economic sociology within the overall discipline.
Audience: Graduate

2. Demonstrate knowledge of a particular topic within economic sociology.
Audience: Graduate

3. Acquire skill in presenting a narrow topic and leading an in-depth seminar discussion of it.
Audience: Graduate

SOC/C&E SOC 922 – SEMINAR-RACE AND ETHNIC RELATIONS
3 credits.

Theoretical, methodological, and current research problems.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SOC/C&E SOC 923 – SEMINAR-SOCIAL STRATIFICATION
3 credits.

Advanced study of current research in social stratification, e.g., historical and comparative studies of inequality; mathematical and econometric modeling of mobility and achievement processes; demographic approaches to power and inequality.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2022

SOC/URB R PL 924 – SEMINAR-POLITICAL SOCIOLOGY
3 credits.

Selected topics in political sociology, e.g., social movements, citizenship, civic engagement, weakening of postwar "social democratic consensus" under financialized globalization pressures.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

SOC/ANTHRO/C&E SOC/ECON 925 – SEMINAR: SOCIO-ECONOMIC CHANGE IN UNDERDEVELOPED AREAS
2-3 credits.

Social and economic factors relating to stability, growth, and change in the non-Western areas of the contemporary world.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

SOC/C&E SOC 940 – SEMINAR-SOCIOLOGY OF ECONOMIC CHANGE
3 credits.

Theoretical and technical problems in research concerning organizational and socio-psychological aspects of changes in large scale social systems.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SOC/C&E SOC 945 – SEMINAR-RURAL SOCIOLOGY
3 credits.

Theory and research in alternate semesters in rural aspects of population, stratification, social change, and groups and institutions.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SOC/C&E SOC 948 – SEMINAR: ENVIRONMENTAL SOCIOLOGY
3 credits.

Examines topics such as theories of environment and society, the treadmill of production, environmental movements, political ecology, environmental justice, consumption, ecological modernization, sustainability, environmental risk, and the sociology of environmental science.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Describe key issues in environmental sociology, including theories of environment and society, environmental movements, political ecology, environmental justice, and sustainability
Audience: Graduate

2. Analyze interdisciplinary approaches to environmental sociology, incorporating perspectives from anthropology, geography, law, history, feminism, and ethnic studies to enhance their sociological research
Audience: Graduate

3. Evaluate multiple approaches to critical race studies within the field of environmental sociology, understanding how race and environmental issues intersect and influence social mobilization and power dynamics
Audience: Graduate

4. Apply foundational theories learned in class to contemporary environmental issues, critically assessing the relevance and impact of these theories on current events and societal challenges
Audience: Graduate

SOC 952 – SEMINAR-MATHEMATICAL AND STATISTICAL APPLICATIONS IN SOCIOLOGY
3 credits.

Selected topics in measurement and model construction in social research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

SOC/ED POL 955 – SEMINAR-QUALITATIVE METHODOLOGY
3 credits.

An intensive, practice-oriented exploration of one qualitative research method such as participant-observation, interviewing, narrative analysis, oral history or ethnography. Treatment of the method includes: logics of inquiry, analysis of data obtained through the method, and uses of the method.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

SOC/C&E SOC 960 – SEMINAR-CURRENT METHODOLOGICAL ISSUES IN SOCIAL PSYCHOLOGY
3 credits.

Alternative research designs and processes, measurement, and analytical techniques in social psychology; experience in developing and utilizing research plans and techniques.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2020

SOC/C&E SOC 971 – SEMINAR-TOPICS IN DEMOGRAPHY AND ECOLOGY
3 credits.

Advanced study of selected topics related to population and society, including health and inequality across the life course, environmental and spatial demography, biodemography.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023

SOC/C&E SOC 977 – SEMINAR-HUMAN ECOLOGY
3 credits.

Review of ecological theory and research; critical assessment of the ecological complex (population, organization, environment, and technology); problems of measurement.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023

SOC/A A E/ANTHRO/C&E SOC/GEOG/HISTORY/LACIS/ POLI SCI/PORTUG/SPANISH 982 – INTERDEPARTMENTAL SEMINAR IN THE LATIN-AMERICAN AREA
1-3 credits.

Interdisciplinary inquiry in Latin American society and culture.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SOC 983 – RESEARCH: ECONOMIC SOCIOLOGY AND COMPARATIVE POLITICAL ECONOMY
1-3 credits.

Presentation and discussion of on-going research in the area of comparative political economy and economic sociology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SOC 984 – RESEARCH: SOCIOLOGY OF GENDER TRAINEES
1-3 credits.

Workshop featuring presentations and discussion of current debates within the sociology of gender.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SOC/C&E SOC 985 – RESEARCH: COMMUNITY AND ENVIRONMENTAL SOCIOLOGY
1-3 credits.

Critical analysis of recent theoretical and methodological issues through presentations of research in progress.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Describe major theories, methodologies, and research findings in the community and environmental sociological literature
Audience: Graduate

2. Evaluate information pertinent to their research question
Audience: Graduate

3. Communicate in a clear, organized engaging manner, using language, methods, and critical tools appropriate to the social sciences
Audience: Graduate

4. Identify and apply principles of ethical and professional conduct
Audience: Graduate

SOC/C&E SOC 987 – RESEARCH: RACE AND ETHNIC STUDIES
1-3 credits.

Analysis of recent research and theory, based on reviews of literature and presentations of research in progress.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SOC 990 – THESIS
1-12 credits.

Mentored research for the Master's thesis or doctoral dissertation.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SOC 992 – RESEARCH: SOCIAL ORGANIZATION TRAINEES POLITICS, CULTURE, AND SOCIETY
1-3 credits.

Workshop on current topics in political, cultural, and comparative historical sociology (e.g., social movements, citizenship, collective identities, political behaviors, attitudes).
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SOC/C&E SOC 993 – RESEARCH: SOCIOLOGY OF ECONOMIC CHANGE TRAINEES
1-3 credits.

Presentations of research in progress concerning social and economic change in developing countries.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SOC 994 – COLLOQUIUM IN CRITICAL SOCIOLOGY
1-3 credits.

Selected topics in critical sociology taught in intensive units.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2019

SOC/C&E SOC 995 – RESEARCH: METHODOLOGY TRAINEES
1-3 credits.

Workshop on social science research methods and professional development, e.g. ethics, communication, data management, novel research methods.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SOC/C&E SOC 997 – RESEARCH: DEMOGRAPHY AND ECOLOGY TRAINEES
1-3 credits.

Interdisciplinary training workshop on current research in population science from scholars at research and teaching institutions around the world.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SOC 999 – READING AND RESEARCH IN SOCIOLOGY
1-12 credits.

Independent reading and research.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SOIL SCIENCE (SOIL SCI)

SOIL SCI/ENVIR ST 101 – FORUM ON THE ENVIRONMENT
1-2 credits.

Lectures and discussions about environmental issues. Historical and contemporary environmental impacts of humans on the biosphere. Global futures: population, technology, societal values, resources and prospects for sustainable management.
Requisites: None
Course Designation: Breadth - Either Social Science or Natural Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the breadth of the environmental sciences field
Audience: Undergraduate

2. Explain how research contributes to understanding of contemporary environmental issues
Audience: Undergraduate

3. Provide examples of the relationships between science, issues, and solutions in environmental topics
Audience: Undergraduate

4. Apply critical reading skills to understand issues and evaluate reliability of information sources
Audience: Undergraduate

5. Communicate and collaborate with a team of peers
Audience: Undergraduate

6. Explain how to pursue interests in environmental issues within and outside of the classroom
Audience:

SOIL SCI 131 – EARTH'S SOIL: NATURAL SCIENCE AND HUMAN USE
1 credit.

A overview of the soils of the world and the grand environmental challenges that face humanity. Soils of the USA and Wisconsin included.
Requisites: None
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Synthesize knowledge of the diversity of soils in the world
Audience: Undergraduate

2. Describe what are important soil characteristics
Audience: Undergraduate

3. Discuss how soils relate to the grand environmental challenges that confront humanity
Audience: Undergraduate

SOIL SCI/ATM OCN/BSE 132 – WATER AND PEOPLE
3 credits.

Water is central to the functioning of planet Earth and is influential to shaping many historical and present-day cultures across the globe. As humans increase their impact on Earth's water cycle, our understanding of the multiple roles of water becomes critical to finding sustainable strategies for human and ecosystem health. Explore different perspectives around cultural significance of, engagement with, and access to water, with particular focus to case studies from the United States. Identify the human influence on water quality and quantity in a changing global climate, from local, regional, and global perspectives, and how different racial and ethnic communities in the United States are differentially impacted.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Situate individual experiences with the water cycle in the broader context of different perspectives around the cultural significance of, engagement with, and access to water
Audience: Undergraduate

2. Summarize how historical circumstances/events have affected present day water resource policies, management, and standards, with a focus on the United States
Audience: Undergraduate

3. Apply knowledge of historical circumstances and current policies to describe how present-day communities are affected by water rights and management, and why
Audience: Undergraduate

4. Analyze the human influence on water quality and quantity under changing climate conditions from local, regional, and global perspectives
Audience: Undergraduate

5. Examine how different racial and ethnic communities, with particular focus on marginalized communities in the United States, are impacted by changes in water quality and quantity
Audience: Undergraduate

SOIL SCI 211 – SOILS AND CLIMATE CHANGE
2 credits.

Soil represents the largest terrestrial pool of carbon, and our management of soil will play a key role in the future of our planet. Course topics include overviews of basic soil science and climate change science; how climate affects soil formation, soil carbon and soil organic matter; soil carbon dynamics in urban areas, the tropics, and the arctic; how humans influence soil carbon stocks around the globe.
Requisites: None
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Explain the role of climate as a soil forming factor.

Audience: Undergraduate

2. Describe the components of the terrestrial carbon cycle and how land management decisions and other human actions affect each component.
Audience: Undergraduate

3. Explain the social, economic, and environmental dimensions of the sustainability challenge of enhancing soil carbon sequestration to mitigate climate change.
Audience: Undergraduate

4. Describe the social, economic, and environmental dimensions of conversion from traditional agriculture to regenerative agriculture and identify potential tradeoffs and interrelationships among these dimensions at a level appropriate to the course.
Audience: Undergraduate

5. Predict how warming in the arctic may affect the release of greenhouse gasses, including CO2, N2O, and CH4 using reasonable assumptions and basic calculations.
Audience: Undergraduate

SOIL SCI/ENVIR ST/GEOG 230 – SOIL: ECOSYSTEM AND RESOURCE
3 credits.

Soils are fundamental to ecosystem science. A systems approach is used to investigate how soils look and function. Topics investigated include soil structure, biology, water, fertility, and taxonomy as well as the human impact on the soil environment.
Requisites: Not open to students with credit for SOIL SCI 301
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the significance of soil and its properties

Audience: Undergraduate

2. Identify and describe key components of soil solids and pores
Audience: Undergraduate

3. Explain and predict the interaction of water with soil
Audience: Undergraduate

4. Interpret basic nomenclature used in soil science
Audience: Undergraduate

5. Analyze that causes and solutions for sustainability of soil resources
Audience: Undergraduate

6. Quantify the interaction of clay surfaces with a soil solution
Audience: Undergraduate

7. Describe the role of soils in many different ecosystems
Audience: Undergraduate

8. Link soil orders with biomes and describe soil's edaphic character
Audience: Undergraduate

9. Analyze sustainability issues using a systems-based approach
Audience: Undergraduate

SOIL SCI 250 – INTRODUCTION TO ENVIRONMENTAL SCIENCE
3 credits.

Discuss how Planet Earth is an interconnected system dominated by the ever-present exchange of materials and energy that control the fitness and fate of all living organisms. Designed to introduce the interdisciplinary field of Environmental Science by providing a broad overview of the basic concepts used to make sense of the environment. Explore how natural systems work, the services they provide, important environmental challenges facing these systems, and how people are working to address them. Includes professionals in the field as guest speakers to discuss a future in Environmental Sciences.
Requisites: None
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. define and apply terminology commonly used in environmental science
Audience: Undergraduate

2. apply the scientific process to environmental issues and articulate its pros and cons
Audience: Undergraduate

3. demonstrate an understanding of the flow and accumulation of energy and materials within a systems context
Audience: Undergraduate

4. identify abiotic and biotic components of the environment and describe their interactions
Audience: Undergraduate

5. examine environmental challenges and approaches to their remediation

Audience: Undergraduate

6. compare and contrast careers in environmental science
Audience: Undergraduate

7. apply systems thinking to understand environmental challenges
Audience: Undergraduate

SOIL SCI 289 – HONORS INDEPENDENT STUDY
1-2 credits.

Research work under direct guidance of a Soil Science faculty or instructional academic staff member. Students are responsible for arranging the work and credits with the supervising instructor. Intended for students in the CALS Honors Program.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Develop critical, analytical, and independent thinking skills
Audience: Undergraduate

2. Apply the scientific method and engage in constructive problem solving

Audience: Undergraduate

3. Demonstrate application of research skills and methodologies
Audience: Undergraduate

4. Effectively communicate findings
Audience: Undergraduate

SOIL SCI 299 – INDEPENDENT STUDY
1-3 credits.

Research work under direct guidance of a faculty or instructional academic staff member. Students are responsible for arranging the work and credits with the supervising instructor.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Develop critical, analytical, and independent thinking skills
Audience: Undergraduate

2. Apply the scientific method and engage in constructive problem solving

Audience: Undergraduate

3. Demonstrate application of research skills and methodologies
Audience: Undergraduate

4. Effectively communicate findings
Audience: Undergraduate

SOIL SCI 301 – GENERAL SOIL SCIENCE
3 credits.

Physical chemical and biological properties of soils as they affect soil-plant-water relations, soil classification and suitability for agricultural and other uses.
Requisites: (CHEM 103, 109, or 115) and (MATH 112, 114, 171 or placement into MATH 221), or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define and describe the basic chemical, physical and biological principles of soils.
Audience: Both Grad & Undergrad

2. Use the acquired knowledge of soil properties to make land use decisions.
Audience: Both Grad & Undergrad

3. Perform quantitative calculations about nutrient status of soil, water content and flow rate, and carbon and greenhouse gas fluxes of soils.
Audience: Both Grad & Undergrad

4. Classify soils based on their properties.
Audience: Both Grad & Undergrad

5. Relate the principles of soil science to the Soil Science Society of America's Four Grand Challenges: Human and Ecosystem Health, Waste Treatment and Water Quality, Food Energy and Security, and Climate Change.
Audience: Both Grad & Undergrad

6. Create a work of art (poem, song, story, etc.) that demonstrates their mastery of soil science.
Audience: Both Grad & Undergrad

7. Apply principles of soil science to make predictions about a contemporary issue in soil science.
Audience: Graduate

SOIL SCI 302 – MEET YOUR SOIL: SOIL ANALYSIS AND INTERPRETATION LABORATORY
1 credit.

Hands-on laboratory on soil analysis and interpretation of soil properties for different uses, such as food production, waste management, water quality, stormwater control, and environmental sustainability.
Requisites: (GEOG/ENVIR ST/SOIL SCI 230 or SOIL SCI 301, or concurrent enrollment) or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Complete laboratory procedures of a variety of physical and chemical properties of soil, using the detailed methodology provided by instructor.
Audience: Both Grad & Undergrad

2. Demonstrate proficiency in technical writing and data presentation in scientific format.
Audience: Both Grad & Undergrad

3. Analyze and contrast the soil dataset for assignation of appropriate soil uses at different scales.
Audience: Both Grad & Undergrad

4. Integrate analytical results with soil science principles.
Audience: Both Grad & Undergrad

5. Discuss and communicate appropriate sustainable agronomical and environmental services for the studied soil.
Audience: Graduate

SOIL SCI 323 – SOIL BIOLOGY
3 credits.

Nature, activities and role of organisms inhabiting soil. Effects of soil biota on ecosystem function, response to cultural practices, and impacts on environmental quality, including bioremediation of contaminated soils.
Requisites: (ZOOLOGY/BIOLOGY/BOTANY 152, or ZOOLOGY/BIOLOGY 101 and 102, or BOTANY/BIOLOGY 130, or BIOCORE 384) and (CHEM 104, 109, or 116), or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use scientific vocabulary and conceptual models to describe microorganisms and fauna in soil
Audience: Both Grad & Undergrad

2. Describe challenges of living in the soil ecosystem and examples of life history traits adaptive to the soil habitat
Audience: Both Grad & Undergrad

3. Explain the relationship between soil organisms, soil organic matter, and nutrient cycling
Audience: Both Grad & Undergrad

4. Explain the importance of the roots and the soil rhizosphere
Audience: Both Grad & Undergrad

5. Discuss the concept of soilborne disease, the general life history traits of soilborne pathogens, and their relationship with the soil food web
Audience: Both Grad & Undergrad

6. Outline the techniques used in soil biology
Audience: Both Grad & Undergrad

7. Connect basic knowledge of soil biology with current global issues
Audience: Both Grad & Undergrad

8. Evaluate current and relevant research and review papers on soil biology
Audience: Both Grad & Undergrad

9. Analyze and explain a specific topic in soil biology that interests you
Audience: Both Grad & Undergrad

10. Examine peer reviewed literature related to topics in soil biology and design a discussion to evaluate findings
Audience: Graduate

SOIL SCI/ENVIR ST 324 – SOILS AND ENVIRONMENTAL QUALITY
3 credits.

Interaction of soils with environmental contaminants and the role of soils in pollution control.
Requisites: CHEM 104, 109, 116, or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain and illustrate the functions of soil resources in food production
Audience: Both Grad & Undergrad

2. Identify, and summarize the connections between the soil resource and the water cycle, with special attention to its roles in water quality control, groundwater recharge, and flood buffering
Audience: Both Grad & Undergrad

3. Identify and summarize the role of soils in carbon sequestration and waste management
Audience: Both Grad & Undergrad

4. Integrate and analyze the effect of human activities on soil properties and its functions in the agricultural system, water cycling, carbon sequestration, and waste management
Audience: Both Grad & Undergrad

5. Identify, monitor and revise the policies, programs, projects, and other activities intended to protect and bolster the functions of the soil resource

Audience: Both Grad & Undergrad

6. Develop critical reading skills to understand environmental issues and design/plan effective management practices
Audience: Graduate

SOIL SCI 326 – PLANT NUTRITION MANAGEMENT
3 credits.

Functions, requirements and uptake of essential plant nutrients; chemical and microbial processes affecting nutrient availability; diagnosis of plant and soil nutrient status; fertilizers and efficient fertilizer use in different tillage systems.
Requisites: (CHEM 103, 109, or 115 and SOIL SCI/ENVIR ST/GEOG 230) or SOIL SCI 301, or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify the essential plant nutrients and their biological functions
Audience: Both Grad & Undergrad

2. Explain sampling and analytical methods used to determine macronutrients sufficiency for healthy plant growth
Audience: Both Grad & Undergrad

3. Discuss the primary fertilizer materials used in agriculture, their sources and limitations
Audience: Both Grad & Undergrad

4. Analyze and interpret experimental data collected in the laboratory about plant growth and nutrient use efficiency
Audience: Both Grad & Undergrad

5. Describe the environmental impact of fertilizer manufacture, the impacts of nutrient loss by leaching and runoff, and best-known practices for improved fertilizer efficiency and mitigation of nutrient loss to the environment
Audience: Both Grad & Undergrad

6. Synthesize soil, cropping systems, and other critical on-farm details needed to develop a comprehensive nutrient management plan
Audience: Graduate

SOIL SCI 327 – ENVIRONMENTAL MONITORING AND SOIL CHARACTERIZATION
3 credits.

Characterization of a soil in the field. Monitoring water flow, nutrient (e.g., nitrate and phosphorus) transport, heat exchange, carbon sequestration, greenhouse gas emission, and soil contamination (e.g., heavy metals, organic pollutants) using soil physical equations and state-of-the-art soil sensing technologies.
Requisites: CHEM 103, 109, 115, or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Explain soil variations across the landscape within the Critical Zone
Audience: Undergraduate

2. Explain the processes that control differences and similarities in soils
Audience: Undergraduate

3. Summarize how soils are described, mapped, and classified
Audience: Undergraduate

4. Explain the concepts of the soil physical properties used to describe the characteristics of soil solid, liquid, and gas phases.
Audience: Undergraduate

5. Explain the social, economic, and/or environmental dimensions of the sustainability challenges of the Critical Zone
Audience: Undergraduate

6. Obtain field experience in soil description and collection of soil sensor measurements to monitor water, nutrient, heat, and gas transport and heavy metal contamination in soils
Audience: Undergraduate

SOIL SCI 330 – HAZARDOUS WASTE OPERATIONS AND EMERGENCY RESPONSE (HAZWOPER) AND FIELD SAFETY TRAINING
1 credit.

Conforms to the guidelines covered under the Occupational Safety and Health Administration (OSHA) standard 29 CFR part 1910.120 for providing Hazardous Wasted Operations and Emergency Response (HAZWOPER) 40-hour certification, required for workers involved in clean-up operations, voluntary clean-up operations, emergency response operations, and the storage, disposal, or treatment of hazardous substances or uncontrolled hazardous waste sites. Beyond satisfying OSHA standards, provides safety training for personnel conducting field sampling operations in proximity of heavy equipment (e.g. excavators, drilling rigs, dump trucks) through guest lectures and videos. Additionally, case studies relating to field safety operations will be examined.
Requisites: None
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify site hazards (ionizing radiation, oxidizer, biological, safety, and electrical) and exposure routes of hazardous materials into the human body.
Audience: Undergraduate

2. Identify the dangers associated with oxygen deficiency, heat stress, cold and noise exposure, and confined space entry.
Audience: Undergraduate

3. Explain the types, uses, and limitations of personal protective equipment including self-contained breathing apparatus, supplied air and air-purifying respirators, and chemical protective clothing.
Audience: Undergraduate

4. Demonstrate the donning and operation of different levels of personal protective equipment.
Audience: Undergraduate

5. Interpret a Health and Safety Plan, and air monitoring device data.
Audience: Undergraduate

6. Explain the roles and responsibilities of field sampling personnel and equipment operators
Audience: Undergraduate

SOIL SCI/BSE/CIV ENGR 372 – ON-SITE WASTE WATER TREATMENT AND DISPERSAL
2 credits.

On-site treatment and dispersal of waste water from homes, commercial sources and small communities. Sources, pretreatment units, nutrient removal units, constructed wetlands, surface and soil dispersal systems, recycle and reuse systems, regulations, alternative collection systems.
Requisites: CHEM 103, 109, or 115
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify, formulate, solve complex wastewater management and engineering problems by applying engineering and science principles to design a complete residential onsite wastewater treatment system.
Audience: Undergraduate

2. Use engineering design to produce wastewater management solutions that meet treatment goals with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.
Audience: Undergraduate

3. Communicate effectively with the instructor and other students during in-class discussions.
Audience: Undergraduate

4. Recognize ethical and professional responsibilities in onsite wastewater management and engineering situations and make informed design assumptions/judgments, which must consider the impact of wastewater management solutions in global, economic, environmental, and societal context.
Audience: Undergraduate

5. Analyze and interpret data related to wastewater flow, source, and characteristics, soil/site characteristics, and use engineering judgement to select appropriate design solutions.
Audience: Undergraduate

6. Acquire and apply new knowledge regarding advanced treatment processes for residential wastewater treatment.
Audience: Undergraduate

SOIL SCI 375 – SPECIAL TOPICS
1-3 credits.

Special topics on contemporary issues relevant to soil science.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate an ability to understand soils within the context of either its biological, physical, or chemical properties
Audience: Undergraduate

2. Communicate soil properties and function either in written or oral form
Audience: Undergraduate

3. Explain soil characteristics and function within a larger context whether it be societal, economic, international, or local
Audience: Undergraduate

4. Link soil function to soil characteristics that demonstrate understanding of their importance
Audience: Undergraduate

SOIL SCI 399 – COORDINATIVE INTERNSHIP/COOPERATIVE EDUCATION
1-8 credits.

An internship under guidance of a Soil Science faculty or instructional academic staff member and internship site supervisor. Students are responsible for arranging the work and credits with the Soil Science faculty or instructional academic staff member and the internship site supervisor.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Workplace - Workplace Experience Course
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply concepts learned in coursework to authentic professional situations
Audience: Undergraduate

2. Demonstrate professional skills appropriate for the industry
Audience: Undergraduate

3. Identify and reflect on how concepts learned in coursework apply to specific work settings and situations
Audience: Undergraduate

SOIL SCI 400 – STUDY ABROAD IN SOIL SCIENCE
1-6 credits.

Provides an area equivalency for courses taken on Madison Study Abroad Programs that do not equate to existing UW courses. Current enrollment in a UW-Madison study abroad program
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions

SOIL SCI/MICROBIO 425 – ENVIRONMENTAL MICROBIOLOGY
3 credits.

Microbial interactions in soils, water, extreme environments and biofilms. Modern methods for studying microbial ecology. role of microbes in nutrient cycles and biogeochemistry. Use of microbes for mitigating manmade environmental problems of industrial, agricultural, and domestic origin.
Requisites: MICROBIO 303 and (CHEM 341 or 343), or graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

SOIL SCI 430 – SOIL POLLUTION AND HUMAN HEALTH
3 credits.

Environmental pollution on global, regional, and local scales is one of humanity's most pressing issues, and will remain so for the foreseeable future. Examine the sources and properties of anthropogenic soil pollution including emerging contaminants such as PFAS, nanomaterials, and microplastics. Understand the contaminant mobility in the environment and in turn, how these contaminants affect human and ecosystem health. Apply epidemiological, toxicological, and risk assessment methods to assess soil contamination impacts on local populations. Through case studies from around the world explore issues of soil contamination and interventions to mitigate health impacts.
Requisites: CHEM 103, 108, 109, 115, or graduate/professional student standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Identify the nature and sources of common and emerging environmental soil pollutants.
Audience: Both Grad & Undergrad

2. Recognize how contaminant mobility and bioavailability impact human and ecosystem health.
Audience: Both Grad & Undergrad

3. Analyze case studies to understand environmental and human health impacts and applicable contamination mitigation techniques.
Audience: Both Grad & Undergrad

4. Apply epidemiology, toxicology, and risk assessment methods to assess soil contamination impacts on local populations.
Audience: Both Grad & Undergrad

5. Evaluate scientific published literature and synthesize results for oral presentations.
Audience: Graduate

SOIL SCI/F&W ECOL 451 – ENVIRONMENTAL BIOGEOCHEMISTRY
3 credits.

Explores long and short-term cycles of carbon, nitrogen, phosphorus, sulfur, and metals as well as water and energy cycles between water, the atmosphere, terrestrial vegetation, and soils. Emphasizes the linkage between terrestrial vegetation and soils across global biomes for managed and unmanaged ecosystems. Investigates biogeochemical processes through their biochemical constituents, conceptual models and exploration of isotopic and chemical data. Provides a practical understanding of the interactions between components and fluxes of terrestrial ecosystems and how data is developed and employed.
Requisites: CHEM 104, 109, 116, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe global biogeochemical cycles of C, N, P, K, S, Fe, energy, and water and their importance
Audience: Both Grad & Undergrad

2. Explain the importance of human perturbations to and management of biogeochemical cycles
Audience: Both Grad & Undergrad

3. Describe key methods used to study biogeochemistry and explain their limitations
Audience: Both Grad & Undergrad

4. Predict which biogeochemical reactions would be likely across different environments and conditions
Audience: Both Grad & Undergrad

5. Discuss and critically evaluate scientific papers in biogeochemistry at a graduate level
Audience: Graduate

6. Discuss and critically evaluate scientific papers in biogeochemistry at an advanced undergraduate level
Audience: Undergraduate

7. Characterize elemental cycling within a system of interest, comparing and contrasting different elements
Audience: Graduate

8. Characterize elemental cycling within a system of interest
Audience: Undergraduate

SOIL SCI/AN SCI/DY SCI/FOOD SCI 472 – ANIMAL AGRICULTURE AND GLOBAL SUSTAINABLE DEVELOPMENT
1 credit.

Examines issues related to global agriculture and healthy sustainable development. Using a regional approach and focusing on crops and livestock case studies, students will learn the interdependence between US agriculture and agriculture in emerging economies. Some topics covered include population and food, immigration, the environment; crop and livestock agriculture; global trade; sustainability; food security, the role of women in agriculture, and the role of dairy products in a healthy diet.
Requisites: None
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Apply sustainability principles and/or framework to addressing the challenge of feeding an increasing world population sustainably.
Audience: Undergraduate

2. Define and characterize sustainability, sustainable agriculture and Sustainable Development
Audience: Undergraduate

3. Analyze the contributions of animal agriculture to the Sustainable Development Goals both in developing and developed countries.
Audience: Undergraduate

4. Explain the social, economic, and/or environmental dimensions of the sustainability challenges of diverse animal agricultural systems both in developing and developed countries.
Audience: Undergraduate

5. Evaluate the role of livestock in communities where poverty, hunger and marginalization are embedded as a way of life.
Audience: Undergraduate

6. Critically evaluate the causes of –and ways to break– the chains of hunger and poverty among the poorest of the poor.
Audience: Undergraduate

SOIL SCI/AN SCI/DY SCI/FOOD SCI 473 – INTERNATIONAL FIELD STUDY IN ANIMAL AGRICULTURE AND SUSTAINABLE DEVELOPMENT
2 credits.

Examines issues related to global agriculture and healthy sustainable development. Using a regional approach and focusing on crops and livestock case studies, students will learn the interdependence between US agriculture and agriculture in emerging economies. Some topics covered include population and food, immigration, the environment; crop and livestock agriculture; global trade; sustainability; and the role of women in agriculture and the role of dairy products in a healthy diet.
Requisites: DY SCI/AN SCI/FOOD SCI/SOIL SCI 472
Repeatable for Credit: No
Learning Outcomes: 1. Improve communication and interpersonal skills associated with participating in team-based intercultural experiences
Audience: Undergraduate

2. Be better prepared for professional success in an interconnected world by navigating unfamiliar cultural norms and societal differences
Audience: Undergraduate

3. Reflect on US-centric personal and cultural values while building an appreciation and respect for the Latin America culture.
Audience: Undergraduate

4. Explain the social, economic, and/or environmental dimensions of the sustainability challenge of alleviating poverty and malnutrition in Mexico
Audience: Undergraduate

5. Apply sustainability principles and/or framework to addressing the challenge of fostering prosperity in marginalized indigenous communities
Audience: Undergraduate

6. Analyze both from their own disciplinary lens and from an interdisciplinary lens the contributions of dairy farming to the Sustainable Development Goals
Audience: Undergraduate

7. Evaluate the sustainability of subsistence, market-oriented, and industrial-scale farming systems
Audience: Undergraduate

SOIL SCI 499 – SOIL MANAGEMENT
3 credits.

A capstone applying independent and team problem solving, critical thinking and oral and written communication skills to issues in soil and environmental sciences.
Requisites: Senior standing only and declared in Soil Science or Environmental Sciences
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply their expertise and skills from previous coursework
Audience: Undergraduate

2. Practice working together in teams to accomplish goals
Audience: Undergraduate

3. Submit a product that addresses the challenge being addressed
Audience: Undergraduate

4. Communicate effectively in both written and oral form
Audience: Undergraduate

SOIL SCI/MICROBIO 523 – SOIL MICROBIOLOGY AND BIOCHEMISTRY
3 credits.

Transformations of nutrients and contaminants in soils and groundwater by microorganisms: emphasis on enzymatic mechanisms and metabolic pathways. Approaches for analyzing microbial populations and activities including molecular techniques. Applications of microbial activities for bioremediation of contaminated soils and groundwater. Students should have completed one course in either Soil Science or Microbiology to feel comfortable with the course content.
Requisites: Senior standing, (CHEM 104, 109, or 116) and (ZOOLOGY/BIOLOGY 102, BOTANY/BIOLOGY 130, or ZOOLOGY/BIOLOGY/BOTANY 151), or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the soil environment from the perspective of a microbe
Audience: Both Grad & Undergrad

2. Explain the importance of soil microbes for globally important issues such as climate change, nutrient cycling, and biodiversity
Audience: Both Grad & Undergrad

3. Describe key methods used to study soil microbes and explain their limitations
Audience: Both Grad & Undergrad

4. Analyze microbial community data to answer the question, are the organisms in these communities different, and how
Audience: Both Grad & Undergrad

5. Discuss and critically evaluate scientific papers in soil microbiology at an advanced undergraduate level
Audience: Undergraduate

6. Conduct, analyze, and interpret a research project
Audience: Undergraduate

7. Discuss and critically evaluate scientific papers in soil microbiology at a graduate level
Audience: Graduate

8. Design, conduct, analyze, and interpret a research project, drawing on the broader literature
Audience: Graduate

SOIL SCI/GEOG 525 – SOIL GEOMORPHOLOGY
3 credits.

Soil development as related to landscape throughout the Quaternary; focusing on the relationship of soils to climate and vegetation, landscape evolution, and time; principles of soil stratigraphy; case histories of soil geomorphic studies; field trips. Students should have completed one course in geomorphology to feel comfortable with the course content.
Requisites: SOIL SCI 325 or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify key concepts and research efforts that link soils and landscape evolution.
Audience: Both Grad & Undergrad

2. Analyze models of soil formation in the context of geomorphology, and determine which model(s) may be applicable to problems you are interested in.
Audience: Both Grad & Undergrad

3. Utilize important quantitative methods and research tools used in soil geomorphology, many of which are more broadly applicable in geomorphology, soils, and critical zone research.
Audience: Both Grad & Undergrad

4. Review the literature and propose new research on a topic of soil geomorphology.
Audience: Graduate

SOIL SCI/GEOG 526 – HUMAN TRANSFORMATIONS OF EARTH SURFACE PROCESSES
3 credits.

Takes an earth systems approach to explore the role of human societies in shaping earth surface processes from local to global scales. We address how alterations to our landscapes and waterways affect biological, physical and chemical interactions among our biosphere, geosphere, hydrosphere and atmosphere. We discuss methods used to distinguish the "human impact" from background variability.
Requisites: Junior standing or ENVIR ST/GEOG 120
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Synthesize how major global biogeochemical cycles and earth surface processes are influenced by human activities.
Audience: Both Grad & Undergrad

2. Identify positive and negative feedbacks among the biosphere, geosphere, and atmosphere at different spatial and temporal scales.
Audience: Both Grad & Undergrad

3. Explain how different methods are used to characterize and quantify human effects on the earth system.
Audience: Both Grad & Undergrad

4. Describe how legacies of colonialism affect historical and current biases in the practice and application of earth system science.
Audience: Both Grad & Undergrad

5. Interpret research findings in peer-reviewed literature.
Audience: Both Grad & Undergrad

6. Summarize research for different audiences.
Audience: Both Grad & Undergrad

7. Identify methods to answer specific research questions and write a research proposal.
Audience: Graduate

SOIL SCI 527 – THE WISCONSIN SOIL TOUR
2 credits.

Focuses on soil distribution and soil forming factors for Wisconsin. Teaches skills in describing soil variations across the landscape, characterization of soils in the field, collecting soil samples, use of state-of-the-art soil sensing technologies, processing soil data from proximal soil sensors, report writing and presentation.
Requisites: SOIL SCI/ENVIR ST/GEOG 230, SOIL SCI 301, or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain soil variations within the profile and across the Wisconsin landscape
Audience: Both Grad & Undergrad

2. Explain the processes that control differences and similarities in soils
Audience: Both Grad & Undergrad

3. Summarize how soils are described, mapped, and classified
Audience: Both Grad & Undergrad

4. Critically evaluate scientific articles on soil issues in Wisconsin
Audience: Graduate

SOIL SCI/ENVIR ST 575 – ASSESSMENT OF ENVIRONMENTAL IMPACT
3 credits.

Overview of methods for collecting and analyzing information about environmental impacts on agricultural and natural resources, including monitoring the physical environment and relating impacts to people and society.
Requisites: Junior standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe various methods used for environmental assessment, particularly in the context of land use, resource extraction, and environmental pollution
Audience: Both Grad & Undergrad

2. Measure and evaluate environmental impacts and the effects of human activities on physical and biological resources, including soil, water, air, and biota
Audience: Both Grad & Undergrad

3. Explain the role of environmental impact statement laws and regulations in decision-making processes
Audience: Both Grad & Undergrad

4. Organize, analyze, and visualize environmental data spatially
Audience: Both Grad & Undergrad

5. Use models to understand complex interactions between natural systems and human activities
Audience: Both Grad & Undergrad

6. Analyze how environmental changes affect communities, health, and well-being
Audience: Both Grad & Undergrad

7. Evaluate the role of environmental assessment in policy-making, enforcement, and information dissemination
Audience: Both Grad & Undergrad

8. Analyze environmental data for trends and patterns
Audience: Graduate

9. Integrate data from multiple databases
Audience: Graduate

10. Critically evaluate environmental impact assessment methodologies
Audience: Graduate

SOIL SCI 585 – USING R FOR SOIL AND ENVIRONMENTAL SCIENCES
3 credits.

Data science techniques are increasingly important in soil and environmental science, improving the efficiency and repeatability of data analysis and enhancing fundamental understanding of soil and environmental issues. Various R packages will be introduced and used to analyze and process soil and environmental data collected using a variety of in situ, ground-based, and remote sensing platforms. R software will be applied to detailed case studies covering soil and environmental data processing, manipulation, and modeling.
Requisites: (STAT 240, 301, 324, 371, or F&W ECOL/STAT 571) and (BSE 301, ENVIR ST/CIV ENGR/GEOG 377, LAND ARC/ENVIR ST/F&W ECOL/G L E/GEOG/GEOSCI 371, or 372), or graduate/professional standing
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Use R software for basic data manipulation, processing, and visualization.
Audience: Both Grad & Undergrad

2. Use R software for basic statistical analysis and hypothesis tests.
Audience: Both Grad & Undergrad

3. Use R software for spatial and temporal analysis on soil and environmental datasets.
Audience: Both Grad & Undergrad

4. Become familiar with the use of electromagnetic induction, portable visible near-infrared spectroscopy, and portal X-ray fluorescence spectroscopy for estimating soil and environmental variables in the lab and in the field.
Audience: Both Grad & Undergrad

5. Build machine learning models using R software for mapping and predicting soil and environmental variables in space and time.
Audience: Both Grad & Undergrad

6. Access, process, and build models using various open-source soil and environmental datasets from USDA, USGS, NASA, and other sources.
Audience: Both Grad & Undergrad

7. Become competent in the oral presentation.
Audience: Both Grad & Undergrad

8. Apply the various R packages to your own research datasets for solving problems in your own disciplines.
Audience: Graduate

9. Explain the social, economic, and environmental dimensions of the sustainability challenges of soil and environmental monitoring and management.
Audience: Both Grad & Undergrad

10. Analyze sustainability issues and/or practices on soil and environment using a systems-based approach.
Audience: Both Grad & Undergrad

SOIL SCI 621 – SOIL AND ENVIRONMENTAL CHEMISTRY
3 credits.

Sources, reactions, transport, effects, and fates of chemical species in soils and associated water and air environments. Emphasis on the chemical behavior of elements and compounds and the phenomena affecting natural and anthropogenic materials in soils.
Requisites: CHEM 104, 109, 116, or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify basic reaction and chemical species of chemicals in soil
Audience: Both Grad & Undergrad

2. Predict soil chemical reactions using equations
Audience: Both Grad & Undergrad

3. Describe solid phases in soils and their surface properties
Audience: Both Grad & Undergrad

4. Critically evaluate soil chemistry literature
Audience: Both Grad & Undergrad

5. Analyze environmental and agricultural problems from a soil chemistry perspective
Audience: Both Grad & Undergrad

6. Apply concepts in environmental soil chemistry to propose research-based solutions to current issues
Audience: Graduate

SOIL SCI 622 – SOIL PHYSICS
3 credits.

Physical properties of soils. Water retention and transmission in soils. Transport of heat, gas, and solutes. Physical environment of soil organisms and soil-plant-water relations.
Requisites: (MATH 211, 217, or 221) and (PHYSICS 104, 202, 208, or 248) and SOIL SCI 301, or graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the various physical models governing water, heat, gas and solute transport in soils
Audience: Both Grad & Undergrad

2. Summarize and compare the principles of various soil sensors used to measure water, heat, gas and solute status and transport in soils
Audience: Both Grad & Undergrad

3. Use Hydrus software to simulate water, heat, gas and solute transport in soils
Audience: Both Grad & Undergrad

4. Present soils physics research to scientific audience
Audience: Both Grad & Undergrad

5. Apply various soil physical models to real-world examples for improved natural resources management
Audience: Both Grad & Undergrad

6. Describe recent advances in soil physics and soil sensing technologies and identify the main research gaps in soil physics
Audience: Graduate

SOIL SCI 630 – FIELD METHODS FOR ENVIRONMENTAL CHARACTERIZATION, ANALYSIS, AND MONITORING
2 credits.

Introduce standard operating procedures and guidance for intrusive and non-intrusive sampling techniques for assessing soil, sediment, surface water, and ground water. Prepare boring logs and install groundwater monitoring well. Properly prepare samples for preservation and shipment. Prepare and maintain defensible field documentation. Use quality control sampling, data verification and validation, and data quality assessment. Decontaminate drilling and field sampling equipment and manage investigative-derived waste.
Requisites: Declared in Environmental Remediation and Management MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Select appropriate non-intrusive or intrusive field sampling methods for environmental site characterization.
Audience: Graduate

2. Design and interpret a defensible environmental sampling program using USEPA Data Quality Objectives process.
Audience: Graduate

3. Demonstrate the use of field screening instruments.
Audience: Graduate

4. Install, develop, and sample a groundwater monitoring well
Audience: Graduate

5. Demonstrate appropriate sample preparation, quality control sampling, documentation, and shipment procedures
Audience: Graduate

6. Perform data quality assessment and interpret laboratory quality assurance/control reports.
Audience: Graduate

SOIL SCI/CIV ENGR/M&ENVTOX 631 – TOXICANTS IN THE ENVIRONMENT: SOURCES, DISTRIBUTION, FATE, & EFFECTS
3 credits.

Nature, sources, distribution, and fate of contaminants in air, water, soil, and food and potential for harmful exposure.
Requisites: (CHEM 104, 109, or 116) and (MATH 211, 217, or 221) and (PHYSICS 104, 202, 208, or 248), or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe how the physicochemical properties of an organic chemical and equilibrium and kinetic principles influence the distribution of the chemical in the environment
Audience: Both Grad & Undergrad

2. Estimate the physico-chemical properties of organic compounds using linear free energy relationships
Audience: Both Grad & Undergrad

3. Predict the behavior of hazardous organic chemicals in the environment

Audience: Both Grad & Undergrad

4. Derive and use equilibrium and kinetic box models for determining the fate of organic pollutants in the environment
Audience: Graduate

SOIL SCI 681 – SENIOR HONORS THESIS
2-4 credits.

Individual study for majors completing theses for Soil Science Honors degrees as arranged with a faculty member. Requires consent of supervising instructor. Enrolled in CALS Honors Program.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Review and analyze scientific literature
Audience: Undergraduate

2. Identify and use appropriate research methodologies to address a research question
Audience: Undergraduate

3. Begin structuring and writing a thesis based on original research
Audience: Undergraduate

SOIL SCI 682 – SENIOR HONORS THESIS
2-4 credits.

Continuation of 681.
Requisites: Consent of instructor
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Review and analyze scientific literature
Audience: Undergraduate

2. Identify and use appropriate research methodologies to address a research question
Audience: Undergraduate

3. Write a thesis based on original research
Audience: Undergraduate

SOIL SCI/ENVIR ST/LAND ARC 695 – APPLICATIONS OF GEOGRAPHIC INFORMATION SYSTEMS IN NATURAL RESOURCES
3 credits.

Modern GIS desktop and web-based workflows, analyses, and visualizations related to natural resource and environmental planning issues and communication. Guest lectures from agency and industry professionals.
Requisites: LAND ARC 311, ENVIR ST/CIV ENGR/GEOG 377, or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop and apply appropriate geospatial analysis workflows related to the study and conservation of natural resources.
Audience: Both Grad & Undergrad

2. Identify and evaluate sources of primary and secondary geospatial data.

Audience: Both Grad & Undergrad

3. Develop methods for collecting primary geospatial data
Audience: Both Grad & Undergrad

4. Communicate analytical results in visual and graphical forms.
Audience: Both Grad & Undergrad

5. Evaluate literature related to geospatial technologies in environmental science and natural resource issues.
Audience: Graduate

SOIL SCI 699 – SPECIAL PROBLEMS
1-3 credits.

Individual study for majors completing theses for Soil Science degrees as arranged with a faculty member. Requires consent of supervising instructor.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Develop critical, analytical, and independent thinking skills
Audience: Undergraduate

2. Apply the scientific method and engage in constructive problem solving

Audience: Undergraduate

3. Demonstrate application of research skills and methodologies
Audience: Undergraduate

4. Effectively communicate findings
Audience: Undergraduate

SOIL SCI 710 – SYSTEMATIC REVIEWS IN AGRICULTURE AND THE ENVIRONMENT
3 credits.

Covers how to develop a publishable systematic review for dissertations and professional work. Understand the distinguishing features of systematic review typologies and apply this understanding to selecting and conducting systematic reviews applicable to a variety of research questions in agricultural sciences.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Identify the fundamentals of systematic review procedures and identify systematic review typologies requirements, strategies for repeatability/reproducibility, and publication development.
Audience: Graduate

2. Use guides (e.g. PICO) and tools (e.g. Rayyan) with an emphasis on developing your own open access toolkit.
Audience: Graduate

3. Assess the need and question the development of proposed systematic review.
Audience: Graduate

4. Develop and register a systematic review protocol.
Audience: Graduate

5. Search and evaluate peer-reviewed and grey literature.
Audience: Graduate

6. Conduct eligibility screening, data extraction and coding using inclusion-exclusion criteria, tools for collaborative and rapid review, extraction templates and best practices, combining raw and summary data.
Audience: Graduate

7. Synthesize results of a systematic review.
Audience: Graduate

8. Characterize bias including types of bias and resulting study limitations.
Audience: Graduate

SOIL SCI 728 – GRADUATE SEMINAR
1 credit.

Topical oral presentations by guest speakers and graduate students on contemporary concerns and issues involving land and soils.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Present to an academic audience comprised of your peers, faculty, and practitioners in and outside UW-Madison
Audience: Graduate

2. Assess and discuss the presentation of research related to soil science
Audience: Graduate

3. Engage in a public question and answer discourse related to the presentation topic
Audience: Graduate

4. Respond to constructive feedback for the purpose of assessment and self-reflection
Audience: Graduate

SOIL SCI 730 – COLLOQUIUM: ENVIRONMENTAL REMEDIATION AND MANAGEMENT
1 credit.

Topical oral presentations by students, faculty, staff, and guest speakers on contemporary concerns and issues designed to increase knowledge and foster understanding of environmental contamination and remediation of soils and groundwater. Includes instruction and practice in public speaking, presentation visuals, resumes, and networking.
Requisites: Declared in Environmental Remediation and Management MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 3 number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Research current topics in environmental contamination and remediation
Audience: Graduate

2. Develop and deliver an effective and engaging oral presentation
Audience: Graduate

3. Utilize effective visual presentation techniques
Audience: Graduate

4. Compose a written abstract summarizing presentation
Audience: Graduate

SOIL SCI 799 – PRACTICUM IN SOIL SCIENCE TEACHING
1-3 credits.

Instructional orientation to teaching at the higher education level in the agricultural and life sciences, direct teaching experience under faculty supervision, experience in testing and evaluation of students, and the analysis of teaching performance.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop a list of one or more learning outcomes for the activity consistent with a backward design model
Audience: Graduate

2. Communicate soil science content using the modality appropriate to the chosen audience
Audience: Graduate

3. Develop and execute an assessment plan to evaluate the learning outcomes
Audience: Graduate

4. Engage in metacognitive reflection on teaching experiences to deepen understanding, identify areas for growth, and refine instructional practices
Audience: Graduate

SOIL SCI 875 – SPECIAL TOPICS
1-4 credits.

Special topics on contemporary issues relevant to soil science.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SOIL SCI 990 – RESEARCH
1-12 credits.

Independent research and writing to complete dissertation requirements.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Devise an engaging overview of a research area
Audience: Graduate

2. Explain background, methods, results, and a discussion of experimental data
Audience: Graduate

3. Design charts/tables that effectively communicate data
Audience: Graduate

4. Assess peers on the effectiveness of a scientific presentation
Audience: Graduate

5. Generate goals to improve presentation skills
Audience: Graduate

SPANISH (SPANISH AND PORTUGUESE) (SPANISH)

SPANISH 101 – FIRST SEMESTER SPANISH
4 credits.

All basic language skills: listening comprehension, speaking, reading, and writing. Requires no previous knowledge of Spanish.
Requisites: None
Course Designation: Frgn Lang - 1st semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

SPANISH 102 – SECOND SEMESTER SPANISH
4 credits.

Continuation of SPANISH 101. All basic language skills: listening comprehension, speaking, reading, and writing.
Requisites: SPANISH 101 or placement into SPANISH 102
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

SPANISH 103 – FIRST YEAR INTENSIVE SPANISH
6 credits.

Accelerated introduction to Spanish language practice through writing, reading, speaking and listening. Course equivalent to SPANISH 101 and 102.
Requisites: Not open to students with credit for SPANISH 102.
Course Designation: Frgn Lang - 2nd semester language course
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2020
Learning Outcomes: 1. Communicate effectively orally and in writing in Spanish, spoken with level-appropriate language for contextualized situations based on course/textbook content.
Audience: Undergraduate

2. Comprehend and interpret basic, level-appropriate common auditory and written inputs.
Audience: Undergraduate

3. Produce level-appropriate grammar and vocabulary, especially in written work.
Audience: Undergraduate

4. Develop awareness of certain aspects of Hispanic culture.
Audience: Undergraduate

SPANISH 203 – THIRD SEMESTER SPANISH
4 credits.

Intermediate-level language review, Hispanic readings, culture, and patterns of conversation.
Requisites: SPANISH 102, 103 or placement into SPANISH 203
Course Designation: Frgn Lang - 3rd semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Produce, with few to no errors in spelling, Spanish vocabulary related to family, cultural customs, traditions and values, food, politics, and historical figures.
Audience: Undergraduate

2. Produce, with few to no errors in grammar, simple and compound sentences that are comprehensible to a native speaker of Spanish with experience in English.
Audience: Undergraduate

3. Read, discuss, and comment upon brief non-fiction and full-length literary texts adapted for intermediate-level Spanish learners.
Audience: Undergraduate

SPANISH 204 – FOURTH SEMESTER SPANISH
4 credits.

Intermediate-level language review, extensive Hispanic readings and culture, intensive written and oral activities.
Requisites: SPANISH 203 or placement into SPANISH 204
Course Designation: Frgn Lang - 4th semester language course
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

SPANISH/CHICLA 215 – BORDER AND MIGRATION STUDIES OF LATINX AMERICA
3 credits.

Drawing from cultural studies, border studies, migration and race theory, explores through cultural and literary texts the social and political issues regarding migration, contact zones, transculturation, and/or diaspora. Considers the various meanings of the word "border" or "frontera". What is a border geographically speaking? What does it mean in political and legal terms? How do we conceive the border in cultural, literary, linguistic, political, judicial, and personal ways? What is like to live on the border or on the margins? It is said that the border is a contact zone, a meeting point, a way to transfer and share information, an invitation to (in)tolerance and ex/inclusion. Read texts from history, politics, cultural anthropology, literature, and theatre to grasp the vast understanding of what is life on the border. Focus on the humanities, paying close attention to how visual artists (theater, performance, documentaries) understand and confront life on the border.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Either Humanities or Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and analyze the historical and political impact of the U.S.-Mexico border zone and Latin America.
Audience: Undergraduate

2. Demonstrate empathy for those impacted by border interventions.
Audience: Undergraduate

3. Explain the importance of speaking about borders and how borders have impacted present day circumstances regarding race and racial inequalities in the U.S.
Audience: Undergraduate

4. Recognize and question previously held assumptions about the border and migration.
Audience: Undergraduate

5. Demonstrate knowledge of artistic and literary interventions on and about the border.
Audience: Undergraduate

6. Explore the contemporary political and economic effects of border policy through a humanistic approach
Audience: Undergraduate

7. Apply important historical concepts and terms to draw conclusions on and about border literature, art, and theater.
Audience: Undergraduate

8. Interpret how literature, theatre, and performance explore a humanistic approach to a geopolitical dilemma.
Audience: Undergraduate

SPANISH/CHICLA 222 – INTRODUCTION TO LATINX CULTURES
3 credits.

Offers an introduction to the culture and history of the Mexican and Latin American origin people in the United States. Emphasis on diversity, emergence of new imagined communities, and cultural hybridity. Focusing on key issues such as U.S. imperial expansion, colonialism, nation and community formations, migration, urban spaces, and the dynamics of race, class, gender, ethnicity, and sexuality, study a range of socio-political, historical, literary, and artistic expressions that inform the whole process of culture and reveal the way Latinos and Latinas negotiate their presence, cultural difference, and creativity in the U.S.
Requisites: SPANISH 226 or concurrent enrollment, or SPANISH 311 or concurrent enrollment
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and analyze the factors that have shaped the presence of Mexican and Latin American origin peoples in the U.S., and the historical processes by which Latinos/as have been culturally, politically, and legally constructed in the United States.
Audience: Undergraduate

2. Demonstrate knowledge of the varied make-up of Latinos and the role that race, ethnicity, gender, class, and migration have played in their own histories.
Audience: Undergraduate

3. Demonstrate an understanding of how Latinidad is constructed and contested in the United States by various communities, institutions, and individuals.
Audience: Undergraduate

4. Demonstrate knowledge on how Latinos/as negotiate or respond to situations of internal colonialism, social disparities, lack of political representation, migration, generational conflicts, assimilation and transcultural issues, gender roles, and transnational situations.
Audience: Undergraduate

5. Learn and employ diverse tools and critical thinking in the analysis of Latinx cultural production.
Audience: Undergraduate

6. Demonstrate further mastering of Spanish speaking and writing skills necessary for articulating arguments in field of study.
Audience: Undergraduate

SPANISH 223 – INTRODUCTION TO HISPANIC CULTURES
3 credits.

Introduction to the issues which shape the national cultures and the cultural practices of the Hispanic world. Emphasis on diversity, emergence of new imagined communities, cultural hybridity, and social movements within a historical framework.
Requisites: SPANISH 226 or concurrent enrollment, or SPANISH 311 or concurrent enrollment
Course Designation: Breadth - Humanities
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Know and remember key periods and figures in the culture of Spain and Latin America.
Audience: Undergraduate

2. Identify and use the vocabulary and conceptual tools to both analyze a wide range of topics in Hispanic cultures and have informed, meaningful discussion regarding their relevance.
Audience: Undergraduate

3. Acquire the fundamental knowledge for more advanced course offerings in Hispanic culture.
Audience: Undergraduate

4. Develop and refine communication skills in Spanish.
Audience: Undergraduate

SPANISH 224 – INTRODUCTION TO HISPANIC LITERATURES
3 credits.

An introduction to reading and analyzing literary works, with special emphasis on development of oral and written skills for the discussion of literature. Concentration on methods of analyzing basic literary forms, conventions, genres, and representative short texts in Spanish.
Requisites: SPANISH 226 or concurrent enrollment, or SPANISH 311 or concurrent enrollment
Course Designation: Breadth - Literature. Counts toward the Humanities req
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Acquire knowledge of the main genres, authors and literary periods and movements in Hispanic literatures.
Audience: Undergraduate

2. Learn and apply basic terminology and methods of literary analysis to written texts, both in isolation and in the context of the particular social, cultural, and historical milieus in which the texts were created.
Audience: Undergraduate

3. Develop oral and written skills in Spanish, both in general terms and for the discussion of literature in particular.
Audience: Undergraduate

SPANISH 225 – LYING, SWEARING, AND BREAKING THE RULES: AN INTRODUCTION TO THE LINGUISTIC STUDY OF SPANISH
3 credits.

Introduction to the basic concepts of linguistics as a discipline and explore real-world Spanish use (e.g., blogs and vlogs, language corpora, press, film, recorded conversations, class visitors, etc.) and how that use varies across regions, speakers, and communicative contexts. Through examination of how different Spanish speakers deploy language in contexts such as confronting social taboos, expressing humor, being polite (or impolite), persuading particular audiences, and negotiating individual and cultural identities, students will gain a foundational understanding of several areas of linguistic study, including phonetics/ phonology, morphosyntax, pragmatics, sociolinguistics, language ideologies, and language variation and change.
Requisites: SPANISH 226 or concurrent enrollment, or SPANISH 311 or concurrent enrollment
Course Designation: Breadth - Humanities
Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate understanding of linguistic, pragmatic, sociolinguistic, and stylistic features of written and spoken Spanish, understand how they influence meaning, and apply these features in level-appropriate ways in writing and speech.
Audience: Undergraduate

2. Demonstrate awareness of the social, cultural, and linguistic diversity that characterizes the Spanish-speaking world.
Audience: Undergraduate

3. Apply basic methods of linguistic analysis to understand the structure and communicative intent of various written and oral Spanish texts.
Audience: Undergraduate

SPANISH 226 – INTERMEDIATE LANGUAGE PRACTICE WITH EMPHASIS ON WRITING AND GRAMMAR
3 credits.

Intensive practice in reading, writing, and grammar.
Requisites: SPANISH 204 or placement into SPANISH 226 or SPANISH 311
Course Designation: Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

SPANISH 228 – FROM BAD BUNNY TO BAD HOMBRES: THE (MIS)REPRESENTATION AND (IN)VISIBILITY OF SPANISH IN THE US
3 credits.

Survey and analysis of the historical and contemporary presence of the Spanish language and its speakers in U.S. communities, pop culture, media, schools and politics. Examination through linguistic, sociolinguistic, raciolinguistic and linguistic-anthropological lenses of how Spanish is used (and misused) by speakers and non-speakers alike to uphold, reproduce or perhaps transform ethnolinguistic, racialized and other social identities, attitudes and ideologies associated with Spanish in the U.S.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the social, cultural, and linguistic diversity that characterizes Spanish-speaking communities in the U.S.
Audience: Undergraduate

2. Analyze how Spanish is (mis)used in the U.S. to variously assert, silence, promote or oppress social, cultural and political identities and causes.
Audience: Undergraduate

3. Identify and critically assess linguistic, sociolinguistic and raciolinguistic attitudes and ideologies surrounding the presence of Spanish and communities of Spanish speakers in the U.S.
Audience: Undergraduate

4. Explain how history has affected present-day circumstances regarding ethnoracial and linguistic inequalities in the U.S.
Audience: Undergraduate

5. Reflect on how the racialization of language impacts their own lives.
Audience: Undergraduate

SPANISH 230 – THE BEAUTIFUL GAME: CULTURAL POLITICS OF SOCCER
3 credits.

In the last three decades, soccer has been transformed from being a very popular game in certain regions of the world to what is now considered a multicultural phenomenon. Soccer has caught the attention of not only the international media but also of disciplines such as sociology, psychology and cultural studies, as well as art forms like photography and filmmaking, digital art and comics. However, more than just a form of entertainment soccer is considered a national sport in most of Latin America. How is it that a game that originated in 19th Century England was adopted by a large and varied culture as a matter of national identity and pride? Focuses on the history of soccer and on soccer as a cultural phenomenon intimately linked to nation building and to notions of progress and national self-image.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Identify the milestones in the history of soccer.
Audience: Undergraduate

2. Recognize the national impact soccer has in Latin American societies.
Audience: Undergraduate

3. Demonstrate an understanding of different kinds of texts about soccer.
Audience: Undergraduate

4. Apply the content of the readings with individual experiences in today's world.
Audience: Undergraduate

SPANISH/AFROAMER/ANTHRO/C&E SOC/GEOG/HISTORY/ LACIS/POLI SCI/SOC 260 – LATIN AMERICA: AN INTRODUCTION
3-4 credits.

Latin American culture and society from an interdisciplinary perspective; historical developments from pre-Columbian times to the present; political movements; economic problems; social change; ecology in tropical Latin America; legal systems; literature and the arts; cultural contrasts involving the US and Latin America; land reform; labor movements; capitalism, socialism, imperialism; mass media.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Analyze Latin American culture and society from an interdisciplinary perspective.
Audience: Undergraduate

2. Examine historical developments from pre-Columbian times to the present.
Audience: Undergraduate

3. Identify political movements, economic problems, social change, and ecology in Latin America.
Audience: Undergraduate

SPANISH/LACIS 285 – RACE AND CULTURE IN THE AMERICAS
3 credits.

Examine how the experiences of marginalized groups in the U.S. are profoundly intertwined with hemispheric historical processes. Review the categories that emerged to conceptualize human difference as European colonizers dispossessed indigenous peoples of their lands and inaugurated the forced migration and enslavement of peoples from Africa. Focus on how race was transformed after the revolutions of independence, exploring key concepts such as the one drop rule, mestizaje, racial democracy, and color-blindness. Explore how race intersects with gender, class, and migration, as well as with slavery, anti-colonial struggles, and US expansionism. Examine common assumptions in comparisons of race relations -e.g., the idea of a more more "fluid" understanding of race in Latin American countries, versus the binary models of the U.S.
Requisites: None
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Identify different forms in which race and ethnicity have been constructed across the Americas, the ways in which the histories of certain groups have been devalued or overlooked, and the implications for our present.
Audience: Undergraduate

2. Identify different understandings of race and ethnicity –for example, the tension between cultural difference and structural domination– and question assumptions commonly held in political discourse, media, arts, and literature.
Audience: Undergraduate

3. Discuss with one another how race and ethnicity condition experiences of social mobility, justice, and a sense of community, reflecting an increasingly multicultural global environment.
Audience: Undergraduate

4. Recognize social inequalities and intervene in contemporary discussions on racism through an appropriate use of evidence, critical tools, and analysis.
Audience: Undergraduate

5. Identify how different disciplinary frameworks (ethnic studies, Latinx Studies, and critical race theory, etc.) can be used to understand the racialized nature of the major questions of the present, including climate change, public health, surveillance, violence, and mass incarceration.
Audience: Undergraduate

6. Present research in a clear, concise, and engaging manner.
Audience: Undergraduate

7. Produce evidence-based, original arguments through both written and oral assignments.
Audience: Undergraduate

SPANISH 299 – DIRECTED STUDY
1-3 credits.

Directed study projects for freshmen and sophomores as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2018

SPANISH 311 – ADVANCED LANGUAGE PRACTICE
3 credits.

Advanced language practice, including intensive writing and work in pertinent areas of grammar and stylistics.
Requisites: SPANISH 226 or placement into SPANISH 311
Course Designation: Frgn Lang - 5th + semester language course
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

SPANISH 317 – SPANISH FOR NURSING
3 credits.

Covers professional oral and written Spanish communication skills to prepare for interactions with Spanish-speaking patients in a clinical setting. Conducted entirely in Spanish.
Requisites: (Declared in Nursing BSN or classified as Pre-Nursing PRN and SPANISH 203) or declared in Nursing Practice DNP or Nursing PhD
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2020
Learning Outcomes: 1. Acquire specific Spanish technical vocabulary and grammatical structures on key topics related to the field of nursing.
Audience: Undergraduate

2. Demonstrate the ability to navigate nurse-patient interactions in oral and written Spanish using appropriate linguistic devices.
Audience: Undergraduate

3. Identify and reflect on cultural beliefs about health and methods of treatment that could influence nurse-patient interactions and demonstrate sensitivity to them.
Audience: Undergraduate

SPANISH 318 – SPANISH FOR PHARMACY
3 credits.

Teaches professional oral and written Spanish communication skills for use in the setting of a pharmacy to communicate with Spanish-speaking patients. Conducted entirely in Spanish. A minimum of three semesters of undergraduate Spanish coursework recommended.
Requisites: Declared in Doctor of Pharmacy program
Repeatable for Credit: No
Learning Outcomes: 1. Acquire specific Spanish technical vocabulary and grammatical structures on key topics related to working in a pharmacy, such as clinical descriptions of medications and their potential side effects.

Audience: Undergraduate

2. Demonstrate the ability to navigate pharmacist-patient interactions in oral and written Spanish using appropriate linguistic devices.
Audience: Undergraduate

3. Identify and reflect on cultural beliefs about health and methods of treatment that could influence pharmacist-patient interactions and demonstrate sensitivity to them.
Audience: Undergraduate

SPANISH 319 – TOPICS IN SPANISH LANGUAGE PRACTICE
1-3 credits.

Intensive oral and written practice in major areas of Spanish professional usage. Each offering will focus on an important field in which students tend to apply their language skills (journalism, commerce, medicine, law, social services, etc.).
Requisites: SPANISH 311
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

SPANISH 320 – SPANISH PHONETICS
3 credits.

Practice course for improvement of pronunciation, and introduction to transcription and phonetic and phonemic analysis.
Requisites: SPANISH 225
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

SPANISH 321 – THE STRUCTURE OF MODERN SPANISH
3 credits.

Structure and usage of modern Spanish through an examination of linguistic phenomena found throughout the Spanish-speaking world. Analyze authentic speech and texts of varied genres (newspaper articles, literature, advertisements, blogs, etc.) both to understand the conventions of modern Spanish structure and usage, and to investigate how grammatical structure may be manipulated by Spanish speakers (including themselves) to accomplish particular communicative goals.
Requisites: SPANISH 225
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

SPANISH 322 – SURVEY OF EARLY HISPANIC LITERATURE
3 credits.

Selected readings, discussions, and literary history of Spain and Spanish America through 1700.
Requisites: (CHICLA/SPANISH 222 or SPANISH 223) and SPANISH 224
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Interpret literary texts from Spain and Spanish America through 1700
Audience: Undergraduate

2. Identify fundamental aspects of literary analysis and apply them to texts written in Spanish from the Medieval time period through 1700
Audience: Undergraduate

3. Examine the historical, social, and cultural contexts of the readings.
Audience: Undergraduate

SPANISH 324 – SURVEY OF MODERN SPANISH LITERATURE
3 credits.

Readings, discussions, literary history. Eighteenth century to present.
Requisites: (CHICLA/SPANISH 222 or SPANISH 223) and SPANISH 224
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall the literary and artistic culture of modern and contemporary Spain.
Audience: Undergraduate

2. Interpret Spanish literary texts from different periods, paying attention to formal and aesthetic questions, cultural movements, and sociopolitical issues.
Audience: Undergraduate

3. Identify connections between other cultures and the students' own cultures.
Audience: Undergraduate

SPANISH 325 – ADVANCED CONVERSATION
3 credits.

Practice and improve conversational Spanish. Form and present opinions about a variety of cultural and social issues that affect Latin America and the US by using appropriate vocabulary and language.
Requisites: SPANISH 226 or 311
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

SPANISH 326 – SURVEY OF SPANISH AMERICAN LITERATURE
3 credits.

Introduction to the study of Spanish American literature; reading, discussions, literary history. Eighteenth century to present.
Requisites: (CHICLA/SPANISH 222 or SPANISH 223) and SPANISH 224
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Converse, read, and write critically in Spanish about Spanish American literary texts from various periods and genres using specialized technical vocabulary
Audience: Undergraduate

2. Identify periods and movements in Spanish American literary and cultural history that continue to shape creative expression in the present.
Audience: Undergraduate

3. Assess the cultural, economic, and political factors that differentiate Spanish American literary production from that of other regions and continue to shape life in the region.
Audience: Undergraduate

SPANISH 327 – INTRODUCTION TO SPANISH LINGUISTICS
3 credits.

Introduction to the linguistic analysis of Spanish, including morphology, syntax, dialectology, history of the language, language acquisition, and sociolinguistic variation.
Requisites: SPANISH 225
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

SPANISH 328 – ADVANCED MEDICAL SPANISH
3 credits.

Focuses on the study of medical Spanish terminology and the cultural issues related to successful interactions with Spanish-speaking patients and their families in the clinical encounter. Introduces a wide array of vocabulary particular to the medical field, as well as a cultural understanding of medicine and illness in the Spanish-speaking world. Prepares to work with Spanish-speaking patients in future careers in medicine, nursing, social work, translation/interpretation, or mental health settings. Addresses cultural issues that may affect the clinical encounter with Spanish-speaking patients and their families.
Requisites: SPANISH 311
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe common medical conditions, procedures, and pharmaceuticals.
Audience: Undergraduate

2. Identify cultural nuances and sensitivities in healthcare interactions with Spanish-speaking patients.
Audience: Undergraduate

3. Develop listening, speaking, reading, and writing skills, with a focus on medical dialogues.
Audience: Undergraduate

4. Apply complex grammatical structures, tenses (e.g., subjunctive, conditional), and sentence construction relevant to medical contexts.
Audience: Undergraduate

5. Conduct medical interviews, take medical histories, and provide explanations and recommendations to patients in Spanish.
Audience: Undergraduate

6. Develop fluency to work confidently and effectively in Spanish-speaking healthcare environments
Audience: Undergraduate

SPANISH/INTL BUS 329 – SPANISH FOR BUSINESS
3 credits.

Spanish lexicon and linguistic style for management, banking, accounting, capital investment, personnel and office systems, production of goods and services, marketing, finance, and import/export; includes translation and interpretive activities.
Requisites: SPANISH 311
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

SPANISH 331 – SPANISH APPLIED LINGUISTICS
3 credits.

Provides an overview of second language acquisition theories and processes as they pertain to Spanish second language learners and characterizes the linguistic challenge that specific Spanish structures pose for English-speakers in particular.
Requisites: SPANISH 225
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024

SPANISH 359 – SPANISH BUSINESS AREA STUDIES
3 credits.

Spanish business language, culture and practice within Spanish-speaking economic markets.
Requisites: SPANISH 311
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

SPANISH 361 – SPANISH CIVILIZATION
3 credits.

Cultural evolution from medieval period through the present; illustrated lectures. Taught in Spanish.
Requisites: (CHICLA/SPANISH 222 or SPANISH 223) and SPANISH 224
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Identify specific cultural traits of Spanish society and trace their historical development within the broader European context.
Audience: Undergraduate

2. Describe characteristics of Spanish national identity and explain how they are represented in historical and modern cultural artefacts and spaces

Audience: Undergraduate

3. Analyze verbal and visual representations of urban and rural spaces and phenomena throughout the history of Spain
Audience: Undergraduate

SPANISH 363 – SPANISH AMERICAN CIVILIZATION
3 credits.

Cultural evolution of Spanish America from pre-Hispanic days through the present. Conducted in Spanish.
Requisites: (CHICLA/SPANISH 222 or SPANISH 223) and SPANISH 224
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify specific cultural traits of Spanish American society and trace their historical development within the broader context of indigenous American civilizations and influences from other regions of the world (Africa, Asia, Europe, etc.)
Audience: Undergraduate

2. Describe characteristics of national identity of Spanish American societies and explain how they are represented in historical and modern cultural artefacts and spaces.
Audience: Undergraduate

3. Analyze verbal and visual representations of urban and rural spaces and phenomena throughout the history of Spanish America.
Audience: Undergraduate

SPANISH/CHICLA 364 – SURVEY OF LATINX/E POPULAR CULTURE
3 credits.

Analysis of Latinx/e popular culture to consider the varied make-up of Latinx/e populations, their specific histories, social dynamics, and politics through their creative expressions, performances, and cultural contestations. Covers key terms and concepts, cultural developments, and diverse interpretations while focusing in the analysis of Latinx/e music, performance art, film and media, sports, food, and car culture. Other topics include the production, circulation, and reception of Latinx/e popular culture, the use of Spanish and English languages, issues of identity, migration, and interculturality, the role of the cultural industry, and the context of globalization. Broadly explores the intersectionality of race, ethnicity, class, gender, sexuality, and nation regarding Latinx/e populations. Taught in Spanish.
Requisites: (CHICLA/SPANISH 222 or SPANISH 223) and SPANISH 224
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the varied make-up of Latinx/e populations and their place and political positions in the United States.
Audience: Undergraduate

2. Analyze the dilemmas, debates, and creativity reflected in Latinx/e popular culture.
Audience: Undergraduate

3. Employ tools and critical perspectives in analyzing Latinx/e popular culture and the intersection of nation, ethnicity, race, gender, and sexuality.
Audience: Undergraduate

4. Explain how Latinidad is constructed and contested in the United States by various communities, institutions, and individuals.
Audience: Undergraduate

5. Engage in cross-disciplinary conversations relevant to the current field of Latinx/e studies.
Audience: Undergraduate

SPANISH/MEDIEVAL 414 – LITERATURE OF THE CASTILIAN MIDDLE AGE (XII-XV CENTURIES)
3 credits.

The study of a particular author, work, topic, or literary genre of the Middle Ages and/or Early Renaissance (through the 15th century): Poema de mio Cid, mester de juglaria, Libro de buen amor, mester de clerecia, El conde Lucanor, La Celestina, etc.
Requisites: (CHICLA/SPANISH 222 or SPANISH 223) and SPANISH 224
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023
Learning Outcomes: 1. Analyze Castilian medieval literary texts (12th to 15th century).
Audience: Undergraduate

2. Describe the historical, political, social, and cultural context of medieval Castile.
Audience: Undergraduate

3. Apply communication skills in reading, speaking, listening, and writing in Spanish to analyze the form and content of Medieval texts.
Audience: Undergraduate

SPANISH 420 – ADVANCED SPANISH PHONETICS
3 credits.

Connects the topics discussed in SPANISH 320 with concrete, physical speech signals. Learn to detect vocal fold vibration, evidence of tongue position, degree of closure between two organs, and friction caused by organ configuration, among other features, through the use of specialized software. Discuss sound experimental designs. Identify a specific set of sound system challenges that speakers of English face when learning Spanish. With regard to all of these issues, discuss address perception and production data, and data coming from native speakers and second language learners. Comparisons between Spanish data and those of English and other Romance languages.
Requisites: SPANISH 320
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate the ability to navigate various functions in phonetics software in order to accurately measure acoustic variables.
Audience: Undergraduate

2. Acquire appropriate terminology related to acoustic measurements and knowledge of well-developed phonetic experimental designs.
Audience: Undergraduate

3. Identify key acoustic differences between the sound systems of Spanish and English and acquisitional challenges related to them.
Audience: Undergraduate

4. Demonstrate the ability to carry out an independent research project that incorporates the three prior learning outcomes.
Audience: Undergraduate

SPANISH/FRENCH/ITALIAN/PORTUG 429 – INTRODUCTION TO THE ROMANCE LANGUAGES
3 credits.

Introduction to structural similarities and differences apparent in major Romance languages (French, Italian, Portuguese, Spanish) and to their historical developments, with reference to basic linguistic features of each language: phonology, morphology, syntax, and lexicon.
Requisites: SPANISH 226, FRENCH 228, ITALIAN 311, or PORTUG 226
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023

SPANISH 430 – SPANISH IN THE UNITED STATES
3 credits.

Focus on the Spanish language in the United States from a sociolinguistic perspective. Comprises three goals: 1) presentation of the main linguistic characteristics represented in the Spanish of the United States (from both speakers that brought their variety from their home country, and Spanish speakers born in the United States); 2) examination of the main aspects related to the acquisition of Spanish as a minority language and phenomena related to English-Spanish language contact; and 3) understanding the socio-cultural aspects connected with the presence and vitality of Spanish in the United States (e.g., Spanish in the public, political, and educational contexts; linguistic identity, linguistic discrimination).
Requisites: SPANISH 225
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Demonstrate a basic understanding of linguistic, pragmatic, sociolinguistic, and stylistic features of the Spanish language.
Audience: Undergraduate

2. Demonstrate awareness of the linguistic diversity that characterizes the Spanish-speaking world at present.
Audience: Undergraduate

3. Apply linguistic concepts and features to the analysis of language, in general, and of Spanish, in particular.
Audience: Undergraduate

4. Develop critical thinking and analytical abilities in the area of language variation and sociolinguistics as related to the topic of Spanish in the United States.
Audience: Undergraduate

5. Develop analytical skills to assess critically different claims about how language is used, and how it varies according to social and linguistic factors (using specific examples from Spanish).
Audience: Undergraduate

SPANISH 435 – CERVANTES
3 credits.

Development of Cervantes as a craftsman and thinker; linguistic and philosophical commentaries on Don Quixote and significant major works.
Requisites: (CHICLA/SPANISH 222 or SPANISH 223) and SPANISH 224
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Conduct close readings of Cervantes' works, such as Don Quixote.
Audience: Undergraduate

2. Analyze literary, aesthetic, philosophical, and linguistic aspects of the texts.
Audience: Undergraduate

3. Examine the historical, social, and cultural context of Early Modern Spain.
Audience: Undergraduate

SPANISH/ENVIR ST 445 – CULTURE AND THE ENVIRONMENT IN THE LUSO-HISPANIC WORLD
3 credits.

Investigates how economy and culture work together, consuming and/or restoring their environments in divergent scenarios of the Hispanic World.
Requisites: (CHICLA/SPANISH 222 or SPANISH 223) and SPANISH 224
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. State the interconnectedness of culture, environment, and economy in the Hispanic world.
Audience: Undergraduate

2. Recognize various socio-environmental conflicts in Latin America.
Audience: Undergraduate

3. Examine various new socio-economic visions emerging aimed at improving human relationships with the environment in the Hispanic World.

Audience: Undergraduate

4. Describe how Latin American indigenous knowledges and values could help us rethink our culture and economy.
Audience: Undergraduate

SPANISH 446 – TOPICS IN SPANISH LINGUISTICS
3 credits.

Advanced descriptive, historical, or applied topics in Spanish linguistics.
Requisites: SPANISH 225
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SPANISH 451 – LITERATURE OF THE EIGHTEENTH AND NINETEENTH CENTURIES
3 credits.

Historical survey of the literature of the eighteenth and nineteenth centuries. Major authors and representative works in all genres covering Neo-Classicism, Romanticism, Realism, and Naturalism. Important currents in intellectual history.
Requisites: SPANISH 223 and 224
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2018

SPANISH 453 – LITERATURE OF THE TWENTIETH CENTURY
3 credits.

Historical survey of the literature of the Twentieth Century. Major authors and representative works in all genres beginning with the Generation of 1898 to the present. Important currents in intellectual history.
Requisites: (CHICLA/SPANISH 222 or SPANISH 223) and SPANISH 224
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2019
Learning Outcomes: 1. Recall the literary and artistic culture of modern Spanish literature of the twentieth and twenty-first centuries.
Audience: Undergraduate

2. Interpret Spanish literary texts from of the twentieth and twenty-first centuries, paying attention to formal and aesthetic questions, cultural movements, and sociopolitical issues.
Audience: Undergraduate

3. Identify connections between Spanish culture and literature and their own culture.
Audience: Undergraduate

SPANISH 455 – CONTEMPORARY MAYAS: A CULTURE OF NATURE
3 credits.

Explore the enduring wisdom and resilience of the Maya civilization amidst historical challenges and contemporary dynamics. Delve into Maya philosophy, history, and current affairs, with a focus on their relationship with the environment. Analyze pivotal questions: Did the Maya civilization collapse or undergo intentional transformation? Why did the Maya army refrain from sacking the colonial capital during a major rebellion? Examine the impact of modern politics and economics on Maya culture. Uncover the role of Maya bioculture in cultural resistance and survival, and the interconnectedness of spirituality, health, and ethics with nature. Investigate the complexities of Maya perspectives on present-day issues.
Requisites: (CHICLA/SPANISH 222 or SPANISH 223) and SPANISH 224
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Examine the intricate relationship between the indigenous Maya people and their natural environment. Compare and contrast the Mayan view of nature with Western conceptualizations.
Audience: Undergraduate

2. Critically evaluate theories surrounding the collapse or intentional transformation of the Maya civilization.
Audience: Undergraduate

3. Explore the history of Mayan resistance from colonial to contemporary times and analyze how their connection to nature has influenced this resistance.
Audience: Undergraduate

4. Evaluate the impact of 20th and 21st-century politics and economic systems on Maya culture.
Audience: Undergraduate

5. Develop a critical understanding of the multifaceted socio-environmental conflicts in Maya territories.
Audience: Undergraduate

6. Acquire knowledge about current Mayan activism and efforts to safeguard their land and traditional knowledge.
Audience: Undergraduate

7. Engage in reflection on decolonial and transdisciplinary approaches to thinking, researching, and traversing Maya lands.
Audience: Undergraduate

8. Articulate the connections between Maya spirituality, health, ethics, and nature.
Audience: Undergraduate

SPANISH 460 – SPANISH AMERICAN LITERATURE
3 credits.

A monograph on a particular author, work or literary current of Latin America: Modernismo, the novel of protest, Latin American theater, etc.
Requisites: (CHICLA/SPANISH 222 or SPANISH 223) and SPANISH 224
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Critically examine contemporary Spanish American literary texts using specialized critical vocabulary beyond that learned in the prerequisite courses.
Audience: Undergraduate

2. Summarize, analyze and interpret the literary texts to develop and substantiate evaluative arguments about them.
Audience: Undergraduate

3. Identify and assess the cultural, economic and political factors that determine Spanish American literary production and differentiate it from that of other regions.
Audience: Undergraduate

SPANISH 461 – THE SPANISH AMERICAN SHORT STORY
3 credits.

Development of the short story throughout Spanish America from its origins in the 19th century to the present.
Requisites: (CHICLA/SPANISH 222 or SPANISH 223) and SPANISH 224
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify key themes, motifs, literary devices, and main characters in short stories and illustrate their importance in constructing the main themes/topics.
Audience: Undergraduate

2. Compare and contrast the construction of relevant plots and characters in targeted short stories.
Audience: Undergraduate

3. Analyze the representation of main themes/topics in Spanish American short stories and assess the connections of those representations with other arts forms (e. g. cinema) and with the political, philosophical and literary history in contemporary Spanish American societies.
Audience: Undergraduate

4. Evaluate and appraise various scholarly interpretations of key themes in Spanish American short stories, offering reasoned arguments for their positions.
Audience: Undergraduate

5. Formulate and defend an original thesis on the portrayal of key themes in Spanish American short stories.
Audience: Undergraduate

SPANISH 464 – SPANISH AMERICAN POETRY AND ESSAY
3 credits.

Readings in the work of major Spanish American poets and essayists within a historical framework.
Requisites: (CHICLA/SPANISH 222 or SPANISH 223) and SPANISH 224
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Recognize the most important elements of a poem through analyses of Spanish American poems
Audience: Undergraduate

2. Identify the relationship between a poem and an essay by the same author.
Audience: Undergraduate

3. Explain how a poem works through analyses of Spanish American poems
Audience: Undergraduate

4. Write well-argued and sound response papers about Spanish American poetry
Audience: Undergraduate

SPANISH/CHICLA 467 – US LATINX/E LITERATURE
3 credits.

Study the literature of Latinx/e populations in the United States, particularly of writers of Mexican, Puerto Rican, Cuban, Dominican, and Central American descent. Examines the impact of race and how individuals and communities negotiate situations of internal colonialism, migration, generational conflicts, tensions between assimilation and cultural preservation, gender roles, literary traditions, and transnational situations. Considers the linguistic, cultural, and formal singularity of Latinx/e literature, the use of Spanish and English languages, the advent of feminist and queer writing, and the vision of the United States in their works regarding its past, present, and future. Explores the intersectionality of race, ethnicity, class, gender, sexuality, and literary forms. Diverse theories and ways to read literary texts will be explored. Literary texts - novels, short stories, poetry, and essays - will be read in English or Spanish, or a combination of both. Taught in Spanish.
Requisites: (CHICLA/SPANISH 222 or SPANISH 223) and SPANISH 224
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Achieve an understanding of how the past affected present day circumstances to Latinx people regarding race and racial inequalities and patterns of oppression in the U.S.
Audience: Undergraduate

2. Develop critical thinking skills to recognize and question cultural assumptions, situations of privilege, and knowledge claims as they relate to race and ethnicity.
Audience: Undergraduate

3. Demonstrate self-awareness about their own racial and ethnic identities and empathy towards the perspectives and histories of others
Audience: Undergraduate

4. Apply key cultural concepts to a diverse array of literary texts in relation to lives outside the classroom
Audience: Undergraduate

SPANISH 468 – TOPICS IN HISPANIC CULTURE
3 credits.

In-depth study of important cultural-historical issues concerning the Hispanic world.
Requisites: (CHICLA/SPANISH 222 and SPANISH 224), (SPANISH 223 and 224), SPANISH 361, 363, or CHICLA/SPANISH 364
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Describe works of art and/or artistic, cultural and political events, currents and movements in the Spanish-speaking world that pertain to specific topics in historical time periods and/or the present day.
Audience: Undergraduate

2. Analyze and critique works of art and secondary literature on artistic, cultural and political events, currents and movements in the Spanish-speaking world that pertain to specific topics in historical time periods and/or the present day.
Audience: Undergraduate

3. Develop novel analyses and interpretations of works of art and/or artistic, cultural and political events, currents and movements in the Spanish-speaking world that pertain to specific topics in historical time periods and/or the present day.
Audience: Undergraduate

SPANISH/CHICLA 469 – TOPICS IN LATINX CULTURE
3 credits.

Focuses on the cultural evolution of Chicanos, Puerto Ricans, Cuban-Americans, and other U.S. Latinos in relation to their countries of origin. Topics vary.
Requisites: (CHICLA/SPANISH 222 and SPANISH 224), (SPANISH 223 and 224), SPANISH 361, 363, or CHICLA/SPANISH 364
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize the place of migration in the development of the U.S. as a nation, of migration as an integral social phenomena, and of Mexican migration in particular.
Audience: Undergraduate

2. Apply various analytical tools and perspectives to grasp diverse practices of cultural retention, cultural transformation, hybridity, transnationalism, and plural identities.
Audience: Undergraduate

3. Recognize the intersectionality of ethnicity, race, gender, nation, and sexuality.
Audience: Undergraduate

4. Identify various cultural expressions in critical dialogue with hegemonic/dominant cultures.
Audience: Undergraduate

SPANISH 470 – UNDERGRADUATE SEMINARS IN HISPANIC LITERATURE/CULTURE/LINGUISTICS
3 credits.

Discussion and research of advanced topics related to Hispanic literature, linguistics, or culture.
Requisites: (CHICLA/SPANISH 222 or SPANISH 223), SPANISH 224, 225, and 311
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024
Learning Outcomes: 1. Summarize primary and secondary literature pertaining to a specific topic on literature, cultural studies or linguistics in the Spanish-speaking world.
Audience: Undergraduate

2. Critique primary and secondary literature pertaining to a specific topic on literature, cultural studies or linguistics in the Spanish-speaking world.
Audience: Undergraduate

3. Propose novel analyses or interpretations of literary or cultural works of art from the Spanish-speaking world or design experiments to test novel hypotheses about linguistic phenomena pertaining to Spanish speakers.
Audience: Undergraduate

SPANISH 472 – HISPANIC SCREEN STUDIES
3 credits.

An introduction to audiovisual media in the Spanish-speaking world. Topics may include cinema, television, video and video gaming. Learn basic technical vocabulary, analytical concepts and industrial history for specific media and consider theoretical issues relating to the integration of those media in various local cultures. Special attention will be paid to the economic, technological, social and political conditions that have determined the differential development of the various screen arts in Spanish-speaking countries.
Requisites: (CHICLA/SPANISH 222 or SPANISH 223) and SPANISH 224
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Converse, read and write in Spanish about screen media using specialized technical vocabulary.
Audience: Undergraduate

2. Analyze and critique texts in these media using categories and concepts prevailing in professional and academic discourse.
Audience: Undergraduate

3. Describe and evaluate the potentialities and limitations of screen media in the sociohistorical context of contemporary Spanish America.
Audience: Undergraduate

4. Identify and explain cultural, financial and political factors that production and consumption of screen media discourses in Spanish America from that in other regions.
Audience: Undergraduate

SPANISH 473 – STUDY ABROAD IN SPANISH LANGUAGE PRACTICE
1-4 credits.

Treatment of a topic in Spanish language in a course carried with a UW-Madison resident study abroad program that has no equivalent on this campus. Enrollment in a UW-Madison resident study abroad program
Requisites: None
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

SPANISH 474 – STUDY ABROAD IN SPANISH LINGUISTICS
1-4 credits.

Treatment of a topic in Spanish linguistics in a course carried with a UW-Madison resident study abroad program that has no equivalent on this campus. Enrollment in a UW-Madison resident study abroad program
Requisites: None
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

SPANISH 475 – STUDY ABROAD IN HISPANIC LITERATURES
1-4 credits.

Treatment of a topic in Hispanic literatures in a course carried with a UW-Madison resident study abroad program that has no equivalent on this campus. Enrollment in a UW-Madison resident study abroad program
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

SPANISH 476 – STUDY ABROAD IN HISPANIC CULTURES
1-4 credits.

Treatment of a topic in Hispanic cultures in a course carried with a UW-Madison resident study abroad program that has no equivalent on this campus. Enrollment in a UW-Madison resident study abroad program
Requisites: None
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

SPANISH 477 – LATIN AMERICAN ROCK CULTURES
3 credits.

Rock'n'roll music emerged in the USA in the 1950s, and almost immediately became a global phenomena, intimately associated to the scheme of Western modernity, informing music and cultural expressions in many parts of world. Study this transnational process, and the culture and music that were produced in Latin America.
Requisites: (CHICLA/SPANISH 222 or SPANISH 223) and SPANISH 224
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Describe music's role in societies and the idea of the nation as a sonic territory whose musical performances define national, cultural, racial, class, and gender identities.
Audience: Undergraduate

2. Analyze what makes Latin American rock strictly Latin American and what role it has played in dictatorial and post-dictatorial societies.
Audience: Undergraduate

3. Explain how Latin American youth have claimed their agency, identity, and social leading roles through rock music.
Audience: Undergraduate

4. Explain how the market, media, and the music industry have shaped and influenced the development of rock.
Audience: Undergraduate

5. Explain the position and presence of women, non-heterosexuals, and Indigenous in the Latin American rock cultures.
Audience: Undergraduate

SPANISH/CHICLA 478 – BORDER AND RACE STUDIES IN LATIN AMERICA
3 credits.

Drawing from cultural studies, border studies and/or critical race theory, this course explores through cultural and literary texts the social and political issues regarding migration, contact zones, transculturation, and/or diaspora.
Requisites: (CHICLA/SPANISH 222 or SPANISH 223) and SPANISH 224. Not open to students with credit for CHICLA/SPANISH 215.
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain political and historical issues between the U.S. and Latin America.
Audience: Undergraduate

2. Analyze the ways in which literature, theatre, and performance represent a humanistic approach to a geopolitical dilemma
Audience: Undergraduate

3. Recognize the visual arts (theatre and performance) as a way to explore issues of and about immigration.
Audience: Undergraduate

SPANISH 479 – LATIN AMERICAN LITERATURE AND HUMAN RIGHTS
3 credits.

Explores the literary culture that emerged in Latin American countries after the military dictatorships in the seventies and eighties. Engage with cultural responses to human rights abuses in order to determine what kind of memory was invoked through available cultural venues and what kind of memory market has been created as a response to neo-liberal economic project. Looks into the means by which literary and cultural responses are produced, circulated and consumed, what seems to be remembered and forgotten as well as who takes ownership of memories and how the state produced official story compares with individual as well as community generated accounts.
Requisites: (CHICLA/SPANISH 222 or SPANISH 223) and SPANISH 224
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Examine human rights issues using specialized technical vocabulary in Spanish.
Audience: Undergraduate

2. Analyze and critique fictional and non-fictional texts related to human rights abuses using categories and concepts prevailing in professional and academic discourse.
Audience: Undergraduate

3. Describe and formulate the representation of human rights issues in Spanish American fictional and testimonial genres and assess the connections of those representations with other art forms (e.g. cinema) and with the political, philosophical and literary history in contemporary Spanish America.
Audience: Undergraduate

4. Identify, evaluate and appraise various scholarly interpretations of cultural, literary and political factors that production and consumption of literary discourses related to human rights in Spanish America entails.
Audience: Undergraduate

SPANISH 480 – TOPICS IN LATIN AMERICAN PERFORMANCE/ VISUAL STUDIES
3 credits.

Latin American culture and politics through the study of selected aspects of performance and/or visual culture. Topics vary.
Requisites: (CHICLA/SPANISH 222 or SPANISH 223) and SPANISH 224
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize contemporary Caribbean art.
Audience: Undergraduate

2. Identify and appraise contemporary racial, environmental, and cultural theories relevant to the Caribbean context.
Audience: Undergraduate

3. Create a critical reflection of artistic forms in the context of contemporary cultural and conceptual trends.
Audience: Undergraduate

4. Identify the methods of Visual Culture as a field of study.
Audience: Undergraduate

5. Illustrate Visual Culture theories and methods, especially approaches to the analysis of gender, sexuality, and race.
Audience: Undergraduate

SPANISH 490 – RACE, RELIGION AND ETHNICITY IN THE AGE OF EMPIRE
3 credits.

Drawing mainly from early modern Spanish and Colonial texts, covers encounters and relations with different forms of "otherness". Move from America to Spain and across the Mediterranean world to Istanbul, from the late 15th century to the 17th. Discuss issues of race, ethnicity, and religious affiliation. Spain's long history of relations between Muslims, Jews and Christians will form a backdrop to interactions with Amerindians, sub-Saharan Africans, Jews, Moriscos, Gypsies, North African Muslims and Turks. One of the millions of slaves during this period was Miguel de Cervantes, author of Don Quixote. He and many other writers would reflect profoundly on questions of "otherness" in works that would have universal implications and continue to connect with our concerns in the 21st century.
Requisites: (CHICLA/SPANISH 222 or SPANISH 223) and SPANISH 224
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2022
Learning Outcomes: 1. Identify and explain issues related to Spain and its cultural "others," both internal (within Spain) and external (from the Americas to the Mediterranean).
Audience: Undergraduate

2. Develop comparisons between the historical and geographical contexts of the course and contemporary issues involving race, ethnicity, and religious affiliation.
Audience: Undergraduate

3. Apply skills in reading, speaking, listening, and writing in Spanish in the comprehension of Spanish texts from the 15th – 17th centuries.
Audience: Undergraduate

SPANISH/MEDIEVAL 503 – SURVEY OF MEDIEVAL LITERATURE
3 credits.

Introduction to major 13th and 14th-century Castilian works.
Requisites: Graduate/professional standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2018

SPANISH/MEDIEVAL 541 – OLD SPANISH
3 credits.

Historical Spanish phonology, morphology, and syntax, with application to theories of language variation and change.
Requisites: Graduate/professional standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2018

SPANISH 545 – COLLEGE TEACHING OF SPANISH
2 credits.

Introduction to Spanish teaching methodology: classroom procedures, lesson planning, drilling techniques, preparation and evaluation of testing devices, current trends in language teaching, audio-visual aids, review of key grammatical concepts, etc.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2018

SPANISH 564 – THEORY AND PRACTICE OF HISPANIC THEATRE
4 credits.

An in-depth study of Hispanic theatre through the analysis of dramatic texts as well as the production of live performance. By reading and staging a final play students explore the full value of dramatic arts.
Requisites: SPANISH 223 and 224
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020

SPANISH 630 – TOPICS IN HISPANIC LINGUISTICS
3 credits.

Advanced course focusing on particular theories, approaches, and/or methodologies concerned with Spanish linguistics.
Requisites: Graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SPANISH 681 – SENIOR HONORS THESIS
3 credits.

First semester independent study with the goal to do the preliminary research to write a senior honors thesis in Spanish.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2023

SPANISH 682 – SENIOR HONORS THESIS
3 credits.

Second semester independent study with the goal to complete a senior honors thesis in Spanish. SPANISH 681
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2024

SPANISH 691 – FIRST SEMESTER SENIOR THESIS
3 credits.

First semester independent study with the goal to do the preliminary research to write a senior thesis in Spanish.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No

SPANISH 692 – SECOND SEMESTER SENIOR THESIS
3 credits.

Second semester independent study with the goal to complete a senior thesis in Spanish. SPANISH 691
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No

SPANISH 699 – DIRECTED STUDY
1-6 credits.

Directed study projects for juniors and seniors as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SPANISH 701 – TEXTUAL CRITICISM
3 credits.

Multiple alterities: religious affiliations, ethnicities, race, and gender in early modern America, Spain and the Mediterranean.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2019

SPANISH/MEDIEVAL 718 – TOPICS IN MEDIEVAL SPANISH LITERATURE
3 credits.

An advanced topics course focusing on themes, particular authors, individual works, or literary genres in medieval Spanish literature.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2019

SPANISH 770 – INTRODUCTION TO THE PROFESSION
3 credits.

Introduction to Spanish teaching methodology: classroom procedures, lesson planning, preparation and evaluation of testing devices, current trends in language teaching, audio visualaids, etc. Other aspects of working in academia are incorporated as well, such as research (intertwining it with teaching, abstracts, conferences, publishing, etc.) and professionalization (building a CV, the job market, cover letters, research statements, teaching philosophies, etc.), both of which are guided by the instructor and faculty visitors from the Department of Spanish Portuguese.
Requisites: Graduate Students Only
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand and evaluate various approaches to and tools used in communicative language teaching
Audience: Graduate

2. Understand variables involved in second language acquisition
Audience: Graduate

3. Understand the steps involved in developing academic research
Audience: Graduate

4. Critically evaluate research on Hispanic and Lusophone culture, literature, and linguistics
Audience: Graduate

5. Understand what goes into getting an academic job and being an academic
Audience: Graduate

SPANISH 771 – WRITING FOR THE PROFESSION
3 credits.

Overview of relevant academic genres through readings and extensive practice in writing, critiquing and editing. Genres include conference paper writing and delivery; grant applications; how to prepare an article for submission, how to choose a journal or a press, and the editorial process from consideration of a manuscript until final publication; to prepare a dissertation proposal, write a dissertation chapter, and an abstract for the job market. Students will work on their choice projects throughout the semester.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate knowledge concerning various genres related to conference presentations and scholarly publication
Audience: Graduate

2. Utilize the techniques, skills and modern tools necessary for generating original, coherent, and compelling writing at various levels depending on your needs
Audience: Graduate

3. Produce a substantial written piece or combination of pieces of publishable quality, such as a polished article manuscript that is ready for submission to an academic journal
Audience: Graduate

4. Be prepared for careers as researchers
Audience: Graduate

5. Demonstrate professional and ethical responsibility
Audience: Graduate

SPANISH 801 – SEMINAR-SPANISH AMERICAN LITERATURE
3 credits.

Seminar focusing on literature, literary criticism, or theory relevant to colonial and 19th-century Spanish American literature.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SPANISH 802 – SEMINAR-SPANISH AMERICAN LITERATURE
3 credits.

Seminar focusing on literature, literary criticism, culture or theory relevant to 20th and 21st Spanish American Lit.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

SPANISH 815 – SEMINAR IN LANGUAGE: MODERN SPANISH
3 credits.

Seminar focusing on theoretical, methodological, and applied approaches to a specific topic related to current Spanish (e.g,, Second Language acquisition, Applied Linguistics, Syntax, Semantics, Phonetics, Phonology, Language variation and change).
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2019

SPANISH/MEDIEVAL 842 – SEMINAR-MEDIEVAL LITERATURE
3 credits.

Seminar focusing on literary, textual criticism or theoretical topics relevant to Medieval Spanish literature.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2022

SPANISH 851 – SEMINAR IN GOLDEN AGE PROSE: CERVANTES DON QUIJOTE
3 credits.

In-depth reading of Cervantes' masterpiece, including a thorough study of its historical context and its place in the history of fiction.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

SPANISH 852 – SEMINAR IN GOLDEN AGE PROSE
3 credits.

Studies in the emergence of the modern novel with the invention of short and long novel forms as well as the development of intellectual and scientific works, including literature about other parts of the world, picaresque novels, courtly novels, pastoral novels, Moorish novels, autobiographies, travel narratives, mystic writings, humanistic dialogues, histories, geographies, and treatises on a wide array of topics.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2023

SPANISH 861 – SEMINAR-MODERN SPANISH LITERATURE
3 credits.

Literary, cultural, or theoretical topics relevant to Modern Peninsular Literature.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SPANISH 899 – INDEPENDENT READING
1-3 credits.

Directed study projects for graduate students as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SPANISH/A A E/ANTHRO/C&E SOC/GEOG/HISTORY/LACIS/POLI SCI/PORTUG/SOC 982 – INTERDEPARTMENTAL SEMINAR IN THE LATIN-AMERICAN AREA
1-3 credits.

Interdisciplinary inquiry in Latin American society and culture.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

SPANISH 990 – THESIS
1-12 credits.

Independent research and writing for graduate students under the supervision of a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

STATISTICS (STAT)

STAT 240 – DATA SCIENCE MODELING I
4 credits.

Introduces reproducible data management, modeling, analysis, and statistical inference through a practical, hands-on case studies approach. Topics include the use of an integrated statistical computing environment, data wrangling, the R programming language, data graphics and visualization, random variables and concepts of probability including the binomial and normal distributions, data modeling, statistical inference in one- and two- sample settings for proportions and means, simple linear regression, and report generation using R Markdown with applications to a wide variety of data to address open-ended questions.
Requisites: Satisfied Quantitative Reasoning (QR) A requirement
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. wrangle data: transform data, possibly from multiple sources, into a form convenient for analysis
Audience: Undergraduate

2. explore data: visualize and summarize data, generate questions/hypotheses, and address them
Audience: Undergraduate

3. program: write R code using the R Studio integrated statistical computing environment to carry out reproducible data analysis
Audience: Undergraduate

4. model data: use probability and random variables in statistical computing environment to carry out reproducible data analysis
Audience: Undergraduate

5. interpret data: explain what can be inferred from the data analysis and make predictions
Audience: Undergraduate

6. communicate: use R Markdown to integrate prose, visualizations, code, interpretation, and results
Audience: Undergraduate

7. collaborate: work with other students to solve data challenges
Audience: Undergraduate

8. make statistical inferences: employ confidence intervals and hypothesis tests using both computational and standard methods such as binomial and t-tests
Audience: Undergraduate

STAT 301 – INTRODUCTION TO STATISTICAL METHODS
3 credits.

Distributions, measures of central tendency, dispersion and shape, the normal distribution; experiments to compare means, standard errors, confidence intervals; effects of departure from assumption; method of least squares, regression, correlation, assumptions and limitations; basic ideas of experimental design.
Requisites: Satisfied Quantitative Reasoning (QR) A requirement. Not open to students with credit for STAT 302, 324, or 371
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe statistics as a discipline and why statistics can be useful for furthering scientific research
Audience: Undergraduate

2. Demonstrate a general understanding of the core concepts of statistics, including probability, sampling distributions, estimation, confidence intervals, and hypothesis testing
Audience: Undergraduate

3. Create useful graphs and summaries of data, and perform basic statistical analyses when appropriate, including one- and two-sample and paired tests for means, chi-squared tests, correlations, and simple linear regressions
Audience: Undergraduate

4. Correctly interpret statistical graphs and results in terms of the original scientific context in which the data was gathered, and identify common pitfalls that lead to compromised or misleading results
Audience: Undergraduate

5. Recognize when to seek statistical help and have a sufficient understanding of statistical terminology to communicate meaningfully with a professional statistician
Audience: Undergraduate

STAT 303 – R FOR STATISTICS I
1 credit.

An understanding of the commonly used statistical language R. Topics will include using R to manipulate data and perform exploratory data analysis.
Requisites: STAT 240, 301, 302, 312, 324, 371, MATH/STAT 310, ECON 310, GEN BUS 303, 304, 306, 307, 317, PSYCH 210, B M E 325, I SY E 210, SOC/C&E SOC 360, graduate/professional standing, or declared in Statistics VISP
Course Designation: Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use basic R vocabulary
Audience: Undergraduate

2. Manipulate data in R
Audience: Undergraduate

3. Produce graphics and reports
Audience: Undergraduate

4. Apply statistical methods
Audience: Undergraduate

5. Run basic simulations
Audience: Undergraduate

STAT 304 – R FOR STATISTICS II
1 credit.

Provides an understanding of the commonly used statistical language R. Topics will include writing conditional expressions, loops, and functions; manipulating data matrices and arrays; extracting data from text; and making high level visualizations of data.
Requisites: STAT 303
Course Designation: Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

STAT 305 – R FOR STATISTICS III
1 credit.

Provides an understanding of the commonly used statistical language R. Learn to combine R with high performance computing tools to do scientific computing.
Requisites: STAT 304
Course Designation: Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

STAT/MATH 309 – INTRODUCTION TO PROBABILITY AND MATHEMATICAL STATISTICS I
3 credits.

Probability and combinatorial methods, discrete and continuous, univariate and multivariate distributions, expected values, moments, normal distribution and derived distributions, estimation.
Requisites: MATH 234, 376, or concurrent enrollment. Not open to students with credit for STAT/MATH 431 or STAT 311
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall the definitions of fundamental objects and concepts underlying probability theory (e.g. sample spaces and events, the axioms of probability, the notions of conditional probability and independence, random variables and their probability distributions, mathematical expectation, and the joint distribution of one or more random variables) and demonstrate understanding of their properties
Audience: Undergraduate

2. Perform important operations in probability (e.g. calculate the probabilities of events, derive the probability distributions of random variables, compute moments and the expectation of functions of random variables, calculate covariances and correlations, and obtain conditional distributions and conditional expectations) and interpret the results
Audience: Undergraduate

3. Explain the meaning of key results in probability theory that are especially important in mathematical statistics (e.g. Bayes' Theorem, probabilistic tail inequalities such as Markov's and Chebyshev's inequalities, the Law of Large Numbers, and the Central Limit Theorem)
Audience: Undergraduate

4. Identify, utilize, and understand the key properties of, probability distributions that are especially important in statistics, including discrete families of distributions (e.g. the binomial, Poisson, geometric, and negative binomial distributions) and continuous families of distributions (e.g. the uniform, exponential, gamma, and normal distributions)
Audience: Undergraduate

STAT/MATH 310 – INTRODUCTION TO PROBABILITY AND MATHEMATICAL STATISTICS II
3 credits.

Mathematical statistical inference aims at providing an understanding of likelihood's central role to statistical inference, using the language of mathematical statistics to analyze statistical procedures, and using the computer as a tool for understanding statistics. Specific topics include: samples and populations, estimation, hypothesis testing, and theoretical properties of statistical inference.
Requisites: (STAT/MATH 309, STAT 311, STAT/MATH 431, or MATH 531) and (STAT 240, STAT 301, STAT 302, STAT 324, STAT 371, or ECON 310), or graduate/professional standing
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Construct point estimators including maximum likelihood estimators, understand the theoretical properties of point estimation methods, and evaluate their performance
Audience: Undergraduate

2. Construct hypothesis tests including likelihood ratio tests, interpret their results, evaluate their performance, and understand the theoretical properties of hypothesis testing methods
Audience: Undergraduate

3. Construct interval estimators to quantify uncertainty, understand the theoretical properties of interval estimation methods, and interpret their results
Audience: Undergraduate

4. Mathematically derive key quantities required for statistical inference methods and be familiar with simulation-based techniques for obtaining those quantities
Audience: Undergraduate

5. Describe the Bayesian approach to inference and contrast it with the frequentist approach
Audience: Undergraduate

6. Identify and describe the assumptions underlying methods of statistical inference and explain their importance
Audience: Undergraduate

STAT 311 – INTRODUCTION TO THEORY AND METHODS OF MATHEMATICAL STATISTICS I
3 credits.

Elements of probability, important discrete distributions, acceptance sampling by attributes, sample characteristics, probability distributions and population characteristics, the normal distribution, acceptance sampling plans based on sample means and variances, sampling from the normal, the central limit theorem, point and interval estimation.
Requisites: MATH 234, 376, or concurrent enrollment or graduate/professional standing. Not open to students with credit for STAT/MATH 309 or STAT/MATH 431
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

STAT 312 – INTRODUCTION TO THEORY AND METHODS OF MATHEMATICAL STATISTICS II
3 credits.

Unbiased estimation, maximum likelihood estimation, confidence intervals, tests of hypotheses, Neyman-Pearson lemma, likelihood ratio test, regression, analysis of variance with applications.
Requisites: STAT/MATH 309, STAT 311, STAT/MATH 431, MATH 531, or graduate/professional standing
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Be able to use probability theory to understand and utilize three principal tools of statistical inference: point estimators, confidence intervals, and hypothesis tests.
Audience: Undergraduate

2. Understand and be able to use standard statistical procedures for analyzing numerical data in certain contexts. These include inference for the mean based on a single random sample; comparing two means based on two random samples; Analysis of Variance; simple linear regression.
Audience: Undergraduate

3. Understand and be able to use standard statistical procedures for analyzing binary and categorical data in certain contexts. These include one- and two-sample inference for proportions, and the analysis of one- and two-way contingency tables for multi-category data.
Audience: Undergraduate

4. Identify the assumptions behind statistical procedures and understand their importance. Be able to recognize when techniques based on standard reference distributions (normal, chi-square, T- and F-distribution) are valid or not, and be able to utilize certain alternatives such as exact or nonparametric methods when they are required or preferable.
Audience: Undergraduate

STAT 324 – INTRODUCTION TO STATISTICS FOR SCIENCE AND ENGINEERING
3 credits.

Descriptive statistics, probability concepts and distributions, random variables. Hypothesis tests and confidence intervals for one- and two-sample problems. Linear regression, model checking, and inference. Analysis of variance and basic ideas in experimental design. Utilizes the R programming language.
Requisites: MATH 211, 217, or 221. Not open to students with credit for STAT 371.
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate the basics of probability and statistics.
Audience: Undergraduate

2. Make numeric and graphical summaries of simple data
Audience: Undergraduate

3. Produce appropriate statistical analyses of simple data sets
Audience: Undergraduate

4. Design simple experiments with data that will suit basic statistical analysis
Audience: Undergraduate

5. Use R for statistical computations and graphs
Audience: Undergraduate

6. Learn additional statistical methods
Audience: Undergraduate

STAT 333 – APPLIED REGRESSION ANALYSIS
3 credits.

An introduction to regression with emphasis on the practical aspects. Topics include: straight-line model, role of assumptions, residual analysis, transformations, multiple regression (with some use of matrix notation), multicollinearity, subset selection, and a brief introduction to mixed models.
Requisites: (STAT 240, 301, 302, 312, 324, 371, ECON 310, B M E 325, or I SY E 210) and (STAT 327 or 303, or concurrent enrollment)
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Correctly choose and apply common regression methods that are used in practice to analyze data, including simple and multiple linear regressions, ANOVAs/ANCOVAs, generalized linear models (e.g. logistic and Poisson) and fixed/random/mixed effect models
Audience: Undergraduate

2. Identify the underlying assumptions behind common regression methods and utilize diagnostic tools to detect violations of said assumptions
Audience: Undergraduate

3. Correctly interpret and explain results from regression methods, including interpretation of the coefficients, the p-values, R-squared, and other statistical summaries from regression
Audience: Undergraduate

4. Apply these methods to real data using the free statistical software R
Audience: Undergraduate

STAT 340 – DATA SCIENCE MODELING II
4 credits.

Teaches how to explore, model, and analyze data using R. Topics include basic probability models; the central limit theorem; Monte Carlo simulation; one- and two-sample hypothesis testing; Bayesian inference; linear and logistic regression; ANOVA; the bootstrap; random forests and cross-validation. Features the analysis of real-world data sets and the communication of findings in a clear and reproducible manner within a project setting.
Requisites: (MATH 211, 217, or 221) and STAT 240
Course Designation: Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand and apply basic concepts in probability; combine basic probability models to build more complicated ones; and critique models and their assumptions
Audience: Undergraduate

2. Formulate statistical hypotheses for different kinds of research questions and test those hypotheses using both classical and Monte Carlo methods.
Audience: Undergraduate

3. Understand and apply principles of statistical estimation and prediction, including fitting models and assessing model quality, in the context of both linear and logistic regression.
Audience: Undergraduate

4. Apply statistical tools to answer research questions using real-world data and present these findings clearly in both spoken and written form to non-experts.
Audience: Undergraduate

STAT 349 – INTRODUCTION TO TIME SERIES
3 credits.

Autocorrelation; stationarity and non-stationarity; heteroscedasticity; dynamic models; auto-regressive and moving average models; identification and fitting; forecasting; seasonal adjustment; applications for financial time series, social sciences and environmental studies.
Requisites: STAT 333, 340, graduate/professional standing, or declared in Statistics VISP
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

STAT 351 – INTRODUCTORY NONPARAMETRIC STATISTICS
3 credits.

Distribution free statistical procedures or methods valid under nonrestrictive assumptions: basic tools; counting methods; order statistics, ranks, empirical distribution functions; distribution free tests and associated interval and point estimators; sign test; signed rank tests; rank tests; Mann Whitney Wilcoxon procedures; Kolmogorov Smirnov tests; permutation methods; kernel density estimation; kernel and spline regression estimation; computer techniques and programs; discussion and comparison with parametric methods.
Requisites: STAT 333, 340, graduate/professional standing, or declared in Statistics VISP
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

STAT 360 – TOPICS IN STATISTICS STUDY ABROAD
1-3 credits.

Credit is awarded for students having completed an advanced statistics course in a study abroad program for which there is no direct equivalence to the statistics department course offerings. The study abroad course must be pre-approved by the statistics department. Enrollment in a UW-Madison resident study abroad program.
Requisites: None
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

STAT 371 – INTRODUCTORY APPLIED STATISTICS FOR THE LIFE SCIENCES
3 credits.

Introduction to modern statistical practice in the life sciences, using the R programming language. Topics include: exploratory data analysis, probability and random variables; one-sample testing and confidence intervals, role of assumptions, sample size determination, two-sample inference; basic ideas in experimental design, analysis of variance, linear regression, goodness-of fit; biological applications.
Requisites: (MATH 112 and placed out of MATH 113), (MATH 113 and placed out of MATH 112), (MATH 112 and 113), MATH 114, 171, 211, 221, or placement in MATH 221. Not open to students with credit for STAT 302 or 324
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Articulate the basics of probability and statistics
Audience: Undergraduate

2. Make numeric and graphical summaries of simple data
Audience: Undergraduate

3. Produce appropriate statistical analyses of simple data sets
Audience: Undergraduate

4. Design simple experiments whose data will suit basic statistical analysis
Audience: Undergraduate

5. Use RStudio, a free statistical software package, for statistical computations and graphs
Audience: Undergraduate

6. Study and learn additional statistical methods
Audience: Undergraduate

STAT/COMP SCI/L I S 401 – UNDERGRADUATE COOPERATIVE EDUCATION
1 credit.

Full time work experience which combines classroom theory with practical knowledge related to Computer Sciences, Data Science, Statistics, or Information Science.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Workplace - Workplace Experience Course
Repeatable for Credit: Yes, for 3 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply academic experience gained through coursework in a professional setting.
Audience: Undergraduate

2. Experience the nature and demands of a professional career in computer science, information science, and/or statistics/data science
Audience: Undergraduate

3. Develop professional and transferable skills like time management, collaboration, problem-solving, and communication in the workplace.
Audience: Undergraduate

STAT/COMP SCI 403 – INTERNSHIP COURSE IN COMP SCI AND DATA SCIENCE
1 credit.

Enables students with outside internships to earn academic credit connected to their work experience related to the Computer Sciences or Data Science programs.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, for 3 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Understand the challenges and opportunities in Computer Sciences and Data Science professions
Audience: Undergraduate

2. Be prepared to find, apply and interview for a job and/or additional education
Audience: Undergraduate

3. Articulate your career goals and long-term trajectory
Audience: Undergraduate

STAT 405 – DATA SCIENCE COMPUTING PROJECT
3 credits.

The development of tools necessary for collecting, managing, and analyzing large data sets. Examples of techniques and programs used include Linux, R, distributed computing, text editor(s), git/github, and other related tools. Work in teams to research, develop, write, and make presentations related to a variety of data analysis projects.
Requisites: (STAT 240 or 303) and (COMP SCI 200, 220, 300, or placement into COMP SCI 300), or graduate/professional standing
Course Designation: Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Collect and manage data and write programs and documentation viatools suited to large computations including an operating system, aneditor, and a version control system.
Audience: Undergraduate

2. Run analyses too large for a laptop on cluster, grid, and/or cloudcomputing environments.
Audience: Undergraduate

3. Work in teams to research, develop, write, and make presentations ona data analysis proposal, a draft data analysis, and a revised dataanalysis.
Audience: Undergraduate

STAT 411 – AN INTRODUCTION TO SAMPLE SURVEY THEORY AND METHODS
3 credits.

An introduction to the methods used to design sample surveys and analyze the results. Topics covered include: basic tools, simple random sampling, ratio and regression estimation, stratification, systematic sampling, cluster (area) sampling, two-stage sampling, unequal probability sampling, non-sampling errors, and missing data. For illustration and clarification, examples are drawn from diverse areas of application.
Requisites: STAT 333, 340, graduate/professional standing, or declared in Statistics VISP
Course Designation: Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023

STAT 421 – APPLIED CATEGORICAL DATA ANALYSIS
3 credits.

Analysis of multidimensional contingency tables, Poisson regression, and logistic regression, with emphasis on practical applications. Use of computer programs for such analyses. Model selection, testing goodness of fit, estimation of parameters, measures of association and methods for detecting sources of significance.
Requisites: STAT 333, 340, graduate/professional standing, or declared in Statistics VISP
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

STAT/M E 424 – STATISTICAL EXPERIMENTAL DESIGN
3 credits.

Introduction to statistical design and analysis of experiments. Topics include: principles of randomization, blocking and replication, randomized blocking designs, Latin square designs, full factorial and fractional factorial designs and response surface methodology. Substantial focus will be devoted to engineering applications.
Requisites: STAT 240, 301, 302, 312, 324, 371, or MATH/STAT 310
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe key concepts in the design and analysis of experiments.
Audience: Undergraduate

2. Generate experimental designs and apply appropriate analysis techniques.
Audience: Undergraduate

3. Compare different experimental design and analysis methods in various scenarios.
Audience: Undergraduate

4. Apply experimental design and analysis methods in real-world projects.
Audience: Undergraduate

5. Implement experimental design and analysis methods in statistical software like R.
Audience: Undergraduate

STAT/MATH 431 – INTRODUCTION TO THE THEORY OF PROBABILITY
3 credits.

Topics covered include axioms of probability, random variables, the most important discrete and continuous probability distributions, expectation and variance, moment generating functions, conditional probability and conditional expectations, multivariate distributions, Markov's and Chebyshev's inequalities, laws of large numbers, and the central limit theorem.
Requisites: MATH 234 or 376 or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall and state the formal definitions of the mathematical objects and their properties used in probability theory (e.g., probability spaces, random variables and random vectors and their probability distributions, named distributions, conditional probability, independence, linearity of expectation, etc.).
Audience: Undergraduate

2. Use such definitions to argue that a mathematical object does or does not have the condition of being a particular type or having a particular property (e.g., whether certain events or random variables are independent or not, whether a random variable has one of the named distributions, whether or not a sequence of random variables is exchangeable, etc.).
Audience: Undergraduate

3. Recall and state the standard theorems of probability theory. (e.g., Bayes' theorem, the law of large numbers, the central limit theorem, etc.), and apply these theorems to solve problems in probability theory.
Audience: Undergraduate

4. Use multiple approaches to compute and estimate probabilities and expectations (e.g., using the indicator method, using conditioning, estimating probabilities using normal or Poisson approximation etc.).
Audience: Undergraduate

5. Construct mathematical arguments related to the above definitions, properties, and theorems, including the construction of examples and counterexamples.
Audience: Undergraduate

6. Convey his or her arguments in oral and written forms using English and appropriate mathematical terminology and notation (and grammar).
Audience: Undergraduate

7. Model simple real-life situations using techniques in probability theory and calculate probabilities and expectations associated with those models.

Audience: Undergraduate

STAT 433 – DATA SCIENCE WITH R
3 credits.

Perform Data Science as an iterative (back and forth) process of four different types of activities (data collection, data wrangling, data analysis, communication). Traverse through the five requisite stances (scientist, coder, mathematician, methodologist, skeptic). Develop and hone a broad set of computational tools in R (but not the broadest) and a broad set of statistical/machine learning tools (but not the broadest). Focus on doing these with agility to make the coding "transparent" and serve the large goals of the project.
Requisites: (STAT 333 or 340) and (MATH 320, 340, 341, 345, or 375), graduate/professional standing, or declared in Statistics VISP
Course Designation: Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2022
Learning Outcomes: 1. Describe and apply the key steps taken in most data science projects and how these steps fit into a coherent whole
Audience: Undergraduate

2. Identify how a data set can be used for a specific purpose
Audience: Undergraduate

3. Clean and analyze data
Audience: Undergraduate

4. Communicate the results of data analysis
Audience: Undergraduate

5. Develop agile and reproducible code that enables iterative development of a data science project using the tools in the tidyverse
Audience: Undergraduate

STAT 436 – STATISTICAL DATA VISUALIZATION
3 credits.

Techniques for visualization within data science workflows. Topics include data preparation; exploratory data analysis; spatial, tabular, and graph structured data; dimensionality reduction; model visualization and interpretability; interactive queries and navigation.
Requisites: (STAT 240 or 303), graduate professional/standing, or declared in Statistics VISP
Course Designation: Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply preprocessing strategies, including outlier removal, missing data imputation, and tidying, in a way that supports downstream visualization
Audience: Undergraduate

2. Develop a vocabulary of visual encoding that support exploration of geospatial, temporal, tree-structured, and network data, and demonstrate facility implementing them using packages in the R programming language

Audience: Undergraduate

3. Design dynamic queries that support interactive visualization of heterogenous data and demonstrate facility implementing them using the shiny package in the R programming language
Audience: Undergraduate

4. Design effective visualizations to summarize the results of dimensionality reduction and clustering algorithms
Audience: Undergraduate

5. Use visual artifacts derived from complex statistical machine learning models to discuss the patterns they learn and mistakes they make
Audience: Undergraduate

6. Recognize chart junk in real-word visualizations and propose improved alternatives
Audience: Undergraduate

STAT 443 – CLASSIFICATION AND REGRESSION TREES
3 credits.

Introduction to algorithms and applications of classification and regression trees. Recursive partitioning, pruning, and cross-validation estimation of prediction error. Class priors and misclassification costs. Univariate and linear splits. Linear and kernel discriminant analysis and nearest-neighbor classification. Unbiased variable selection and importance scoring of variables. Least-squares, quantile, Poisson, logistic, and proportional hazards regression tree models. Tree ensembles. Subgroup identification of differential treatment effects. Multiple and longitudinal response variables. Missing values and multiple missing value codes. Comparisons with neural networks, support vector machines, and other methods. Bootstrap calibration and post-selection inference. Applications to business, social science, engineering, biology, medicine, and other fields.
Requisites: STAT 333, 340, graduate/professional standing, or declared in Statistics VISP
Course Designation: Breadth - Either Social Science or Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2022
Learning Outcomes: 1. Know the weaknesses and limitations of traditional statistical modeling methods
Audience: Undergraduate

2. Understand the strengths and capabilities of the classification and regression tree approach
Audience: Undergraduate

3. Learn to analyze data with missing values without missing value imputation
Audience: Undergraduate

4. Learn to analyze data containing circular or periodic variables, such as angle of impact, time of day, day of week, and month of year
Audience: Undergraduate

5. Learn how to build regression tree models for least squares regression, logistic regression, Poisson regression, quantile regression, and proportional hazards regression
Audience: Undergraduate

6. Learn how to build prediction models for univariate, multivariate, longitudinal, and censored dependent variables
Audience: Undergraduate

7. Learn to use GUIDE and R software for algorithms such as AMELIA and MICE (for missing value imputation), and RPART, MOB, random Forest (for tree and forest models)
Audience: Undergraduate

STAT 451 – INTRODUCTION TO MACHINE LEARNING AND STATISTICAL PATTERN CLASSIFICATION
3 credits.

Pattern classification, regression analysis, clustering, and dimensionality reduction. For each category, covers fundamental algorithms and selections of contemporary, current state-of-the-art algorithms. Focus on evaluation of machine learning models using statistical methods. Statistical pattern classification approaches, including maximum likelihood estimation and Bayesian decision theory, algorithmic and nonparametric approaches. Practical use of machine learning algorithms using open source libraries from the Python programming ecosystem.
Requisites: MATH 320, 321, 340, 341, 345, 375, graduate/professional standing, or declared in Statistics VISP
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand the different subfields of machine learning, such as supervised and unsupervised learning and being familiar with essential algorithms from each subfield.
Audience: Undergraduate

2. Identify whether machine learning is appropriate for solving a given problem task and which class of algorithms is best suited for real-world problem solving.
Audience: Undergraduate

3. Use statistical learning theory to combine multiple machine learning models via ensemble methods.
Audience: Undergraduate

4. Apply best-practices for statistical model evaluation, model selection and algorithm comparisons including suitable statistical hypothesis tests.
Audience: Undergraduate

5. Use contemporary programming languages and machine learning libraries for implementing machine learning algorithms such that they can be readily applied for practical problem solving.
Audience: Undergraduate

6. Connect concepts from probability theory with supervised learning by implementing models based on Bayes' theorem.
Audience: Undergraduate

STAT 453 – INTRODUCTION TO DEEP LEARNING AND GENERATIVE MODELS
3 credits.

Deep learning is a field that specializes in discovering and extracting intricate structures in large, unstructured datasets for parameterizing artificial neural networks with many layers. Since deep learning has pushed the state-of-the-art in many research and application areas, it's become indispensable for modern technology. Focuses on a understanding deep, artificial neural networks by connecting it to related concepts in statistics. Beyond covering deep learning models for predictive modeling, focus on deep generative models. Besides explanations on a mathematical and conceptual level, emphasize the practical aspects of deep learning. Open-source computing provides hands-on experience for implementing deep neural nets, working on supervised learning tasks, and applying generative models for dataset synthesis.
Requisites: MATH 320, 321, 340, 341, 345, 375, graduate/professional standing, or declared in Statistics VISP
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop an advanced understanding of deep learning and generative models, which represent state-of-the-art approaches for predictive modeling in today's data-driven world.
Audience: Undergraduate

2. Identify scenarios where it makes sense to deep learning for real-world problem-solving.
Audience: Undergraduate

3. Build a repertoire of different algorithms and approaches to deep learning and understanding their various strengths and weaknesses.
Audience: Undergraduate

4. Employ the Python programming language and Python's scientific computing stack for implementing deep learning algorithms to 1) enhance the learning experience, 2) conduct research and be able to develop novel algorithms, and 3) apply deep learning to problem-solving in various fields and application areas.
Audience: Undergraduate

5. Apply both the theoretical and practical concepts taught in this class to creative, real-world problem solving and communicating the outcome professionally in form of a scientific paper and a formal oral presentation.
Audience: Undergraduate

STAT 456 – APPLIED MULTIVARIATE ANALYSIS
3 credits.

Theory and applications of multivariate statistical methods. Basic concepts and statistical reasoning which underlie the techniques of multivariate analysis. Ideas rather than derivations stressed although basic models discussed to provide a sense of adequacy in particular situations. Acquaintance with and use of existing computer programs in the multivariate analysis area.
Requisites: (STAT 333 or 340) and (MATH 320, 340, 341, 345, or 375), graduate/professional standing, or declared in Statistics VISP
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the purpose and basic concepts of multivariate analysis, distinguishing it from other common forms of statistical analysis such as regression analysis.
Audience: Undergraduate

2. Define fundamental concepts of multivariate analysis, such as covariance and correlation, and explain their meaning.
Audience: Undergraduate

3. Explain common methods of multivariate analysis such as principal components analysis, factor analysis, multidimensional scaling, and clustering; this includes identifying situations in which these methods would be useful, describing how they are performed, and explaining how to interpret their outputs.
Audience: Undergraduate

4. Use statistical software such as R to create meaningful visualizations of multivariate data, and to carry out multivariate analyses.
Audience: Undergraduate

5. Properly interpret, contextualize, and communicate the results of an applied multivariate analysis.
Audience: Undergraduate

STAT 461 – FINANCIAL STATISTICS
3 credits.

Stochastic models and statistical methodologies are widely employed in modern finance. The models and their inferences are very important for academic research and financial practices. Financial stochastic models and their statistical inferences with applications to volatility analysis and risk management, introduction to discrete models such as binomial trees and GARCH and stochastic volatility models as well as simple continuous models like the Black-Scholes model. The focus will be on statistical inference, data analysis and risk management regarding these models.
Requisites: (STAT 333, 340, or ECON 410) and (MATH/STAT 309, STAT 311, MATH 331, MATH/STAT 431, or MATH 531), graduate/professional standing, or declared in Statistics VISP
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand basic stochastic models used in pricing financial instruments.
Audience: Undergraduate

2. Develop statistical inferences for financial applications to volatility analysis and risk management.
Audience: Undergraduate

3. Use computer packages to perform statistical analysis of financial data.
Audience: Undergraduate

4. Interpret statistical analysis in the context of financial applications
Audience: Undergraduate

STAT/COMP SCI 471 – INTRODUCTION TO COMPUTATIONAL STATISTICS
3 credits.

Classical statistical procedures arise where closed-form mathematical expressions are available for various inference summaries (e.g. linear regression; analysis of variance). A major emphasis of modern statistics is the development of inference principles in cases where both more complex data structures are involved and where more elaborate computations are required. Topics from numerical linear algebra, optimization, Monte Carlo (including Markov chain Monte Carlo), and graph theory are developed, especially as they relate to statistical inference (e.g., bootstrapping, permutation, Bayesian inference, EM algorithm, multivariate analysis).
Requisites: STAT/MATH 310 and (STAT 333 or 340), graduate/professional standing, or declared in Statistics VISP
Course Designation: Breadth - Natural Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use computational tools (alongside mathematical ones) to extract information from (a) the likelihood function, the central object of interest in frequentist statistics, and (b) the posterior distribution, the central object of interest in Bayesian statistics
Audience: Undergraduate

2. Describe, understand the theoretical properties of, and implement basic algorithms for optimizing likelihood functions, including least squares and the IRLS algorithm, and the EM algorithm
Audience: Undergraduate

3. Understand random numbers and pseudorandom numbers and how to distinguish them, and utilize a variety of techniques for generating random variates from a probability distribution
Audience: Undergraduate

4. Use Monte Carlo methodology for such purposes as (a) carrying out a simulation study to study the properties of a statistical method, or (b) performing statistical inference via the bootstrap, or MCMC
Audience: Undergraduate

5. Understand the use of graphical models for representing the structure of complex joint distributions, and be able to use computational tools to extract information from graphical models
Audience: Undergraduate

STAT/COMP SCI/MATH 475 – INTRODUCTION TO COMBINATORICS
3 credits.

Problems of enumeration, distribution, and arrangement. Inclusion-exclusion principle. Generating functions and linear recurrence relations. Combinatorial identities. Graph coloring problems. Finite designs. Systems of distinct representatives and matching problems in graphs. Potential applications in the social, biological, and physical sciences. Puzzles. Problem solving.
Requisites: (MATH 320, 340, 341, or 375) or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand basic counting strategies, such as staged thought-experiments, inclusion/exclusion, generating functions, and recurrence relations, and apply these strategies to solve a wide variety of counting problems.
Audience: Undergraduate

2. Recall basic objects that are used in combinatorics, such as permutations and combinations of sets and multisets, binomial and multinomial coefficients, the Catalan numbers, the Stirling numbers, and the partition numbers.
Audience: Undergraduate

3. Analyze a given combinatorial problem using the standard theorems of combinatorics, such as the pigeonhole principle, the Newton binomial theorem, the multinomial theorem, the Ramsey theorem, the Dilworth theorem, the Burnside theorem, and the Polya counting theorem.
Audience: Undergraduate

4. Construct mathematical arguments related to combinatorial problems using the above definitions, properties, theorems, and counting strategies; including the construction of examples and counterexamples.
Audience: Undergraduate

5. Convey his or her arguments in oral and written form in English, using appropriate mathematical terminology, notation, and grammar.
Audience: Undergraduate

STAT 479 – SPECIAL TOPICS IN STATISTICS
1-3 credits.

Special topics of interest in undergraduate students.
Requisites: None
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

STAT/COMP SCI/I SY E/MATH 525 – LINEAR OPTIMIZATION
3 credits.

Introduces optimization problems whose constraints are expressed by linear inequalities. Develops geometric and algebraic insights into the structure of the problem, with an emphasis on formal proofs. Presents the theory behind the simplex method, the main algorithm used to solve linear optimization problems. Explores duality theory and theorems of the alternatives.
Requisites: MATH 320, 340, 341, 375, or 443 or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use linear programming to formulate real world decision problems.
Audience: Both Grad & Undergrad

2. Apply algorithms to solve linear programming problems and demonstrate their correctness.
Audience: Both Grad & Undergrad

3. Combine different proving techniques explored in class in an original way to show new results.
Audience: Graduate

STAT/B M I 541 – INTRODUCTION TO BIOSTATISTICS
3 credits.

Course designed for the biomedical researcher. Topics include: descriptive statistics, hypothesis testing, estimation, confidence intervals, t-tests, chi-squared tests, analysis of variance, linear regression, correlation, nonparametric tests, survival analysis and odds ratio. Biomedical applications used for each topic.
Requisites: Graduate/professional standing. Not open to students with credit for STAT 511 or POP HLTH/B M I 551
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand building blocks and fundamentals that support core themes of Biostatistics in the application of biomedicine and public health
Audience: Both Grad & Undergrad

2. Conduct basic statistical analyses of biomedical data
Audience: Both Grad & Undergrad

3. Use R for statistical computing
Audience: Both Grad & Undergrad

4. Critique methods and evidence from others' studies
Audience: Graduate

5. Collaborate effectively with biostatisticians
Audience: Graduate

STAT/B M I 542 – INTRODUCTION TO CLINICAL TRIALS I
3 credits.

Intended for biomedical researchers interested in the design and analysis of clinical trials. Topics include definition of hypotheses, measures of effectiveness, sample size, randomization, data collection and monitoring, and issues in statistical analysis.
Requisites: B M I/STAT 541
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Develop skills to critically review clinical trials literature
Audience: Graduate

2. Formulate focused research questions, specific aims, and key outcomes

Audience: Graduate

3. Recognize the strengths and weaknesses of alternative clinical trials designs and design components
Audience: Graduate

4. Develop related technical skills, including basic sample size calculations and survival analysis
Audience: Graduate

5. Write a clinical trial protocol with all its core components
Audience: Graduate

STAT/F&W ECOL 571 – STATISTICAL METHODS FOR BIOSCIENCE I
4 credits.

Descriptive statistics, distributions, one- and two-sample normal inference, power, one-way ANOVA, simple linear regression, categorical data, non-parametric methods; underlying assumptions and diagnostic work.
Requisites: Graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

STAT/F&W ECOL 572 – STATISTICAL METHODS FOR BIOSCIENCE II
4 credits.

Polynomial regression, multiple regression, two-way ANOVA with and without interaction, split-plot design, subsampling, analysis of covariance, elementary sampling, introduction to bioassay.
Requisites: STAT/F&W ECOL 571
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

STAT 575 – STATISTICAL METHODS FOR SPATIAL DATA
3 credits.

Detecting, quantifying, and modeling spatial patterns and structure in data. Variograms and covariance functions, linear predictions with uncertainty qualification, and conditional simulations. Spectral domain models and spectral densities. Spatial point processes. Contemporary applications and Gaussian process model fitting at scale.
Requisites: (STAT 333 or 340) and (MATH 320, 340, 341, 345, or 375), graduate/professional standing, or declared in Statistics VISP
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Undertake exploratory analysis of spatial and spatio-temporal data with nonparametric estimators like empirical variograms.
Audience: Both Grad & Undergrad

2. Fit parametric and semi-parametric mean and covariance models to spatial and spatio-temporal data for the purposes of prediction and uncertainty quantification.
Audience: Both Grad & Undergrad

3. Understand important differences between interpolation and extrapolation and how to choose and design models more effectively for each application.
Audience: Both Grad & Undergrad

4. Use the R programming language to load, manipulate, and effectively work with spatial data in popular file formats like CSV, NetCDF, HDF5.
Audience: Undergraduate

5. Use several popular software libraries and modeling paradigms for spatial and spatio-temporal problems like estimation and prediction.
Audience: Both Grad & Undergrad

6. Understand problems of identifiability and consistency in popular modeling paradigms.
Audience: Graduate

STAT 601 – STATISTICAL METHODS I
4 credits.

Provides a thorough grounding in modern statistical methods. The specific learning outcomes for the course are to understand data collection in context (how/why data were collected, key questions under study); explore data by effective graphical and numerical summaries; understand probability concepts and models as tools for studying random phenomena and for statistical inference; analyze data using appropriate, modern statistical models, methods, and software; understand the statistical concepts underlying methods; develop the ability to interpret results and critically evaluate the methods used; communicate data analysis and key findings in context.
Requisites: Graduate/professional standing or declared in Statistics VISP
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

STAT 602 – STATISTICAL METHODS II
4 credits.

Provides a thorough grounding in modern statistical methods. The specific learning outcomes for the course are to understand data collection in context (how/why data were collected, key questions under study); explore data by effective graphical and numerical summaries; understand probability concepts and models as tools for studying random phenomena and for statistical inference; analyze data using appropriate, modern statistical models, methods, and software; understand the statistical concepts underlying methods; develop the ability to interpret results and critically evaluate the methods used; communicate data analysis and key findings in context.
Requisites: STAT 601
Repeatable for Credit: No
Last Taught: Spring 2022

STAT 605 – DATA SCIENCE COMPUTING PROJECT
3 credits.

The development of tools necessary for collecting, managing, and analyzing large data sets. Examples of techniques and programs utilized include Linux, R, distributed computing, powerful editor(s), git/github, and other related tools. Work in the class will be done in teams to research, develop, write, and make presentations related to a variety of data analysis projects.
Requisites: Declared in Statistics MS or Statistics VISP
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Collect and manage data and write programs and documentation via tools suited to large computations. Use the Linux operating system and write shell scripts. Use an editor to write and manage local and remote files. Use the git/github version control system to track changes and manage collaboration.
Audience: Graduate

2. Be able to use Linux, R, and the Slurm job scheduler to run tens of parallel jobs on the Statistics High Performance Computing (HPC) Cluster. Use Linux, R, and distributed high-throughput computing via HTCondor to run thousands of parallel jobs at UW's Center for High-Throughput Computing (CHTC).
Audience: Graduate

3. Work in teams to research, develop, write, and make three presentations including one on a data analysis proposal consisting of data, a question, and a suggested analysis; one on a draft data analysis; and one on a revised data analysis.
Audience: Graduate

STAT 606 – COMPUTING IN DATA SCIENCE AND STATISTICS
3 credits.

A survey of some of the tools and frameworks that are currently popular among data scientists and statisticians working in both academia and industry. Begins with an accelerated introduction to the Python programming language and brief introductions to object-oriented and functional programming. Covers some of the scientific computing platforms available in Python, including tools for numerical and scientific computing; training basic machine learning models; and data visualization. Discusses collecting data from the web both by scraping and using APIs. Concludes with a brief survey of distributed computing platforms, focusing on the MapReduce framework.
Requisites: Declared in Statistics MS or Statistics VISP (undergraduate)
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand and apply the basics of the Python programming language and basic programming patterns in both the object-oriented and functional programming frameworks
Audience: Graduate

2. Collect and clean data from a variety of data sources including markup languages from the web, databases, and by using APIs
Audience: Graduate

3. Understand the MapReduce framework and apply it to large-scale data sets in a distributed environment using modern cloud computing platforms

Audience: Graduate

4. Use numerical and scientific computing libraries to build and fit statistical models on large datasets
Audience: Graduate

STAT 609 – MATHEMATICAL STATISTICS I
3 credits.

Review of probability, random variables and vectors and their distributions, moments and inequalities, generating functions, transformations of random variables, sampling and distribution theory, convergence concepts for sequences of random variables, laws of large numbers, central limit and other limit theorems.
Requisites: Graduate/professional standing or declared in Statistics VISP
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

STAT 610 – INTRODUCTION TO STATISTICAL INFERENCE
4 credits.

Conditioning, distribution theory, approximation to distributions, modes of convergence, limit theorems, statistical models, parameter estimation, comparision of estimators, confidence sets, theory of hypothesis tests, introduction to Bayesian inference and nonparametric estimation.
Requisites: Graduate/professional standing or declared in Statistics VISP
Course Designation: Breadth - Physical Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

STAT 611 – STATISTICAL MODELS FOR DATA SCIENCE
3 credits.

Probability, random variables and their distributions, joint and conditional distributions, moments and inequalities, generating functions, transformations of random variables, sampling and distribution theory, convergence concepts and limit theorems for sequences of random variables.
Requisites: Declared in Data Science MS or Data Engineering MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the foundations of probability theory, including: the axioms of probability, the concepts of sample space and probability measure, events and their probabilities, and the notions of conditional probabilityand independence
Audience: Graduate

2. Explain the concepts of random variables and probability distributions, and calculate or otherwise utilize key mathematical objects and results related to them, including: random number generation, expected values and moments, moment-based probabilistic inequalities, moment generating functions, joint probability distributions of multiple random variables
Audience: Graduate

3. Identify the most important probability distributions used in Statistics, cite their properties, create computer visualizations of them, and simulate random variates from these distributions. This includes the normal distribution, the binomial distribution, the exponential distribution, the Poisson distribution, and more
Audience: Graduate

4. Apply, and explain the significance of, key results related to the limits of sequences of random variables, including laws of large numbers, the Central Limit Theorem, and the delta method
Audience: Graduate

5. Grasp important elements of sampling theory, including: random samples and how to generate them; statistics, such as the sample mean and sample variance, and how to derive or simulate their sampling distributions; and the distributions that arise from a normal random sample, namely the chi-square,T, and F distributions.
Audience: Graduate

STAT 612 – STATISTICAL INFERENCE FOR DATA SCIENCE
3 credits.

Statistical models, methods and theory for parameter estimation, Bayesian approach to parameter estimation, methods and theory for hypothesis tests, confidence sets, two-sample testing and ANOVA, categorical data analysis, linear regression.
Requisites: STAT 611
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Construct point estimators including maximum likelihood estimators, understand the theoretical properties of point estimation methods, evaluate their performance using mathematical derivations and simulation-based techniques, and identify optimal point estimators
Audience: Graduate

2. Describe the Bayesian approach to point estimation and contrast it with the frequentist approach
Audience: Graduate

3. Construct and evaluate hypothesis tests (such as likelihood ratio tests) using mathematical derivations or simulation-based techniques, interpret their results, understand theoretical properties of hypothesis testing methods, and identify optimal hypothesis tests
Audience: Graduate

4. Construct and evaluate interval estimators using mathematical and simulation-based techniques, understand the theoretical properties of interval estimation methods, and interpret their results
Audience: Graduate

5. Identify and describe the assumptions underlying methods of statistical inference and explain their importance
Audience: Graduate

6. Fit models and carry out statistical inference in classical situations: namely: the comparison of two or more samples (ANOVA), the analysis of categorical data, linear regression, generalized linear models, and random and mixed effects models
Audience: Graduate

STAT 613 – STATISTICAL METHODS FOR DATA SCIENCE
3 credits.

Provides a thorough grounding in modern statistical methods. Introduces statistical techniques and methods of data analysis, including data description, linear regression models, diagnostic tools, prediction and model selection, and experimental design.
Requisites: Declared in Data Science MS or Data Engineering MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Strategize and select a regression equation, examine residuals, transform data, recognize biases due to excluded variables and measurement error
Audience: Graduate

2. Conduct general linear modeling for exponential family data and specifically models for binary, count, and categorical data, perform model fitting and inference
Audience: Graduate

3. Develop the concepts and relevant methodology and ability to design and analyze experiments
Audience: Graduate

4. Use and interpret computer package for regression programs
Audience: Graduate

5. Present clear data structure and analysis in the context of data drawn from real-world applications
Audience: Graduate

STAT 615 – STATISTICAL LEARNING
3 credits.

The development of a variety of mathematical theories and statistical concepts (1) to understand the properties of those models and methods used for the purpose of prediction from data or decision making from data, and (2) to criticize such models, methods and their consequences. Specifically, the theories and tools that will be developed will include complexity theory, Hilbert spaces, Gaussian processes, Variational Analysis, and concentration inequalities.
Requisites: Declared in Statistics: Statistics and Data Science MS, Data Science MS, Data Engineering MS, or Statistics VISP
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate understanding of statistical theories, methodologies, and applications as tools in scientific inquiries.
Audience: Graduate

2. Select and utilize the most appropriate statistical methodologies and practices.
Audience: Graduate

3. Synthesize information pertaining to questions in empirical studies.
Audience: Graduate

4. Communicate data concepts and analysis results clearly.
Audience: Graduate

5. Recognize and apply principles of ethical and professional conduct.
Audience: Graduate

6. Demonstrate knowledge of theoretical properties of many procedures used in machine learning for the purposes of classification, regression, and beyond.
Audience: Graduate

7. Demonstrate knowledge of classical and modern notions in statistical learning theory including concentration inequalities, measures of statistical complexity, kernel methods for learning, Gaussian processes, and basics of variational inference.
Audience: Graduate

STAT/B M I 620 – STATISTICS IN HUMAN GENETICS
3 credits.

Provides a comprehensive survey of statistical methods in human genetics research. Covered topics include linkage analysis, genome-wide association study, rare variant association analysis, meta-analysis, genome and variant annotation, heritability estimation, multi-trait modeling techniques, multi-omic data integration, and genetic risk prediction.
Requisites: STAT 333, 340, or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize problems in human genetics that are appropriate for statistical modeling
Audience: Both Grad & Undergrad

2. Identify appropriate statistical procedures and computational algorithms for different tasks
Audience: Both Grad & Undergrad

3. Gain practical experience in applying a select set of statistical methods on real data and evaluate its outputs
Audience: Both Grad & Undergrad

4. Evaluate the strengths and weaknesses of different statistical and computational approaches designed for a specific biological problem
Audience: Graduate

STAT 627 – PROFESSIONAL SKILLS IN DATA SCIENCE
1-3 credits.

Covers important aspects of professional development in statistics, including skills with internet tools, sophisticated use of statistical languages (such as R) and other emerging topics.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

STAT 628 – DATA SCIENCE PRACTICUM
3 credits.

Provides an understanding of and experience with turning statistics concepts into practice through data science practicums inspired by realistic projects. Combine theory and methods expertise with communications skills to translate from a vaguely stated project description and complex data set into a concisely summarized analysis, including both written and graphical interpretation that can be used by decision makers in an organization.
Requisites: Declared in Statistics: Statistics and Data Science MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Frame real-world data problems into testable and solvable statistical problems.
Audience: Graduate

2. Develop analysis/solutions that are fast, scalable, and robust
Audience: Graduate

3. Communicate solutions concisely and clearly, creating understandable and accurate visual/tabular summaries of the data analysis, and responding to audience questions clearly
Audience: Graduate

STAT/I SY E/MATH/OTM 632 – INTRODUCTION TO STOCHASTIC PROCESSES
3 credits.

Topics include discrete-time Markov chains, Poisson point processes, continuous-time Markov chains, and renewal processes. Applications to queueing, branching, and other models in science, engineering and business.
Requisites: (STAT/MATH 431, 309, STAT 311 or MATH 531) and (MATH 320, 340, 341, 375, 421 or 531) or graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recall and state the formal definitions of the mathematical objects and their properties for stochastic processes (e.g., discrete space Markov chains, Poisson processes, renewal processes, branching processes, etc.).
Audience: Both Grad & Undergrad

2. Use such definitions to argue that a mathematical object does or does not have the condition of being a particular type or having a particular property (e.g., irreducibility, aperiodicity, recurrence, transience, the Markov property, etc.).
Audience: Both Grad & Undergrad

3. Recall and state the standard theorems of stochastic processes. (e.g., laws of large numbers for Markov chains, existence of limiting/stationary distributions, law of large numbers for renewal processes, etc.) and recall the arguments for these theorems and the underlying logic of their proofs.

Audience: Both Grad & Undergrad

4. Construct mathematical arguments related to the above definitions, properties, and theorems, including the construction of examples and counterexamples.
Audience: Both Grad & Undergrad

5. Convey arguments in oral and written forms using English and appropriate mathematical terminology, notation and grammar.
Audience: Both Grad & Undergrad

6. Model simple real life situations by means of discrete-space stochastic processes and calculate probabilities associated with those processes.
Audience: Both Grad & Undergrad

7. Identify applications of course content in current areas of research.
Audience: Graduate

STAT/B M I 641 – STATISTICAL METHODS FOR CLINICAL TRIALS
3 credits.

Statistical issues in the design of clinical trials, basic survival analysis, data collection and sequential monitoring.
Requisites: STAT/MATH 310 or graduate/professional standing
Course Designation: Breadth - Natural Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

STAT/B M I 642 – STATISTICAL METHODS FOR EPIDEMIOLOGY
3 credits.

Methods for analysis of case-control, cross sectional, and cohort studies. Covers epidemiologic study design, measures of association, rates, classical contingency table methods, and logistic and Poisson regression.
Requisites: STAT/MATH 310 or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Summarize key concepts of statistical methods in epidemiology study: study design, association, causation
Audience: Both Grad & Undergrad

2. Build parametric or semiparametric model for analyzing categorical data and survival data
Audience: Both Grad & Undergrad

3. Utilize model design tools for model performance assessment
Audience: Both Grad & Undergrad

4. Build semiparametric model for analyzing categorical data and survival data
Audience: Graduate

STAT/B M I 643 – CLINICAL TRIAL DESIGN, IMPLEMENTATION, AND ANALYSIS
3 credits.

Gain an understanding of fundamental elements of clinical trials (such as objectives, endpoints, surrogate endpoints, and statistical decisions) and statistical design considerations (such as randomization and blinding). Designs of clinical trials for Phase I, II, and III studies including single-arm, two-arm, and drug combination trials. Introduction to adaptive designs for precision medicine and master protocol designs such as umbrella trials and basket trials.
Requisites: STAT 609, 610, B M I/STAT 641, or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Summarize the objectives of clinical trials and key statistical design components
Audience: Both Grad & Undergrad

2. Design the clinical trials and investigate the operating characteristics of the design to implement clinical trials
Audience: Both Grad & Undergrad

3. Write the protocol section of statistical considerations and communicate the design of clinical trials to both statisticians and clinicians
Audience: Both Grad & Undergrad

4. Build sequential and adaptive methods for clinical trials
Audience: Graduate

STAT 678 – INTRODUCTION TO STATISTICAL CONSULTING
3 credits.

Develop statistical consulting skills to be able to communicate design and analysis to non-technical research collaborators. Provides a supportive environment to experiment with statistical consulting in practice, which will sometimes be uncomfortable and strange. Consulting problems typically do not have a "right" answer, and mistakes are encouraged. Take risks in sharing developing ideas in class. Connections with external organizations, such as the private sector and government agencies, will be made through possible internship experiences.
Requisites: Declared in Statistics MS
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. summarize findings with graphs and non-technical writing
Audience: Graduate

2. ask questions to reveal problem design and study details
Audience: Graduate

3. present design, analysis approach and findings orally in plain language
Audience: Graduate

4. manage time and project workflow effectively
Audience: Graduate

5. contribute as an active member of a research team
Audience: Graduate

STAT 679 – SPECIAL TOPICS IN STATISTICS
1-3 credits.

Special topics in statistics at the master's level. Subject matter varies.
Requisites: Graduate/professional standing or declared in Statistics VISP
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

STAT 681 – SENIOR HONORS THESIS
3 credits.

Mentored individual study for students writing honors thesis, as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025

STAT 682 – SENIOR HONORS THESIS
3 credits.

Mentored individual study for students writing honors thesis, as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2025

STAT 698 – DIRECTED STUDY
1-6 credits.

Directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

STAT 699 – DIRECTED STUDY
1-6 credits.

Directed study projects as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

STAT 701 – APPLIED TIME SERIES ANALYSIS, FORECASTING AND CONTROL I
3 credits.

Theory and application of discrete time series models illustrated with forecasting problems. Principles of iterative model building. Representation of dynamic relations by difference equations. Autoregressive integrated Moving Average models. Identification, fitting, diagnostic checking of models. Seasonal model application to forecasting in business, economics, ecology, and engineering used at each stage, which the student analyzes using computer programs which have been specially written and extensively tested.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

STAT/MATH 709 — MATHEMATICAL STATISTICS I
4 credits.

An introduction to measure theoretic probability, random variables, and high-dimensional statistics; conditional expectation, sufficiency, and unbiased estimation; methods of large sample theory including laws of large numbers and central limit theorems.
Requisites: Declared in Statistics MS, Statistics PhD, Biomedical Data Science PhD, Biomedical Data Science MS, or Statistics Doctoral Minor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Define statistical estimation problems using rigorous mathematicallanguages
Audience: Graduate

2. Derive basic statistical properties of an estimator such as bias andvariance
Audience: Graduate

3. Analyze and compare different statistical estimators, and articulatethe strengths and weaknesses of each method
Audience: Graduate

4. Apply theoretical tools such as concentration inequalities to newstatistical problems in the form of mathematical proofs
Audience: Graduate

5. Articulate the distinctions between classical large-sample statisticaltheory and high-dimensional statistical theory, and critique recentstatistical research
Audience: Graduate

STAT/MATH 710 — MATHEMATICAL STATISTICS II
4 credits.

Estimation theory, efficiency, Neyman-Pearson theory of hypothesis testing, confidence regions, decision theory, likelihood ratio theory, current research topics in mathematical statistics.
Requisites: STAT/MATH 709
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Define and distinguish different notions of optimality in point estimation, hypothesis testing, and confidence sets.
Audience: Graduate

2. Apply standard techniques to derive optimal estimators, hypothesis tests, and confidence sets.
Audience: Graduate

3. Study statistical inference procedures for parametric and non-parametric models.
Audience: Graduate

4. Investigate asymptotic analysis of point estimators, hypothesis tests, and confidence sets.
Audience: Graduate

5. Understand and critique current research in mathematical statistics.
Audience: Graduate

STAT/COMP SCI/I SY E/MATH 726 — NONLINEAR OPTIMIZATION I
3 credits.

Theory and algorithms for nonlinear optimization, focusing on unconstrained optimization. Line-search and trust-region methods; quasi-Newton methods; conjugate-gradient and limited-memory methods for large-scale problems; derivative-free optimization; algorithms for least-squares problems and nonlinear equations; gradient projection algorithms for bound-constrained problems; and simple penalty methods for nonlinearly constrained optimization. Students are strongly encouraged to have knowledge of linear algebra and familiarity with basic mathematical analysis.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

STAT/B M I 727 – THEORY AND METHODS OF LONGITUDINAL DATA ANALYSIS
3 credits.

Theory and methods of fundamental statistical models for the analysis of longitudinal data, including repeated measures analysis of variance, linear mixed models, generalized linear mixed models, and generalized estimating equations. Introduction of how to implement these methods in statistical softwares such as in R and/or SAS, within the context of appropriate statistical models and carry out and interpret analyses.
Requisites: STAT 610
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze longitudinal data in a variety of settings and with a variety of outcome variables
Audience: Graduate

2. Apply statistical methods in fitting longitudinal data models for addressing scientific questions
Audience: Graduate

3. Perform longitudinal data analyses in statistical softwares such as R and/or SAS
Audience: Graduate

4. Interpret and communicate the scientific meanings of the results to both statisticians and non-statisticians (such as clinicians and scientists)
Audience: Graduate

STAT 732 – LARGE SAMPLE THEORY OF STATISTICAL INFERENCE
3 credits.

Stochastic modes of convergence. Asymptotic theory of normed sums of random variables with applications to asymptotic normality of estimators. Methods for deriving limit distributions of nonlinear statistics. Asymptotic relative efficiencies. Asymptotic confidence regions and tests of hypotheses. Models of non-identically distributed or dependent random variables.
Requisites: STAT 610 or MATH/STAT 709
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020

STAT/MATH 733 – THEORY OF PROBABILITY I
3 credits.

An introduction to measure theoretic probability and stochastic processes.Topics include foundations, independence, zero-one laws, laws of large numbers, convergence in distribution, characteristic functions, central limit theorems, random walks, conditional expectations. Familiarity with basic measure theory (e.g. MATH 629 or 721) or concurrent registration in MATH 721 is strongly recommended.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

STAT/MATH 734 – THEORY OF PROBABILITY II
3 credits.

Possible topics include martingales, weak convergence of measures, introduction to Brownian motion.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

STAT/B M I 741 – SURVIVAL ANALYSIS THEORY AND METHODS
3 credits.

Theory and practice of analytic methods for censored survival data, including nonparametric and parametric methods, the proportional hazards regression model, and a review of current topics in survival analysis.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Summarize the features of censored data and their implications in drawing inference
Audience: Graduate

2. Implement proper non- and semi-parametric methods for analysis of various types of data
Audience: Graduate

3. Recognize and check the assumptions needed for estimation and inference
Audience: Graduate

4. Implement the inference procedures to solve real-world problems using statistical packages such as R (or SAS)
Audience: Graduate

5. Interpret and present the analytic results in a clear and coherent way to answer substantive questions
Audience: Graduate

STAT 760 – MULTIVARIATE ANALYSIS I
3 credits.

Multivariate normal distribution, estimation of mean and covariance matrix; Wishart distribution; distribution of partial and multiple correlation coefficients; Hotelling's T-squared, principal components.
Requisites: STAT 610 or MATH/STAT 710
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

STAT 761 – DECISION TREES FOR MULTIVARIATE ANALYSIS
3 credits.

Tree construction, including finding splits, tree-pruning and error estimation. Categorical predictor variables, missing or censored data, prior class-probabilities, and unequal misclassification costs. Selection bias. Comparison with other statistics and machine-learning methods. Extensions to piecewise linear and non-least squares regression models.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

STAT/B M I 768 – STATISTICAL METHODS FOR MEDICAL IMAGE ANALYSIS
3 credits.

Introduce key statistical methods and concepts for analyzing various medical images. Analyze publicly available and student/instructor supplied imaging data using the most up-to-date methods and tools.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Implement the key concepts of biomedical image processing and analysis
Audience: Graduate

2. Describe the key concepts of statistical inference procedures for single and multiple images
Audience: Graduate

3. Apply scalable computation in breaking bigger imaging problems into smaller computable problems
Audience: Graduate

4. Describe functional data analysis (FA), geometric data analysis (GDA) and topological data analysis (TDA) methods in analyzing biomedical images
Audience: Graduate

STAT 771 – COMPUTATIONAL STATISTICS
4 credits.

Statistical inference from the perspective of computation. Statistical problems include data reduction, parameter estimation, hypothesis testing, prediction, statistical modeling, and both Bayesian and non-Bayesian inference. Computational issues include algorithms for model fitting (optimization), computing standard errors, calculating various model properties (integration), as well as systems to organize and manage data and to deploy computations.
Requisites: Declared in Statistics MS, Statistics PhD, Biomedical Data Science PhD, Biomedical Data Science MS, Business PhD, or Statistics Doctoral Minor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Explain, evaluate, and avoid the ill-effects of finite-precision arithmetic in statistical calculations
Audience: Graduate

2. Construct summary statistics from data using multiple algorithms, including best-practice approaches
Audience: Graduate

3. Identify problems for which Monte Carlo simulation is appropriate, and deploy schemes to simulate random variables
Audience: Graduate

4. Recognize statistical model fitting situations where tools from numerical linear algebra are required, and deploy various matrix decompositions for these situations
Audience: Graduate

5. Demonstrate knowledge of basic convex analysis and how this is used to solve statistical optimization problems
Audience: Graduate

6. Describe and deploy algorithmic strategies for both nonlinear and constrained optimization problems that arise in fitting statistical models
Audience: Graduate

7. Construct confidence sets for a parameter, standard errors for an estimator, a p-value for a hypothesis test, or a prediction accuracy estimate for a predictor in both standard and non-standard statistical settings
Audience: Graduate

8. Use graph-based approaches to deploy Bayesian posterior analysis
Audience: Graduate

9. Design, deploy, and justify various Markov-chain Monte Carlo algorithms for statistical inference
Audience: Graduate

10. Outline the structure of specialized optimization tools used in statistics

Audience: Graduate

11. Deploy computations on a variety of data structures using R programming tools
Audience: Graduate

STAT 772 – LINEAR RANDOMIZED ALGORITHMS FOR DATA SCIENCE
3 credits.

Introduce new algorithms that leverage randomization to address the scale, speed, and sensitivity needs of modern data science. Develop the mathematical foundations of such randomized algorithms. Criticize these algorithms through the lens of computational resource utilization. Implement these algorithms to address linear problems in data science.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply common (constructive and inductive) thinking and reasoning patterns used in randomized algorithms for deriving solutions to linear problems arising in data science
Audience: Graduate

2. Transform constructive mathematical reasoning patterns into numerical algorithms, and criticize the computational resource utilization of these algorithms
Audience: Graduate

3. Implement numerical algorithms using the Julia programming language, and become familiar with assistive tools such as debuggers and profilers
Audience: Graduate

4. Create and implement rigorous numerical experiments to test and compare different algorithms and implementations, and draw appropriate conclusions from the results of these experiments
Audience: Graduate

STAT/ECON/GEN BUS 775 – BAYESIAN STATISTICS
3 credits.

Introduces the theory, methods, and computational procedures needed to perform advanced Bayesian data analyses. Predictive and decision-theoretic motivations including subjective probability, risk, admissibility, and exchangeability; highlights key components of Bayesian analysis (i.e., prior, likelihood, posterior, and predictive distributions) within standard parametric models and advanced hierarchical and multilevel models; demonstrates the iterative process of model specification, implementation, criticism, and revision with applied case studies; implements computational techniques (e.g., Markov chain Monte Carlo, variational inference) in modern probabilistic programming languages.
Requisites: STAT 609, 610, 611, STAT/MATH 709, ECON 709, POLI SCI 818, or COMP SCI/E C E 761
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Justify the use of probability for coherent uncertainty quantification
Audience: Graduate

2. Explain how Bayesian updating occurs in conjugate models and hierarchical models
Audience: Graduate

3. Compare and contrast the conceptual and practical benefits and challenges of different posterior approximation strategies like MCMC and variational inference
Audience: Graduate

4. Implement posterior approximation algorithms in modern statistical and probabilistic programming languages such as R or Stan
Audience: Graduate

5. Specify, fit, criticize, and revise Bayesian models in practice
Audience: Graduate

STAT 780 – INTRODUCTION TO QUANTUM DATA SCIENCE
3 credits.

Quantum computation issues, including probability, statistics, sensing, information, machine learning, and applying data science to quantum information science.
Requisites: STAT 601, (STAT 609 and 610), or (STAT 611 and 612)
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Demonstrate understanding of quantum probability, including axioms, observable, outcome, expectation, and distribution.
Audience: Graduate

2. Master quantum statistics methods such as likelihood, information inequality, quantum hypothesis test, and quantum tomography (quantum sensing).
Audience: Graduate

3. Comprehend concept of quantum computation and quantum information, including qubit and its properties, quantum entropy, and quantum cryptography.
Audience: Graduate

4. Understand essential elements of quantum algorithms and quantum machine learning.
Audience: Graduate

5. Understand statistics in quantum computational advantage (supremacy) studies.
Audience: Graduate

STAT 801 – ADVANCED FINANCIAL STATISTICS
3 credits.

Statistical theory and methodology for modern financial data. Topics include financial stochastic models based on time series and stochastic calculus, modern statistical inference, and statistical learning for financial data as well as their applications to financial problems.
Requisites: STAT 601 or 701
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2020

STAT/MATH 803 – EXPERIMENTAL DESIGN I
3 credits.

Summary of matrix algebra required, theory of estimable functions, incomplete blocks, balanced incomplete block designs, partially balanced incomplete block designs.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

STAT 809 – NON PARAMETRIC STATISTICS
3 credits.

Statistical procedures valid under unrestrictive assumptions; sign test; confidence intervals; efficiency comparisons; signed rank procedures; Walsh sums; point estimators; two sample rank tests; zeros, ties, and other problems of discrete data; order statistics; Winsorized and truncated point estimators and connection with gross error models; permutation procedures; combinatorial problems, and computer applications.
Requisites: STAT 610 or MATH/STAT 710
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019

STAT/B M I 828 – SEMIPARAMETRIC METHODS IN DATA SCIENCE
3 credits.

Review of statistical convergence modes, M-estimation, and basics of Hilbert space. Introduction of how to derive the nuisance tangent space, its complement, and the corresponding efficient influence function, from the geometric perspective of semiparametric models. Introduction of how to estimate nuisance functions using machine learning methods, and their implementations in R and/or Python. Introduction of a variety of semiparametric models in missing data analysis, causal inference, dimension reduction, precision medicine, semi-supervised learning, transfer learning and domain adaptation.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Derive the nuisance tangent space, its complement, and the corresponding efficient influence function in semiparametric models
Audience: Graduate

2. Apply a variety of semiparametric methods and models in applications ranging from biomedical studies to social sciences
Audience: Graduate

3. Perform machine learning algorithms for estimating nuisance functions in software such as R and/or Python
Audience: Graduate

STAT/MATH 833 – TOPICS IN THE THEORY OF PROBABILITY
3 credits.

Advanced topics in probability and stochastic processes.
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

STAT 834 – EMPIRICAL PROCESSES AND SEMIPARAMETRIC INFERENCE
1-3 credits.

Empirical process methods in statistics; semiparametric models; stochastic convergence in metric spaces; Glivenko-Cantelli and Donsker theorems; entropy calculations; bootstrapped empirical processes; functional delta method; Z-estimators; M-estimators; rates of convergence; semiparametric efficiency; semiparametric estimating equations; nonparametric maximum likelihood.
Requisites: STAT 610 or MATH/STAT 710
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019

STAT 841 – NONPARAMETRIC STATISTICS AND MACHINE LEARNING METHODS
3 credits.

Statistical function estimation and classification; reproducing kernel machines, support vector machines; high dimensional model selection and estimation; Bayesian, empirical Bayesian interpretation of nonparametric learning methods; log density ANOVA and graphical models; tree ensemble methods including bagging, boosting, and random forest.
Requisites: STAT 610 or MATH/STAT 710
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2019

STAT 849 – ADVANCED STATISTICAL METHODS
4 credits.

Gain thorough grounding in modern statistical methods and theory. Classical and modern statistical techniques, including linear regression models, diagnostic tools, prediction, generalized linear regression models, random effect models, experimental design, and model selection. Apply these techniques to dataset in specific contexts.
Requisites: Declared in Statistics MS, Statistics PhD, Biomedical Data Science PhD, Biomedical Data Science MS, Business PhD, or Statistics Doctoral Minor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Build appropriate regression models given specific contexts.
Audience: Graduate

2. Conduct estimation and inference for regression models: Calculate important quantities, such as MLE and test statistics. Derive important statistical properties, such as distributions of statistics and conducting hypothesis testing
Audience: Graduate

3. Analyze the performance of linear models: The use of goodness-of-fit measurements of models. Describe common issues of model building. Use statistical methods to select between models.Provide interpretation of the built models.
Audience: Graduate

4. Master the concepts and relevant theory for general linear model, especially the inference procedure for binary, multinomial, count and categorical data.
Audience: Graduate

5. Understand the theory and methods for random effect models and experiment design including blocking, nesting, replication.
Audience: Graduate

STAT/COMP SCI/E C E 861 – THEORETICAL FOUNDATIONS OF MACHINE LEARNING
3 credits.

Advanced mathematical theory and methods of machine learning. Statistical learning theory, Vapnik-Chevronenkis Theory, model selection, high-dimensional models, nonparametric methods, probabilistic analysis, optimization, learning paradigms.
Requisites: E C E/COMP SCI 761 or E C E 830
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

STAT/B M I 877 – STATISTICAL METHODS FOR MOLECULAR BIOLOGY
3 credits.

Statistical and computational methods in statistical genomics for human and experimental populations. Review methods for quality control, experimental design, clustering, network analysis, and other downstream analysis of next-generation sequencing studies along with methods for genome wide association studies.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Understand the statistical and computational background underlying many state-of-the-art techniques for the pre-processing and analysis of high-throughput genomics datasets
Audience: Graduate

2. Identify the appropriateness and limitations of such methods in a variety of settings.
Audience: Graduate

3. Discuss scientific problems and identify the statistical and computational aspects embedded in the processing and analysis of genomics datasets.
Audience: Graduate

4. Become proficient in select software packages commonly used in analysis of next-generation sequencing data.
Audience: Graduate

STAT/E C E/MATH 888 – TOPICS IN MATHEMATICAL DATA SCIENCE
1-3 credits.

Advanced topics in the mathematical foundations of data science
Requisites: Graduate/professional standing or member of the Pre-Masters Mathematics (Visiting International) Program
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply advanced mathematical concepts to solve a variety of data science problems
Audience: Graduate

2. Analyze rigorously the mathematical properties of methods used in data science
Audience: Graduate

STAT 990 – RESEARCH
1-12 credits.

Independent research and writing for graduate students under the supervision of a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

STAT 992 – SEMINAR
1-3 credits.

Special topics in statistics at the graduate level. Subject matter varies.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

STAT 998 – STATISTICAL CONSULTING
3 credits.

Consulting apprenticeship.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

SURGERY (SURGERY)

SURGERY 699 – INDEPENDENT STUDY
0-5 credits.

Independent study projects as arranged with faculty or instructional staff.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Develop critical, analytical, and independent thinking skills
Audience: Undergraduate

SURGERY 909 – SURGERY INTERNSHIP PREPARATION
1 credit.

High-yield topics that a surgery intern should know to start of residency. Routine communication skills needed in residency, including writing comprehensive orders and effectively handing off patients. Communication and teamwork skills with healthcare team members. Communication and interpersonal skills in difficult situations, including obtaining informed consent, talking with parents of patients who choose to decline recommended management options, and disclosing complications. Common pediatric skills, including IV placement, umbilical line placement, defibrillation, airway management, lumbar puncture, and suturing. Based on the national Educational Curriculum that was developed by the American College of Surgeons, American Program Director Society, and the Association for Surgical Education, which focuses on focused on essential skills for medical students and PGY-1 residents to successfully navigate the first year of surgical residency.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Write comprehensive admit, transfer, and discharge orders for surgical patients.
Audience: Graduate

2. Manage common electrolyte abnormalities in the surgical patient.
Audience: Graduate

3. Interpret common ancillary testing in the surgical patient (imaging, EKG, labs).
Audience: Graduate

4. Assess and intervene on basic perioperative situations in the surgical patient.
Audience: Graduate

5. Safely function in the role of first responder to an urgent patient situation.
Audience: Graduate

6. Use universal precautions and maintain sterility appropriately.
Audience: Graduate

7. Master the bedside procedures and minor procedures covered in the course.
Audience: Graduate

8. Suture and tie knots using basic techniques.
Audience: Graduate

9. Describe the basics of wound care and management.
Audience: Graduate

10. Prepare for participation in the operating room.
Audience: Graduate

11. Identify key professional and unprofessional behavioral traits in surgical trainees.
Audience: Graduate

12. Develop strategies for addressing professionally challenging situations in surgical residency.
Audience: Graduate

13. Delineate negative connotations of communication failures.

SURGERY 910 – INDEPENDENT READING AND RESEARCH IN SURGERY
2-8 credits.

Independent research under the direct supervision of Surgery, Orthopedics, or Urology faculty. Projects are individualized to meet research goals within the context of faculty research needs.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Formulate a hypothesis or specific objective if study does not involve hypothesis generating research
Audience: Graduate

2. Conduct a thorough literature review of the specific research question
Audience: Graduate

3. Select and apply statistical knowledge methodologies appropriate for the proposed analyses
Audience: Graduate

4. Interpret results correctly and in context of previous findings from literature review
Audience: Graduate

SURGERY 911 – AORTIC DISEASE FROM BENCH TO BEDSIDE
2 credits.

The basics of vascular biology, as it applies to abdominal aortic aneurysm disease. Gain an understanding of pathophysiology of aneurysm disease, animal models of aortic aneurysm, and knowledge on experimental approaches to develop biomarkers and therapeutic strategies. Experience medical treatment of aneurysm disease in the clinic, and how risk factors identified from basic science techniques are applied at the bedside.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Demonstrate mastery of the basics of vascular biology and how this relates to vascular disease
Audience: Graduate

2. Practice techniques involved in studying various aspects of vascular biology
Audience: Graduate

3. Describe the application of vascular biology technique to the study of vascular disease observed in the clinic
Audience: Graduate

4. Demonstrate understanding of the pathophysiology involved in aneurysm development (patient factors and cell biology)
Audience: Graduate

5. Describe how pathophysiology is studied in each of the following: animal models, cell culture, and aortic modeling
Audience: Graduate

6. Identify the factors for aneurysm growth and rupture
Audience: Graduate

SURGERY 912 – AORTIC DISEASE FROM BENCH TO BOARDROOM
2 credits.

The anatomy applicable to abdominal aortic aneurysm repair, how this influenced the development of endografts, and how that development is regulated. Investigate the issues involved in aneurysm screening, and experience aneurysm screening in the clinic and aneurysm repair in the operating room. Discuss what is involved in medical device regulation, and how the medical device industry interacts with physicians to develop and distribute technology. Evaluate how the cost of medical devices is distributed to patients.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Describe how aortic aneurysm physiology have informed trials that established criteria for repair
Audience: Graduate

2. Describe how aortic aneurysm anatomy influences options for endovascular or surgical repair
Audience: Graduate

3. Describe the biological, clinical, and public health factors influencing successful endograft development
Audience: Graduate

4. Explain the process for regulatory evaluation of devices from an engineering standpoint to a patient's perspective.
Audience: Graduate

5. Describe the anatomical details involved in evaluating an endograft for device regulation
Audience: Graduate

6. Describe the science behind the imaging techniques involved in regulating and following endografts clinically.
Audience: Graduate

7. Describe the anatomy and physiology relevant to open abdominal aortic aneurysm repair, and how this may influence a patient's operative course.
Audience: Graduate

8. Describe the anatomy and physiology behind endoleaks, and how this influences post-operative endograft surveillance and need for re-intervention.
Audience: Graduate

9. Explain the biological, clinical, and socio-economic factors involved in advocacy to implement screening for abdominal aortic aneurysm
Audience: Graduate

10. Analyze the costs and charges associated with specific procedures and how this influences treatment choice for specific patient populations
Audience: Graduate

11. Synthesize acquired knowledge of basic science and public health implications of aortic aneurysm disease, clinic trials, repair options, and regulatory evaluation of devices to defend application of a device to specific patient populations.
Audience: Graduate

SURGERY 913 – APPLIED IMMUNOLOGY
2 credits.

Basic, clinical, and translational immunological techniques and advanced/experimental concepts related to immuno-oncology, regenerative medicine, and infectious disease, with relevance to contemporary clinical transplantation.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge of the basic science principles of immunologic foundations of transplantation.
Audience: Graduate

2. Develop familiarity with common immunologic assays.
Audience: Graduate

3. Select patients for treatment, including immunological assessment of risk after transplant.
Audience: Graduate

4. Explain the balance between infectious risks vs oncological vs immunological considerations in solid organ transplantation.
Audience: Graduate

5. Describe new approaches to apply personalized medicine to the immune system in the context of the UW history of regenerative medicine.
Audience: Graduate

6. Describe the scientific method used in a clinical and translational research study.
Audience: Graduate

7. Describe the application of scientific research to patient care.
Audience: Graduate

8. Describe how clinical and translational research findings are discussed with patients.
Audience: Graduate

SURGERY 919 – INDIVIDUALIZED PHASE 3 CLINICAL ELECTIVE IN SURGERY
2-4 credits.

Care for hospitalized patients on general surgery or surgical specialty services. Admit new patients, round on previously admitted patients, participate in multidisciplinary rounds, and work to transition patients to the next level of care. Evaluate and manage patient with both common inpatient conditions and medically complex patients requiring collaboration with consulting specialties. Direct supervision by house staff and attending physicians. Participate in regularly scheduled supervisor-student meetings, which involve some or all of the following: rounding on service patients, participating in scheduled operative procedures, presenting cases and teaching topics, and discussing patient cases. Complete independent activities including some or all of the following: reading about patient conditions and preparing for direct patient care as needed. Complete other patient care related learning activities as assigned by instructors.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a hypothesis driven history and complete a targeted exam
Audience: Graduate

2. Develop and present a weighted differential diagnosis for medical and surgical conditions
Audience: Graduate

3. Using clinical evidence, adapt and justify the working diagnosis
Audience: Graduate

4. Present a diagnostic plan including laboratory and imaging modalities
Audience: Graduate

5. Correctly interpret imaging and laboratory findings and communicate results to patients and team members
Audience: Graduate

6. Develop and implement effective patient management plans
Audience: Graduate

7. Complete written documentation in a comprehensive, concise, accurate and timely manner
Audience: Graduate

8. Review, interpret, and present current literature to support patient care
Audience: Graduate

9. Communicate effectively with patients, families, physicians and non-physician team members
Audience: Graduate

10. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care
Audience: Graduate

11. Engage patients in shared decision making regarding tests, orders, and procedures
Audience: Graduate

12. Avoid medical jargon when communicating with patients and families
Audience: Graduate

SURGERY 920 – GENERAL SURGERY ELECTIVE
2-4 credits.

Direct supervision by General Surgery senior residents, fellows, and attending physicians. Participate in regularly scheduled supervisor-student meetings, which involve some or all of the following: rounding on service patients, participating in scheduled operative procedures, presenting cases and teaching topics, and discussing patient cases. Complete independent activities including some or all of the following: reading about patient conditions and preparing for direct patient care as needed. Attend conferences associated with the assigned general surgery service. Complete other patient care related learning activities as assigned by instructors; these are dependent on the individual student, the patients under the student's care, and the location.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a hypothesis driven history and complete a targeted exam
Audience: Graduate

2. Develop and present a weighted differential diagnosis for medical and surgical conditions
Audience: Graduate

3. Using clinical evidence, adapt and justify the working diagnosis
Audience: Graduate

4. Present a diagnostic plan including laboratory and imaging modalities
Audience: Graduate

5. Correctly interpret imaging and laboratory findings and communicate results to patients and team members
Audience: Graduate

6. Develop and implement effective patient management plans
Audience: Graduate

7. Complete written documentation in a comprehensive, concise, accurate and timely manner
Audience: Graduate

8. Review, interpret, and present current literature to support patient care
Audience: Graduate

9. Communicate effectively with patients, families, physicians and non-physician team members
Audience: Graduate

10. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care
Audience: Graduate

11. Engage patients in shared decision making regarding tests, orders, and procedures
Audience: Graduate

12. Avoid medical jargon when communicating with patients and families
Audience: Graduate

13. Recognize limitations and seek assistance as appropriate
Audience: Graduate

14. Observe the process of obtaining informed consent prior to surgical

SURGERY 938 – INPATIENT ACTING INTERNSHIP-SURGERY
4 credits.

Provides an in-depth exposure to inpatient and operative management of complicated surgical patients. Work under the direct supervision of a senior resident, fellows and faculty. This rotation will provides an opportunity to function at the intern level and play an active role in inpatient management of surgical patients.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop an evidenced-based understanding of the pathophysiology and appropriate management options for common surgical disorders.
Audience: Graduate

2. Discuss the surgical anatomy, common procedural indications, comorbidities, and prophylactic strategies to reduce post-operative complications.
Audience: Graduate

3. Demonstrate basic knowledge regarding common post-operative complications and the appropriate management of each.
Audience: Graduate

4. Describe indications and list the appropriate preoperative evaluations including lab tests, radiographic imaging, and ECG.
Audience: Graduate

5. Identify and describe use of common instruments used in surgery.
Audience: Graduate

6. Discuss common intraoperative complications associated with procedures and the appropriate management of each.
Audience: Graduate

7. Gather a history and perform a physical examination for a surgical patient
Audience: Graduate

8. Prioritize a differential diagnosis following a clinical encounter
Audience: Graduate

9. Recommend and interpret common diagnostic and screening tests
Audience: Graduate

10. Enter and discuss patient orders
Audience: Graduate

11. Document a clinical encounter in the patient record
Audience: Graduate

12. Provide an oral presentation of a clinical encounter
Audience: Graduate

13. Form clinical questions and retrieve evidence to advance patient care
Audience: Graduate

14. Give or receive a patient handover to transition care responsibility
Audience: Graduate

15. Collaborate as a member of an interprofessional team
Audience: Graduate

SURGERY 944 – UPPER EXTREMITY ORTHOPAEDIC CLERKSHIP-MARSHFIELD CLINIC
2-12 credits.

Clinical elective for fourth year medical students.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

SURGERY 948 – OTOLARYNGOLOGY ELECTIVE
2-4 credits.

Direct supervision by Otolaryngology senior residents, fellows, and attending physicians. Participate in regularly scheduled supervisor-student meetings, which involve some or all of the following: rounding on service patients, participating in scheduled operative procedures, presenting cases and teaching topics, and discussing patient cases. Complete independent activities including some or all of the following: reading about patient conditions and preparing for direct patient care as needed. Attend conferences associated with the assigned general surgery service. Complete other patient care related learning activities as assigned by instructors; these are dependent on the individual student, the patients under the student's care, and the location.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a hypothesis driven history and complete a targeted exam
Audience: Graduate

2. Develop and present a weighted differential diagnosis for medical and surgical conditions
Audience: Graduate

3. Using clinical evidence, adapt and justify the working diagnosis
Audience: Graduate

4. Present a diagnostic plan including laboratory and imaging modalities
Audience: Graduate

5. Correctly interpret imaging and laboratory findings and communicate results to patients and team members
Audience: Graduate

6. Develop and implement effective patient management plans
Audience: Graduate

7. Complete written documentation in a comprehensive, concise, accurate and timely manner
Audience: Graduate

8. Review, interpret, and present current literature to support patient care
Audience: Graduate

9. Communicate effectively with patients, families, physicians and non-physician team members
Audience: Graduate

10. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care
Audience: Graduate

11. Engage patients in shared decision making regarding tests, orders, and procedures
Audience: Graduate

12. Avoid medical jargon when communicating with patients and families
Audience: Graduate

13. Recognize limitations and seek assistance as appropriate
Audience: Graduate

14. Observe the process of obtaining informed consent prior to surgical

SURGERY 954 – PERIPHERAL VASCULAR ELECTIVE
2-4 credits.

Direct supervision by Peripheral Vascular Surgery senior residents, fellows, and attending physicians. Participate in regularly scheduled supervisor-student meetings, which involve some or all of the following: rounding on service patients, participating in scheduled operative procedures, presenting cases and teaching topics, and discussing patient cases. Complete independent activities including some or all of the following: reading about patient conditions and preparing for direct patient care as needed. Attend conferences associated with the assigned general surgery service. Complete other patient care related learning activities as assigned by instructors; these are dependent on the individual student, the patients under the student's care, and the location.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a hypothesis driven history and complete a targeted exam
Audience: Graduate

2. Develop and present a weighted differential diagnosis for medical and surgical conditions
Audience: Graduate

3. Using clinical evidence, adapt and justify the working diagnosis
Audience: Graduate

4. Present a diagnostic plan including laboratory and imaging modalities
Audience: Graduate

5. Correctly interpret imaging and laboratory findings and communicate results to patients and team members
Audience: Graduate

6. Develop and implement effective patient management plans
Audience: Graduate

7. Complete written documentation in a comprehensive, concise, accurate and timely manner
Audience: Graduate

8. Review, interpret, and present current literature to support patient care
Audience: Graduate

9. Communicate effectively with patients, families, physicians and non-physician team members
Audience: Graduate

10. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care
Audience: Graduate

11. Engage patients in shared decision making regarding tests, orders, and procedures
Audience: Graduate

12. Avoid medical jargon when communicating with patients and families
Audience: Graduate

13. Recognize limitations and seek assistance as appropriate
Audience: Graduate

14. Observe the process of obtaining informed consent prior to surgical

SURGERY 956 – PLASTIC AND RECONSTRUCTIVE SURGERY ELECTIVE
2-4 credits.

Direct supervision by Plastic Surgery senior residents and attending physicians. Participate in regularly scheduled supervisor-student meetings, which involve some or all of the following: rounding on service patients, participating in scheduled operative procedures, presenting cases and teaching topics, and discussing patient cases. Complete independent activities including some or all of the following: reading about patient conditions and preparing for direct patient care as needed. Attend conferences associated with the assigned general surgery service. Complete other patient care related learning activities as assigned by instructors; these are dependent on the individual student, the patients under the student's care, and the location.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a hypothesis driven history and complete a targeted exam
Audience: Graduate

2. Develop and present a weighted differential diagnosis for medical and surgical conditions
Audience: Graduate

3. Using clinical evidence, adapt and justify the working diagnosis
Audience: Graduate

4. Present a diagnostic plan including laboratory and imaging modalities
Audience: Graduate

5. Correctly interpret imaging and laboratory findings and communicate results to patients and team members
Audience: Graduate

6. Develop and implement effective patient management plans
Audience: Graduate

7. Complete written documentation in a comprehensive, concise, accurate and timely manner
Audience: Graduate

8. Review, interpret, and present current literature to support patient care
Audience: Graduate

9. Communicate effectively with patients, families, physicians and non-physician team members
Audience: Graduate

10. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care
Audience: Graduate

11. Engage patients in shared decision making regarding tests, orders, and procedures
Audience: Graduate

12. Avoid medical jargon when communicating with patients and families
Audience: Graduate

13. Recognize limitations and seek assistance as appropriate
Audience: Graduate

SURGERY 960 – TRANSPLANTATION ELECTIVE
2-4 credits.

Direct supervision by Transplant fellows and attending physicians. Participate in regularly scheduled supervisor-student meetings, which involve some or all of the following: rounding on service patients, participating in scheduled operative procedures, presenting cases and teaching topics, and discussing patient cases. Complete independent activities including some or all of the following: reading about patient conditions and preparing for direct patient care as needed. Attend conferences associated with the assigned general surgery service. Complete other patient care related learning activities as assigned by instructors; these are dependent on the individual student, the patients under the student's care, and the location.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a hypothesis driven history and complete a targeted exam
Audience: Graduate

2. Develop and present a weighted differential diagnosis for medical and surgical conditions
Audience: Graduate

3. Using clinical evidence, adapt and justify the working diagnosis
Audience: Graduate

4. Present a diagnostic plan including laboratory and imaging modalities
Audience: Graduate

5. Correctly interpret imaging and laboratory findings and communicate results to patients and team members
Audience: Graduate

6. Develop and implement effective patient management plans
Audience: Graduate

7. Complete written documentation in a comprehensive, concise, accurate and timely manner
Audience: Graduate

8. Review, interpret, and present current literature to support patient care
Audience: Graduate

9. Communicate effectively with patients, families, physicians and non-physician team members
Audience: Graduate

10. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care
Audience: Graduate

11. Engage patients in shared decision making regarding tests, orders, and procedures
Audience: Graduate

12. Avoid medical jargon when communicating with patients and families
Audience: Graduate

13. Recognize limitations and seek assistance as appropriate
Audience: Graduate

14. Observe the process of obtaining informed consent prior to surgical

SURGERY 962 – SURGICAL CRITICAL CARE ELECTIVE
2-4 credits.

Direct supervision by General Surgery senior residents, fellows, and attending physicians. Participate in regularly scheduled supervisor-student meetings, which involve some or all of the following: rounding on service patients, participating in scheduled operative procedures, presenting cases and teaching topics, and discussing patient cases. Complete independent activities including some or all of the following: reading about patient conditions and preparing for direct patient care as needed. Attend conferences associated with the assigned general surgery service. Complete other patient care related learning activities as assigned by instructors; these are dependent on the individual student, the patients under the student's care, and the location.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a hypothesis driven history and complete a targeted exam
Audience: Graduate

2. Develop and present a weighted differential diagnosis for medical and surgical conditions
Audience: Graduate

3. Using clinical evidence, adapt and justify the working diagnosis
Audience: Graduate

4. Present a diagnostic plan including laboratory and imaging modalities
Audience: Graduate

5. Correctly interpret imaging and laboratory findings and communicate results to patients and team members
Audience: Graduate

6. Develop and implement effective patient management plans
Audience: Graduate

7. Complete written documentation in a comprehensive, concise, accurate and timely manner
Audience: Graduate

8. Review, interpret, and present current literature to support patient care
Audience: Graduate

9. Communicate effectively with patients, families, physicians and non-physician team members
Audience: Graduate

10. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care
Audience: Graduate

11. Engage patients in shared decision making regarding tests, orders, and procedures
Audience: Graduate

12. Avoid medical jargon when communicating with patients and families
Audience: Graduate

13. Recognize limitations and seek assistance as appropriate
Audience: Graduate

14. Observe the process of obtaining informed consent prior to surgical

SURGERY 963 – CARDIOTHORACIC SURGERY ELECTIVE
2-4 credits.

Direct supervision by Cardiothoracic fellows and attending physicians. Participate in regularly scheduled supervisor-student meetings, which involve some or all of the following: rounding on service patients, participating in scheduled operative procedures, presenting cases and teaching topics, and discussing patient cases. Complete independent activities including some or all of the following: reading about patient conditions and preparing for direct patient care as needed. Attend conferences associated with the assigned general surgery service. Complete other patient care related learning activities as assigned by instructors; these are dependent on the individual student, the patients under the student's care, and the location.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a hypothesis driven history and complete a targeted exam
Audience: Graduate

2. Develop and present a weighted differential diagnosis for medical and surgical conditions
Audience: Graduate

3. Using clinical evidence, adapt and justify the working diagnosis
Audience: Graduate

4. Present a diagnostic plan including laboratory and imaging modalities
Audience: Graduate

5. Correctly interpret imaging and laboratory findings and communicate results to patients and team members
Audience: Graduate

6. Develop and implement effective patient management plans
Audience: Graduate

7. Complete written documentation in a comprehensive, concise, accurate and timely manner
Audience: Graduate

8. Review, interpret, and present current literature to support patient care
Audience: Graduate

9. Communicate effectively with patients, families, physicians and non-physician team members
Audience: Graduate

10. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care
Audience: Graduate

11. Engage patients in shared decision making regarding tests, orders, and procedures
Audience: Graduate

12. Avoid medical jargon when communicating with patients and families
Audience: Graduate

13. Recognize limitations and seek assistance as appropriate
Audience: Graduate

14. Observe the process of obtaining informed consent prior to surgical

SURGERY 973 – OPTIMIZING VALUE, QUALITY AND SAFETY IN HEALTHCARE
2 credits.

An in-depth understanding of the key concepts of value, quality and safety is critical to the education of future physicians. The majority of adverse events experienced by hospitalized patients occur in surgery. Surgery offers the ideal setting to explore these three components critical to improving the US healthcare system. Examine factors that influence the care we provide and critically consider the value of this care. Observe efforts to improve value in surgery focusing on quality, safety and appropriate utilization of critical resources and consider areas for improvement. Follow patients in all processes of care from clinic, to the operating room, through their postoperative course, to discharge, and consider how important measures to secure safety and quality are encountered and impact care in the clinical arena. Consider price and allocation of scarce resources. Gather information for their analysis of the patient experience.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Demonstrate understanding of system efforts to promote high value healthcare.
Audience: Graduate

2. Integrate understanding of complex care for individuals with policy or institutional level strategies to improve health
Audience: Graduate

3. Identify processes or attitudes that may (or may not) provide for the fair and just distribution of healthcare resources.
Audience: Graduate

SURGERY 974 – PATIENT EDUCATION AS A STRATEGY FOR ADVOCACY
2 credits.

Develop knowledge of how people learn, adult learning principles, and how these apply to medicine. Learn and practice effective interpersonal communication techniques. Reflect on your own strategies for communicating with patients, and develop and implement a plan to improve your communication with patients. Effective communication and patient education allows physicians to act as advocates for their patients. Discuss barriers to patient education, and strategies to mitigate those barriers. Gain insight into communication and education strategies for patients with communication issues.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate understanding of how people learn and adult learning principles and how these apply to medicine
Audience: Graduate

2. Apply effective interpersonal communication techniques.
Audience: Graduate

3. Recognize how effective communication and patient education allows physicians to act as advocates for their patients.
Audience: Graduate

4. Identify barriers to patient education and use strategies to mitigate those barriers.
Audience: Graduate

5. Demonstrate knowledge of communication and education strategies for patients with communication issues.
Audience: Graduate

SURGERY 975 – MULTIDISCIPLINARY APPROACHES TO COLON CANCER PREVENTION/TREATMENT
2 credits.

Explore the reasons behind failure of colorectal cancer screening programs. Learn the standard of care for prevention, diagnosis, and treatment of colorectal cancer. Focus on all facets of the disease, with active engagement in dialogue to improve screening programs for colorectal cancer. Learn to identify methods to improve medical care and population health. Explore background studies to integrate emerging information on individual's biologic and genetic risk with population-level factors when deciding upon prevention and treatment options. Work with the various members of the healthcare team involved in treating colorectal cancer and educate the public on the importance of colorectal cancer screening.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the principles of developing a successful cancer screening program.
Audience: Graduate

2. Identify the limitations of current cancer screening strategies.
Audience: Graduate

3. Identify barriers to participation in colon cancer screening program.
Audience: Graduate

4. Identify the pros and cons of various tests to screen for colorectal cancer and determine which are ideal from the physician's and patient's perspective as well as from the public health perspective.
Audience: Graduate

5. Identify the group of patients who will benefit from chemotherapy and radiation therapy.
Audience: Graduate

6. Identify the goals of radiation therapy.
Audience: Graduate

7. Identify the negative side effects of various therapies.
Audience: Graduate

8. Examine the role of surgery in the treatment of colorectal cancer.
Audience: Graduate

9. Effectively utilize the principles and optimal timing of the workup of colorectal cancer.
Audience: Graduate

10. Better identify the genetics of colorectal cancer and the impact on screening programs.
Audience: Graduate

SURGERY 976 – THE SCIENCE OF OBESITY AND DIABETES
2 credits.

The science of diabetes and obesity as it correlates to the clinical setting. The history of endocrinology and discovery of insulin will provide the basis for understanding hormonal mechanisms controlling fuel metabolism and how these processes become dysfunctional in different disease states. Topics will include pancreatic and extrapancreatic control of metabolism, and diseases linked with obesity, including PCOS, type 2 diabetes, and cancer. Lifestyle, medical, and surgical treatments of obesity and diabetes, including pharmacologic mechanisms of insulin and non-insulin diabetes therapeutics and bariatric surgery, will be highlighted. The public health perspective will shine light on societal factors that influence obesity and diabetes care. Provides an advanced scientific foundation with which to approach evidence-based care and treatment of individuals with obesity and/or diabetes.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the prevalence of obesity and diabetes and discuss the impact of these conditions on health care costs
Audience: Graduate

2. Describe the history of endocrinology and the discovery of insulin and illustrate how key scientific contributions have influenced the modern practice of medicine
Audience: Graduate

3. Discuss the biology of digestion and calorie expenditure on weight regulation and the development of obesity.
Audience: Graduate

4. Illustrate the interplay among neurological, microbiota, and hormonal effects driving insulin resistance, obesity, and type 2 diabetes.
Audience: Graduate

5. Illustrate the roles of insulin-sensitive tissues in the development of the pathological inflammatory, hyperglycemic, and dyslipidemic state(s) of obesity and diabetes.
Audience: Graduate

6. Identify obesity-related diseases and syndromes, and discuss unique challenges these pose in the care of the obese/diabetic patient
Audience: Graduate

7. Discuss the mechanisms behind pediatric obesity and summarize the effects on childhood development and ways to combat and prevent pediatric obesity
Audience: Graduate

8. Identify the unique challenges in assessing the adult patient with obesity, including history and physical considerations as well as lab abnormalities commonly seen in the obese
Audience: Graduate

9. Discuss the available lifestyle, medical, and surgical treatments for obesity and diabetes, demonstrating knowledge of the science behind these treatments
Audience: Graduate

10. Identify ways that discrimination and prejudice of obese/diabetic patients exists and affects their care and outcomes
Audience: Graduate

SURGERY 977 – INJURY AND VIOLENCE PREVENTION
4 credits.

The concept of injury prevention is inherently challenging, despite the systemic global public health problem of violence and injuries. Provides a foundation to approach injury prevention and control. Incorporates curriculum from TEACH-VIP (Training, Educating, and Advancing Collaboration in Health on Violence and Injury Prevention).
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020
Learning Outcomes: 1. Identify resources for injury prevention at the state, national, and international level
Audience: Graduate

2. Identify community partners at the local and state level in injury prevention
Audience: Graduate

3. Place an injury into the Haddon matrix and identify places for intervention
Audience: Graduate

4. Explain the concept of cost-effective analysis and demonstrate basic use of cost-effective analysis.
Audience: Graduate

5. Describe a variety of successful injury prevention interventions.
Audience: Graduate

6. Examine the role of legislation in injury prevention.
Audience: Graduate

SURGERY 981 – MINDFULNESS TRAINING FOR RESIDENCY
1 credit.

Gain familiarity with Mindfulness-Based Stress Reduction interventions that have been shown to increase physician well-being and build resiliency. Cultivate non-judgmental and calm awareness of the present moment. Learn and practice formal and informal mindfulness meditation practices. Research mindfulness skills and their benefits to physicians. Understand guided mindful activities. Adapt individualized mindfulness techniques.
Requisites: Declared in Doctor of Medicine program with fourth year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Effectively practice the principles of mindfulness-based stress reduction
Audience: Graduate

2. Gain experience and practice in contemplative movement, 3-point body scan, and breath awareness practice
Audience: Graduate

3. Develop body and breath awareness and how they can be used to be present with emotions and sensations present during everyday clinical practice
Audience: Graduate

4. Explore the evidence surrounding the neuroscience and clinical applications of meditation
Audience: Graduate

5. Develop self-compassion and loving-kindness meditations and practices
Audience: Graduate

6. Enhance communication skills and compassionate relationships with patients and colleagues
Audience: Graduate

SURGERY 982 – SURGICAL AND PROCEDURAL CARE EDUCATION TEACHING ELECTIVE
2 credits.

Learn effective methods of teaching procedural skills and of small group case-based learning (CBL) facilitation. Demonstrate effective teaching strategies when instructing more junior medical students in in-person procedural skills (e.g., suturing, knot-tying, ultrasound/doppler, intubation) and facilitating virtual CBL learning. Bolster mastery in surgical and procedural education.
Requisites: MED SC-M 810, 811, 812, and 813 and declared in Doctor of Medicine with fourth-year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Use effective surgical and procedural teaching practices.
Audience: Graduate

2. Develop effective small-group facilitation skills.
Audience: Graduate

3. Demonstrate effective teaching strategies alongside resident and faculty teachers in the Sim lab and CBL didactic sessions
Audience: Graduate

4. Mentor Phase 2 (more junior) students and assist them in their introduction to surgical and procedural care
Audience: Graduate

5. Reflect on specific feedback on applied education and facilitation skills
Audience: Graduate

SURGERY 983 – COMMON ANORECTAL DISEASES
2 credits.

The diagnosis and treatment of common anorectal diseases in the context of anatomical and physiological basis as it correlates to the clinical setting. The medical and surgical treatment of anorectal disorders will be discussed from the historical background to modern management algorithms. Topics will include fissures, perirectal abscess, fistula-in-ano, external and internal hemorrhoidal diseases, pruritus ani, fecal incontinence, rectal prolapse, obstructive defecation, sexually transmitted infections, and various anorectal manifestations of irritable bowel disease. Symptomatic presentation and natural progression of each of these disease processes will be discussed. Provide a sound scientific foundation with which to approach evidence-based diagnosis, triage, and treatment of patients with acute versus chronic anorectal disorders.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Describe the normal anatomy of the male and female pelvic floor, structural relationships of the pelvic organs, with special focus on the rectum, anal canal, and perianal spaces
Audience: Graduate

2. Describe the physiology and function of the anal sphincter complex and various defecatory reflexes
Audience: Graduate

3. Discuss the biology of stool formation, propulsion, and expulsion
Audience: Graduate

4. Describe the dietary roles of soluble and insoluble fiber in digestion, and its role in treatment strategies of benign anorectal disorders
Audience: Graduate

5. Describe the anatomical basis of symptomatic internal and external hemorrhoidal disorders in relation to their presentation and natural progression
Audience: Graduate

6. Discuss the surgical options in the treatment of different grades of internal hemorrhoids and the complications associated with each
Audience: Graduate

7. Discuss the etiology of perirectal abscesses and their progression/relationship to fistula-in-ano
Audience: Graduate

8. Describe the various types of fistula-in-ano, diagnostic techniques and imaging modalities, and treatment strategies
Audience: Graduate

9. Explain the rationale for medical versus surgical treatment options for anal fissures
Audience: Graduate

10. Identify the various lifestyle and dietary etiologies for pruritis ani, and explain the rational for treatment algorithm
Audience: Graduate

11. Differentiate between presentations of thrombosed external hemorrhoid, strangulated or prolapsed internal hemorrhoid, and rectal prolapse
Audience: Graduate

SURGERY/MED HIST 984 – TRANSPLANT ETHICS
2 credits.

Understand and analyze the ethics of transplantation practice and policy in the U.S. health care system, especially considering ethical criticisms made by and on behalf of the diverse populations it serves. Gain an understanding of philosophical debates over important issues in transplant ethics. Hone the craft of constructing ethical arguments, and foreseeing and responding to potential objections.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate understanding of transplant-related dimensions of the U.S. health care system.
Audience: Graduate

2. Critically analyze transplant candidate evaluation, deceased donor allocation policy, ethics of living donation, and novel transplant and procurement techniques using the tools of ethical analysis.
Audience: Graduate

3. Exposit others' ethical claims and arguments about transplant ethics clearly, concisely, and charitably.
Audience: Graduate

SURGICAL SCIENCES (SURG SCI)

SURG SCI 501 – RADIOGRAPHIC ANATOMY OF THE DOG AND CAT
1 credit.

Normal radiographic anatomy of the dog and cat. This will include soft tissue structures as well as the skeletal system. Clinical case material to emphasize the need for a thorough knowledge of normal radiographic anatomy.
Requisites: Declared in Doctor of Veterinary Medicine with first year standing
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024
Learning Outcomes: 1. Recognize normal anatomic structures of the dog, cat and bird on radiographs
Audience: Undergraduate

2. By comparing to normal, name the site of a radiographic abnormality
Audience: Undergraduate

3. Identify locations of ossification centers and physes
Audience: Undergraduate

4. Recall basic principles of radiography
Audience: Undergraduate

SURG SCI 542 – VETERINARY OPHTHALMOLOGY
2 credits.

Provides basic instruction in the application of ophthalmic diagnostics and therapeutics to small and large domestic animals. Acquire skills and knowledge to accurately diagnose, treat, prognose or refer domestic animals with common ophthalmic disorders.
Requisites: Declared in Doctor of Veterinary Medicine with third year standing
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify common ophthalmic diseases and abnormalities in veterinary patients.
Audience: Undergraduate

2. Interpret ophthalmic examination findings from descriptions and/or pictures.
Audience: Undergraduate

3. Interpret results of basic ophthalmic tests routine performed in general practice.
Audience: Undergraduate

4. Formulate differential diagnoses for ophthalmic examination findings.
Audience: Undergraduate

5. Devise a treatment plan for common ophthalmic diseases.
Audience: Undergraduate

SURG SCI 543 – FUNDAMENTALS OF ANESTHESIOLOGY I
1 credit.

Covers basic principles of sedation, pain physiology, anesthetic drugs, anesthetic monitoring, and the practical considerations in performing anesthesia on healthy veterinary species. Case-based and interactive where appropriate.
Requisites: Declared in Doctor of Veterinary Medicine with second year standing
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand and remember the pharmacodynamics and pharmacokinetics of anesthetic drugs
Audience: Graduate

2. Identify the components of the anesthesia machine and describe their function.
Audience: Graduate

3. Identify anesthetic monitors and techniques and describe their function and data collected.
Audience: Graduate

4. Design effective monitoring and supportive care plans for patients.
Audience: Graduate

5. Identify pain in animals and select appropriate treatment.
Audience: Graduate

SURG SCI 544 – SURGERY FUNDAMENTALS
2 credits.

Introductory material on the scientific foundations of surgery. Preparation for clinical work in veterinary surgery and medicine.
Requisites: Declared in Doctor of Veterinary Medicine with second year standing
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and describe intended use of common surgical instruments in veterinary surgical procedures
Audience: Undergraduate

2. Describe the differences between the various methods of sterilization and disinfection
Audience: Undergraduate

3. Perform simple suture patterns and secure knot tying techniques
Audience: Undergraduate

4. Describe basic properties of suture material and needles
Audience: Undergraduate

5. Apply sterile technique to patient preparation for surgery
Audience: Undergraduate

6. Describe how various tissues respond to injury
Audience: Undergraduate

7. Describe the steps necessary to complete a preoperative assessment of a surgical patient
Audience: Undergraduate

8. Describe the basic concepts of postoperative care of a surgical patient
Audience: Undergraduate

SURG SCI 545 – FUNDAMENTALS OF ANESTHESIOLOGY II
1 credit.

Focus on anesthetic management of common veterinary species with concurrent medical disease. Covers advanced pain management principles and techniques, anesthesia for exotic animal species, and breed considerations in anesthesia. Case-based and interactive where appropriate.
Requisites: Declared in Doctor of Veterinary Medicine with third year standing
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Implement the pharmacodynamics and pharmacokinetics of anesthetic drugs.
Audience: Undergraduate

2. Design individualized anesthetic plans for patients with co-existing disease.
Audience: Undergraduate

3. Identify abnormalities in anesthetized patients and demonstrate effective ways to remedy the abnormalities.
Audience: Undergraduate

4. Design effective monitoring and supportive care plans for patients.
Audience: Undergraduate

5. Identify pain in animals and select appropriate treatment.
Audience: Undergraduate

6. Demonstrate knowledge associated with euthanasia.
Audience: Undergraduate

7. Demonstrate knowledge of CPR.
Audience: Undergraduate

SURG SCI/F&W ECOL 548 – DISEASES OF WILDLIFE
3 credits.

Provides an overview of the issues involved across a wide range of wildlife diseases, presented within the context of ecosystem health or "one health". Content will be on the biological, epidemiological, clinical, public health and, in some cases, sociopolitical ramifications of wildlife diseases. Covers a wide variety of wildlife diseases caused by bacteria, viruses, parasites, prions, and environmental contaminants. Consequences associated with environmental changes on the manifestation of wildlife diseases will also be discussed. This range of diseases will be presented in order to familiarize the many facets involved in disease management, from animal and human health issues, to ecological and environmental considerations, to the role of society in contributing to, and managing, these diseases.
Requisites: BOTANY/BIOLOGY 130, (ZOOLOGY/BIOLOGY 101 and 102), ZOOLOGY/BIOLOGY/BOTANY 151, BIOCORE 381, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain how an infection differs from disease.
Audience: Undergraduate

2. Recognize different groups of infectious microorganisms: viruses, bacteria, fungi, parasites, prions, etc.
Audience: Undergraduate

3. Define and describe ecosystem health or one health.
Audience: Undergraduate

4. Define the terms zoonosis, zoonoses, and zoonotic.
Audience: Undergraduate

5. Evaluate how anthropogenic influences exacerbate transmission of zoonotic diseases.
Audience: Undergraduate

6. Describe and explain the epidemiological concepts related to each wildlife disease presented in this course.
Audience: Undergraduate

7. Recognize diseases that are specific to animal groups or humans, or are nonspecific, having the potential to infect many different species.
Audience: Undergraduate

SURG SCI 630 – SMALL ANIMAL SURGERY
4 credits.

The pathophysiology and diagnosis of common general, orthopedic, and neurologic surgical diseases of small animals are presented. The operative management and postoperative care of small animal surgical patients are discussed in detail.
Requisites: Declared in Doctor of Veterinary Medicine with third year standing
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the problems that may benefit from surgical intervention that are typically encountered in a given organ system, how these diseases or problems present, and what surgical interventions are typically implemented to improve the problem.
Audience: Undergraduate

2. Explain the surgical techniques employed for treatment of disease/problems in a given organ system and the complications that may arise related to surgery.
Audience: Undergraduate

3. Compare both short- and long-term prognoses for diseases or clinical problems in a given organ system with and without surgical treatment to facilitate assessment of the benefits of surgery versus other courses of action such as conservative management.
Audience: Undergraduate

4. Summarize the principles that guide the evaluation of a lame dog or cat.
Audience: Undergraduate

5. Describe the principles of physical examination of a lame dog or cat.
Audience: Undergraduate

6. Take a history of a lame dog or cat and list likely differential diagnoses for the patient.
Audience: Undergraduate

7. Select appropriate diagnostic tests for evaluation of patients with locomotor system disease and interpret abnormal results and their significance.
Audience: Undergraduate

8. Choose appropriate medical or surgical therapy to enable effective management of animals with locomotor system disease.
Audience: Undergraduate

9. Offer appropriate advice on prognosis and complications for clients owning animals with locomotor system disease.
Audience: Undergraduate

10. List the common congenital, developmental and acquired locomotor system diseases of the dog and cat, and describe how these alter locomotor system function.
Audience: Undergraduate

11. Describe the etiology and pathogenesis of common locomotor diseases in the dog and cat and recognize pathological lesions associated with these diseases.
Audience: Undergraduate

12. Describe the alterations that take place in bone, cartilage, tendon and ligament in response to disease.
Audience: Undergraduate

SURG SCI 631 – LARGE ANIMAL SURGERY: ORTHOPEDIC AND SOFT TISSUE
3 credits.

Examination techniques, diagnostic aids and surgical procedures relevant to the gastrointestinal, integumentory, musculoskeletal, respiratory and genitourinary systems of the equine and food animal species.
Requisites: Declared in Doctor of Veterinary Medicine with third year standing
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize key concepts in large animal surgery, including but not limited to common signalments, relevant history, risk factors, diagnostic methods, and pathophysiology for commonly encountered diseases in upper airway surgery, urogenital surgery, orthopedic surgery, gastrointestinal surgery, wounds and laceration care.
Audience: Undergraduate

2. Describe the basic elements of lameness evaluation, localization, and diagnosis in the horse.
Audience: Undergraduate

3. Explain specific treatment options, both surgical and non-surgical, for common diseases including potential benefits and complications associated with prescribed therapeutics.
Audience: Undergraduate

4. Describe factors that contribute to outcomes and prognosis for specific large animal patients and surgical procedures.
Audience: Undergraduate

5. Apply concepts of anatomy, diagnostic imaging, clinical pathology and other relevant areas, to the evaluation, treatment, and prognosis of large animals with surgical conditions.
Audience: Undergraduate

SURG SCI 632 – SMALL ANIMAL SURGERY LABORATORY
2 credits.

Basic skills necessary for participation in the surgical management of small animals in the Veterinary Medical Teaching Hospital.
Requisites: Declared in Doctor of Veterinary Medicine with third year standing
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and describe the function of common surgical instruments
Audience: Undergraduate

2. Identify and describe the important properties of common suture materials and understand the indications for their use
Audience: Undergraduate

3. Perform a comprehensive physical examination of a small animal patient and determine pertinent differential diagnoses, if any based on that physical exam
Audience: Undergraduate

4. Perform a complete surgical station set-up, including selection and knowledge of appropriate intra- operative patient monitoring equipment and thermoregulatory units
Audience: Undergraduate

5. Demonstrate proper aseptic surgical technique including open and closed gloving, re-gloving, gowning, draping, rough and sterile patient surgical preparation
Audience: Undergraduate

6. Demonstrate proficiency with various surgical techniques, including but not limited to the creation and closing of an incision, proper tissue handling techniques, and instrument handling and appropriate suture patterns and knot tying
Audience: Undergraduate

7. Perform post-operative incision care and recognize and differentiate post-operative complications
Audience: Undergraduate

8. Maintain proper medical records for a routine surgical case
Audience: Undergraduate

SURG SCI 634 – SMALL ANIMAL ANESTHESIA LABORATORY
1 credit.

Apply principles and techniques of veterinary anesthesiology to common companion animals.
Requisites: Declared in Doctor of Veterinary Medicine with third year standing
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and summarize the important properties of common pharmaceuticals administered pre, intra and post-operatively for sedation, analgesia, induction, and maintenance of anesthesia
Audience: Undergraduate

2. Identify and summarize the important properties of common patient monitoring equipment, including but not limited to: pulse oximeter (heart rate & SpO2), Doppler (blood pressure & heart rate), temperature probes, capnometers/capnographs (EtCO2 & respiration)
Audience: Undergraduate

3. Perform a comprehensive physical examination of a small animal patient, determine pertinent differential diagnoses based on that physical exam, prioritize and perform relevant diagnostic tests and therapeutics to resolve any health problems as part of a pre-anesthetic work-up
Audience: Undergraduate

4. Perform complete anesthetic station set-up, including selection and knowledge of appropriate intra- operative patient monitoring equipment and thermoregulatory units
Audience: Undergraduate

5. Demonstrate proper anesthetic technique for the following- intravenous catheterization, intramuscular, subcutaneous and intravenous injections, anesthetic induction, intubation, patient positioning and maintenance and recovery of general anesthesia in a small animal patient
Audience: Undergraduate

6. Calculate proper intravenous fluid amounts, set up a proper fluid administration set for each patient, and deliver prescribed amounts of fluids both subcutaneously and intravenously peri-operative
Audience: Undergraduate

7. Show proficiency with various anesthetic breathing systems (Modified Mapleson D systems) and rebreathing systems (F & Y circle systems) and machines (Drager's & Versa II's), including set-up, pressure checking, and checking/filling inhalant levels
Audience: Undergraduate

8. Recognize, differentiate and mitigate peri-operative anesthetic complications and pain
Audience: Undergraduate

9. Complete pre- anesthetic SOAP work-up and intra-operative anesthetic record keeping
Audience: Undergraduate

SURG SCI 638 – VETERINARY DIAGNOSTIC IMAGING
2 credits.

Veterinary radiology principles, physical background and diagnostic techniques will be taught and emphasized in laboratory exercises.
Requisites: Declared in Doctor of Veterinary Medicine with third year standing
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Learn principals of Image formation in Radiography, CT, MRI, Ultrasound and Nuclear Medicine
Audience: Undergraduate

2. Learn principles of Image interpretation in the 5 modalities
Audience: Undergraduate

3. Learn principles of Contrast media used in Radiography, CT, MRI and Ultrasound
Audience: Undergraduate

4. Learn principles of Biological effects, operator hazards and protective measures in the 5 modalities
Audience: Undergraduate

5. Develop a technique to "read" radiographs and learn to recognize lesions - laboratories on Wednesday afternoons are where students can hone their interpretation skills
Audience: Undergraduate

6. Learn imaging features of common diseases of: Small and large animal musculoskeletal diseases and Small animal neurological, thoracic and abdominal diseases
Audience: Undergraduate

7. Learn advantages and limitations of each of the 5 imaging modalities in examining various organ systems
Audience: Undergraduate

8. Develop skills in clear and logical client-directed and peer communication of: Pertinent radiographic signs
Audience: Undergraduate

9. Develop skills in clear and logical client-directed and peer communication of: Prioritized differential diagnoses for each Roentgen sign
Audience: Undergraduate

10. Develop skills in clear and logical client-directed and peer communication of: Prioritized basic plan for additional clinical tests and treatment
Audience: Undergraduate

SURG SCI 642 – LARGE ANIMAL SURGERY: CLINICAL ROTATION
2 credits.

Learn the admission, examination, preoperative management, surgical procedures and postoperative management of large animals presented to the Veterinary Medical Teaching Hospital. Hands-on experience in the Large Animal Surgery Service.
Requisites: Declared in Doctor of Veterinary Medicine with fourth year standing
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Effectively communicate patient signalment and pertinent case information to colleagues to develop a differential diagnosis
Audience: Undergraduate

2. Select, perform, and interpret pre- and post-operative diagnostic tests
Audience: Undergraduate

3. Integrate findings from patient history, physical exam, and tests and imaging to formulate comprehensive diagnostic and treatment plans for surgical patients
Audience: Undergraduate

4. Describe basic surgical principles in large animal surgery such as wound management and common surgical procedures
Audience: Undergraduate

5. Recognize situational limitations or indications for patient referral to a specialist
Audience: Undergraduate

6. Describe introductory level of knowledge in equine lameness including the basic elements of lameness evaluation, nerve blocks, etc.
Audience: Undergraduate

7. Document procedures and treatments in medical records, treatment sheets, and surgical reports
Audience: Undergraduate

8. Create patient discharge instructions using appropriate language for client communication, understanding, and compliance
Audience: Undergraduate

SURG SCI 644 – CLINICS-SMALL ANIMAL ORTHOPEDIC SURGERY
2 credits.

Rotation through orthopedic and neurosurgical clinics and surgery.
Requisites: Declared in Doctor of Veterinary Medicine with fourth year standing
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Obtain a complete history and understand and complete the steps to a physical exam and orthopedic assessment
Audience: Undergraduate

2. Prioritize a differential diagnosis and refined problem list based on patient history and physical exam
Audience: Undergraduate

3. Design appropriate diagnostic and therapeutic plans for patients
Audience: Undergraduate

4. Effectively communicate patient signalment, history, and diagnostic and therapeutic plan to colleagues
Audience: Undergraduate

5. Describe and identify indications for patient referral
Audience: Undergraduate

6. Describe common orthopedic surgical procedures and post-operative care
Audience: Undergraduate

7. Report procedures and treatments in medical records, treatment sheets, and surgical reports
Audience: Undergraduate

SURG SCI 645 – SENIOR ROTATION IN SMALL ANIMAL GENERAL SURGERY
2 credits.

Hands-on diagnosis and treatment of general surgical diseases of small animal species.
Requisites: Declared in Doctor of Veterinary Medicine with fourth year standing
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Develop prioritized differential diagnoses based on patient history, comprehensive physical exam, and refined problem list
Audience: Undergraduate

2. Effectively communicate patient signalment and pertinent case information to colleagues
Audience: Undergraduate

3. Select, perform, and interpret pre- and post-operative diagnostic tests
Audience: Undergraduate

4. Describe indications for patient referral to a surgical specialist
Audience: Undergraduate

5. Adapt client communication style for gaining client trust and understanding
Audience: Undergraduate

6. Describe surgical principles of wound management and common surgical procedures
Audience: Undergraduate

7. Report procedures and treatments in medical records, treatment sheets, and surgical reports
Audience: Undergraduate

8. Create patient discharge instructions using appropriate language for client communication understanding, and compliance
Audience: Undergraduate

SURG SCI 646 – VETERINARY ANESTHESIOLOGY-CLINICAL ROTATION
2 credits.

Clinical anesthesia and pain management techniques including pre-anesthetic evaluation, induction procedures, intraoperative anesthetic and analgesic care and recovery management of small, large and exotic animal species. Critical patient care, novel anesthetic and analgesic techniques and cardiopulmonary resuscitation.
Requisites: Declared in Doctor of Veterinary Medicine with fourth year standing
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Obtain an oral history and perform a complete physical examination to identify clinical problems and abnormalities
Audience: Undergraduate

2. Apply foundational anesthetic principles and management and patient history to create an anesthetic work-up plan
Audience: Undergraduate

3. Evaluate and administer appropriate drugs (type/dose/volumes) and monitors based on work-up plan
Audience: Undergraduate

4. Monitor anesthetic depth during procedures and adapt treatment plan according to physical parameters
Audience: Undergraduate

5. Describe and apply appropriate drug administration and CPR techniques for emergent patients
Audience: Undergraduate

6. Report procedures and treatments in medical records, treatment sheets, and surgical reports
Audience: Undergraduate

SURG SCI 647 – RADIOLOGY CLINICS
2 credits.

Clinical clerkship in the Veterinary Medical Teaching Hospital. Provides exercises in technical and interpretive diagnostic radiology.
Requisites: Declared in Doctor of Veterinary Medicine with fourth year standing
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Model low-stress handling and humane restraint of live animals
Audience: Undergraduate

2. Demonstrate appropriate radiographic techniques and radiation safety to obtain quality diagnostic images
Audience: Undergraduate

3. Label images appropriately and interpret abnormal imaging findings using Roentgen sign approach
Audience: Undergraduate

4. Prioritize a list of differential diagnoses based on available information and classify diseases associated with radiographic findings
Audience: Undergraduate

5. Develop a diagnostic plan and describe indications for additional tests or referrals
Audience: Undergraduate

SURG SCI 675 – SPECIAL TOPICS
1-5 credits.

Topics vary.
Requisites: Declared in Doctor of Veterinary Medicine
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Develop competence and professional skills in veterinary medicine
Audience: Undergraduate

2. Explore current topics and trends in veterinary medicine
Audience: Undergraduate

3. Developing breadths of experiences related to veterinary medicine
Audience: Undergraduate

SURG SCI 676 – SPECIAL SPECIES HEALTH
2 credits.

Basic principles of the clinical management of exotic pet species, with an emphasis on small mammals (rabbits, rodents, etc), birds and reptiles commonly kept as companion animals.
Requisites: Declared in Doctor of Veterinary Medicine with third year standing
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Provide the correct husbandry recommendations for small mammals, birds and reptiles maintained as pets
Audience: Undergraduate

2. Identify common disorders in small mammals, birds and reptiles maintained as pets
Audience: Undergraduate

3. Demonstrate a basic understanding anatomy and physiology of small mammals, birds, and reptiles
Audience: Undergraduate

SURG SCI 677 – VETERINARY DENTISTRY ELECTIVE
1 credit.

Introduction to veterinary dentistry principles and practice.
Requisites: Declared in Doctor of Veterinary Medicine with third year standing
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe indications and techniques for the safe administration of regional oral anesthesia
Audience: Undergraduate

2. Safely perform single and multi-rooted dental extractions with surgical flaps and tension free closure
Audience: Undergraduate

3. Compare and contrast various oral pathologic conditions and describe various treatment options associated with each
Audience: Undergraduate

4. Recognize clinical signs and symptoms associated with periodontal and/or endodontic disease and list appropriate treatment options
Audience: Undergraduate

5. Describe various oral trauma symptoms, imaging modalities and treatment options
Audience: Undergraduate

6. List and describe conditions unique to feline oral disease and their treatment
Audience: Undergraduate

SURG SCI 699 — DIRECTED STUDY
1-5 credits.

Projects in the laboratory and/or through library work in specific subject area under the direct guidance of a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply foundational veterinary knowledge and critical thinking to identify problems in veterinary medicine
Audience: Undergraduate

2. Develop professional veterinary medicine skills of interest by performing select techniques and procedures
Audience: Undergraduate

3. Communicate in written and/or verbal reports to veterinary colleagues and supervisors
Audience: Undergraduate

SURG SCI 710 — SPECIAL SPECIES CLINICAL ROTATION
2 credits.

Develop clinical proficiency in the basic veterinary care of common exotic pet species routinely seen in general veterinary practice. Learn how to obtain comprehensive medical histories, how to safely restrain, obtain samples and administer drugs in a variety of common exotic pet species. Develop a solid understanding on how to manage common disorders seen in small exotic mammals, pet birds and pet reptiles.
Requisites: Declared in Doctor of Veterinary Medicine with fourth year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 1 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Safely restrain and handle a variety of common exotic pet species
Audience: Graduate

2. Perform complete physical examinations in a variety of common exotic pet species
Audience: Graduate

3. Suggest effective and safe sedation protocols for a variety of common exotic pet species
Audience: Graduate

4. Become proficient in the in the intramuscular and subcutaneous drug administration in various exotic pet species
Audience: Graduate

5. Formulate a problem list, diagnostic plan, prognosis and make therapeutic suggestions for a variety of common disorders seen in exotic pets
Audience: Graduate

SURG SCI 711 — WILDLIFE REHABILITATION MEDICINE ROTATION
2 credits.

Rotation is a partnership between the UW Vet School, Dane County Humane Society's Wildlife Center and the Wisconsin Humane Societies' (WHS) Wildlife Center in Milwaukee. Develop clinical proficiency in wildlife rehabilitation. Work closely with licensed wildlife rehabilitators at wildlife centers to learn more about native wildlife in rehabilitation settings. Participate in veterinary patient rounds, which are led by UW veterinarians at wildlife centers. Cadaver laboratories, topic presentations and radiograph and blood smear reviews will complement the patient-based learning.
Requisites: Declared in Doctor of Veterinary Medicine with fourth year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 1 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Safely restrain and handle a variety of common native wildlife species
Audience: Graduate

2. Perform complete physical examinations in a variety of common native wildlife species
Audience: Graduate

3. Suggest effective and safe sedation protocols for a variety of native wildlife species
Audience: Graduate

4. Become proficient in the in the intramuscular and subcutaneous drug administration in a variety of native wildlife species
Audience: Graduate

5. Formulate a problem list, diagnostic plan, prognosis and make therapeutic suggestions for a variety of common disorders seen in native wildlife species
Audience: Graduate

SURG SCI 712 – ZOOLOGICAL MEDICINE CLINICAL ROTATION
2 credits.

Practice medical management of zoological species kept in small- to medium-sized zoological facilities and wildlife rehabilitation cases, in collaboration with local facilities, such as Henry Vilas Zoo, Ochsner Park Zoo, and the Dane County Humane Society's Wildlife Center. Prepare for clinical cases, provide on-site medical evaluations, and complete medical records.
Requisites: Declared in Doctor of Veterinary Medicine with fourth year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 2 number of completions
Last Taught: Spring 2023
Learning Outcomes: 1. Conduct visual and physical health assessments on a variety of zoological species
Audience: Graduate

2. Create a preventive health plan (including routine vaccine recommendations) for a variety of zoological species
Audience: Graduate

3. Suggest effective and safe sedation or anesthesia protocols, including methods of drug administration, for a variety of zoological species
Audience: Graduate

4. Apply knowledge of domestic animal medicine, clinical pathology, and radiographic anatomy to a variety of zoological species
Audience: Graduate

5. Formulate a problem list, diagnostic plan, differential diagnosis list, prognosis, and therapeutic plan for a variety of common disorders seen in zoological species
Audience: Graduate

SURG SCI 714 – SMALL ANIMAL RADIATION ONCOLOGY ROTATION
1-2 credits.

Apply clinical veterinary medicine in a small animal oncology setting that focuses on radiotherapy. Work alongside veterinarians and veterinary technicians with expertise in veterinary oncology. Participate in case management and client communication. Expand general knowledge about cancer in dogs and cats, including diagnosis and treatment. Learn about the role of radiotherapy in the treatment of cancer. Understand the patient experience during cancer treatment, specifically related to radiation. Learn about alternative treatment options when radiotherapy is not feasible. Practice clinical skills including physical examination, venipuncture, fine needle aspiration, tissue biopsy, image interpretation, and record keeping.
Requisites: Declared in Doctor of Veterinary Medicine with fourth year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, for 1 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Become familiar with tumor types treated with radiotherapy and their biologic behavior.
Audience: Graduate

2. Understand when and why radiotherapy is used and how it works.
Audience: Graduate

3. Learn about radiation side effects and how to manage them.
Audience: Graduate

4. Become familiar with the animal's and pet-owner's experience during radiotherapy including with daily anesthesia.
Audience: Graduate

5. Understand the benefits of conformal radiation delivery techniques.
Audience: Graduate

6. Understand the history of tomotherapy at the University of WI-Madison.
Audience: Graduate

7. Be familiar with alternative treatment options when radiotherapy is not feasible.
Audience: Graduate

8. Interpret radiographs and CT scans used in the diagnosis of tumors and in the planning of radiation.
Audience: Graduate

9. Practice the following clinical skills: performing physical examinations, creating and implementing diagnostic and treatment plans, performing tissue sampling including fine needle aspiration and biopsy, venipuncture, and record keeping.
Audience: Graduate

10. Practice communication skills involved in getting a history from a pet-owner/client, client education, and clinical team collaboration.
Audience: Graduate

SURG SCI 741 – CLINICAL OPHTHALMOLOGY ROTATION
2 credits.

Provides experience in ocular examination, problem solving skills, and formulation of diagnostic and therapeutic plans for animals presenting with eye disease. Ocular examination as part of the complete physical examination and ocular manifestations of systemic diseases are emphasized.
Requisites: Declared in Doctor of Veterinary Medicine with fourth year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a complete ophthalmic examination using appropriate instrumentation to identify common ophthalmic diseases and abnormalities in veterinary patients
Audience: Graduate

2. Execute and interpret the results of basic ophthalmic tests
Audience: Graduate

3. Formulate differential diagnoses for ophthalmic examination and diagnostic findings
Audience: Graduate

4. Integrate history, ophthalmic/physical examination findings, and diagnostic test results to make an accurate clinical diagnosis(es)
Audience: Graduate

5. Devise a treatment plan for the most common ophthalmic diseases in animals
Audience: Graduate

SURG SCI 743 – ADVANCED ANESTHESIOLOGY/CRITICAL CARE MEDICINE
2 credits.

Provides advanced, in-depth training in the areas of small, large and exotic animal anesthesia and pain management.
Requisites: Declared in Doctor of Veterinary Medicine with fourth year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Recognize & describe indicators of medical instability in critical patients
Audience: Graduate

2. Apply appropriate basic procedural skills on patients in critical care
Audience: Graduate

3. Demonstrate effective collaboration with critical care team to implement treatment plans
Audience: Graduate

4. Demonstrate effective oral and/or written communication with critical care team and clients
Audience: Graduate

SURG SCI 744 – RESTRAINT AND ANESTHESIA OF EXOTIC ANIMALS
2 credits.

Provides advanced, directed anesthetic and restraint techniques for multiple exotic animal species such as rodents, rabbits, amphibians, reptiles, primates, fish and birds. The unique pharmacology and physiology of each species will be emphasized.
Requisites: Declared in Doctor of Veterinary Medicine with fourth year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Apply the variations in anatomy and physiology of non-domestic species to provide tailored anesthetic care to a variety of species
Audience: Graduate

2. Solve challenges associated with the presentation of a novel species by integrating the skills and knowledge learned in this course with self-guided research of the differences in anatomy, physiology, and pharmacology of the novel species
Audience: Graduate

3. Construct and implement a complete perianesthetic plan for non-domestic classes and families of animals including birds, rabbits, rodents, fish, frogs, and reptiles
Audience: Graduate

4. Apply and interpret the information obtained by anesthetic monitors and realize their individual strengths and limitations in a variety of species.
Audience: Graduate

SURG SCI 746 – FOOD ANIMAL SURGERY
2 credits.

Provides didactic and surgical experience in the major, common surgical diseases of cattle and pigs.
Requisites: Declared in Doctor of Veterinary Medicine with fourth year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Effectively communicate patient signalment and pertinent case information to colleagues to develop a differential diagnosis
Audience: Graduate

2. Select, perform, and interpret pre- and post-operative diagnostic tests
Audience: Graduate

3. Integrate findings from patient history, physical exam, and tests and imaging to formulate comprehensive diagnostic and treatment plans for surgical patients
Audience: Graduate

4. Describe basic surgical principles in food animal surgery such as wound management and common surgical procedures
Audience: Graduate

5. Document procedures and treatments in medical records, treatment sheets, and surgical reports
Audience: Graduate

SURG SCI 748 – DENTISTRY AND ORAL SURGERY ROTATION
1-3 credits.

Dentistry, oral medicine and surgery as well as comprehensive patient care through the use of progressive methods, hospital resources and interdisciplinary specialists.
Requisites: Declared in Doctor of Veterinary Medicine with fourth year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Understand and complete the steps to a complete oral health assessment
Audience: Graduate

2. Use appropriate techniques to acquire dental radiographs and interpret image findings
Audience: Graduate

3. Safely administer appropriate dental nerve blocks for general dental procedures
Audience: Graduate

4. Properly extract maxillary canine, mandibular canine, maxillary fourth premolar tooth and mandibular molar tooth in cadaveric lab exercises
Audience: Graduate

5. Integrate findings from patient history, oral exam, and dental radiograph to formulate a comprehensive oral health treatment plan
Audience: Graduate

SURG SCI 750 – SMALL ANIMAL ULTRASOUND ELECTIVE
1 credit.

Introduction to hands-on ultrasound imaging and expand on selected portions of ultrasound physics, literature and problem-based case studies.
Requisites: Declared in Doctor of Veterinary Medicine with fourth year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Model low-stress handling and humane restraint of small animal patients
Audience: Graduate

2. Apply basic ultrasound techniques to identify organs, recognize imaging artifacts, and obtain diagnostic quality images
Audience: Graduate

3. Interpret abnormal imaging findings and prioritize a list of differential diagnoses based on available information
Audience: Graduate

4. Design appropriate diagnostic and therapeutic plans for small animal patients based on ultrasound results and clinical information
Audience: Graduate

SURG SCI 775 – EXTERNSHIP
1-24 credits.

Offers opportunities for faculty coordinated experience in the veterinary medical profession outside School of Veterinary Medicine.
Requisites: Declared in Doctor of Veterinary Medicine with fourth year standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023
Learning Outcomes: 1. Understand real-world applications of foundational veterinary medical knowledge and skills
Audience: Graduate

2. Apply foundational veterinary knowledge and critical thinking to solve real-world problems
Audience: Graduate

3. Perform select techniques and procedures to develop various skills professional in veterinary medicine
Audience: Graduate

THEATRE AND DRAMA (THEATRE)

THEATRE 100 – EXPERIENCING THEATRE
2-3 credits.

By attending live theatre performances, watching films of theatrical productions and participating in colloquiums with theatre professionals, explore how theatre is made through the lens of various theatre artists. Through this exploration, develop an understanding and a deeper appreciation of performative events as well as critically think about those experiences. Explores performance and the human condition, using acquired knowledge to build empathy and appreciation for the complexities of one's own and other people's perspectives.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge of theatrical terminology

Audience: Undergraduate

2. Demonstrate an understanding of how theatre artists collaborate
Audience: Undergraduate

3. Employ various approaches to critically evaluate the art and craft of theatre
Audience: Undergraduate

4. Identify the responsibilities of various artists/individuals involved in theatre
Audience: Undergraduate

5. Use learned knowledge to build empathy and appreciation for the complexities of one's own and other people's perspectives
Audience: Undergraduate

THEATRE/ENGL 120 – INTRODUCTION TO THEATRE AND DRAMATIC LITERATURE
3-4 credits.

Reading important plays, attending stage productions, writing and thinking critically about theatre and drama. Emphasis on developing analytic skills in dramatic literature and theatre production.
Requisites: None
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

THEATRE 130 – FUNDAMENTALS OF THEATRICAL DESIGN
3 credits.

Foundational elements of theatrical design and developing the skills to translate text into visual and/or aural content. Involves an introduction to script analysis; visual, aural, and dramaturgical research; problem solving skills; creative exploration and visual communication. Relevant to designers, directors, actors, stage managers, technicians, and informed audience members.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025

THEATRE 140 – VOICE 1: EFFECTIVE COMMUNICATION
3 credits.

Introduces and explores the fundamentals and discipline of voice and speech. Provides a foundation from which the student will begin to access and engage healthful, practical, and creative vocal and speech function. Introduction to methods of expression for acting and public speaking.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

THEATRE 150 – ACTING I: INTRODUCTION TO ACTING
3 credits.

Provides a basic introduction to the craft of acting. Develops disciplines and tools of the actor as they relate to voice, movement, language skills, and engaging communication. Explores how actor training skills can be a benefit in a wide context of professional and personal endeavors.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

THEATRE 160 – TECHNICAL THEATRE FUNDAMENTALS
3 credits.

Learn how to mount a theatrical production. Through scenery, costumes, lighting, sound, and stage management explore the relationship between the technical components of the production process. Includes lectures as well as practical experience in University Theatre productions.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

THEATRE 161 – BACKSTAGE LABORATORY I
2 credits.

Learn through practical participation in University Theatre productions; lab choices include scenery and costume construction, lighting, and sound.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2019

THEATRE 199 – DIRECTED STUDY
1-3 credits.

Collaborate with instructor for personalized curriculum.
Requisites: Consent of instructor
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2008

THEATRE 200 – ACTING SKILLS FOR LIFE
2-3 credits.

Learn how to apply acting skills to presentations and interactions in non-arts settings (business, education, etc.), such as enhancing confidence and communication in interviews presentations, elevator pitches, authentically connecting on a personal level with others, and how to avoid or better deal with stage fright.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Gain a deeper understanding and awareness of their physical/vocal presence.
Audience: Undergraduate

2. Effectively communicate their work to different audiences.
Audience: Undergraduate

3. Adjust their behavior in real time to respond to audience feedback.
Audience: Undergraduate

4. Manipulate their vocal and physical presence to communicate more effectively.
Audience: Undergraduate

5. Gain confidence in public speaking and leadership presence.
Audience: Undergraduate

6. Develop greater self-awareness and how acting techniques can benefit all areas of connection with others.
Audience: Undergraduate

THEATRE 213 – DIGITAL DESIGN VISUALIZATION FOR ENTERTAINMENT
3 credits.

Offers the fundamental principles and the practical knowledge of design visualization for theatrical productions and entertainment events. Focuses on building students' capability of producing clear and effective visual presentations of their creative design concepts by using the most cutting edge 2D and 3D digital applications.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2021
Learning Outcomes: 1. Transform 2D sketches, technical drawings into 3D shapes with multiple choices including digital modeling tools, sculpting tools and 2.5D postproduction tools including transfer files among the applications.
Audience: Undergraduate

2. Apply the basic surface textures to the 3D objects with graphic and dimensional qualities.
Audience: Undergraduate

3. Enrich the digitally designed environment with lights and atmosphere such as basic illumination, theatrical lighting effects, environmental fog and particles.
Audience: Undergraduate

4. Demonstrate the basic digital rendering technique and the use of different render engines, virtual camera, camera animation, render output selection and settings.
Audience: Undergraduate

5. Demonstrate the basic special effects and simulations such as fractures, cloth, water surface with collision, physics and basic particles.
Audience: Undergraduate

6. Discuss the basic concept and demonstrate the use of the digital game engine for design visualization.
Audience: Undergraduate

7. Search, compare and select the most suitable and efficient applications as the project centric tool and technology setting.
Audience: Undergraduate

THEATRE 219 – UNDERGRADUATE TOPICS INTHEATRE AND DRAMA
1-3 credits.

Undergraduate study in subjects of current interest in design, performance, technology, history, dramatic theory, literature criticism, or theatre/drama education.
Requisites: None
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

THEATRE 220 – SCENIC STUDIO PRACTICUM
1 credit.

Hone skills learned in Technical Theater Fundamentals while working side-by-side with designers and technicians building University Theatre productions.
Requisites: None
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and use equipment found in the Scenic Studio safely and effectively.
Audience: Undergraduate

2. Demonstrate Professionalism through prompt attendance, engagement and effective teamwork.
Audience: Undergraduate

3. Improve on skills and techniques of theatrical set construction and the usage of tools, hardware and materials as learned in TD 160.
Audience: Undergraduate

4. Execute verbal instructions with preciseness and skill.
Audience: Undergraduate

5. Develop new skills such as the interpretation of drawn images and their translation into three-dimensional objects through scenic construction.
Audience: Undergraduate

THEATRE 221 – COSTUME STUDIO PRACTICUM
1 credit.

Hone skills learned in Technical Theater Fundamentals while working side-by-side with designers and technicians building University Theatre productions.
Requisites: THEATRE 160
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and use equipment found in the Costume Studio safely and effectively.
Audience: Undergraduate

2. Demonstrate Professionalism through prompt attendance, engagement and effective teamwork.
Audience: Undergraduate

3. Improve on skills and techniques in creating costumes and accessories for theatrical productions as learned in TD 160.
Audience: Undergraduate

4. Execute verbal instructions with preciseness and skill.
Audience: Undergraduate

5. Develop new skills such as the interpretation of drawn images and their translation into three-dimensional objects through costume construction and fabric manipulation.
Audience: Undergraduate

THEATRE 222 – LIGHTING & SOUND STUDIO PRACTICUM
1 credit.

Hone skills learned in Technical Theater Fundamentals while working side-by-side with designers and technicians building University Theatre productions.
Requisites: THEATRE 160
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and use equipment found in the Lighting and Sound Studio safely and effectively.
Audience: Undergraduate

2. Develop new skills such as the interpretation of drafted plots and paperwork and translate them into realized designs.
Audience: Undergraduate

3. Improve on skills and techniques in light hanging and focusing, rigging and speaker installation for theatrical productions.
Audience: Undergraduate

4. Execute verbal instructions with preciseness and skill.
Audience: Undergraduate

5. Demonstrate Professionalism through prompt attendance, engagement and effective teamwork.
Audience: Undergraduate

THEATRE 230 – ENVIRONMENT DESIGN FOR GAMES AND OTHER VIRTUAL STORYTELLING SPACES
3 credits.

Video game environments by their nature are designed to support storytelling. Develop the skills needed to create rich virtual worlds using theatrical storytelling techniques and three-dimensional modeling.
Requisites: THEATRE 130
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Relate game design concepts to theatrical performance and design practices.
Audience: Undergraduate

2. Analyze the relationship between theatre and games using specific examples of "gamified" theatre.
Audience: Undergraduate

3. Demonstrate the basics of 3D modeling using tools and techniques to create assets.
Audience: Undergraduate

4. Apply assets and tools to solve visual storytelling problems.
Audience: Undergraduate

5. Compose a 3D scene that supports narrative.
Audience: Undergraduate

6. Develop a storytelling project from scratch to finish through all stages of an ordered workflow.
Audience: Undergraduate

THEATRE 234 – COLLABORATIVE PROBLEM SOLVING
3 credits.

Theatre is the manifestation of collaborative problem solving. Collaboration is a process involving two or more individuals working toward a common goal, through interdependent behavior with individual accountability. Build collaborative and creative problem-solving skills to generate innovative solutions to complex problems and practices.
Requisites: THEATRE 100, or concurrent enrollment in THEATRE 100
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify and demonstrate competency in the common elements in collaborative frameworks.
Audience: Undergraduate

2. Collaborate effectively in various theatrical organizational roles and structures.
Audience: Undergraduate

3. Employ various methods in problem-solving and idea-generation in pursuit of a common team goal.
Audience: Undergraduate

THEATRE 240 – INTERMEDIATE VOICE TRAINING
3 credits.

Techniques and practice for increasing vocal strength, range, flexibility and the study of diction. Attention to individual problems in tone production, resonance, and articulation.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

THEATRE 250 – FUNDAMENTALS OF ACTING
3 credits.

Focuses on developing fundamental acting techniques (voice, characterization, physicality) and learn to apply skills in individual performance and scene study of contemporary dramatic texts.
Requisites: THEATRE 150
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

THEATRE 256 – VIDEO GAMES AS PERFORMANCE: A HISTORICAL PERSPECTIVE
2 credits.

Using a video games-as-performance framework, explore the history, business, and technology of video games. Study the cultural, artistic, and technological evolution of major video game consoles, handheld systems, and personal/gaming computers, as well as a look at the business, technology, and people behind the games. Contemplate video games as theatrical performance while journeying into a different segment of gaming each week and examining their cultural impact on each era.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Identify iconic video game consoles, characters, companies, people, themes, and key attributes across video gaming generations to place key developments in video games into broader social, cultural, and historical contexts.
Audience: Undergraduate

2. Describe key aspects of the video games as performance framework.
Audience: Undergraduate

3. Employ various approaches to critically evaluate the artistic, societal, and cultural impact of video games as performance.
Audience: Undergraduate

4. Demonstrate knowledge of major movements, trends, and events in the development of video games as cultural artifacts in global society.
Audience: Undergraduate

5. Examine game characteristics through practical play and/or observing playthroughs using a theatrical lens.
Audience: Undergraduate

THEATRE/DANCE 259 – COLLABORATIVE ARTS PERFORMANCE LAB: DEVISING COLLABORATIVE PERFORMANCE THROUGH HIP HOP ARTS
1-2 credits.

Work together to create a repertory company which produces performances of short hip hop theater and other collaborative performance art works for public viewing. Experimental works are researched and developed. Involves the development of collaborative and small group pieces as well as artistic training with a focus on individual and multi-voice work, theater improvisation, dance/movement.
Requisites: None
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2023

THEATRE 260 – PRODUCING THEATRE
3 credits.

Focuses on the fundamental principles and practical operational knowledge of different theatrical business models. Topics include: planning, scheduling, marketing, fundraising, budgeting, hiring, commercial vs. not-for-profit, legal concerns, and public relations.
Requisites: None
Repeatable for Credit: No
Last Taught: Spring 2025

THEATRE 262 – BACKSTAGE PRACTICUM
1 credit.

Participation as a backstage run crew member for one University Theatre production. Crew positions vary per production and may include wardrobe, deck, light board operator, sound board operator, backstage microphone technician, and follow spot operator. In-person attendance for all production calls is mandatory.
Requisites: Consent of instructor
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the production process through hands-on experience.
Audience: Undergraduate

2. Demonstrate the ability to problem-solve collaboratively.
Audience: Undergraduate

3. Explain basic theatrical terminology and the responsibilities of various roles involved in producing theatre.
Audience: Undergraduate

4. Execute verbal instructions with precision and skill.
Audience: Undergraduate

THEATRE 266 – FUNDAMENTALS OF STAGE LIGHTING TECHNOLOGY
3 credits.

Theories and techniques for the use of stage lighting equipment, special effects, and other stage electrics devices.
Requisites: THEATRE 160
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2022

THEATRE 270 – FUNDAMENTALS OF STAGECRAFT
3-4 credits.

Theory and techniques of stagecraft for theatrical production. When taken for 4 credits, a lab component required.
Requisites: THEATRE 160
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023

THEATRE 298 – DIRECTED STUDY
1-3 credits.

Collaborate with instructor for personalized curriculum.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2004

THEATRE 299 – DIRECTED STUDY
1-3 credits.

Collaborate with instructor for personalized curriculum.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

THEATRE 324 – TRADITIONS IN DRAMATIC LITERATURE
3 credits.

Multiple approaches to reading plays from a variety of important periods in dramatic literature with an emphasis on the life of older plays in the contemporary repertory. When possible, some course materials are linked to University Theatre production.
Requisites: THEATRE/ENGL 120
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

THEATRE 327 – HISTORY OF COSTUME FOR THE STAGE
3 credits.

Examines dress in Western civilization through the cultural context of history, art and fashion and related to theatrical costume design through a comparison of theatre designs to their primary visual sources.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2018

THEATRE 328 – MATERIAL CULTURE FOR PERFORMANCE DESIGN
3 credits.

Introduction to art, architecture, interior design, objects, and clothing history, including social and economic factors that influenced development. Through research and critical thinking, demonstrate knowledge of historical and contemporary art movements, architecture, and clothing for application in performance design.
Requisites: THEATRE 130, ART 100, or DS 120
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Synthesize research and knowledge learned about global material cultures for its significance, potential application, and understanding of its relationship to the time/culture in which it was created.
Audience: Undergraduate

2. Facilitate and contribute to a discussion around a material culture different from their own or new to them.
Audience: Undergraduate

3. Review evidence and hypothesize how an object's impact might be changed by re-contextualizing for use in performance design.
Audience: Undergraduate

4. Synthesize research and knowledge learned about global material cultures and apply that within a design process to devise a culturally competent historical world for use in performance design.
Audience: Undergraduate

THEATRE 329 – INTRODUCTION TO AFRICAN-AMERICAN PERFORMANCE
3-4 credits.

Introduction to historical, social and political contexts of African-American artistic expression in theatre and performance. Offers critical analyses of theatre, films, and/or dance forms that reflect cultural values, ideologies and performance aesthetics rooted in African-American and West African traditions.
Requisites: Junior standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2022

THEATRE/LITTRANS 335 – IN TRANSLATION: THE DRAMA OF HENRIK IBSEN
3-4 credits.

Often considered "the father of modern drama," the Norwegian playwright Henrik Ibsen (1828-1906) is a major figure of world literature whose dramatic works remain fascinating and globally influential, both as texts and through performance and adaptation. Read and discuss Ibsen in English translation, with a focus on Ibsen's historical contexts, dramatic techniques, social and political thought, and the reception and adaptation of his work in modern culture.
Requisites: Junior standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2022

THEATRE 341 – FUNDAMENTALS OF IMPROVISATION
3 credits.

Study, discuss, and perform the central principles of improvisation for the stage, which have useful applications in a range of personal and professional settings. Skills and tools to foster comfort, ease, authenticity, and confidence in performance, public speaking, and everyday interactions.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Articulate and demonstrate comprehension of the central tenets and historical movements of improvisational theatre with examples (verbally and in writing)
Audience: Undergraduate

2. Utilize creative and collaborative concepts and tools that support effective improvisation, including the “Yes-and” principle, and establishing location, character, relationship, and objective in given circumstances
Audience: Undergraduate

3. Describe how the principles and practices of improvisation can be applied in a range of professional and personal settings
Audience: Undergraduate

4. Demonstrate the principles, concepts, and tools of improvisation via performance in improv exercises, games, and scenes
Audience: Undergraduate

5. Provide and integrate feedback with specificity and care
Audience: Undergraduate

THEATRE 342 – FUNDAMENTALS OF MOVEMENT FOR THE STAGE
1-3 credits.

Development of the actor's awareness of habitual patterns of tension. Elements of movement including space, time, energy. Introduction to improvisation skills.
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

THEATRE 350 – ACTING REALISM
3 credits.

Intensive scene study from the major works of selected modern playwrights, concentrating on realism.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

THEATRE 351 – FUNDAMENTALS OF ASIAN STAGE DISCIPLINE
3 credits.

Intensive movement discipline using Asian martial art techniques and mask work as a preparation for performance.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2020

THEATRE 352 – AUDITIONING FOR STAGE AND SCREEN
3 credits.

Student actors develop career-focused skills and confidence in auditioning for theatre and on-camera projects. Includes exercises in handling "cold" readings, prepared monologues, interviews, and improvisational auditioning. Student will also learn to look at auditions from the casting director's point of view.
Requisites: THEATRE 150 and 250
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Demonstrate skills to effectually audition for professional and academic theatre
Audience: Undergraduate

2. Demonstrate skills to effectually audition for commercials, film and television work
Audience: Undergraduate

3. Self-tape auditions for digital submissions
Audience: Undergraduate

4. Perform a personalized repertoire of audition material
Audience: Undergraduate

THEATRE 357 – INTRODUCTION TO THEATRE FOR CULTURAL AND SOCIAL AWARENESS
3 credits.

Analysis of sensitive subject matter in U.S. workplace and school/community settings through theatre and drama. Examines race relations, cultural diversity, gender, sexual orientation and other topics in plays, films, and current events. Develops theatrical models to encourage healthy dialogue.
Requisites: Consent of instructor
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

THEATRE 360 – PERFORMANCE IN PRACTICE
1-3 credits.

Students gain practical theatrical experience, skills, and knowledge by working on a University Theatre production. The assignments will involve responsibilities as Actor, Director, Assistant Director, Stage Manager, Assistant Stage Manager, or other approved performance related positions on a University Theatre production.
Requisites: Consent of instructor
Course Designation: Workplace - Workplace Experience Course
Repeatable for Credit: Yes, for 5 number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Exhibit the capability of taking a production from page to stage
Audience: Undergraduate

2. Demonstrate professional deportment
Audience: Undergraduate

3. Display a practical understanding of collaboration on a theatrical production
Audience: Undergraduate

4. Recognize the role and responsibilities expected of each collaborator within the production
Audience: Undergraduate

THEATRE 361 – BACKSTAGE LABORATORY II
1-2 credits.

Emphasis on student's involvement with a specific responsibility within theatrical production.
Requisites: Consent of instructor
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

THEATRE/CURRIC/SLAVIC 362 – DRAMA FOR TEACHING AND LEARNING
3 credits.

Methods for all involved in teaching and learning, including foreign languages. Introduction to philosophy, methodology, and practice of the use of drama and performance techniques in any educational or recreational settings. Focus on creativity and embodied and contextual learning, based on current neurological, psychological, and sociological research. A practical class which includes demonstration and practice with children.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Articulate the importance of drama in the education of all children.
Audience: Both Grad & Undergrad

2. Connect drama to multiple forms of expressing and receiving experiences, ideas, and feelings.
Audience: Both Grad & Undergrad

3. Apply the basic terms, skills, philosophies, and methodologies for leading drama sessions
Audience: Both Grad & Undergrad

4. Articulate the difference and similarities between the drama methodologies offered in the course.
Audience: Both Grad & Undergrad

5. Connect the use of drama with current brain based research
Audience: Both Grad & Undergrad

6. Demonstrate ability to design, implement, and evaluate activities and lesson plans with sound objectives and goals.
Audience: Both Grad & Undergrad

7. Connect school and community-making connections between community-based knowledge and school knowledge in theory and practice of drama.
Audience: Both Grad & Undergrad

8. Demonstrate ability to design, implement, and evaluate lesson plans that focus on inclusion and diversity in theory, practice, and pedagogy.
Audience: Graduate

9. Articulate the value of drama in relation to children's social, cultural, cognitive, linguistic, emotional, and moral development.
Audience: Graduate

THEATRE 363 – COSTUME DESIGN I
3 credits.

An introduction to costume design theory and techniques for performance. Emphasis on script analysis for costume design and visual communication skills. Projects will explore design by using analytical and problem-solving skills to interpret a text, supporting a text through design choices, and achieving mastery of drawing and costume rendering techniques using analog techniques and/or digital media.
Requisites: THEATRE 130, ART 100, or DS 120
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze a text to create costume designs and defend those choices.
Audience: Undergraduate

2. Synthesize research to tell a visual story.
Audience: Undergraduate

3. Engage in culturally competent creative practices.
Audience: Undergraduate

4. Communicate costume designs through effective costume renderings and supporting research.
Audience: Undergraduate

5. Demonstrate a level of skill and proficiency in costume rendering in analog or digital methods.
Audience: Undergraduate

THEATRE 364 – MAKEUP FOR THE THEATRE
3 credits.

An introduction to makeup design for the theater. Learn the aesthetics of makeup, color theory, and the technical aspects of applying makeup. Topics include the importance of developing a character through makeup, techniques of physically applying makeup to the actor and special effects makeup such as old age and prosthetic makeup appliances.
Requisites: Sophomore standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

THEATRE 365 – SEWING FOR THE THEATRE
3 credits.

Intermediate sewing techniques used to create theatrical garments.
Requisites: THEATRE 263
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2021

THEATRE/ART 366 – STAGE LIGHTING I
3 credits.

Application of lighting design to the stage and natural environment. Color principles, lighting instruments, and control equipment. Production participation and labs.
Requisites: THEATRE 130, ART 100, or DS 120
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Observe light in its natural, artistic, and theatrical environments, and discuss its controllable qualities and functions.
Audience: Undergraduate

2. Summarize the role of a lighting designer and the roles of other members of a production team.
Audience: Undergraduate

3. Understand theatrical lighting production planning and implementation methods, including: lighting hang and focus, lighting control, instrument design and selection.
Audience: Undergraduate

4. Develop the analytical skills needed to read a script, communicate ideas, and establish a design aesthetic and personal design process.
Audience: Undergraduate

5. Design the lighting for a play and produce al relevant paperwork and documentation, including drafting a full light plot.
Audience: Undergraduate

THEATRE 367 – SCRIPT ANALYSIS
3 credits.

A study of dramatic structure and examination of the basic elements of theatrical text. Introduction to applied methods of script analysis as an approach to researching, writing, directing, designing, performing and critiquing plays and screenplays.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

THEATRE 368 – FUNDAMENTALS OF DIRECTING
3 credits.

Principles and practice of play direction; motivational analysis, composition, movement, stage business and rehearsal techniques. Student directs a final project.
Requisites: THEATRE 367
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

THEATRE 370 – DRAFTING FOR THE THEATRE
3-4 credits.

Methods and development of techniques used in theatrical drafting.
Requisites: THEATRE 160 or graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

THEATRE/ART 372 – SET DESIGN I
3 credits.

Principles of composition, scale, perspective, and color applied to the stage; production of ground plans, elevations, sketches, and models.
Requisites: None
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

THEATRE 379 – INTRODUCTION TO STAGE MANAGEMENT
3 credits.

Principles of stage management from auditions through closing night. Class work and supplementary production experience.
Requisites: THEATRE 160 or graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

THEATRE/GEN&WS 415 – INTRODUCTION TO CONTEMPORARY FEMINIST THEATRE AND CRITICISM
3 credits.

Introduction to the history, literature and theory of feminist theatre and of feminist criticism of mainstream theatre in the United States from 1960 to the present.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

THEATRE/LITTRANS 423 – IN TRANSLATION: SLAVIC DRAMA IN CONTEXT
3 credits.

Slavic playwrights and the European tradition of theatre and drama.
Requisites: Junior standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2020

THEATRE 424 – CONTEMPORARY WORLD THEATRE AND DRAMATIC LITERATURE
3 credits.

Considers important current trends in performance and dramatic literature worldwide. Writing component includes both literary and performance criticism. When possible, some course materials are linked to University Theatre productions.
Requisites: Junior standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025

THEATRE 431 – HISTORY OF THEATRES AND STAGING
3 credits.

Theatre architecture, scenery, costume, acting, directing, and modes of staging in Europe from 500 B.C.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

THEATRE 440 – MUSICAL PERFORMANCE FOR THE ACTOR
3 credits.

Styles and genres of the modern American and British musical theatre for performers. Their application to audition techniques and scene/song presentations.
Requisites: THEATRE 140 and 150 or graduate/professional standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020

THEATRE 450 – ACTING STYLES
1-3 credits.

Study and demonstration of the various acting styles from the Greek to the modern. Concentration on two specific styles in a semester.
Requisites: Consent of instructor
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2021

THEATRE 451 – ACTING FOR THE CAMERA
4 credits.

Focuses on the principles of acting for the camera including industry terms, auditioning techniques, and acting techniques for film/television, industrials, and commercials. Learn tools for script analysis, character development, and on-camera performance which will be recorded and critiqued in class.
Requisites: THEATRE 250
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate the basic vocabulary, etiquette, and procedures involved in acting for the camera.
Audience: Undergraduate

2. Develop text analysis skills and implement research into performance.
Audience: Undergraduate

3. Expressively perform for the camera through active listening, reacting, subtext, and business.
Audience: Undergraduate

4. Apply the necessary adaptations in acting techniques from the stage to the screen.
Audience: Undergraduate

5. Exhibit critical on-camera audition skills.
Audience: Undergraduate

6. Identify the various production roles of on-camera and "behind the camera" personnel.
Audience: Undergraduate

THEATRE 464 – COSTUME TECHNOLOGY TOPICS
3-4 credits.

Examines techniques used to create costumes. Rotating topics including draping, period patternmaking, tailoring, crafts, and painting. When taken for 4 credits, a lab component required.
Requisites: Consent of instructor
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

THEATRE 466 – STAGE LIGHTING DESIGN II
3-4 credits.

Detailed study of lighting design techniques and professional practices for commercial and resident theatres.
Requisites: THEATRE/ART 366 and THEATRE 370
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

THEATRE 469 – INTERDISCIPLINARY STUDIES IN THE ARTS
1-4 credits.

Guest artists offer interdisciplinary courses on topics appropriate to their specializations.
Requisites: None
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2022

THEATRE 472 – SCENIC PAINTING
3 credits.

Painting scenery for the stage. Techniques for painting drops, flats, and props in a range of illusion effects.
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

THEATRE/ENGL 477 – DIASPORA AND THEATRE
3 credits.

Study of the drama and theatre of a variety of immigrant communities in three Western locations: Britain, the United States, and Canada. Focuses on current theories of diaspora and transnationalism, the place of theatre in diasporic writing, and the literary, performative, and material dimensions of the genre.
Requisites: Sophomore standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2018

THEATRE 500 – THE BUSINESS OF THE BUSINESS
3 credits.

Explores the real-world practicalities of the business side of show business, and gives students the business tools and resources necessary to be successful as directors, designers, stage managers, and technicians. Addresses the unique business demands of working artists.
Requisites: None
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021

THEATRE 501 – THE BUSINESS OF ACTING
3 credits.

Teaches actors the vital, non-performance skills and knowledge needed to launch professional acting careers. Knowledge of self-promoting, marketing, unions, networking, headshot/resumes, agents, casting directors, trade publications, and more will empower the actor and ease their transition into the professional world.
Requisites: Junior standing
Repeatable for Credit: No
Last Taught: Fall 2025

THEATRE 526 – THE THEATRES OF CHINA AND JAPAN
3 credits.

An advanced study of the theatres of China and Japan in relation to aesthetics and form.
Requisites: Sophomore standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021

THEATRE 541 – ACTING SHAKESPEARE
1-3 credits.

Studio presentation of Shakespearean drama with emphasis on language and verse structure; techniques for enhancing performances skills.
Requisites: THEATRE 240 and 350 or graduate/professional standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

THEATRE 550 – ADVANCED SCENE STUDY
1-3 credits.

Intensive scene study from the major works of selected modern playwrights.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2022

THEATRE 561 – BACKSTAGE LABORATORY III
1-2 credits.

Emphasis on fulfilling one major assignment in theatre performance or production situation such as actor, stage manager, master carpenter, wardrobe master, properties master.
Requisites: Consent of instructor
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

THEATRE 563 – COSTUME DESIGN II
3 credits.

Problems in use of line, form, color, texture, and movement in the design of costumes for the stage. Class projects include investigation into classical and contemporary drama.
Requisites: THEATRE 363
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

THEATRE 570 – ADVANCED STAGECRAFT
3 credits.

An intensive study of stage rigging, scenic locomotion, set construction and structural analysis techniques.
Requisites: THEATRE 270 and THEATRE 370 (or concurrent enrollment in THEATRE 370) or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

THEATRE/ART 572 – SET DESIGN II
3 credits.

Historical survey of visual theatre, painting, and architectural styles adapted to various dramatic forms. Application of design elements and styles to contemporary theatre productions.
Requisites: THEATRE/ART 372
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2019

THEATRE/ENGL 575 – BRITISH DRAMA, 1914 TO PRESENT
3 credits.

Plays and playwrights from the first World War to the present, including movements leading to the "revolt" of 1956 and subsequent proletarian and absurdist drama. Plays by Shaw, O'Casey, Maugham, Coward, Eliot, Osborne, Beckett, Pinter, Stoppard, Arden, Wesker, Bond, Churchill and others.
Requisites: Junior standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021

THEATRE/ENGL 576 – SURVEY: THEORIES OF DRAMA
3 credits.

Selected major critical and theoretical sources, from Aristotle to the present day; the influences of theories upon playwriting and modes of theatrical production.
Requisites: Junior standing
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

THEATRE/ENGL 577 – POSTCOLONIAL THEATRE: DRAMA, THEORY AND PERFORMANCE IN THE GLOBAL SOUTH
3 credits.

Study of drama, dramatic theory and theatrical practices in postcolonial cultures, primarily in Asia, Africa and the Caribbean. Considers status of drama/theatre in postcolonial studies and focuses on issues of form, language, intertextuality, trans-culturation, material organization and reception.
Requisites: Junior standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

THEATRE/ENGL 578 – MODERN AMERICAN DRAMA AND THEATRE
3 credits.

Representative twentieth-century plays from Glaspell and O'Neill to the present considered within contemporary cultural, theatrical and academic context.
Requisites: Junior standing
Course Designation: Breadth - Literature. Counts toward the Humanities req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020

THEATRE 579 – ADVANCED CONCEPTS IN STAGE MANAGEMENT
2 credits.

Advanced study of organizational behaviors, theatre infrastructures, styles communication techniques in relation to Stage Management.
Requisites: THEATRE 379
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

THEATRE 595 – TOPICS IN THEATRE AND DRAMA: STUDY ABROAD
1-6 credits.

A course carried with a UW-Madison study abroad program which has no equivalent on this campus.
Requisites: None
Course Designation: Breadth - Humanities
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2002

THEATRE 597 – INTERNSHIP IN THEATRE
1-6 credits.

Enables theatre majors with a supervised internship to earn academic credit while engaged in a professional setting outside of the University and directly related to their field of study.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

THEATRE 619 – SPECIAL TOPICS IN THEATRE AND DRAMA
1-3 credits.

Specialized subjects of current interest in design, performance, technology, history, dramatic theory, literature criticism, and theatre/drama education.
Requisites: Sophomore standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

THEATRE 631 – THEORIES OF ACTING
3 credits.

Interdisciplinary and cross-cultural seminar on the historical, cultural, performative, aesthetic, and ideological construction of acting on stage.
Requisites: THEATRE/ENGL 120 or Graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

THEATRE 661 – ADVANCED PRODUCTION PRACTICUM
1-3 credits.

Provides students the opportunity to apply their knowledge in a production setting. Enrollment is limited to designated Dramaturg, Lighting Designer, Costume Designer, Set Designer, Technical Director, Assistant Dramaturg, Assistant Designers, or Assistant Technical Director on a season production for the University Theatre.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

THEATRE 681 – SENIOR HONORS THESIS
3 credits.

Mentored individual study for students completing honor theses. For further information, consult the department's Undergraduate Advisor.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025

THEATRE 682 – SENIOR HONORS THESIS
3 credits.

Mentored individual study for students completing honor theses. For further information, consult the department's Undergraduate Advisor.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Spring 2019

THEATRE 691 – SENIOR THESIS
2-3 credits.

Mentored individual study for students completing theses.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2021

THEATRE 692 – SENIOR THESIS
2-3 credits.

Mentored individual study for students completing theses.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2021

THEATRE 698 – DIRECTED STUDY
1-6 credits.

Collaborate with instructor for personalized curriculum.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2015

THEATRE 699 – DIRECTED STUDY
1-6 credits.

Collaborate with instructor for personalized curriculum.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

THEATRE 713 – ADVANCED DIGITAL DESIGN VISUALIZATION FOR ENTERTAINMENT
3 credits.

Offers advanced knowledge of design visualization for theatrical productions and entertainment events. Focuses on producing clear and effective visual presentations of creative design concepts by using the most cutting edge digital applications that include 3D contents modeling, texturing, still and animated rendering, VR and interactive output packaging.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Transform 2D sketches, technical drawings into 3D shapes with multiple choices including digital modeling tools, sculpting tools and 2.5D postproduction tools including transfer files among the applications.
Audience: Graduate

2. Apply the multiple types of textures to the 3D objects with high level graphic and dimensional qualities, include unwrapping UVW, normal map, bump map, displacement map.
Audience: Graduate

3. Demonstrate advanced effects of lighting, atmosphere, physics, particles within the digital environment.
Audience: Graduate

4. Demonstrate the high-end digital rendering technique and the use of different render engines, virtual camera setting for animation, render output selection and settings.
Audience: Graduate

5. Develop the concept and demonstrate the use of the digital game engine for design visualization.
Audience: Graduate

6. Research, compare and employ the most suitable and efficient applications as the project centered tool and technology setting.
Audience: Graduate

THEATRE/ENGL 731 – ADVANCED THEATRE HISTORY 500 BC TO 1700
3 credits.

Problems of scholarship in the dramatic, performance and staging practices of major traditions of world theatre history between 500 BCE and 1700 including the theatres of ancient Greece and Rome; medieval, Renaissance and early modern Europe; and the Muromachi and Tokugawa eras in Japan.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2020

THEATRE/ENGL 732 – ADVANCED THEATRE HISTORY 1700 TO PRESENT
3 credits.

Problems of scholarship in the dramatic, performance and staging practices of major traditions of world theatre history since 1700, including melodrama, naturalism, the avant-garde, and other movements that helped shaped contemporary theatre.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

THEATRE 763 – COSTUME DESIGN III
3 credits.

Advanced problems in costume design for the stage.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

THEATRE 799 – INDEPENDENT STUDY
1-6 credits.

Collaborate with instructor for personalized curriculum.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

THEATRE 911 – SEMINAR-PROBLEMS IN THEATRE AND DRAMA
2-3 credits.

Topics variable.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2018

THEATRE 990 – RESEARCH AND THESIS
1-9 credits.

Independent research and writing under the supervision of a staff member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2021

THEATRE 999 – INDEPENDENT STUDY
1-3 credits.

Independent pursuit of a creative project designed by the student and supervised by a staff member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2015

URBAN AND REGIONAL PLANNING (URB R PL)

URB R PL 215 – WELCOME TO YOUR URBAN FUTURE
3 credits.

We live in an increasingly urban world and anticipate that 70% of the world's population will live in urban areas by 2050. For many of us, our shared future experience will be urban and interconnected. How can we make the future of urban areas as bright as possible for everyone? The answer begins with us. Building equitable and sustainable urban futures for everyone will require the efforts of a diverse group of people from many disciplines, backgrounds, and ways of thinking. Guest presenters introduce different disciplines and perspectives through major themes related to the planning and design of urban systems and environments. Imagine and develop your plan to effect positive change in an urban area focused on relevant topics like community food systems, water conservation, multimodal and active transportation, affordable housing, and urban nature.
Requisites: None
Course Designation: Breadth - Humanities
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Recognize and articulate the challenges facing the future of urban systems from academic and practitioner points of view.

Audience: Undergraduate

2. Integrate different disciplinary perspectives and relate them to solving problems in cities.
Audience: Undergraduate

3. Explain the social, economic, and/or environmental dimensions of the sustainability challenge(s) of future cities.
Audience: Undergraduate

4. Identify opportunities and appreciate careers that are relevant for innovating in cities domestically and globally.
Audience: Undergraduate

5. Analyze sustainability issues and/or practices using a systems-based approach (e.g., urban metabolism).
Audience: Undergraduate

6. Understand the interactions between diverse groups living together in cities, and analyze the tensions and possibilities.
Audience: Undergraduate

7. Translate course concepts into opportunities for leadership and action from the private, non-profit, and public sectors within cities, especially as it relates to being an urban leader grounded in equity and social justice.
Audience: Undergraduate

8. Frame complex public issues concisely in writing to city leaders about the issues.
Audience: Undergraduate

URB R PL/GEOG 305 – INTRODUCTION TO THE CITY
3-4 credits.

Investigates urbanization as a general process, as well as the resulting contemporary physical, social, cultural and political- economic forms of cities. Emphasis will be placed on the history and current forms of spatial and social segregation of cities by race, class, ethnicity, and gender. The myriad ways that cities have addressed the tensions emerging from this history of spatial and social segregation will be highlighted. Further, emphasis will be placed on understanding the experiences of those most-affected by historical and continuing segregation.
Requisites: Sophomore standing
Course Designation: Ethnic St - Counts toward Ethnic Studies requirement
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify the largest factors influencing where, when, and how cities develop.
Audience: Undergraduate

2. Explain historical and contemporary patterns of social inclusion and exclusion in cities and identify and explain their underlying causes and effects.
Audience: Undergraduate

3. Apply lessons of the past to the puzzles of today's cities.
Audience: Undergraduate

4. Recognize and question assumptions about current city form, including racial segregation.
Audience: Undergraduate

5. Recognize and question assumptions about the experience of contemporary urban dwellers, particularly as these are shaped by race, class, and gender.
Audience: Undergraduate

6. Develop a consciousness of self and others.
Audience: Undergraduate

7. Participate effectively in a multicultural society by embracing your role as a citizen of Madison; valuing the positive aspects of American urban culture, including diversity in its many forms; and understanding cities as primarily social entities and problems of organized complexity.
Audience: Undergraduate

URB R PL/A A E/ECON/REAL EST 306 – THE REAL ESTATE PROCESS
3 credits.

Introductory overview focused on the key aspects of the real estate process: developing real estate, permitting real estate, buying and selling real estate, understanding the economics of real estate, financing real estate, valuing real estate, leasing real estate, and managing real estate.
Requisites: (ECON 101, 111, A A E 101, or 215 prior to Fall 2024) or declared in undergraduate Business Exchange program
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop a working knowledge of the real estate process, including the roles of the various key real estate professionals and the unique challenges associated with the real estate asset class.
Audience: Undergraduate

2. Explain the characteristics, advantages, and disadvantages of the primary commercial real estate property types.
Audience: Undergraduate

3. Discuss the role of debt and equity in a real estate transaction as well as the fundamental terms, conditions, and requirements of commercial real estate financing.
Audience: Undergraduate

4. Navigate the basic regulatory framework governing the real estate process, including land use planning, zoning and the required project approvals.
Audience: Undergraduate

5. Describe the role of leasing in the commercial real estate transaction, including the critical terms and conditions of commercial leases.
Audience: Undergraduate

URB R PL/JOURN/POLI SCI 373 – INTRODUCTION TO SURVEY RESEARCH
3-4 credits.

Theory and practice of survey research; questionnaire design, sampling, data visualization, statistical analysis.
Requisites: Sophomore standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Formulate and construct logical arguments about political phenomena and evaluate those arguments using survey research
Audience: Undergraduate

2. Explain the theoretical components of survey research
Audience: Undergraduate

3. Interpret survey results in general with a particular focus on political polling
Audience: Undergraduate

4. Design and assess political surveys, including questionnaire design, question wording, survey mode, sample size, nonresponse, survey experiments, standard error, and margin of error
Audience: Undergraduate

5. Demonstrate statistical analysis skills in the context of political surveys including: hypothesis testing, confidence intervals, difference of means tests, data visualization and linear regression
Audience: Undergraduate

6. Recognize ethical issues in survey research
Audience: Undergraduate

7. Assess the state of a body of scholarly literature related to course themes, identify gaps in that literature, and formulate an original research question in the context of those gaps.
Audience: Graduate

URB R PL 375 – SPECIAL TOPICS
1-3 credits.

Exploration of special issues or problems in urban planning.
Requisites: Sophomore standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Demonstrate critical thinking and the ability to explore ideas and synthesize information, both independently and in collaboration with interdisciplinary team members.
Audience: Undergraduate

2. Understand, apply and evaluate the principles, theories and research findings underlying urban planning.
Audience: Undergraduate

3. Integrate social, cultural, ecological and technological dimensions in solving design and urban planning problems.
Audience: Undergraduate

URB R PL 411 – MARKETPLACES AND ENTREPRENEURSHIP
3 credits.

The history, practices, processes, and prospects of marketplaces generally and farmers markets in particular. Includes the history, practices, and processes, of entrepreneurship and the tight fit between markets and entrepreneurship. Explores marketplaces and entrepreneurship in through the lens of economic development, food justice, and political regionalism.
Requisites: Sophomore standing
Course Designation: Gen Ed - Communication Part B
Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Apply concepts of social scientific analysis
Audience: Undergraduate

2. Understand the history of marketplaces, and more recently, of farmers markets, how they developed
Audience: Undergraduate

3. Evaluate their relationship to trends in economic development, food justice, and political regionalism
Audience: Undergraduate

4. Distinguish and judge the various legal and social practices and processes that unfold in establishing markets and market entrepreneurs/farmers, as well as distinguishing descriptive from normative concerns
Audience: Undergraduate

5. Describe how markets relate to bioregionalism, places, and place making
Audience: Undergraduate

6. Understand and apply basic knowledge of entrepreneurship, social entrepreneurship, and community economic development, as well as how these embody normative concerns and bioregional/placemaking interests
Audience: Undergraduate

7. Apply knowledge from the course in executing research on markets and vendors in order to contribute to an existing market in Wisconsin or elsewhere
Audience: Undergraduate

URB R PL/ECON/REAL EST 420 – URBAN AND REGIONAL ECONOMICS
3 credits.

Focuses on the study of the allocation of scarce resources across space. Uses economic methods to analyze urban real estate. Topics covered include the determinants of real estate values, the location decisions of households and firms, land use, urban growth and agglomeration, real estate pricing, cycles, development, housing market and policies, and sustainable development.
Requisites: (ECON 101 or 111) or declared in undergraduate Business Exchange program
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the economic forces that drive urban growth and regional development.
Audience: Undergraduate

2. Analyze how business and residential location decisions are made and how these decisions impact housing prices, land use, labor market, and many other aspects of cities.
Audience: Undergraduate

3. Apply the spatial equilibrium concepts to urban development and real estate analysis.
Audience: Undergraduate

4. Develop statistical models to assess residential and commercial real estate and perform sensible business and policy analysis.
Audience: Undergraduate

5. Apply the economic decision-making framework to real estate development decisions.
Audience: Undergraduate

6. Demonstrate understanding of cycles, risks and bubbles in residential and commercial real estate markets.
Audience: Undergraduate

7. Evaluate the challenges in economic, social and environmental sustainability in urban development around the world.
Audience: Undergraduate

8. Apply urban and regional economics to real estate business decisions and policy analysis.
Audience: Undergraduate

URB R PL/ECON/ENVIR ST/POLI SCI 449 – GOVERNMENT AND NATURAL RESOURCES
3-4 credits.

Problems of public policy and administration for development and use of natural resources.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025

URB R PL/LAND ARC 463 – EVOLUTION OF AMERICAN PLANNING
3 credits.

The nature and cultural significance of contemporary methods for the systematic formulation of public policies for community, metropolitan, and state development through comprehensive planning. Historic roots, recent trends and new directions in American planning concepts, institutions and professional specializations.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Evaluate urban form and design using ideas from planning history and contemporary practice.
Audience: Undergraduate

2. Explain the legal, institutional, economic, political or moral justifications for planning.
Audience: Undergraduate

3. Analyze planning as a collective enterprise in relation to individual freedom, politics, autonomy, and private property.
Audience: Undergraduate

4. Explain the concept of the public interest in relation to planning.
Audience: Undergraduate

5. Describe the role of urban planners and the tensions planners face as professionals.
Audience: Undergraduate

6. Evaluate the relevant scales for urban planning, e.g., Individual parcels? Neighborhoods? Communities? Municipalities? Counties? States? Regions? Nations? Watersheds?
Audience: Undergraduate

7. Explain suburbs and the process of suburbanization.Describe the role of race and racism in shaping cities and metropolitan regions.
Audience: Undergraduate

URB R PL/GEOG 503 – RESEARCHING THE CITY: QUALITATIVE STRATEGIES
3 credits.

Explores, and applies, qualitative methods in the field of urban geography. An introduction to debates around the analysis and interpretation of qualitative data is provided, grounded in concrete urban research. Participation in a three-day field course is required.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2020

URB R PL/GEOG 505 – URBAN SPATIAL PATTERNS AND THEORIES
3 credits.

Various urban empirical regularities and theories which explain them.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

URB R PL 512 – GENTRIFICATION AND URBAN RESTRUCTURING
3 credits.

An intensive analysis of the process of gentrification through its historical and spatial development within moments of post-fordist urban restructuring in the United States. Highlights urban theory and methodological questions important to the study of gentrification that are relevant to the fields of urban planning, geography and sociology. Case study investigation of particular locations will provide examples to test the applicability of the various analytical frameworks presented in the class.
Requisites: Junior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand the development of gentrification from its origin as an urban anomaly in the eastern seaboard and rustbelt region during a period of "crisis-generated restructuring" to a "global urban strategy" of urban development.
Audience: Both Grad & Undergrad

2. Analyze the complicated urban processes behind gentrification and the forces and actors that work to create them.
Audience: Both Grad & Undergrad

3. Evaluate important concepts in urban planning theory through questions regarding development and the negative consequences associated with the process of gentrification.
Audience: Both Grad & Undergrad

4. Understand the role of urban planning in the gentrification process and the forms of resistance/mediation communities have used to challenge gentrification.
Audience: Both Grad & Undergrad

5. Apply and strengthen research skills through written, oral, and graphic communication with written reflections, formal essays, and in-class engagement around the material as well as a final project that asks students to operationalize the concept of gentrification.
Audience: Both Grad & Undergrad

6. Apply urban theory to an original research project on gentrification for the final project.
Audience: Graduate

7. Analyze the primary theoretical approaches to gentrification and urban restructuring through particular and additional focus on relevant theory-based scholarly articles.
Audience: Graduate

URB R PL/A A E/REAL EST 520 – COMMUNITY ECONOMIC ANALYSIS
3 credits.

Economic theory (location and growth) applicable to community economic development; the role of private and public sector in local economic development, and techniques for economic analysis of community.
Requisites: ECON 301 or 311 or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Synthesize an overview of economic theory as applied to small open economies.
Audience: Both Grad & Undergrad

2. Identify the strengths and weaknesses of the community's economy.
Audience: Both Grad & Undergrad

3. Implement alternative processes for affecting change at the community level.
Audience: Both Grad & Undergrad

4. Demonstrate literacy of economic factors affecting change at the local level.
Audience: Both Grad & Undergrad

5. Describe the community within a sustainable systems thinking approach.
Audience: Both Grad & Undergrad

6. Identify appropriate roles for community economic development practitioners in a variety of community settings.
Audience: Graduate

URB R PL/ENVIR ST/GEOG/LAND ARC 532 – APPLICATIONS OF GEOGRAPHIC INFORMATION SYSTEMS IN PLANNING
3 credits.

Explores planning-related Geographic Information System (GIS) data, applications, analytical tools, and implementation issues.
Requisites: GEOG/CIV ENGR/ENVIR ST 377 or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Identify how planning agencies use GIS.
Audience: Both Grad & Undergrad

2. Explain the nature, characteristics, and possible ways of analyzing spatial data in a planning context.
Audience: Both Grad & Undergrad

3. Communicate geospatial data and analyses effectively.
Audience: Both Grad & Undergrad

4. Obtain and analyze geospatial data using a range of spatial analysis tools for a number of planning practices.
Audience: Both Grad & Undergrad

5. Conduct site-selection and land-suitability analysis.
Audience: Both Grad & Undergrad

6. Identify ethical issues surrounding access to and use of geospatial data.

Audience: Both Grad & Undergrad

7. Analyze and provide written feedback on undergraduate student presentations.
Audience: Graduate

8. Produce a memo on land-suitability analysis.
Audience: Graduate

URB R PL 550 – TRANSPORTATION AND THE BUILT ENVIRONMENT
3 credits.

Investigation of multi-modal transportation, travel behavior, and urban form. Attention to site, neighborhood, regional, and global scales. Consideration of public health, environmental, economic, and social equity outcomes.
Requisites: Senior standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Understand major debates, issues, and theories in transportation, land use, urban design, and travel behavior at the site, neighborhood, regional, and global scales.
Audience: Both Grad & Undergrad

2. Develop and apply strategies for collecting and analyzing data representing built environment and transportation issues such as travel behavior.
Audience: Both Grad & Undergrad

3. Appreciate the roles of officials, stakeholders, and community members in making decisions about transportation and built environments.
Audience: Both Grad & Undergrad

4. Appreciate economic, social, cultural, technological, and environmental factors in urban and regional growth and change.
Audience: Both Grad & Undergrad

5. Develop one's professional identity by envisioning a future self (and possibly make plans that build on the course experience), evaluating one's own learning, and assessing one's own strengths and weaknesses.
Audience: Graduate

URB R PL 551 – CLIMATE ACTION PLANNING: SUSTAINABLE TRANSPORTATION
3 credits.

Learn fundamental concepts of climate action planning and sustainable transportation through hands-on collaborations with the University of Wisconsin-Madison Office of Sustainability, Transportation Services, and other partners. Work with real world data to analyze policies, programs, and plans to reduce greenhouse gas emissions from travel, as well as the potential health and well-being co-benefits of sustainable transportation interventions. Analyze further reduction of the campus and community carbon footprints through practice-oriented green fleet management, behavior-based tools to support participation in active travel, modifications to the built environment, and other interventions.
Requisites: Senior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024
Learning Outcomes: 1. Locate specific climate governance relationships and actors as they relate to sustainable transportation (i.e., climate action in higher ed nested within intergovernmental context)
Audience: Both Grad & Undergrad

2. Employ the mechanics of climate action plans and processes in the context of sustainable transportation
Audience: Both Grad & Undergrad

3. Explain policy and planning issues in sustainable transportation broadly and with a focus on fuels, vehicles, and vmt-reduction
Audience: Both Grad & Undergrad

4. Relate travel behavior and its application to climate change mitigation;
Audience: Both Grad & Undergrad

5. Create a GHG emissions analysis/assessment using relevant methods and applied to sustainable campus transportation in its community context

Audience: Both Grad & Undergrad

6. Explain the social, economic, and/or environmental dimensions of the sustainability challenge(s) of urban transportation systems.
Audience: Both Grad & Undergrad

7. Apply sustainability principles and/or frameworks to addressing the challenge of climate change mitigation in the transportation sector.
Audience: Both Grad & Undergrad

8. Expand one's professional self-awareness through group leadership, facilitation, and cooperation
Audience: Graduate

URB R PL/A A E/CIV ENGR/ENVIR ST 561 – ENERGY MARKETS
3 credits.

Energy resources are an essential element of the world's business, political, technical and environmental landscape. Analytic tools provided by the discipline of economics expands our understanding of this critical issue. Energy supply markets reviewed include both fossil fuels and renewable resources. Energy demand sectors include residential, commercial, industrial and transportation. Electricity represents an intermediate energy market. The interactions among these markets participants indicate how scarce resources are allocated among competing needs in the world economy.
Requisites: A A E 101 (215 prior to Fall 2024), ECON 101, 111, or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

URB R PL 590 – CONTEMPORARY TOPICS IN URBAN AND REGIONAL PLANNING
1-3 credits.

Examination of special issues or problems in urban and regional planning and development, such as mineral development in Wisconsin or fringe development in Madison. Topic and faculty vary.
Requisites: Senior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

URB R PL 595 – LANDSCAPE AND URBAN STUDIES CAPSTONE
3 credits.

Consider, synthesize, and culminate educational experiences. Engage with Landscape and Urban Studies (LUS) learning community and community of practice through thoughtful inquiry and reflection, respectful and collegial discussion, and communication of perspectives, findings, and recommendations through written work and class presentations. Develop critical thinking, creativity, and innovation for effective solutions to real-world challenges.
Requisites: Declared in Landscape and Urban Studies undergraduate program and senior standing
Course Designation: Gen Ed - Communication Part B
Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Synthesize knowledge from various disciplines to address complex design and planning challenges and opportunities.
Audience: Undergraduate

2. Identify relevant, reliable, and high-quality research sources appropriate to the subject and discipline.
Audience: Undergraduate

3. Make productive use of the writing process, including brainstorming, outlining, drafting, incorporating feedback, and revising, to develop a fledgling idea into a formal paper, presentation, and/or project.
Audience: Undergraduate

4. Share community-engaged research, course content, or creative activity in writing and at least one other mode of communication relevant to the discipline. Other modes of communication might include presentations using one or more media, debate, discussion, poster presentations, and other forms of expression that convey course content.
Audience: Undergraduate

5. Use knowledge to build empathy and appreciation for the complexities of one's own and other people's perspectives.
Audience: Undergraduate

6. View issues from multiple perspectives and think critically about their own societies and the larger global community.
Audience: Undergraduate

URB R PL 597 – UNIVERCITY YEAR GUIDED EXPERIENCE
1 credit.

Orientation to the UniverCity Year program and underlying theory and applied knowledge around community engagement, the function of local governments, and working with local officials and professional staff. Gain core competencies for applied, community-based learning projects and the importance of place-based learning. Includes multidisciplinary approaches to problem-solving, access and use of information resources, reflection and action on ethical and professional issues, consideration of social and systemic roots of issues faced by local municipalities, and preparing written reports.
Requisites: Junior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2019
Learning Outcomes: 1. Understand concepts of community-based learning and their application to community-based projects.
Audience: Undergraduate

2. Understand local government structure and opportunities for engagement in light of existing strategic plans, priorities, and initiatives.
Audience: Undergraduate

3. Observe and understand professional relationships with project clients and other community partners
Audience: Undergraduate

4. Understand the UniverCity Year program and how individual projects fit within a larger context of UW-Madison's civic engagement and community-based learning efforts.
Audience: Undergraduate

5. Understand the role of students as ambassadors of UW-Madison
Audience: Undergraduate

URB R PL 601 – SITE PLANNING
3 credits.

Survey of site planning theory and methods; standards for municipal review of site plans and related design proposals. Topics include architecture, vehicle circulation and parking, pedestrian circulation, stormwater management, landscaping, outdoor lighting, and signage.
Requisites: Senior standing
Course Designation: Breadth - Either Humanities or Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Explain land use regulations and site planning guidance embodied in local comprehensive plans, zoning codes, ordinances, and design review policies.
Audience: Both Grad & Undergrad

2. Assess design quality and evaluate potential site planning improvements.
Audience: Both Grad & Undergrad

3. Communicate site and contextual analyses, design reviews, and planning recommendations through reports and presentations.
Audience: Both Grad & Undergrad

4. Compare subjects covered by this course to those included in the American Institute for Certified Planners (AICP) Certification Exam.
Audience: Graduate

URB R PL 611 – URBAN DESIGN: THEORY AND PRACTICE
3 credits.

Focusing on three basic components of the built environment (buildings, transportation systems, and open spaces), addresses the forces that shape land use and transportation patterns, the effects of urban form on public health, safety, and welfare, and ways that communities can make their built environments more livable and environmentally sustainable.
Requisites: Senior standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Outline the basic building blocks of design and the design process.
Audience: Both Grad & Undergrad

2. Articulate how design of the built environment affects public health, safety, and well-being
Audience: Both Grad & Undergrad

3. Explore the history of the changes in design of the built environment and the current state of practice in the planning and design professions.
Audience: Both Grad & Undergrad

4. Analyze the built environment and assess the performance of design with a common lexicon of design terms
Audience: Both Grad & Undergrad

5. Diagram, sketch, and deconstruct design case studies
Audience: Both Grad & Undergrad

6. Cultivate spatial awareness and critical “seeing” of space and design.
Audience: Both Grad & Undergrad

7. Compare subjects covered by this course to those included in the American Institute for Certified Planners (AICP) Certification Exam.
Audience: Graduate

URB R PL/C&E SOC/SOC 617 – COMMUNITY DEVELOPMENT
3 credits.

Social, cultural and personality factors influencing community development, with reference to developing countries as well as contemporary rural communities; consideration of theoretical and operational issues.
Requisites: SOC/C&E SOC 140, 210, 211, SOC 181, or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Explain how social science arguments related to community development are constructed and evaluated
Audience: Both Grad & Undergrad

2. Assess data quality and whether particular data is appropriate to answer specific questions
Audience: Both Grad & Undergrad

3. Define general theories on basic social processes, especially those related to the relationships between society and the environment and the social organization of communities
Audience: Both Grad & Undergrad

4. Apply verbal and written communication skills to discuss complex issues in the social sciences
Audience: Both Grad & Undergrad

5. Synthesize and evaluate scholarly social science literature related to community development
Audience: Graduate

URB R PL/C&E SOC/SOC 645 – MODERN AMERICAN COMMUNITIES
3 credits.

Relevance of the concept of community to American society. Review of several basic theories of community and analysis of the nature of community in the broader political and economic context.
Requisites: SOC/C&E SOC 140, 210, 211, SOC 181, or graduate/professional standing
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2021
Learning Outcomes: 1. Critically analyze arguments and evidence in scholarly and public-facing materials concerning residential segregation and integration, housing access and choices, and the role of police and prisons within communities
Audience: Both Grad & Undergrad

2. Formulate an empirical question concerning at least one of the three identified course themes and answer it drawing on course reading materials and data sources
Audience: Both Grad & Undergrad

3. Communicate ideas and arguments about course themes rooted in theory and evidence through written and audio-visual mediums
Audience: Both Grad & Undergrad

4. Synthesize current research in an issue related to community or urban sociology and identify areas for novel research
Audience: Graduate

URB R PL/A A E/ECON/ENVIR ST 671 – ENERGY ECONOMICS
3 credits.

The method, application, and limitations of traditional economic approaches to the study of energy problems. Topics include microeconomic foundations of energy demand and supply; optimal pricing and allocation of energy resources; energy market structure, conduct, and performance; macro linkages of energy and the economy; and the economics of regulatory and other public policy approaches to the social control of energy.
Requisites: Graduate/professional standing or (senior standing and ECON 101, 111, A A E 101, or 215 prior to Fall 2024)
Course Designation: Breadth - Social Science
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2020
Learning Outcomes: 1. Understand fundamentals of energy sources and technologies.
Audience: Both Grad & Undergrad

2. Be familiar with microeconomic theory with applications to energy industries and markets.
Audience: Both Grad & Undergrad

3. Build analytical skills in economic analysis and be able to apply the economic thinking to historical and contemporary energy-related issues.
Audience: Graduate

4. Analyze the causes of and solutions for the sustainability challenge of affordable and clean energy.
Audience: Both Grad & Undergrad

5. Apply sustainability principles and/or frameworks to addressing the challenge of affordable and clean energy.
Audience: Both Grad & Undergrad

URB R PL 699 – DIRECTED STUDY
1-6 credits.

Independent study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

URB R PL 711 – PLANNING FOR FOOD SYSTEMS AND MARKETPLACES
3 credits.

Planning for and improving the quality of US metropolitan markets and food systems. Topics include public markets, community food security, urban agriculture, and the public health impact of food systems.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe and understand specific [planning] practice impacts with respect to the food system, over time and across space.
Audience: Graduate

2. Explain the purpose and meaning of food system activities/planning.
Audience: Graduate

3. Outline the behaviors and structures available to bring about sound food system outcomes.
Audience: Graduate

4. Describe the legal and organizational contexts of food systems.
Audience: Graduate

5. Assemble, analyze, and synthesize ideas and information from practice and scholarship, and from primary and secondary sources, related to food systems.
Audience: Graduate

6. Comprehend the importance of history and the connection between people and organization in the context of food systems.
Audience: Graduate

7. Describe the basic structures and activities of food system organizations.
Audience: Graduate

8. Prepare standard written and graphic communication modalities for use in documents and presentations.
Audience: Graduate

9. Apply knowledge of [planning] theory and interactionist theory in particular.
Audience: Graduate

10. Create and implement food system plans or activities, including their own approach to leadership, organizational analysis, and strategic behavior.
Audience: Graduate

11. Apply values and ethics used in professional planning and democratic society, incorporating issues of diversity and social justice through case examples.
Audience: Graduate

12. Evaluate ethical questions of public decision-making, research, and client representation, governance and participation, sustainability and environmental quality, and growth and development from the different roles of elected officials, stakeholders, and community members.
Audience: Graduate

URB R PL/CIV ENGR/ENVIR ST 717 – WATER RESOURCES MANAGEMENT PRACTICUM PLANNING SEMINAR I
1 credit.

The first of two seminars for planning the activities of the practicum.
Requisites: Declared in Water Resources Management MS or Doctoral Minor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

URB R PL/CIV ENGR/ENVIR ST 718 – WATER RESOURCES MANAGEMENT PRACTICUM PLANNING SEMINAR II
2 credits.

The second of two seminars for planning the field work, analysis, and reporting of the practicum.
Requisites: Declared in Water Resources Management MS or Doctoral Minor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

URB R PL/CIV ENGR/ENVIR ST 719 – WATER RESOURCES MANAGEMENT SUMMER PRACTICUM
4 credits.

Interdisciplinary team of students and staff working with agency personnel, citizen groups, and/or private sector representatives on the analysis of a contemporary, problem-oriented water resource issue. Physical, biological, economic and social aspects of the issue analyzed. Comprehensive written report results, practicum's findings and management recommendations.
Requisites: URB R PL/CIV ENGR/ENVIR ST 718
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Summer 2025

URB R PL/REAL EST 720 – URBAN ECONOMICS
3 credits.

Analysis of spatial relationships in the urban economy, including urban land, labor and housing markets; urban transport; city governance and finance; and regional models. Historical and applied focus. Interdisciplinary approach emphasizing economics, geography, and planning.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Analyze how urban environmental issues impact real estate markets and development
Audience: Graduate

2. Apply an evidenced-based framework to analyze the different types and roles of cities
Audience: Graduate

3. Demonstrate effective oral and written communication skills in individual and group projects as a means to present course concepts and market analyses
Audience: Graduate

4. Understand the role of urban public policy, particularly land use controls, and evaluate its impact on real estate markets
Audience: Graduate

5. Explain the fundamental determinants of location across and within cities, as well as rents and prices of land and real estate
Audience: Graduate

6. Explain how real estate markets affect, and are affected by, national and regional economic events and processes.
Audience: Graduate

URB R PL/SOC WORK 721 – METHODS OF PLANNING ANALYSIS
3 credits.

Research methods and statistics used in analyzing planning problems: conceptualization, design, and implementation of planning research; statistical methods for analyzing data including review of inferential statistics, analysis of variance, correlation, and multiple regression; use of computer; review of sources of planning data.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Discuss equity, diversity, and social justice, focusing on planners' use of planning analysis and engagement to close disparities between advantaged and disadvantaged groups and to promote racial, gender, economic and other dimensions of equity.
Audience: Graduate

2. Explain the social, economic, public health, and environmental dimensions of the sustainability challenges of urban and regional development.
Audience: Graduate

3. Differentiate between quantitative and qualitative analysis in planning.
Audience: Graduate

4. Connect planning analysis to best practices for community-engagement in the co-production of planning knowledge.
Audience: Graduate

5. Carry out research and critical analysis, including the use of quantitative and qualitative methods of data collection, analysis, and forecasting.
Audience: Graduate

6. Connect planning ethics to public decision-making, research, and client representation (including the provisions of the AICP Code of Ethics and Professional Conducts, and APA's Ethical Principles in Planning).
Audience: Graduate

7. Relate complex ideas through written, oral, and graphic communication.
Audience: Graduate

8. Reflect on working in teams and with professionals in allied fields, including self-assessment of professional leadership in the planning context.
Audience: Graduate

URB R PL 731 – INTRODUCTION TO REGIONAL PLANNING
3 credits.

Broad coverage of regional planning--basic concepts, history, influences of the political, economic, and social environment, techniques of analysis and substantive tasks and problems in preparing regional plans.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2019
Learning Outcomes: 1. Explain the purpose and meaning of regional planning.
Audience: Graduate

2. Explore the history of regional planning in the United States and the many planning issues that transcend the jurisdictional boundaries of government.
Audience: Graduate

3. Describe the institutional framework of the different levels of government within which regional planning occurs.
Audience: Graduate

4. Interpret the behaviors and structures available to bring about sound regional planning outcomes.
Audience: Graduate

5. Discuss key issues of the ethics of public decision-making in the regional planning context.
Audience: Graduate

6. Critique the role of officials, stakeholders, and community members in regional planning.
Audience: Graduate

7. Explain sustainability, environmental quality, social justice, economic, and cultural factors in regional planning.
Audience: Graduate

8. Assemble and analyze ideas and information from regional planning practice.
Audience: Graduate

URB R PL/ECON/PUB AFFR 734 – REGIONAL ECONOMIC PROBLEM ANALYSIS
3 credits.

Examination of major theories of regional economic development, with special emphasis upon the evolution and amelioration of regional economic problems. Selected techniques of regional analysis, including economic base multipliers, input/output models, and shift-share analysis are used in the context of setting regional development goals.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022
Learning Outcomes: 1. Explain regional economic theory, empirical justification/application, and relevant impacts of planning in the context of addressing local economic, social, and environmental problems.
Audience: Graduate

2. Understand the theoretical basis of regional science.
Audience: Graduate

3. Describe and apply basic empirical tools.
Audience: Graduate

4. Explain relevant consequences of regional policies that target economic, social, and environmental change.
Audience: Graduate

URB R PL 741 – INTRODUCTION TO PLANNING
3 credits.

Evolution of contemporary urban and regional planning thought. Major conceptual dilemmas in theory and practice. Emerging trends in planning, e.g., forecasting and futurism.
Requisites: Declared in Urban and Regional Planning MS or PhD
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2021
Learning Outcomes: 1. Explain the purpose and meaning of planning: why planning is undertaken by communities and what impact it is expected to have.
Audience: Graduate

2. Interpret relationships between past, present, and future in planning and appraise the potential to influence the future.
Audience: Graduate

3. Apply and critique the core values of planning (e.g., equity and social justice, public interest, sustainability, healthy and prosperous communities, diversity, democratic engagement, transparency).
Audience: Graduate

4. Describe general terminology, practices, and principles of related professions (e.g., public health, architecture, law, engineering, real estate, environmental restoration).
Audience: Graduate

5. Apply and critique tools of plan making and implementation: integrative tools useful for sound plan formulation, adoption, implementation, and enforcement.
Audience: Graduate

6. Apply and critique planning process methods and tools for stakeholder involvement, community engagement, and working with diverse communities.
Audience: Graduate

7. Explain and formulate for oneself professional planning ethics and responsibility.
Audience: Graduate

8. Describe and appraise external and internal organizational management.
Audience: Graduate

9. Compare the roles of officials, stakeholders, and community members in planned change governance and participation.
Audience: Graduate

URB R PL 742 – PLANNING ORIENTATION SEMINAR
1 credit.

Introduction to the field of planning and orientation to graduate study in urban and regional planning at UW-Madison. Explore planning as a tool for problem solving, planning and social change, the multiple roles in which planners find themselves, useful skills and perspectives, and areas of planning practice. Addresses core values, sustainability, equity and social justice, professional skills, and the role of plans in relation to policies and programs.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain the purpose and meaning of planning: why planning is undertaken by communities and what impact it is expected to have.
Audience: Graduate

2. Interpret relationships between past, present, and future in planning.
Audience: Graduate

3. Recognize and articulate the core values of planning (e.g., equity and social justice, public interest, sustainability, healthy and prosperous communities, diversity, democratic engagement, transparency) and their application in planning practice.
Audience: Graduate

4. Understand and analyze interconnected roles of officials, stakeholders, and community members in participation and governance for planned change.
Audience: Graduate

5. Develop capacity and a conceptual foundation for evaluating and critiquing planning process and applications.
Audience: Graduate

6. Apply sustainability frameworks to analyze challenges and opportunities in urban and regional planning.
Audience: Graduate

URB R PL 751 – INTRODUCTION TO FINANCIAL PLANNING
3 credits.

State and local financial planning with emphasis on the functional importance of expenditure; special problems in financing city and metropolitan governments; intergovernmental fiscal relations and the use of various budgetary techniques as integral parts of the planning process.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Describe the relationship between federal, state, and local government finance (fiscal federalism) and state constraints on local fiscal policy.
Audience: Graduate

2. Explain the use of financial analysis in local decision making.
Audience: Graduate

3. Explain property tax administration and its public policy context.
Audience: Graduate

4. Summarize fundamental concepts of local infrastructure finance, bonds, and debt.
Audience: Graduate

5. Apply basic financial and mathematical analysis of the time value of money.
Audience: Graduate

6. Apply alternative fiscal planning techniques in developing policy and reviewing development proposals.
Audience: Graduate

7. Evaluate policies to reduce racial and income disparities in the provision of public services.
Audience: Graduate

8. Critique professional ethics in the context of social justice and equity concerns.
Audience: Graduate

URB R PL 761 – CENTRAL CITY PLANNING: ISSUES AND APPROACHES
3 credits.

Social, economic, environmental, and fiscal trends affecting larger, older American cities, critical policy issues confronting central city decision-makers, and major programmatic responses to these issues; the role of planning in response to these trends and issues.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2020
Learning Outcomes: 1. Use ideas and information to understand specific planning practice impacts with respect to growth and development of places over time and across space.
Audience: Graduate

2. Understand the purpose and meaning of the city, an increased appreciation of the behaviors and activities available to residents, and an appreciation of the organizational contexts associated with their activities.
Audience: Graduate

3. Practice fundamental planning research used for assembling and analyzing ideas and information from prior practice and scholarship, and from secondary sources.
Audience: Graduate

4. Prepare standard written and graphic communication modalities for use in documents and presentations.
Audience: Graduate

5. Carry out an applied project with a stakeholder from initial concept to presentation.
Audience: Graduate

6. Practice values and ethics used in professional planning and more accurately, in a democratic society.
Audience: Graduate

7. Evaluate ethical questions of public decision-making, research, and client representation, governance and participation, sustainability and environmental quality, and growth and development from the different roles of elected officials, stakeholders, and community members.
Audience: Graduate

URB R PL 781 – PLANNING THOUGHT AND PRACTICE
3 credits.

Intensive analysis of selected planning cases highlighting important issues that planners deal with in practice. Examine case studies in the context of broader framework of planning history, decision making process models and planner role models. Explore subnational planning and regional development issues in developing countries.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe key concepts and moments within the field of urban planning.
Audience: Graduate

2. Explain the theoretical foundations for understanding city-regions and the role of urban planning.
Audience: Graduate

3. Critique the economic, political, and spatial forces behind the (re)production of urban space and various spatial relationships
Audience: Graduate

4. Apply critical spatial thinking to questions regarding the inequitable distribution of resources, services, and access.
Audience: Graduate

5. Apply research and presentation skills through informed written, oral, and graphic communication.
Audience: Graduate

URB R PL 791 – VISUAL COMMUNICATION FOR PLANNERS
3 credits.

Visual communication in planning addresses the communication of plans - specifically in the form of site plans, master plans, comprehensive plans, illustrative design codes, cartography, analyses maps, among other. Provides a planning and design graphics foundation to help realize the procedures in communication and information management within today's interdisciplinary planning process. Develop skills in graphic communication from techniques currently used in the planning, architecture, engineering, landscape architecture and urban design fields and review several digital graphic representation programs as a means of developing a planning graphics toolkit.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Create visual communication strategies that lead to more focused planning conversations with stakeholders
Audience: Graduate

2. Organize digital planning tools within multi-team member workflows to efficiently produce exhibits, presentations, and report documents
Audience: Graduate

3. Transform 2D planning data into 3D models to better convey written policies and their impacts on the physical environment
Audience: Graduate

4. Integrate emerging technology, such as virtual reality, into public engagement, analysis and planning studies
Audience: Graduate

URB R PL/ENVIR ST/PUB AFFR 809 – INTRODUCTION TO ENERGY ANALYSIS AND POLICY
3 credits.

Strategy and policy problems in energy policy, both national and international.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

URB R PL/ENVIR ST/PUB AFFR 810 – ENERGY ANALYSIS AND POLICY CAPSTONE
3 credits.

Interdisciplinary application of energy knowledge to an analysis project for a real-world client. Integrate and apply technical, economic, political, and social factors in energy decision-making.
Requisites: Declared in Energy Analysis and Policy Graduate/Professional Certificate or Doctoral Minor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Conduct an original analysis by collecting and interpreting data on an energy-related issue for areal-world client.
Audience: Graduate

2. Integrate and apply multiple disciplinary perspectives such as technical, economic, socio-political, and environmental factors in the context of complex energy problems.
Audience: Graduate

3. Prepare for energy-related careers by: planning and managing a project over multiple months; interacting professionally with client; working effectively in multidisciplinary teams; and producing professional-quality deliverables such as presentations and reports in accordance with scope of work.
Audience: Graduate

4. Analyze the causes and solutions for the sustainability challenge of affordable and clean energy.
Audience: Graduate

5. Analyze sustainability issues and/or practices using a systems-based approach.
Audience: Graduate

URB R PL/LAW 830 – LAND USE CONTROLS
3 credits.

Limitations imposed upon the use of privately owned land by the court-made law of nuisance, by private covenant, and by public action; master plan, official map, subdivision regulation, zoning, and urban redevelopment.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze the legal and institutional contexts within which planning occurs.
Audience: Graduate

2. Describe the operation and functioning of the legal system and its impact on planning.
Audience: Graduate

3. Use legal research skills to perform specific tasks required in the practice of planning.
Audience: Graduate

4. Find and analyze information from primary and secondary legal resources.
Audience: Graduate

5. Write legal documents related to plan creation, implementation, and enforcement.
Audience: Graduate

6. Recognize ethics of public decision-making including the AICP Code of Ethics and state rules related to the unauthorized practice of law.
Audience: Graduate

7. Examine the role of officials, stakeholders, and community members in planning in a democratic society.
Audience: Graduate

8. Recognize sustainability, environmental quality, social justice, economic, and cultural factors in planning
Audience: Graduate

URB R PL 833 – PLANNING AND THE LEGAL SYSTEM
3 credits.

An examination of how the legal system influences community planning. Overview of the institutional framework for planning and the legal authority for tools used to create healthy and sustainable communities.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Analyze the legal and institutional contexts within which planning occurs.
Audience: Graduate

2. Describe the operation and functioning of the legal system and its impact on planning.
Audience: Graduate

3. Use basic legal research skills to perform specific tasks required in the practice of planning.
Audience: Graduate

4. Find and analyze information from primary and secondary legal resources.
Audience: Graduate

5. Write legal documents related to plan creation, implementation, and enforcement.
Audience: Graduate

6. Recognize key issues of the ethics of public decision-making including the AICP Code of Ethics and state rules related to the unauthorized practice of law.
Audience: Graduate

7. Examine the role of officials, stakeholders, and community members in planning in a democratic society.
Audience: Graduate

8. Recognize sustainability, environmental quality, social justice, economic, and cultural factors in planning
Audience: Graduate

URB R PL 841 – URBAN FUNCTIONS, SPATIAL ORGANIZATION AND ENVIRONMENTAL FORM
2-3 credits.

Influence of social, economic, and political systems, technological innovations, and architectural concepts on the spatial organization and environmental form of cities and urban areas; the adaptability of urban physical structure to developmental change; planned, conceptual organization and form versus unplanned and ecological organization and form.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2023
Learning Outcomes: 1. Identify environmental issues arising from urbanization; describe urban ecological processes; and identify policies and practices of environmental planning in local, regional, and federal levels.
Audience: Graduate

2. Identify ways we can design with nature and assess land development patterns for environmental performance.
Audience: Graduate

3. Obtain and analyze geospatial environmental data using a range of spatial analysis tools for a number of environmental planning practices.
Audience: Graduate

4. Conduct a land suitability analysis, examine the impacts of imperviousness on water resources, and investigate the impacts of development on land resources.
Audience: Graduate

5. Present solutions to environmental planning problems.
Audience: Graduate

6. Evaluate natural resource and pollution control factors in planning.
Audience: Graduate

7. Describe how to create sustainable futures.
Audience: Graduate

URB R PL/ENVIR ST 843 – LAND USE POLICY AND PLANNING
3 credits.

Critical evaluation and analysis of land use policies and programs in relation to comprehensive planning and growth management issues in the U.S. The role of legislative and judicial processes and emerging public land use social values and philosophies in the development, regulation, and effectuation of innovative land use policies. Alternative land policy and growth guidance systems of select European countries.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Analyze the historical, political, social, and economic dimensions of land use policy in the U.S. context.
Audience: Graduate

2. Analyze relationships between land use regulation and urban form
Audience: Graduate

3. Identify the various actors that participate in contemporary land use planning and policy in the U.S. context and the interests that motivate their involvement.
Audience: Graduate

4. Analyze the conflicts around land use and how planners participate in them.
Audience: Graduate

5. Evaluate the role of planning in the land development process.
Audience: Graduate

URB R PL 844 – HOUSING AND PUBLIC POLICY
3 credits.

Issues and methodological problems encountered in the production, financial, and consumption sectors of housing program design; comparisons with European and Third World country housing and public policy programs.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Explain the relationship between federal, state, and local government programs.
Audience: Graduate

2. Describe housing finance and mortgages, policies and programs to provide affordable housing for lower-income households in the context of the history and structure of housing in the US.
Audience: Graduate

3. Evaluate the role of race and segregation in US housing history.
Audience: Graduate

4. Explain the role of local governments in producing and regulating housing and community development.
Audience: Graduate

5. Analyze housing plans and housing needs.
Audience: Graduate

6. Apply basic financial analysis of housing proposals using Census and other government data. Understand various policy tools to produce and provide housing services.
Audience: Graduate

7. Discuss professional ethics, social justice and equity concerns, and the role of race and poverty in housing policy.
Audience: Graduate

8. Explain the role of planning and public policy in addressing inequality and exclusion.
Audience: Graduate

URB R PL/ECON 845 – ADVANCED TOPICS IN PUBLIC FINANCE
1-4 credits.

Advanced public finance problems and literature, research; subject changes each semester; may be repeated. Modules.
Requisites: ECON 713 and 714
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2020

URB R PL/ENVIR ST 865 – WATER RESOURCES INSTITUTIONS AND POLICIES
3 credits.

Governmental processes and policies for water resources management: major substantive problems and issues; political processes of decision making; problems of governmental organization and intergovernmental arrangements.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024
Learning Outcomes: 1. Describe the historical and institutional dimensions of water resources planning, management, and policy.
Audience: Graduate

2. Summarize the overall U.S. water resources "institutional landscape"—the array of institutional arrangements that comprise our system for addressing water resource issues and problems—and relative strengths and weaknesses of various approaches and system components.
Audience: Graduate

3. Articulate the limitations of the existing water resources management framework, along with opportunities and strategies for reform, for addressing various substantive ecological water issues (e.g., watershed protection, restoration, and management; water allocation; groundwater; water quality and quantity; etc.).
Audience: Graduate

4. Identify and evaluate selected institutional and societal issues pertinent to water resources policy and management, including through an equity lens (e.g., integrated environmental collaborative watershed approaches, intergovernmental roles, program implementation, etc.).
Audience: Graduate

5. Evaluate institutional effectiveness in addressing and resolving water resource issues and problems management, collaborative watershed approaches, intergovernmental roles, program implementation, etc.).
Audience: Graduate

6. Apply sustainability principles and/or frameworks to addressing the challenges of water resource protection and restoration.
Audience: Graduate

7. Analyze sustainability issues and/or practices using a systems-based approach
Audience: Graduate

URB R PL/POLI SCI/PUB AFFR 874 — POLICY-MAKING PROCESS
3 credits.

Examines the political, social, and economic contexts that shape and are shaped by policy making processes. Though the focus is on the US, international comparisons will be made, and students are encouraged to think about the American context through comparative and international perspectives. Familiarizes students with dominant theories and models of policymaking process and policy change, starting with the model of the policy cycle. Focuses in on key topics and issues in policy making, specifically, agenda setting, implementation, and the relationships between policymaking and democracy. Reflects on contemporary and emerging issues and dilemmas of the politics of policy making.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify important contextual aspects of policy making processes, of dominant theories, models and conceptual frameworks of policy processes, and of key issues and topics in policy making.
Audience: Graduate

2. Critically analyze theories and evidence presented in readings and describe debates, past and present, surrounding public policy making processes.
Audience: Graduate

3. Read and comprehend academic research, data, and writing as well as journalistic writings on relevant issues of public policy processes and politics.
Audience: Graduate

4. Communicate summaries and analyses of topics, issues and key readings in class discussions, presentations, and writing assignments. Use clear written language and draw on theories, concepts, and evidence to support their arguments and ideas.
Audience: Graduate

5. Maintain fidelity to objective social science-based research methods.
Audience: Graduate

6. Prepare a high-quality presentation and communicate effectively as a speaker.
Audience: Graduate

URB R PL/POLI SCI/PUB AFFR 878 — PUBLIC MANAGEMENT
3 credits.

Role of administration in American government; problems of organization, bureaucracy and control; public policy as the output of the administrative process.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

URB R PL 912 — PLANNING WORKSHOP
4 credits.

Selected problems in planning to emphasize the interdisciplinary character of planning practice and to give opportunity to apply socioeconomic analysis, physical planning, and implementation techniques.
Requisites: URB R PL 791
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand and generally appreciate the purpose and meaning of planning, including ideas about planning and the role of planners, and the institutional contexts within which planning occurs
Audience: Graduate

2. Develop skills in communication, plan creation, planning process methods, and leadership,including methods for stakeholder involvement, project management, facilitation, and public participation techniques
Audience: Graduate

3. Understand and apply ethical principles to planning in a democratic society and understand key issues of ethical planning practice, including issues of governance and participation
Audience: Graduate

URB R PL/ENVIR ST 917 – PUBLIC PARTICIPATION FOR PLANNING AND POLICY MAKING
3 credits.

Examines public participation for planning and policymaking in both urban and natural environments; considers different types of participation from agency consultation to negotiation; designing, conducting, and evaluating citizen participation are major features.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Explain what public participation is and its application to planning, policy-making, and related decision-making processes, including benefits and challenges, the interplay between professional and community-based or local knowledge, values and ethics, and responsibilities of those leading participatory processes.
Audience: Graduate

2. Involve people meaningfully in planning and decision-making processes and create public participation plans, including goals and objectives tailored to specific project needs, techniques suitable to the goals, objectives and circumstances, and assessing effectiveness through ongoing evaluation.
Audience: Graduate

3. Use public participation applications and skills recognizing effective communication principles, sources of outrage and deep emotion, empathy, listening skills, constructive practices, and aligned participatory and facilitation techniques.
Audience: Graduate

4. Recognize conflicts and anticipate conflict resolution options in participatory processes by demonstrating knowledge of conflict resolution concepts and approach, analyzing conflict situations, and understanding proven techniques for resolving conflicts.
Audience: Graduate

URB R PL/SOC 924 – SEMINAR-POLITICAL SOCIOLOGY
3 credits.

Selected topics in political sociology, e.g., social movements, citizenship, civic engagement, weakening of postwar "social democratic consensus" under financialized globalization pressures.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

URB R PL 932 – SEMINAR-RESEARCH REVIEW AND CRITICISM
1-3 credits.

Group consideration of thesis or equivalent projects during their preparation; individual reports on successive stages of work.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Engage in/lead discussions about scholarship and gain insights about new ideas within the fields of landscape design, planning, conservation, and restoration.
Audience: Graduate

2. Present individual research/design projects and engage in discussions appropriate to its stage of development.
Audience: Graduate

3. Review the presentations of others and offer constructive comments to the presenter.
Audience: Graduate

4. Locate, summarize, critique, and contextualize scholarly journal articles, and present their findings to an audience of peers.
Audience: Graduate

URB R PL 945 – SEMINAR IN LAND USE AND COMMUNITY DEVELOPMENT ISSUES
3 credits.

The social, economic, and political setting of urban blight and the current measures, including urban renewal and model cities programs, to cope with the condition. Attention to social change, concept of neighborhood, and cross-cultural perspectives to renewal and community development.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023
Learning Outcomes: 1. Describe the spatial/temporal characteristics, markets, society, institutions, and decision-making within which amenities are commodified.
Audience: Graduate

2. Distinguish between and critically evaluate the provision of amenity resources and the humanmotivations for leisure (demand).
Audience: Graduate

3. Explain the foundational theories of policy analysis and research in tourism.
Audience: Graduate

URB R PL/DS/F&W ECOL 955 – PRACTICAL RESEARCH DESIGN AND METHODS OF EMPIRICAL INQUIRY
3 credits.

Provides a practical introduction to basic concepts of research question formulation, research designs and alternative methods of inquiry, implications for internal validity of the research and generalizability of the findings, operational definitions and measurement validity, reliability, utility and precision.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2022

URB R PL 990 – RESEARCH AND THESIS
1-5 credits.

Individual mentored research and study for completing theses, as arranged with a faculty member
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

URB R PL 999 – INDEPENDENT WORK
1-3 credits.

Independent study as arranged with a faculty member.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

UROLOGY (UROLOGY)

UROLOGY 910 – INDEPENDENT READING AND RESEARCH IN UROLOGY
2-8 credits.

Independent research under the direct supervision of Urology faculty. Projects are individualized to meet student research goals within the context of faculty research needs.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Formulate a hypothesis or specific objective if study does not involve hypothesis-generating research
Audience: Graduate

2. Conduct a thorough literature review of the specific research question.
Audience: Graduate

3. Select and apply statistical knowledge methodologies appropriate for the proposed analyses.
Audience: Graduate

4. Interpret results correctly and in context of previous findings from literature review.
Audience: Graduate

5. Present findings.
Audience: Graduate

UROLOGY 938 – INPATIENT ACTING INTERNSHIP-UROLOGY
4 credits.

An in-depth exposure to inpatient and operative management of complicated urologic patients, under the direct supervision of a senior resident, fellows, and faculty. Function at the intern level and have an active role in inpatient management of urologic patients.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Develop evidence-based understanding of the pathophysiology and appropriate management options for common urologic disorders.
Audience: Graduate

2. Discuss the surgical anatomy, common procedural indications, comorbidities, and prophylactic strategies to reduce post-operative complications.
Audience: Graduate

3. Summarize basic knowledge regarding common post-operative complications and the appropriate management of each.
Audience: Graduate

4. Describe indications and list the appropriate preoperative evaluations, including lab tests, radiographic imaging, and ECG.
Audience: Graduate

5. Identify and describe the use of common instruments used in surgery.
Audience: Graduate

6. Discuss common intraoperative complications associated with procedures and the appropriate management of each.
Audience: Graduate

7. Gather a history and perform a physical examination for a surgical patient.
Audience: Graduate

8. Prioritize a differential diagnosis following a clinical encounter.
Audience: Graduate

9. Recommend and interpret common diagnostic and screening tests.
Audience: Graduate

10. Enter and discuss patient orders.
Audience: Graduate

11. Document a clinical encounter in the patient record.
Audience: Graduate

12. Provide an oral presentation of a clinical encounter.
Audience: Graduate

13. Form clinical questions and retrieve evidence to advance patient care.
Audience: Graduate

14. Give or receive a patient handover to transition care responsibility.
Audience: Graduate

15. Collaborate as a member of an interprofessional team.
Audience: Graduate

16. Recognize a patient requiring urgent or emergent care and initiate evaluation and management.

UROLOGY 967 – UROLOGY ELECTIVE
2-4 credits.

In-depth exposure to operative, inpatient, ambulatory, and subspecialty clinic urology. Round on Urology service patients, participate in scheduled operative procedures, present cases, and discuss patient cases. Complete independent activities, including reading about patient conditions and preparing for direct patient care as needed. Attend conferences associated with the assigned Urology service. Complete other patient care related learning activities as assigned by instructors; these are dependent on the individual student, the patients under the student's care, and the location.
Requisites: MED SC-M 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Perform a hypothesis-driven history and complete a targeted exam
Audience: Graduate

2. Develop and present a weighted differential diagnosis for medical and surgical conditions
Audience: Graduate

3. Using clinical evidence, generate and justify the working diagnosis
Audience: Graduate

4. Present a diagnostic plan, including laboratory and imaging modalities
Audience: Graduate

5. Correctly interpret imaging and laboratory findings and communicate results to patients and team members
Audience: Graduate

6. Develop and implement effective patient management plans
Audience: Graduate

7. Complete written documentation in a comprehensive, concise, accurate, and timely manner
Audience: Graduate

8. Review, interpret, and present current literature to support patient care
Audience: Graduate

9. Communicate effectively with patients, families, physicians, and non-physician team members
Audience: Graduate

10. Communicate and collaborate with consultants and/or primary team and other providers to coordinate care
Audience: Graduate

11. Engage patients in shared decision making regarding tests, orders, and procedures
Audience: Graduate

12. Communicate with patients and families effectively, including avoiding medical jargon
Audience: Graduate

13. Recognize limitations and seek assistance as appropriate
Audience: Graduate

14. Explain the process of obtaining informed consent prior to surgical intervention

UROLOGY 980 – SEX, GENDER, AND SEXUALITY HEALTH EQUITY
2 credits.

An overview of how concepts of sex, gender, and sexuality in society and medicine impact medical care and lived experience for patients who are LGBQ, transgender, gender-diverse, and/or have variations in sex characteristics (VSC). Topics include shared decision-making, allyship, trauma-informed care, gender-affirming care, and unique health disparities in patients who are LGBQ, transgender, gender-diverse, and/or those with VSC. Gain insight into patient experience of medical care through patient-centered shadowing/observer opportunities.
Requisites: MED SC-M 810, 811, 812, and 813
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Learning Outcomes: 1. Describe differences between the terms "sex," "gender," and "sexuality," identify potential for conflation of these terms, and apply these terms correctly in the context of clinical care and daily life.
Audience: Graduate

2. Summarize how historical approaches to medical care for those with variations in sex characteristics (VSC) have impacted the patient-provider relationship on the individual and community level, and identify ethical principles that influence decision-making for early childhood medical care for people with VSC.
Audience: Graduate

3. Identify how medical and non-medical systems level barriers and societal awareness of needs unique to these populations impact health care interactions and overall health of patients with variations in sex characteristics (VSC), trans and gender-diverse patients, and LGBQ patients.
Audience: Graduate

4. Integrate knowledge of health disparities experienced by LGBTQI+ patients and apply understanding of available resources and care support for these populations in future clinical practice.
Audience: Graduate

ZOOLOGY (ZOOLOGY)

ZOOLOGY/BIOLOGY 101 – ANIMAL BIOLOGY
3 credits.

General biological principles. Topics include: evolution, ecology, animal behavior, cell structure and function, genetics and molecular genetics and the physiology of a variety of organ systems emphasizing function in humans.
Requisites: Not open to students with credit for BOTANY/BIOLOGY/ZOOLOGY 151 or 152
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ZOOLOGY/BIOLOGY 102 – ANIMAL BIOLOGY LABORATORY
2 credits.

General concepts of animal biology at an introductory level emphasizing the evolutionary relationships between animals. Learn about general body plans and strategies used to accomplish the basic tasks of staying alive in major animal groups using preserved and live animals. Study the diversity within each group of animals by integrating the body plans with the lifestyle and ecology of animals. Dissections of earthworm, freshwater mussel, squid, sea star, and rat aid the study of these general principles.
Requisites: Not open to students with credit for BOTANY/BIOLOGY/ZOOLOGY 151 or 152
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ZOOLOGY 110 – BIOLOGY IN POPULAR MEDIA
3 credits.

Learn introductory biology concepts, and about science as a process while analyzing depictions of biology, biologists and the scientific method in popular movies, TV and documentaries. Evaluate the factuality of biology as it is represented and explore common biology tropes and their impact on science and the public's understanding of biology.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No

ZOOLOGY 115 – FRESHWATER: PAST, PRESENT, AND FUTURE
3 credits.

Freshwater is one of our most valuable resources, and the basis for life itself. Explores contemporary threats and issues relating to freshwater ecosystems (lakes, rivers, wetlands) ranging from local to global. Covers a broad range of topics in freshwater sciences (invasive species, harmful algal blooms, overfishing, pathogens in drinking water) to provide a representative cross-section of the field. Material will tie directly to local and global societal issues. Integrates insights from biology with other disciplines (chemistry, geosciences, social sciences) to offer a deeper understanding of the threats to freshwater ecosystems, and how this affects human well-being.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the status and threats to freshwater organisms and ecosystems – both in Wisconsin and globally
Audience: Undergraduate

2. Apply knowledge of water and the hydrologic cycle to understanding the ecology of freshwater organisms (harmful algal blooms) and ecosystems (specifically rivers, lakes, and wetlands)
Audience: Undergraduate

3. Demonstrate an understanding of contemporary environmental issues relating to freshwater ecosystems (harmful algal blooms, invasive species, overfishing, pathogens in drinking water)
Audience: Undergraduate

4. Recognize the role and importance of freshwater ecosystems in their own lives – how our society and well-being depend on healthy freshwater ecosystems and resources
Audience: Undergraduate

ZOOLOGY/BIOLOGY/BOTANY 151 – INTRODUCTORY BIOLOGY
5 credits.

Topics include: cell structure and function, cellular metabolism (enzymes, respiration, photosynthesis), information flow (DNA, RNA, protein), principles of genetics and selected topics in Animal Physiology.
Requisites: Not open to students with credit for BIOLOGY/ZOOLOGY 101, 102 or BIOLOGY/BOTANY 130
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ZOOLOGY/BIOLOGY/BOTANY 152 – INTRODUCTORY BIOLOGY
5 credits.

Topics include: selected topics in plant physiology, a survey of the five major kingdoms of organisms, speciation and evolutionary theory, and ecology at multiple levels of the biological hierarchy.
Requisites: ZOOLOGY/BIOLOGY/BOTANY 151
Course Designation: Gen Ed - Communication Part B
Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ZOOLOGY 153 – INTRODUCTORY BIOLOGY
3 credits.

Topics include: cell structure and function, cellular metabolism (enzymes, respiration, photosynthesis), information flow (DNA, RNA, protein), principles of genetics, and selected topics in Animal Physiology. Designed for engineering majors that do not need a lab component.
Requisites: Not open to students with credit for BIOLOGY/ZOOLOGY 101, 102 or BIOLOGY/BOTANY 130
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ZOOLOGY/PL PATH 154 — TINY EARTH: ANTIBIOTIC DISCOVERY RESEARCH
2 credits.

Learn basic methodology in scientific research and discovery, including laboratory techniques, quantitative reasoning, scientific communication, and collaboration. Gain hands-on laboratory experience working with microbes to test original hypotheses concerning the discovery of potential antibiotic compounds while addressing the world's antibiotic resistance crisis by contributing data to the global "Tiny Earth" network of researchers to advance potential drug development. Tiny Earth seeks to encourage students to pursue careers in science through real-world, applied research experiences and aims to address a worldwide health threat of the diminishing supply of effective antibiotics by "student-sourcing antibiotic discovery." Concurrent enrollment in BIOLOGY/BOTANY/ZOOLOGY 152 is required for permission to enroll.
Requisites: Consent of instructor
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate basic knowledge of microbes and antibiotic resistance by (1) sufficiently explaining the process of natural selection with the accurate use of terminology, (2) describing morphological and physiological variation in bacteria and how this relates to bacterial taxonomy, and (3) summarizing mechanisms of the spread of antibiotic resistance genes across the microbial world.
Audience: Undergraduate

2. Demonstrate scientific competency as shown by their ability to (1) propose an original research question and hypothesis, (2) develop a biological rationale for the hypothesis, (3) select appropriate protocols to test the hypothesis, and (4) perform the research collaboratively with group members in a cordial and respectful way.
Audience: Undergraduate

3. Demonstrate proper techniques in basic micro- and molecular biology by (1) pipetting fluids with volume accuracy, (2) plating microbes via spread, patch, and streak methods, (3) using proper sterile technique, and (4) performing protocols for polymerase chain reaction (PCR), gel electrophoresis, and BLAST analysis for DNA amplification and sequencing.
Audience: Undergraduate

4. Demonstrate quantitative reasoning as shown by their ability to (1) select an appropriate statistical analysis for a given data set and research question, (2) carry out the statistical analysis using a vetted program (e.g. online statistical calculator tool such as Vassarstats.com), and (3) accurately interpret and the translate the results into a meaningful statement.
Audience: Undergraduate

5. Demonstrate scientific communication as shown by their ability to (1) clearly express a hypothesis, general methodology, and results in formal writing, (2) accurately visualize numerical results in the form of graph, (3) satisfactorily deliver aspects of the research project and findings via oral presentation and scientific poster presentation.
Audience: Undergraduate

ZOOLOGY 199 — DIRECTED STUDY
1-3 credits.

Directed study/independent research. Experience hypothesis development, research through faculty mentorship.
Requisites: Consent of instructor
Course Designation: Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ZOOLOGY 200 — TOPICS IN BIOLOGY
1-3 credits.

Introductory topics in biological sciences.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025
Learning Outcomes: 1. Develop an understanding of various basic key concepts in biological sciences from molecular biology to ecosystem ecology.
Audience: Undergraduate

2. Make connections among biological concepts.
Audience: Undergraduate

3. Appreciate biological sciences in a natural world
Audience: Undergraduate

4. Make connections between biology and societal issues
Audience: Undergraduate

ZOOLOGY/BOTANY/ENVIR ST 260 — INTRODUCTORY ECOLOGY
3 credits.

The relationships of organisms and the environment. Population dynamics and community organization, human-environment relationships, action programs.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ZOOLOGY 275 – BIOLOGY OF THE DINOSAURS
3 credits.

Biology, ecology and evolution of dinosaurs. Use anatomical correlates and phylogeny to understand physiology, adaptation, and evolutionary transitions. Examples include predator-prey interactions, the evolutionary transition to flight, and how late Mesozoic ecology gave rise to our modern world.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate comprehension of paleobiological processes, and awareness of major concepts and debates.
Audience: Undergraduate

2. Connect the role of phylogeny in shaping terrestrial ecosystems past and present.
Audience: Undergraduate

3. Identify anatomical correlates of physiological processes.
Audience: Undergraduate

4. Assess how changing environments drive major evolutionary transitions.

Audience: Undergraduate

5. Develop initial competency reading scientific articles.
Audience: Undergraduate

6. Evaluate scientific claims about living and extinct animals.
Audience: Undergraduate

ZOOLOGY 299 – DIRECTED STUDIES IN ZOOLOGY
1-3 credits.

Directed study/independent research. Experience hypothesis development, research through faculty mentorship.
Requisites: Consent of instructor
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ZOOLOGY 300 – INVERTEBRATE BIOLOGY AND EVOLUTION
3 credits.

Introduction to invertebrate diversity and biology, with emphasis on anatomy, development, and systematic relationships of the main animal phyla. Phyla are discussed in the context of major themes in animal evolution, such as the origin of tissue layers, the diversity of feeding mechanisms, the evolution of terrestrialization, patterns of diversification through time, and the conservation of transcriptional circuitry. Focus on animal diversity from a phylogenetic and developmental perspective.
Requisites: (ZOOLOGY/BIOLOGY 101 and 102), (ZOOLOGY/BIOLOGY/BOTANY 151 and 152) or BIOCORE 381
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023

ZOOLOGY 301 – INVERTEBRATE BIOLOGY AND EVOLUTION LAB
2 credits.

Introduction to invertebrate diversity and biology, with emphasis on anatomy, development, and systematic relationships of the main animal phyla. Phyla are discussed in the context of major themes in animal evolution, such as the origin of tissue layers, the diversity of feeding mechanisms, the evolution of terrestrialization, patterns of diversification through time, and the conservation of transcriptional circuitry. Focus on animal diversity from a phylogenetic and developmental perspective.
Requisites: Concurrent enrollment in ZOOLOGY 300
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023

ZOOLOGY/ENTOM 302 – INTRODUCTION TO ENTOMOLOGY
4 credits.

Principles including morphology and classification.
Requisites: ZOOLOGY/BIOLOGY 101, ZOOLOGY/BIOLOGY/BOTANY 151, ZOOLOGY 153, or BIOCORE 381
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ZOOLOGY 303 – AQUATIC INVERTEBRATE BIOLOGY
3 credits.

The form, function, development, basic physiology and ecology of the freshwater and marine invertebrates in the context of their environment. Study live invertebrate specimens, their habitat selection, adaptation and diversity.
Requisites: (ZOOLOGY/BIOLOGY 101 and 102), ZOOLOGY/BIOLOGY/BOTANY 152, or BIOCORE 381
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2024

ZOOLOGY 304 — MARINE BIOLOGY
2 credits.

Explore the biological and ecological systems of the oceans and marginal seas. Focus on understanding how marine organisms interact with their physical environment and how the biological components of the oceans are interconnected through trophic interactions and habitat selection.
Requisites: (ZOOLOGY/BIOLOGY 101 and 102), ZOOLOGY/BIOLOGY/BOTANY 152, or BIOCORE 381
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025
Learning Outcomes: 1. Describe the oceanic environment, its chemical and physical factors and life in a fluid medium.
Audience: Undergraduate

2. Explain the processes in the open sea: Nutrients, productivity, food webs.
Audience: Undergraduate

3. Identify and describe marine organisms in their habitats: How they function and adapt.
Audience: Undergraduate

4. Explain the drivers behind the diversity of marine life: Habitat stability and diversity, evolutionary and ecological connections.
Audience: Undergraduate

5. Explain and discuss the human impact on the sea: Agricultural land to the seas, point and non-point sources of nutrients, increased primary productivity, over fishing.
Audience: Undergraduate

ZOOLOGY/ENVIR ST 315 — LIMNOLOGY-CONSERVATION OF AQUATIC RESOURCES
2 credits.

General limnology. Physical, chemical and biological characteristics and processes of lakes. Environmental problems and rehabilitation of lakes.
Requisites: (ZOOLOGY/BIOLOGY 101 and 102), ZOOLOGY/BIOLOGY/BOTANY 152, or BIOCORE 381 or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ZOOLOGY 316 — LABORATORY FOR LIMNOLOGY-CONSERVATION OF AQUATIC RESOURCES
2-3 credits.

Biological, physical, and chemical characteristics and their interrelationships in Wisconsin lakes and streams.
Requisites: ZOOLOGY/ENVIR ST 315 or concurrent enrollment
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ZOOLOGY 320 — FIELD MARINE BIOLOGY
3 credits.

Provides a hands-on, research-driven experience within a marine environment, centering on exposure to 1) the diverse organisms and ecological interactions of coastal marine habitats 2) conservation issues relevant in these habitats 3) the research process from formulating interesting biological questions to conducting scientific research. Features immersion in a variety of marine habitats along with presentations by experts on marine conservation issues.
Requisites: (BIOCORE 381 and 382), (ZOOLOGY/BIOLOGY 101 and 102), or ZOOLOGY/BIOLOGY/BOTANY 152
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Be able to describe how habitat structures marine fish and invertebrate communities
Audience: Undergraduate

2. Identify common marine fish and invertebrate species and their adaptations to the unique challenges of feeding, predator avoidance, and reproduction in the marine environment
Audience: Undergraduate

3. Describe threats to marine biodiversity and strategies used to mitigate these threats
Audience: Undergraduate

4. Formulate testable scientific hypotheses/questions
Audience: Undergraduate

5. Develop and execute a data collection plan for investigating the hypotheses/questions
Audience: Undergraduate

6. Communicate research findings verbally and in writing, including using data and figures
Audience: Undergraduate

ZOOLOGY 335 – HUMAN/ANIMAL RELATIONSHIPS: BIOLOGICAL AND PHILOSOPHICAL ISSUES
3 credits.

An interdisciplinary approach to our complex and often contradictory relationships with non-human animals, including information about the nature, needs and behavior of human and non-human animals in relation to our personal and professional interactions with them.
Requisites: Sophomore standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ZOOLOGY/ENTOM/M M & I/PATH-BIO 350 – PARASITOLOGY
3 credits.

The biology of water-borne, food-borne, soil-borne and vector-borne parasites of animals including humans. Parasites are explored in the context of transmission, associated disease, diagnosis and treatment options, and environmental, cultural and socioeconomic drivers of disease epidemiology.
Requisites: ZOOLOGY/BIOLOGY 101 and 102, or ZOOLOGY/BIOLOGY/BOTANY 152 or ZOOLOGY 153, or BIOCORE 381
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Be conversant in terminology used in the field of Parasitology.
Audience: Undergraduate

2. Recall scientific and common names for parasites and hosts, and the name of the resulting disease in humans or animals.
Audience: Undergraduate

3. Attribute parasite behavior and characteristics to specific disease features in the host.
Audience: Undergraduate

4. Identify appropriate means to diagnose infections with parasites.
Audience: Undergraduate

5. Describe and identify factors that determine when, where, and why parasitic diseases exist.
Audience: Undergraduate

6. Integrate terminology, scientific nomenclature, diagnostic features and demographics to solve case studies where the parasitic culprit is unknown.
Audience: Undergraduate

7. Compare and contrast commonalities in parasite life cycles to demonstrate how flexibility in those life cycles has resulted in many different potential means of transmission.
Audience: Undergraduate

8. Deconstruct the impact of parasitic diseases on human and animal health, from disease symptoms and pathology in an individual, to socioeconomics in communities and countries.
Audience: Undergraduate

9. Identify reliable resources (primarily internet-based) available for researching the biology and epidemiology parasitic diseases.
Audience: Undergraduate

ZOOLOGY/ENVIR ST/F&W ECOL 360 – EXTINCTION OF SPECIES
3 credits.

A comprehensive treatment of the ecology, causes, and consequences of species extinction. Ecology and problems of individual species, habitat alteration and degradation, socio-economic pressures and conservation techniques and strategies.
Requisites: Sophomore standing and ZOOLOGY/BIOLOGY/ BOTANY 151, (ZOOLOGY/BIOLOGY 101 and 102), BIOLOGY/ BOTANY 130, or (BIOCORE 381 and 382)
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Describe the ecological and evolutionary processes shaping the distribution of species diversity globally
Audience: Undergraduate

2. Explain how human activities can threaten species with extinction
Audience: Undergraduate

3. Identify genetic problems and management in small populations
Audience: Undergraduate

4. Discuss social and political dimensions to conservation problems and solutions
Audience: Undergraduate

5. Identify the basic components of the US Endangered Species Act (ESA) and how the ESA has been applied to the conservation of species
Audience: Undergraduate

6. Evaluate and create conservation strategies for at-risk species
Audience: Undergraduate

ZOOLOGY 370 – GENERAL MOLECULAR BIOLOGY
3 credits.

Develop a broad understanding of how life works at the molecular level. Covers structure, chemistry, and functions of macromolecules, focusing primarily on how nucleic acids carry out their central roles in cells, rather than transmission genetics. Other topics include the governing principles by which life evolved, functions, and is organized; the experimental methods used to study these processes; and the historical context for our understanding of them. In other words: soup-to-nuts of nucleic acid biology and chemistry.
Requisites: (ZOOLOGY/BIOLOGY 101, ZOOLOGY/BIOLOGY/ BOTANY 151, or BIOCORE 383) and (CHEM 104, 109, or 116)
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Describe the molecular basis of life and the relationship between the structure and function of biological macromolecules
Audience: Undergraduate

2. Explain the means by which genetic information is stored and organized in biological cells.
Audience: Undergraduate

3. Explain the means by which the genetic information is replicated.
Audience: Undergraduate

4. Explain how information is transformed from the genetic code to structural and catalytic molecular forms.
Audience: Undergraduate

5. Describe the nature, causes, and consequences of changes in the genetic code.
Audience: Undergraduate

6. Define the laboratory techniques of modern biology.
Audience: Undergraduate

7. Describe the nature of the genetic material and its roles in inheritance, evolution and cellular function.
Audience: Undergraduate

8. Be able to integrate the nature of molecular biology with the cultural and historical factors surrounding the scientific enterprise.
Audience: Undergraduate

9. Become equipped to critically assess the primary scientific literature in molecular biology.
Audience: Undergraduate

ZOOLOGY/ENTOM 371 – MEDICAL ENTOMOLOGY: BIOLOGY OF VECTOR AND VECTOR-BORNE DISEASES
3-4 credits.

Explore the biological and molecular adaptations of parasitic arthropods that allow them to feed on vertebrate host and facilitate the transmission of vector-borne pathogens. Examines how anthropogenic activities, behaviors, and effects on climate affect the biology of vectors, the pathogens they transmit, and the emergence of vector-borne epidemics in the world. Emphasis on the molecular and physiological interaction between pathogens, their vector, and the vertebrate host and the fundamentals on how vectors and vector-borne pathogens cause disease in humans. Evaluate real control programs deployed globally for the control of vector-borne diseases.
Requisites: ZOOLOGY/BIOLOGY 101, ZOOLOGY/BIOLOGY/BOTANY 151, BIOCORE 383, ZOOLOGY 153, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify vector-borne pathogens of public health importance and their respective vectors.
Audience: Both Grad & Undergrad

2. Distinguish how biological and physiological adaptations facilitate the relationship between vectorsand particular pathogens.
Audience: Both Grad & Undergrad

3. Apply information on disease epidemiology, vector ecology, vector distribution, and disease manifestation to solve hypothetical scenarios of vector-borne disease transmission.
Audience: Both Grad & Undergrad

4. Discuss current issues delaying the development of diagnostics, prevention, treatment, and control of vector-borne diseases.
Audience: Both Grad & Undergrad

5. Evaluate vector control programs currently deployed internationally based on knowledge of vector biology.
Audience: Both Grad & Undergrad

6. Design project proposals to study different aspects of vector physiology, biology, ecology, and pathogen-vector interactions.
Audience: Graduate

ZOOLOGY 400 – TOPICS IN BIOLOGY
1-3 credits.

Various intermediate level topics in Biology. Each section will explore a different topic in biology.
Requisites: Sophomore standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ZOOLOGY 401 – TOPICS IN BIOLOGY
1-3 credits.

Explore various intermediate level topics in biological sciences through lecture and lab courses. Each section will explore a different topic.
Requisites: Sophomore standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Learning Outcomes: 1. Develop an understanding of various concepts and methods in biological sciences
Audience: Undergraduate

2. Make connections among biological concepts
Audience: Undergraduate

3. Identify the connection between the biological concepts and natural processes.
Audience: Undergraduate

4. Develop laboratory based research skills for scientific inquiry
Audience: Undergraduate

5. Apply scientific methods to investigate various biological processes
Audience: Undergraduate

ZOOLOGY 405 – INTRODUCTION TO MUSEUM STUDIES IN THE NATURAL SCIENCES
2-3 credits.

Provides an overview of natural history museums, including history, field collecting, specimen preparation, collection preservation, ethics, education and employment opportunities. Introduces the natural science museums and library collections located on the UW campus.
Requisites: Junior standing
Course Designation: Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ZOOLOGY/ANTHRO/BOTANY 410 – EVOLUTIONARY BIOLOGY
3 credits.

Evolutionary biology, emphasizing how modern scientists study evolution. Topics include: nature and mechanisms of microevolution, macroevolution, adaptation, speciation; systematics and taxonomy; quantitative genetics and measurement of natural selection; phylogenetic analyses of behavior, physiology, morphology, biochemistry; current controversies in evolution.
Requisites: ZOOLOGY/BIOLOGY 101, BIOLOGY/BOTANY 130, ZOOLOGY/BIOLOGY/BOTANY 152, BIOCORE 381, (ANTHRO 105 and satisfied QR-A requirement), or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ZOOLOGY 415 – GENETICS OF HUMAN HISTORY
3 credits.

Covers a range of topics related to human genetics and evolution. Explores questions about what genetic differences between humans tell us about our species' evolutionary and demographic history, and conversely, how our history has shaped the genetic diversity of people living today. At a time of rapidly increasing ability to sequence huge numbers of genomes such questions play a central role in understanding how genetics impacts individuals' disease risks, how to interpret reported ancestry and family history from direct-to-consumer genotyping kits, and how genetics can (or importantly, cannot) inform descriptions of human diversity and concepts of race. Includes topics of diversity and inclusion in genomics studies, with a focus on the application and limits of results obtained from one group to our understanding of other groups.
Requisites: (ZOOLOGY/BIOLOGY 101 and 102), ZOOLOGY/BIOLOGY/BOTANY 152, or BIOCORE 381
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Read different types of sources covering current scientific topics
Audience: Undergraduate

2. Learn the vocabulary and concepts needed to read and discuss advances in genomics research, human evolution, and the genetics of diversity
Audience: Undergraduate

3. Read and discuss material where the scientific consensus is unclear, uncertain, or controversial
Audience: Undergraduate

4. Synthesize scientific information as an evolving understanding of complex topics shaped both by new scientific discoveries and broader society
Audience: Undergraduate

5. Explain the science behind our understanding of human genetics
Audience: Undergraduate

ZOOLOGY 425 – BEHAVIORAL ECOLOGY
3 credits.

Explore how organisms make decisions and how these decisions affect their survival. These decisions are key aspects of an organism's life, e.g. foraging behavior, mating behavior, anti-predator behavior, and habitat selection. Approaches these questions with the perspective that understanding the proximal and ultimate basis of behavior requires understanding the ecological and evolutionary context of behavior.
Requisites: ZOOLOGY/BIOLOGY/BOTANY 152, (ZOOLOGY/BIOLOGY 101 and BOTANY/BIOLOGY 130), or (BIOCORE 381 and 382)
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ZOOLOGY 430 – COMPARATIVE ANATOMY OF VERTEBRATES
5 credits.

Basic vertebrate anatomical systems and a consideration of variations, using functional embryological and evolutionary approaches. Lab dissection and study of representative vertebrate material.
Requisites: (ZOOLOGY/BIOLOGY 101 and 102), ZOOLOGY/BIOLOGY/BOTANY 152, or BIOCORE 381
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ZOOLOGY 444 – NEURONAL CELL BIOLOGY IN HEALTH AND DISEASE
2 credits.

Provides an advanced understanding of cell biology as it relates to the nervous system. Covers the neuronal cytoskeleton, molecular motors and their cargos, the secretory system and how it functions in neurons, formation and maintenance of pre- and post-synaptic structures, neuronal organelles and their functions. Discussion of what is known about the disruptions to cell biology of neurons that contributes to neurodevelopmental and neurodegenerative diseases such as Alzheimer's disease, Parkinson's disease, Amyotrophic Lateral Sclerosis, Charcot Marie Tooth Disease, Spinal Muscular Atrophy, and others.
Requisites: ZOOLOGY/BIOLOGY 101, BOTANY/BIOLOGY/ZOOLOGY 152, or BIOCORE 384
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Learning Outcomes: 1. Understand vocabulary used to describe and understand cell biology in the context of neuroscience
Audience: Undergraduate

2. Read and critique primary literature related to neuronal cell biology
Audience: Undergraduate

3. Synthesize and disseminate knowledge related to neuroscience, cell biology, and the relationship between concepts discussed and human disease
Audience: Undergraduate

4. Summarize the state of the field of cellular neuroscience
Audience: Undergraduate

5. Ask critical, open questions that have yet to be addressed at the basic science level and in relation to disruptions associated with neurological disease
Audience: Undergraduate

ZOOLOGY/BOTANY 450 – MIDWESTERN ECOLOGICAL ISSUES: A CASE STUDY APPROACH
2 credits.

How ecological principles can be used to address contemporary environmental issues such as water quality, invasive species, and population growth. Emphasis on midwestern issues, practical approaches, the role of history, and geographic context.
Requisites: ZOOLOGY/BIOLOGY/BOTANY 152, BOTANY/BIOLOGY 130, (ZOOLOGY/BIOLOGY 101 and ZOOLOGY/BIOLOGY 102), or BIOCORE 381
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Summer 2025

ZOOLOGY/BOTANY/F&W ECOL 460 — GENERAL ECOLOGY
4 credits.

Ecology of individual organisms, populations, communities, ecosystems, landscapes, and the biosphere. The interaction of organisms with each other and their physical environment. These relationships are studied, often in quantitative terms, in both field and laboratory settings.
Requisites: Satisfied Quantitative Reasoning (QR) A requirement and ZOOLOGY/BIOLOGY/BOTANY 152, (ZOOLOGY/BIOLOGY 101 and 102), BIOCORE 381, or BOTANY/BIOLOGY 130, or graduate/professional standing
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ZOOLOGY 470 — INTRODUCTION TO ANIMAL DEVELOPMENT
3 credits.

Introduction to the major features and mechanisms of early embryonic development in animals, including (1) the major stages of early development, (2) how form arises in the embryo (morphogenesis), (3) how differences arise between cells in the embryo, and (4) how specific genes control these processes.
Requisites: ZOOLOGY/BIOLOGY/BOTANY 151, BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY 101, BIOCORE 381, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ZOOLOGY/BOTANY/ENTOM 473 — PLANT-INSECT INTERACTIONS
3 credits.

Multiple ways in which arthropods exploit plants, plant traits that deter or augment insects, environmental mediation of these interactions, effects on population dynamics, community ecology and co-evolution, and implications to natural resource management, environmental quality, and sustainable development.
Requisites: F&W ECOL/BOTANY/ZOOLOGY 460, FW ECOL 500, ENTOM/BOTANY/PL PATH 505, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

ZOOLOGY 500 — UNDERGRADUATE NEUROBIOLOGY SEMINAR
1 credit.

A wide range of topics in neurobiology research from molecular neurobiology to integrative systems. Topics discussed by invited UW-Madison faculty researchers might include: ion channels and synaptic plasticity, neural development, sensory and cognitive physiology, biological basis of behavioral disorders and cognitive decline.
Requisites: Declared in Neurobiology and ZOOLOGY/PSYCH 523 or concurrent enrollment.
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ZOOLOGY/ENVIR ST 510 – ECOLOGY OF FISHES
3 credits.

Interactions of fishes with their physical, chemical, and biotic environment; physiological ecology, community ecology and fisheries sciences. Lake Mendota perch fishery and Shedd Aquarium field trips.
Requisites: (ZOOLOGY/BIOLOGY 101 and 102), ZOOLOGY/BIOLOGY/BOTANY 152, or BIOCORE 381
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Use facts to guide conceptual thinking and hypothesis tests about ecological systems.
Audience: Undergraduate

2. Draw upon aspects of fish evolution, ecology, and conservation to produce an integrated perspective.
Audience: Undergraduate

3. Summarize the diversity of fishes on Earth, including phylogenetic and geographic patterns.
Audience: Undergraduate

4. Analyze the relationship between form and function of individual fish.
Audience: Undergraduate

5. Place fish in the context of the broader food web and ecological community.
Audience: Undergraduate

6. Describe the management and use of fish by human society.
Audience: Undergraduate

7. Describe the conservation challenges faced by fish now and in the future.
Audience: Undergraduate

8. Write clear, concise scientific reports both individually and in teams.
Audience: Undergraduate

9. Present effective, informative, and persuasive arguments in writing and orally.
Audience: Undergraduate

ZOOLOGY/ENVIR ST 511 – ECOLOGY OF FISHES LAB
2 credits.

Anatomy and taxonomy of Wisconsin fishes and projects in fish ecology.
Requisites: ZOOLOGY/ENVIR ST 510 or concurrent enrollment
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ZOOLOGY/BOTANY/ENVIR ST/F&W ECOL 516 — CONSERVATION BIOLOGY
3 credits.

Investigate the science behind the protection of nature and preservation of biodiversity by focusing on both the biological and socioeconomic factors that underlie the challenges to and the impacts of conservation efforts. Explore the theory, research, and application of biological conservation from an interdisciplinary, international, solutions-focused perspective. Learn about the many threats to Earth's biodiversity but also examine in-depth and apply approaches to overcome them.
Requisites: Satisfied Quantitative Reasoning (QR) A requirement and ZOOLOGY/BIOLOGY/BOTANY 152, BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY 101, BIOCORE 381, or graduate/professional standing
Course Designation: Gen Ed - Quantitative Reasoning Part B
Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Distinguish conservation biology from other scientific disciplines and describe its over-arching principles.
Audience: Both Grad & Undergrad

2. Articulate many reasons why the conservation of biological diversity (at many levels) is important.
Audience: Both Grad & Undergrad

3. Quantify biodiversity at the individual, population, and species level by applying various commonly used models and indices.
Audience: Both Grad & Undergrad

4. Explain orally and in writing the principal threats to biodiversity, to both scientific and layperson audiences (habitat loss and fragmentation; industrial agriculture; climate change; overexploitation; invasive species; pollution) and the specific biological effects of these threats.
Audience: Both Grad & Undergrad

5. Outline strategies to implement at the personal, local, and global scales for solving the biodiversity crisis.
Audience: Both Grad & Undergrad

6. Critically analyze, apply, and communicate recommendations for changing personal behaviors to mitigate the biodiversity and climate crises.
Audience: Both Grad & Undergrad

7. Assess the strengths and weaknesses of various conservation strategies or policy approaches.
Audience: Both Grad & Undergrad

8. Synthesize multiple investigations of conservation strategies to assess trade#offs and synergies among them.
Audience: Graduate

9. Make science#based recommendations for the appropriate conservation approach or strategy for a given situation.
Audience: Graduate

10. Manipulate quantitative data using multi-step arguments to evaluate, interpret, and express solutions to problems in biodiversity estimation, population monitoring, and genetics in the context of conservation.
Audience: Both Grad & Undergrad

ZOOLOGY/AN SCI/F&W ECOL 520 — ORNITHOLOGY
3 credits.

Introduction to bird biology, ecology, and behavior. Topics include the evolutionary origin of birds and flight, anatomy and physiology, functional morphology, migration, communication, reproductive strategies, ecological adaptations and roles, and biogeographical patterns.
Requisites: ZOOLOGY/BIOLOGY 101 and 102, ZOOLOGY/BIOLOGY/BOTANY 152, (BIOCORE 381 and 382), or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ZOOLOGY/AN SCI/F&W ECOL 521 — BIRDS OF SOUTHERN WISCONSIN
3 credits.

Outdoor and indoor labs/lectures emphasizing identification of southern Wisconsin birds by sight and vocalization. Two required Saturday field trips in Southern Wisconsin.
Requisites: ZOOLOGY/BIOLOGY 101 and 102, ZOOLOGY/BIOLOGY/BOTANY 152, (BIOCORE 381 and 382), or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ZOOLOGY/PSYCH 523 – NEUROBIOLOGY
3 credits.

Basic mechanisms in cellular neurophysiology: electrophysiology and chemistry of nerve signals, mechanisms in integration, simple nervous pathways and their behavioral correlates.
Requisites: (ZOOLOGY/BIOLOGY/BOTANY 151, ZOOLOGY/BIOLOGY 101, or BIOCORE 383) and (CHEM 104, CHEM 109, or CHEM 116)
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Understand the molecular mechanisms of cellular neurophysiology, including the ionic basis of the resting membrane potential and action potential, and mechanisms of synaptic transmission.
Audience: Undergraduate

2. Understand the basis of sensory perception at the receptor level.
Audience: Undergraduate

3. Demonstrate how neuronal signaling is integrated into simple nervous pathways and their behavioral correlates.
Audience: Undergraduate

4. Apply principles of neuronal function to activity-dependent changes in rhythmic neuronal activity, neuronal plasticity, and memory.
Audience: Undergraduate

5. Understand some of the state-of-the-art approaches to neuronal function.
Audience: Undergraduate

6. Understand key steps in the development of the nervous system and explain and apply the experimental approaches underpinning that understanding.
Audience: Undergraduate

7. Elucidate connections between genetics, pharmacology, and the functioning of the nervous system.
Audience: Undergraduate

8. Understand the mechanisms underlying a subset of disorders of the nervous system and the bases of current treatments.
Audience: Undergraduate

ZOOLOGY/ENTOM 540 – THEORETICAL ECOLOGY
3 credits.

Introduction to theoretical ecology, including hands-on experience in computer modeling.
Requisites: STAT/F&W ECOL 571
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ZOOLOGY/GEOSCI 542 – INVERTEBRATE PALEONTOLOGY
3 credits.

The evolutionary history, morphology, and ecology of fossil invertebrates. Labs emphasize fossil identification and recognition of basic morphological features.
Requisites: (GEOSCI 110 or 204), (ZOOLOGY/BIOLOGY 101 and 102), ZOOLOGY/BIOLOGY/BOTANY 152, (BIOCORE 381 and 382), or graduate/professional standing.
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

ZOOLOGY 555 – LABORATORY IN DEVELOPMENTAL BIOLOGY
3 credits.

Developmental anatomy and laboratory manipulations of representative animal embryos used extensively for analysis of developmental phenomena (sea urchins, amphibia, annelids, molluscs, ascidians, insects, chicks, fish, mice).
Requisites: ZOOLOGY 470, 625, ZOOLOGY/PSYCH 523, or BIOCORE 587
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ZOOLOGY/F&W ECOL/LAND ARC 565 – PRINCIPLES OF LANDSCAPE ECOLOGY
2 credits.

Emphasizes the importance of spatial patterns at broad scales. Concepts and applications are covered.
Requisites: (ZOOLOGY/BOTANY/F&W ECOL 460 or F&W ECOL 550) and (STAT 301, 371, or F&W ECOL/STAT 571), or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2019

ZOOLOGY 570 – CELL BIOLOGY
3 credits.

Comprehensive course on modern aspects of cell biology.
Requisites: ZOOLOGY/BIOLOGY 101, ZOOLOGY/BIOLOGY/BOTANY 151, or BIOCORE 383
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2025

ZOOLOGY 603 – ENDOCRINOLOGY
3-4 credits.

An introduction to the role that hormones play in a variety of physiological pocesses and behaviors from a molecular to a systems level. Topics include hormonal involvement in growth, development, homeostasis, reproduction, and behavior, with an emphasis on vertebrate systems.
Requisites: ZOOLOGY/BIOLOGY 101, ZOOLOGY/BIOLOGY/BOTANY 151, BIOCORE 383 or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2023

ZOOLOGY 604 – COMPUTER-BASED GENE AND DISEASE/DISORDER RESEARCH LAB
2 credits.

Learn to navigate open access biological and biomedical databases that include a wealth of information regarding genes, gene expression, gene pathways, behavioral characteristics, and disorders or diseases. This includes extracting information to develop new ideas, and using multiple databases to develop new ideas on which genes may be playing important, but previously underappreciated or unknown roles.
Requisites: ZOOLOGY/BIOLOGY 101, ZOOLOGY/BIOLOGY/BOTANY 151, BIOCORE 381, or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

ZOOLOGY 611 – COMPARATIVE AND EVOLUTIONARY PHYSIOLOGY
3 credits.

Examines general physiological principles by comparing taxa from diverse evolutionary histories and ecological adaptations. Examples include adaptation to environments differing in salinity, temperature, altitude, pressure, or pollution, and examines how nervous and endocrine systems evolved to support the adaptations.
Requisites: ZOOLOGY/BIOLOGY 101, BOTANY/BIOLOGY 130, ZOOLOGY/BIOLOGY/BOTANY 151, or BIOCORE 381
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ZOOLOGY 612 – COMPARATIVE PHYSIOLOGY LABORATORY
2 credits.

Investigating physiological adaptations in different animals. Design and execute experiments.
Requisites: ZOOLOGY 611 or concurrent enrollment
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ZOOLOGY/ANTHRO/PSYCH 619 – BIOLOGY OF MIND
3 credits.

Origins and structures of mind, brain, and consciousness. Transitions from early mammalian through primate to hominid intelligence. Genetics and plasticity in brain development. Modern studies of human brain mechanisms and consciousness.
Requisites: Junior standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2023

ZOOLOGY 620 – NEUROETHOLOGY SEMINAR
2 credits.

A group discussion of primary literature articles relevant to the neural basis of behavior with a purpose to understand the neural basis of behavior in animals, to learn to read papers critically and improve discussion leading skills.
Requisites: PSYCH/ZOOLOGY 523 or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ZOOLOGY/ENTOM/GENETICS 624 – MOLECULAR ECOLOGY
3 credits.

Basic principles of molecular ecology. Lecture topics include population genetics, molecular phylogenetics, rates and patterns of evolution, genome evolution, and molecular ecology.
Requisites: GENETICS 466, 467, BIOCORE 383, or graduate student standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and describe common molecular genetic techniques.
Audience: Both Grad & Undergrad

2. Demonstrate knowledge about the significance of genetic diversity in species biology.
Audience: Both Grad & Undergrad

3. Differentiate how ecological and evolutionary processes shape genetic variation.
Audience: Both Grad & Undergrad

4. Analyze genetic data and communicate the results.
Audience: Both Grad & Undergrad

5. Evaluate whether genetic data are appropriate for answering scientific questions.
Audience: Both Grad & Undergrad

6. Summarize and critique the primary literature in the field of Molecular Ecology.
Audience: Graduate

ZOOLOGY 655 – MODELING NEURODEVELOPMENTAL DISEASE
3 credits.

Systematically explores current animal models of human diseases that affect the central nervous system. Topics will include birth defects that disrupt normal brain architecture (holoprosencephaly and neural tube closure defects), birth defects affecting the visual system, and postnatal disease, e.g. neurodegeneration and stroke.
Requisites: GENETICS 466, ZOOLOGY/PSYCH 523, ZOOLOGY 470ZOOLOGY 470, or 570
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. apply and enhance their understanding of genetics and cell biology
Audience: Undergraduate

2. understand the concepts and methods used to model human disease
Audience: Undergraduate

3. read and critically evaluate current scientific literature
Audience: Undergraduate

4. develop and present short lectures on selected topics
Audience: Undergraduate

5. prepare review-style articles based on primary literature research
Audience: Undergraduate

ZOOLOGY/F&W ECOL 660 – CLIMATE CHANGE ECOLOGY
3 credits.

The evidence that the Earth's climate is changing at unprecedented rates is now overwhelming. Environmental tipping points are being crossed and many species are adapting or failing to adapt. Climate change poses a significant problem for conserving and managing wildlife and their habitats. Climate change, its ecological impacts, and the principle of climate change adaptation in natural resources conservation will be discussed.
Requisites: BOTANY/BIOLOGY/ZOOLOGY 152, (BIOLOGY/ZOOLOGY 101 and 102), BIOCORE 381, or BIOLOGY/BOTANY 130, or graduate/professional standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. explain historic and future trends in climate change within an ecological context.
Audience: Both Grad & Undergrad

2. identify the eco-evolutionary impacts of climate change on biological communities (including changes in phenology and ranges, community dynamics, and altered trophic interactions).
Audience: Both Grad & Undergrad

3. develop a climate change vulnerability assessment for a given species or community.
Audience: Both Grad & Undergrad

4. analyze and incorporate climate and biological data in vulnerability assessments.
Audience: Graduate

ZOOLOGY/BOTANY/F&W ECOL 672 – HISTORICAL ECOLOGY
2 credits.

Study the importance of past events for current ecosystems. Emphasizes concepts and applications.
Requisites: Senior standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

ZOOLOGY/NEURODPT/PSYCH 674 – BEHAVIORAL NEUROENDOCRINOLOGY SEMINAR
2 credits.

Behavior results from a complex interplay among hormones, the brain, and environmental factors. Behaviors and their underlying neural substrates have evolved in response to specific environmental conditions, resulting in vast species diversity in behavioral and neuroendocrine solutions to environmental problems. Designed to explore the primary literature on the neuroendocrine underpinnings of behavior spanning from feeding to sex differences in complex social behaviors. A range of taxonomic groups will be discussed, including (but not limited to) mammals, birds, and fish.
Requisites: ZOOLOGY/BIOLOGY 101, ZOOLOGY/BIOLOGY/BOTANY 151, BIOCORE 383 or graduate/professional standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Identify how behaviors and their underlying neural substrates have evolved in response to specific environmental conditions
Audience: Both Grad & Undergrad

2. Discuss and explore the primary literature on the neuroendocrine underpinnings of behavior spanning from feeding to sex differences in complex social behaviors
Audience: Both Grad & Undergrad

3. Identify and discuss hormones, the brain, and environmental factors as they relate to behavioral evolution and biological diversity
Audience: Both Grad & Undergrad

4. Develop and apply critical thinking to evaluate neuroendocrinological research
Audience: Graduate

5. Communicate effectively about concepts, theories and approaches of neuroendocrinology and behavioral research
Audience: Graduate

ZOOLOGY 677 – INTERNSHIP IN ECOLOGY
2 credits.

Provides support and structure for those interested in gaining hands-on experience working as a volunteer with local environmental, ecological or conservation groups.
Requisites: Junior standing
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2023

ZOOLOGY 681 – SENIOR HONORS THESIS
1-6 credits.

Mentored individual research and study for students completing a thesis in an Honors program.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ZOOLOGY 682 – SENIOR HONORS THESIS
1-4 credits.

Mentored individual research and study for students completing a thesis in an Honors program.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Honors - Honors Only Courses (H)
Repeatable for Credit: No
Last Taught: Fall 2025

ZOOLOGY 691 – SENIOR THESIS
1-6 credits.

Mentored individual research and study for students completing a senior thesis.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ZOOLOGY 692 – SENIOR THESIS
1-4 credits.

Mentored individual research and study for students completing a senior thesis.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Spring 2025

ZOOLOGY 698 – DIRECTED STUDY
1-6 credits.

Selected research projects for juniors and seniors.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ZOOLOGY 699 – DIRECTED STUDIES IN ZOOLOGY
1-6 credits.

Selected research projects for juniors and seniors.
Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ZOOLOGY/BOTANY 725 – ECOSYSTEM CONCEPTS
3 credits.

Scope and objectives of ecosystem ecology; roles of theory, long-term studies, comparative studies, and large-scale experiments; scaling problems; ecosystem services and ecological economics; adaptive ecosystem assessment and management.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025

ZOOLOGY/ATM OCN/ENVIR ST/GEOSCI 750 – PROBLEMS IN OCEANOGRAPHY
3 credits.

Introduction to techniques used in the study of the biology, chemistry, geology, and physics of the marine environment.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2024

ZOOLOGY/NEURODPT 765 – DEVELOPMENTAL NEUROSCIENCE
3 credits.

Analysis of neural development with emphasis on experimental approaches. Combination of lectures and discussions of primary literature. Topics include neural induction, patterning, mechanisms of axon guidance, neural crest cell migration and differentiation, cortical development, and synapse formation and elimination.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Gain an extensive understanding of mechanisms of neural development
Audience: Graduate

2. Acquire the ability to critically analyze current studies in neural development
Audience: Graduate

ZOOLOGY 799 – INDEPENDENT STUDY
1-6 credits.

Advanced topics in zoology explored through individual research projects.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ZOOLOGY 800 – ADVANCED TOPICS IN THE BIOLOGICAL SCIENCES
1-3 credits.

Various advanced topics in the Biological Sciences
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Apply, analyze, evaluate advanced theories, concepts and methods in the biological Sciences.
Audience: Graduate

2. Identify and describe key theories, concepts and methods in the biological sciences.
Audience: Graduate

3. Explore new approaches in the biological science research, and apply the knowledge gained to own research.
Audience: Graduate

ZOOLOGY/BOTANY/ENTOM/GENETICS 820 – FOUNDATIONS OF EVOLUTION
2 credits.

Explore some of the most important themes and debates that have permeated evolutionary biology over the last 50 years. Read key papers related to each controversial topic, debate the pros and cons of competing viewpoints, and reflect on the relevance of the issue to contemporary evolutionary biology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025

ZOOLOGY/BOTANY/ENTOM/F&W ECOL 821 – FOUNDATIONS OF ECOLOGY
2 credits.

Foundational ideas in the field of ecology. Discussion topics trace the development of ecology as a discipline, and the roots of modern ecological thought, as well as the research approaches in ecology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2025
Learning Outcomes: 1. Identify and describe key debates in the history of ecology and ongoing controversies in the field.
Audience: Graduate

2. Differentiate ecological processes and how they sustain ecological systems.
Audience: Graduate

3. Moderate and participate in discussions about the significance of important ecological concepts.
Audience: Graduate

4. Summarize, interpret, and synthesize conceptual theories of ecology orally and in writing.
Audience: Graduate

5. Evaluate peer work and provide constructive, professional feedback.
Audience: Graduate

ZOOLOGY/BOTANY 879 – ADVANCED LANDSCAPE ECOLOGY
3 credits.

Emphasizes spatial patterning (its development and importance for ecological processes) and often focuses on large regions. Learn concepts, methods, and applications of landscape ecology.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2024

ZOOLOGY/ATM OCN/BOTANY/CIV ENGR/ENVIR ST/GEOSCI 911 – LIMNOLOGY AND MARINE SCIENCE SEMINAR
1 credit.

Sections in various fields of zoological research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ZOOLOGY/AGROECOL/ATM OCN/BOTANY/ENTOM/ENVIR ST/ F&W ECOL/GEOG 953 — INTRODUCTION TO ECOLOGY RESEARCH AT UW-MADISON
1-2 credits.

Introduction to diverse ecological research across the UW-Madison Campus. Discussions on adapting to graduate school and graduate-level ecological research, key topics in professional development, and research presentations by faculty members.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2025
Learning Outcomes: 1. Develop an appreciation for the foundations and legacy of ecology research and conservation science at UW-Madison
Audience: Graduate

2. Recognize the diversity and strength of current research in ecology at UW-Madison
Audience: Graduate

3. Differentiate expectations between undergraduate education and those of independent research for graduate degrees in ecology
Audience: Graduate

4. Develop appropriate expectations for advisors and advisees
Audience: Graduate

5. Reason through hypothetical ethical challenges and identify potential solutions based on professional codes of ethics
Audience: Graduate

6. Develop an understanding of the suite of skills associated with success in graduate school and in science
Audience: Graduate

ZOOLOGY/AN SCI/OBS&GYN 954 — SEMINAR IN ENDOCRINOLOGY-REPRODUCTIVE PHYSIOLOGY
0-1 credits.

Promotes scientific and professional development. Presenters develop and deliver research presentations to a scientific audience, field questions, and receive critiques about their presentation style and scientific approach. Additional presentations include professional development, career advancement opportunities, and topics of interest to the endocrinology and reproduction community at large.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025
Learning Outcomes: 1. Demonstrate knowledge of cutting-edge research in and related to one's research area through the development and delivery of research presentations
Audience: Graduate

2. Communicate complex ideas in research presentations and questions in a clear and understandable manner
Audience: Graduate

3. Evaluate presentations and providing effective feedback
Audience: Graduate

ZOOLOGY 955 — SEMINAR-LIMNOLOGY
1 credit.

Sections in various fields of zoological research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

ZOOLOGY 956 — SEMINAR-ECOLOGY
1 credit.

Sections in various fields of zoological research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2024

ZOOLOGY 957 — SEMINAR-EVOLUTION
1 credit.

Sections in various fields of zoological research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

ZOOLOGY 960 – SEMINAR IN CELLULAR BIOLOGY
1 credit.

Sections in various fields of zoological research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ZOOLOGY 962 – SEMINAR-ETHOLOGY
1 credit.

Sections in various fields of zoological research.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2025

ZOOLOGY/ATM OCN/BOTANY/ENVIR ST/F&W ECOL/GEOG/ GEOSCI 980 – EARTH SYSTEM SCIENCE SEMINAR
1 credit.

Topics in earth system science. Emphasis on the coupling between atmospheric, oceanic and land surface systems, involving physical geochemical and biological processes, and including interactions with human systems.
Requisites: Graduate/professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2024

ZOOLOGY 990 – RESEARCH
1-9 credits.

Advanced research in biology as part of graduate program requirements arranged with mentoring faculty.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2025

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